

Thomas R. Howell's Check-List of the Birds of Nicaragua as of 1993

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THOMAS R. HOWELL'S CHECK-LIST OF THE BIRDS OF NICARAGUA AS OF 1993

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ABSTRACT.—Between December 1951 and April 1967, Thomas R. Howell made 13 separate research trips to Nicaragua. The result was a collection of over 2,000 bird skins and at least 16 publications that form the backbone of Nicaraguan ornithology. In the late 1970s, Howell began working on a manuscript that was intended to be his major contribution to the ornithology of the country. The first version of this “Check-list of the Birds of Nicaragua” was not ready until 1983, and many different typewritten versions circulated among a small but growing number of Nicaraguan biologists for the next two decades. Partly because of Howell’s passion for detail and completeness, and finally because of his failing health in the late 1990s, the check-list was never published before his death in December 2004. This monograph remedies what had become a significant obstacle to further studies in the country by providing, in Howell’s own words, a comprehensive background for subsequent explorations. It documents the 654 species (611 supported with specimen evidence) known to have occurred in Nicaragua as of 1993, the date of the last substantial revision of the manuscript, and also provides a rationale for anticipating another 44 species. The publication of this significant chapter in the history of Central American bird studies is offered both as a tribute to Tom Howell’s enthusiasm and contributions and as a frame of reference and springboard for current and future ornithologists inspired to study the rich and still largely unexplored avifauna of Nicaragua.

Key words: biogeography, Central America, distribution, history of ornithology, James Silliman, Ludlow Griscom, subspecies, W. B. Richardson, W. DeWitt Miller.

Lista Patrón de las Aves de Nicaragua hasta el año 1993 de Thomas R. Howell

RESUMEN.—Entre diciembre de 1951 y abril de 1967, Thomas R. Howell llevó a cabo 13 expediciones a Nicaragua. El resultado fue una colección de más de 2,000 pieles de aves y al menos 16 publicaciones que forman la columna vertebral de la ornitología nicaragüense. A finales de 1970, Howell comenzó a trabajar en un manuscrito que tenía previsto fuera su principal contribución a la ornitología del país. La primera versión de esta “Lista Patrón de las Aves de Nicaragua” no estuvo lista hasta 1983, y durante las dos siguientes décadas numerosas versiones de la misma circularon entre un grupo pequeño, pero creciente, de biólogos nicaragüenses. En parte debido a la pasión de Howell por el detalle y tener un producto completo, y finalmente debido a su deteriorada salud a finales de 1990, la Lista Patrón nunca llegó a publicarse antes de su muerte en diciembre del 2004. Esta publicación subsana lo que se había convertido en un obstáculo importante para el desarrollo de nuevos estudios en el país ya que provee, en las propias palabras de Howell, una base sólida para llevar a cabo futuras

¹Deceased 14 December 2004.

investigaciones. Documenta 654 especies (611 de ellas con evidencia de especímenes) cuya presencia había sido confirmada en Nicaragua hasta 1993, fecha en que estimamos llevó a cabo su última revisión del manuscrito. También discute los motivos para anticipar la presencia de otras 44 especies. Se ofrece la publicación de este importante capítulo en la historia de los estudios de aves en Centro América tanto como un tributo al entusiasmo y a las contribuciones de Thomas Howell, como para que sirva como una plataforma y un marco de referencia para ornitólogos presentes y futuros inspirados a estudiar la rica y en gran parte inexplorada avifauna de Nicaragua.

NICARAGUA IS THE only Middle American country for which there is no distributional check-list or single comprehensive account of its bird life. A check-list including some ecological data could be compiled from the *Biologia Centrali-Americana* (Salvin and Godman 1873–1904), *Birds of North and Middle America* (Ridgway and Friedmann 1901–1946), *Catalogue of Birds of the Americas* (Cory et al. 1918–1949), and works on the birds of El Salvador (Dickey and van Rossem 1938) and Honduras (Monroe 1968) to the north and Costa Rica (Slud 1964, Stiles and Skutch 1989) to the south. Such a list would be reasonably complete but not fully adequate, as there are both old and recent unpublished records and because some species are discontinuously distributed—present or absent in Nicaragua but not in the adjacent countries. The sixth edition of the American Ornithologists' Union's (1983) *Check-list of North American Birds* included all species found south through Panama and thus covers Nicaragua, but it would be convenient for those interested in bird distribution to have an annotated check-list of Nicaraguan birds. For that purpose I have prepared the present work.

HISTORICAL REVIEW

Knowledge of bird distribution in Nicaragua is based on relatively few collections and published observations. The following review is not comprehensive but surveys briefly the principal sources of distributional information.

The records of most of the 19th-century collections are included in the works of Salvin and Godman (1879–1904), Ridgway and Friedmann (1901–1946), and Cory et al. (1918–1949), but a few specimens of importance were overlooked or misidentified. The publications of Nutting (1884), Ridgway (1888), and Richmond (1893) are of special interest as they include some natural-history notes. Ridgway's account was based on notes and specimens collected by Charles H. Townsend

along the "Segovia River, Honduras." This river, now known as the Río Coco, forms most of the boundary between Honduras and Nicaragua, and Townsend's records apply to either or both countries. A hand-written note dated 11 April 1918 to Miller from Townsend about his collection reads, "You are safe in calling it all Nicaragua as I was never 5 miles from the river." Which side or both is not stated, but the river does not delimit different habitats and does not seem to constitute a distributional barrier for birds. Rendahl (1919) reported for the first time on a collection made by the Swedish biologist Carl Bovallius in 1882–1883.

Most of the bird specimens from Nicaragua in British and American museums were obtained in the late 19th and early 20th centuries by the professional collector William B. Richardson, who lived in Nicaragua during the latter part of his life. His earlier specimens are mostly in the British Museum (Natural History), and most but not all were listed by Salvin and Godman in the *Biologia*. Later specimens went to the Field Museum of Natural History, Chicago (recorded in the *Catalogue of the Birds of the Americas*; Cory et al. 1918–1949), and to the American Museum of Natural History (AMNH), New York.

Waldron deWitt Miller and Ludlow Griscom, then at the AMNH, joined Richardson in Nicaragua from 11 March to 21 June 1917 and collected in the north Central Highlands, the Caribbean lowlands along the Río San Juan, and the Pacific Region, including the volcanic peaks Mombacho and San Cristóbal. In the 1920s, they described numerous subspecies from Nicaragua, mostly in *American Museum Novitates* nos. 25, 159, 183, and 184. They had completed a draft of a full account of the birds of Nicaragua by 1928, but the work was never finished, as Miller died in an accident in 1929 and Griscom left the AMNH. Some of the AMNH's Nicaraguan specimens were listed among those examined by John T. Zimmer in his *Studies of Peruvian Birds* (1931–1953, American

Museum Novitates nos. 500 *et seq.*), but no complete listing has been published. The ornithological staff at the AMNH has kindly granted me full access to Miller and Griscom's unpublished manuscript and the associated field notes.

Nicaraguan naturalist Diocleciano Chávez made a collection of mounted birds in the early 1900s for public museum display in Managua. These were examined and listed by Miller and Griscom during their 1917 visit. Unfortunately, there was little specific data accompanying the specimens, but Miller and Griscom talked with Chávez and wrote down his comments on localities and approximate dates. The collection is of particular interest in documenting the occurrence of some large species (especially raptors) from the Pacific Region that even by 1917 had become rare or were no longer found there. The Chávez collection was still on display in the 1960s, but it may not have survived the Managua earthquake of 1972 or the war damage of 1979.

Wharton A. Huber (1932) reported on a collection made by him on the Caribbean slope from 8 March to 18 June 1922 for the Academy of Natural Sciences of Philadelphia, and his account includes numerous nesting records.

In the 1940s, Fr. Bernardo Ponsol of the Colegio Centroamérica in Granada made collections of birds from various parts of Nicaragua. Because of his untimely death in a plane crash in 1946, most of his records were unpublished and unknown. I reported on the most important of these for which there are definite data (Howell 1964a), but other specimens in the University of California, Los Angeles (UCLA) collection contribute to the overall picture of Nicaraguan bird distribution. Except for these, I know of no further bird collections made in Nicaragua until 1951, when I made my first visit to the country. I subsequently returned frequently, including a stay from November 1961 to May 1962, until my last visit in 1967. The principal publications resulting from my studies are Howell (1957, 1964a, 1965, 1969, 1971, 1972) and Monroe and Howell (1966). Since the 1950s, several other ornithologists and collectors have obtained specimens from Nicaragua, usually of some taxon of particular interest to them or collected incidental to special studies. All significant distributional records known to me from these collections are included herein.

General geographic features and principal reference points in relation to bird collections are given in Figures 1–4.

W. B. RICHARDSON'S COLLECTING LOCALITIES "SANTA CRUZ" AND "RIO COCO"

The professional collector W. B. Richardson obtained bird and mammal specimens in Nicaragua between 1891 and 1917. His earliest Nicaraguan specimens, from 1891 to 1898, were collected for Frederick D. Godman and Osbert Salvin and are now (except for some exchanges) in the British Museum (Natural History) (BMNH) at Tring. They constitute almost all of the bird records from Nicaragua in Salvin and Godman's *Biologia Centrali-Americana* (1879–1904). In 1891, Richardson settled in Matagalpa, Nicaragua, to grow coffee, and he continued collecting for Salvin and Godman until 1898. From 1904 to 1908, he collected intermittently in Nicaragua for the AMNH. From January through April 1905, he made a small collection in Nicaragua and Orosí in northwestern Costa Rica which went to the Field Museum in Chicago. From 1911 to 1913, he collected for the AMNH in Colombia and Ecuador. From February to June 1917, he was joined in Nicaragua by Miller and Griscom for several months of collecting there for the AMNH. That year seems to have been his last period of bird collecting. Many of his specimens from Nicaragua and elsewhere in the Neotropical region became the types of new species and subspecies, and some were named *richardsoni* to honor him.

Many of Richardson's Nicaraguan collecting localities were small villages not now found on most maps or were given as undelimited geographic features (e.g., Río Grande). He never gave distance and direction from a locality and seldom included the departamento. His handwriting was not always clear and he sometimes used cryptic abbreviations (e.g., Lake Nic, Nic. = Lago de Nicaragua, Nicaragua). He always used the American numerical sequence for month/day/year (e.g. 10/6/98 = 6 October 1898). His estimates of altitude were usually too high. All this is understandable, considering the difficulties of collecting in his time, and most of his localities have subsequently been identified with sufficient precision. One of Richardson's most enigmatic collecting places, however, is that given on his labels as "Santa Cruz," or "Santa Cruz, Río Coco," or only as "Río Coco," sometimes with the elevation 1,000 feet (300 m) or 5,000 feet (1,524 m) added. He collected birds there from 27 April to 8 May 1896, from 15 to 30 March 1898 (specimens in BMNH), and from 9 November to 4 December

1908 (specimens in AMNH). I consider these localities to be essentially the same because specimens labeled "Santa Cruz" and "Río Coco" were sometimes taken on the same day (e.g., on 28 April and again on 4 May 1896), as were some labeled "Río Coco 1000 ft" (300 m) and "Río Coco 5000 ft" (1,524 m) (e.g., 20 November 1908). Probably these names represent an area comprising different habitats which were all reachable on foot or by mule-back within the same day. The second edition of *Official Standard Names for Nicaragua* prepared by the Defense Mapping Agency Topographic Center, Washington, D.C. (U.S. Board on Geographic Names 1976), lists 11 populated places named Santa Cruz. The Río Coco (Río Segovia, Wanks River) has its headwaters in the north Central Highlands in the Departamento de Madriz, flows generally east through Depto. de Nueva Segovia, forms part of the border between those two departamentos and Depto. de Jinotega, and then reaches the lowlands of the Caribbean slope where it now constitutes most of the boundary between Nicaragua and Honduras. Richardson's Santa Cruz must be close to the Río Coco, and the area can be narrowed down by the kinds of birds he collected there and his subsequent movements. On 11 May 1896, he was collecting at San Sebastián de Yalí, in western Jinotega, after last collecting at "Santa Cruz" on 8 May. In 1898, he last collected at "Río Coco" on 30 March and collected at Jalapa, Depto. de Nueva Segovia, on 3 April. Richardson never collected anywhere along the Río Coco in the Caribbean lowlands, so Santa Cruz must be in the Nueva Segovia-Jinotega region. There is a village of Santa Cruz on the Río Coco where it forms the boundary between the two. It is still shown on some modern maps, and its coordinates are 13°27'N and 85°55'W. It is on the south side of the river and thus within Jinotega. San Sebastián de Yalí and Jalapa are approximately equidistant in airline distance (50 and 56 km) from this village.

The birds collected by Richardson at "Santa Cruz" and "Río Coco" are remarkably varied and include species characteristic in Nicaragua of (1) Caribbean slope, humid lowland forest; (2) highland pine forest; (3) humid montane (cloud) forest; and (4) Pacific slope thorn scrub and deciduous forest edge. These include, for example, (1) *Galbula ruficauda*, *Malacoptila panamensis*, and *Laniocera rufescens*; (2) *Accipiter striatus chionogaster*, *Melanerpes aurifrons santacruzi*, and *Contopus pertinax*; (3) *Myadestes unicolor* and *Atlapetes*

brunneinucha; and (4) *Eumomota superciliosa* and *Basileuterus rufifrons*. The diversity of habitats and stated altitudes at essentially a single location not precisely fixed by the collector has given rise to confusion. On the basis of studies of Richardson's mammal collections, I earlier (Buchanan and Howell 1965) speculated that "Río Coco" must have been a village ~10 km southeast of Quilalí, Depto. de Nueva Segovia, where the river forms the boundary with Jinotega. Jones and Engstrom (1986) suggested instead a village called San Juan de Río Coco, ~15 km to the west in Depto. de Madriz. Fortunately, I have recently found published evidence that makes the location of Richardson's "Santa Cruz" and "Río Coco" virtually certain.

In 1945, the English naturalist and collector Mervyn G. Palmer published a book entitled *Through Unknown Nicaragua* which described his travels and experiences during 26 months in that country (Palmer 1945). Curiously, although Palmer gave dates as months and days, he never mentioned the years of his stay. From labels on his bird specimens and his narrative, he must have arrived on the Caribbean coast of Nicaragua in October 1904 and departed from the Pacific port of Corinto on 7 December 1906. In April 1905, he commenced a journey of 6 months from the mouth of the Río Coco (Huancs [= Wanks] River in his account) at Cabo Gracias a Dios, Región Autónoma del Atlántico Norte (RAAN), along the river to the village of Santa Cruz, where he arrived on 11 October 1905. He spent several days there and traveled about the vicinity, which he described and photographed (pp. 76–78, plates 15–17). He describes (p. 77) reaching the top of the "Sierra de los Sompoperos at Santa Cruz" (plate 17, fig. 1 = Cerro Sompopera) and seeing "forest and mountain peak, pine-clad hills and wild undulating open country between them and beneath, the mighty river winding its way eastward on its long and broken journey to the sea." He shot a deer among the pines and included a photo (plate 15, fig. 2). On page 76, he describes climbing a little hill 3,000 ft (915 m) high "which was densely clothed with prickly mimosa and a new plant to me" which was extremely thorny. This suggests the presence of patches of thorn scrub characteristic of the Pacific slope habitat. On the road south to Jinotega, he climbed a mountain "with its forest-covered summit enveloped in the mist." The altitude at the top was 3,550 feet (1,082 m) according to his aneroid barometer. There he

heard "the sweetest, silvery bird's voice . . . in that mournful setting of mist and dreary wet forest. I learnt that it was the Jilguero. . . ." This is the Nicaraguan name for the Slate-colored Solitaire (*Myadestes unicolor*), in Nicaragua recorded only from cloud forest. Palmer does not tell how far south he was from Santa Cruz, but he earlier mentioned and photographed the prominent Ventilla Hills. Fila Ventilla, altitude 1,200 m, is 13.5 km north of Santa Cruz, and given that the altitude is essentially the same as 3,550 feet (1,082 m; see above), there was presumably cloud forest at the summit. Palmer gave the altitude of the village of Santa Cruz as 1,400 feet (426 m), and at that elevation along the Río Coco there would have been (unless cleared) humid lowland forest characteristic of the Caribbean slope.

Thus, the vicinity of Santa Cruz includes, within less than a day's journey, all of the four different habitats from which Richardson obtained characteristic birds. As the Río Coco at Santa Cruz is the Jinotega-Nueva Segovia boundary, Richardson's specimens may have come from either departamento. When he collected some distance away from the village, and with no other named place nearby, he appears to have used only "Río Coco" as his locality. His estimate of 5,000 feet (1,524 m) elevation appears too high, but he may have assumed that figure when he encountered cloud forest. If Santa Cruz is at 425 m, 300 m would be a reasonably close estimate of the altitude of the Río Coco nearby. Palmer described Santa Cruz as the port of debarkation for Jinotega from the Río Coco, and in the era when the river was an important travel route for people and cargo the village was doubtless better known than at present. It appears on the small-scale map of Central America in vol. 3 of 7 of the *Biología Centrali-Americana* (1904) at what appears to be the same coordinates given above, but the scale does not permit an exact determination.

From Jinotega the road south continued to Matagalpa, where Richardson had settled in 1891. Palmer later continued on to Matagalpa, and on arriving he mentioned that his pack mules were quartered "at Mr. Richardson's stables." This must surely refer to W. B. Richardson, but there is no further mention of his name and apparently the two collectors did not meet. They later did meet in South America as members of Frank M. Chapman's team of collectors between 1911 and 1913, and one of Richardson's letters from that period mentions Palmer by name.

The most detailed map of the Santa Cruz-Río Coco region that I have seen is that of the *Dirección General de Cartografía de Nicaragua, Servicio Geodésico Interamericano*, Hoja 3056 III (Las Praderas) and 3056 IV (Wiwilí) (1967). The scale is 1:50,000, with contour lines at 20-m intervals. The name Santa Cruz appears by a point 1.5 km south of the Río Coco, at an elevation of ~400 m. This location is at 13°27'N and 85°55'W, as given for Santa Cruz, Depto. de Jinotega, in the 1967 *Gazetteer of Official Standard Names for Nicaragua* (cf. U.S. Board on Geographic Names 1985). Other localities mentioned by Palmer are shown on the same map. Cerro Sompopera, summit 810 m, is 4 km northeast of Santa Cruz. Fila Ventilla is due north of the village. Symbols representing pine forest are shown on numerous ridges within 6 km of Santa Cruz at elevations from 400 to 665 m. All of the data are consistent with the hypothesis that Richardson's specimens labeled "Santa Cruz" and "Río Coco" come from this area.

THE CHECK-LIST PLAN

The check-list that follows focuses primarily on species. Subspecies are evaluated mainly in cases in which well-marked forms are of particular distributional interest or when their validity requires clarification. Although there are many distinct subspecies ranging into Nicaragua, there are many others in need of critical examination and revision. A check-list is not the best place to introduce systematic revisions, as there is no space for the necessary discussion of the basis for changes, and listing unreviewed subspecies only according to geographical probability would not constitute an advancement of knowledge.

For each species, the information provided includes residential or seasonal status, geographic region(s) of occurrence (represented by abbreviations, as described below), type of habitat(s) occupied, degree of abundance, additional notes of special interest, and points on which important information is lacking. Banding data cited throughout the species accounts—primarily for waterfowl, waterbirds, and doves—were retrieved from the U.S. Geological Survey Bird Banding Laboratory (1980).

In addition to the 654 species whose presence in Nicaragua has been documented, I have also included in the check-list an additional 44 species whose presence in the country can be anticipated because they occur in similar habitat in Honduras

to the north and/or Costa Rica to the south. These expected species are enclosed in {braces}.

RESIDENTIAL OR SEASONAL STATUS

With the exception of poorly known or unusual cases discussed individually in the species accounts, most species recorded from Nicaragua can be assigned to one or a combination of the following categories: Permanent Resident, Winter Resident, Summer Resident, Transient, and Visitor (irregular occurrence; may also be designated seasonally).

For most species that are permanent residents, breeding in Nicaragua is a safe assumption even in the absence of specific nesting records. For others, especially some wading birds and water birds, this may not be so. In cases in which breeding in Nicaragua might be doubtful, I have mentioned whether or not there are specific records or evidence of strong probability. In other cases in which the residential status is uncertain, question marks are used. Transient status as well as winter resident status is presumed for species that winter both in Nicaragua and also farther south in Central America.

GEOGRAPHIC REGIONS

Nicaragua is divisible into three major regions—the Pacific Region, the (north) Central Highlands, and the Caribbean Region (Figs. 2 and 3). In general, the Pacific Region constitutes a continuation of the arid tropical conditions that extend from western Mexico to northwest Costa Rica. The Central Highlands are a continuation and termination of the highlands of Mexico, Guatemala, and El Salvador–Honduras. The Caribbean Region is largely a broad expanse of lowland rain forest that is essentially continuous (primordially) from South America to southeastern Mexico, but it also includes a large area of lowland pine savanna continuous with that of Caribbean Honduras and discontinuous with similar habitat farther north in Belize.

The basis for these regional divisions, the habitats within them, and their vegetational characteristics were described by Taylor (1963). The upland pine forests were discussed in detail by Denevan (1961), and Radley (1960) described the characteristics of the lowland pine savanna. Figures 3 and 4 are slightly modified from those of Taylor (1963). Incer (1973) usefully summarized the basic geography of Nicaragua in a school textbook, and I have used his figures for the elevations of

various mountains as these were provided by the Instituto Geográfico Nacional de Nicaragua. The following accounts of the three regions are based in part on these sources plus my own observations. Abbreviations to be used subsequently are given in parentheses.

Pacific Region (PAC). This region consists largely of lowlands with ridges and plateaus of generally less than 500 m elevation. Primordially, the region was mostly covered with deciduous broad-leaved forest in the more mesic portions and thorn forest and scrub in the more arid portions. To the northeast, the Pacific lowlands merge into the Central Highlands. The two great lakes—Lago de Managua and Lago de Nicaragua—lie almost entirely within the Pacific Region, but the habitat along the southeast and south shores of Lago de Nicaragua approaches the characteristics of the Caribbean Region. The lakes are mostly relatively shallow, windswept, often turbulent, and always turbid; the shores are usually sandy or marshy, but Lago de Managua is largely without extensive areas of marsh.

Running parallel to the Pacific coast is a chain of volcanoes, some of them still active, which rise to elevations of >1,000 m. The most prominent of these are, from north to south, San Cristóbal (also called Volcán de Chinandega and El Viejo; 1,745 m); Casita (1,405 m), just southeast of San Cristóbal; Momotombo (1,280 m); Mombacho (1,345 m); Concepción (1,610 m); and Maderas (1,394 m). The latter two comprise most of the island of Ometepe in Lago de Nicaragua. The upper slopes of Momotombo and Concepción are largely un-vegetated areas of volcanic rock and cinders, and there is no cloud forest; below, the vegetation is essentially the same as that found at similar elevations in the surrounding areas. Mombacho, however, is completely forested (or was, prior to recent agricultural clearings), with deciduous forest giving way to cloud forest above ~1,100 m. This is the only area of cloud forest within the Pacific Region; it is heavily windswept and generally stunted except in sheltered locations. Maderas, however, is reported to be forested similarly to Mombacho.

On both San Cristóbal and Casita, deciduous forest is replaced above about 700–800 m by pine forest (*Pinus oocarpa*) which extends all the way to the summits. These were the only areas of pine forest within the Pacific Region. The late James Silliman informed me in 1982 that fires and fumes resulting from volcanic activity several years ago on Volcán San Cristóbal had destroyed its pine forests almost completely. San Cristóbal became

active for the first time in recent history in the 1970s, destroying pine forest on its upper slopes (Incer 1973).

In the lowlands on both sides of the lakes, there are some areas of thorn tree savanna and grasslands. Some of these may originally have been natural, but at present most are probably the result of deforestation, burning, and livestock grazing.

In Lago de Nicaragua, in addition to Isla de Ometepe, there are numerous smaller islands and islets near the shore. These are all of low relief, with vegetation similar to that of the closest mainland; they are little known ornithologically. Along the southeast and southern shore of Lago de Nicaragua, the habitat consists of a mixture of Caribbean lowland humid forest elements with vegetation typical of the more arid Pacific Region. Some birds characteristic of either region may be found in this area, and the south shore conditions allow many typically Caribbean species to extend their ranges westward and, in some cases, to colonize broad-leaf forested areas in the Pacific Region.

There are no major rivers in the Pacific Region, but throughout the region there are numerous small rivers and scattered crater lakes, ponds, marshes, and wooded swamps. The Pacific coast includes sandy beaches with small rock outcrops and mangroves around estuaries. There are no major islands off the Pacific coast and only a few small islets close to shore. Nicaragua borders on the Gulf of Fonseca to the northwest along with Honduras and El Salvador, but none of the major islands in the Gulf—some of which have (or did have) important seabird colonies—lies within Nicaraguan territory. Within Nicaragua at the southern end of the Gulf, there is an extensive area of mangroves and dry “salt savanna” (Taylor 1963) that has never been investigated ornithologically. The beaches, mangrove swamps, and offshore waters of the Pacific coast are similarly little known.

Central Highlands (CNHL). The highlands are formed primarily by three successive east-west oriented ranges which are, from north to south, the Cordilleras Segoviana, Isabelia, and Dariense. These are irregularly linked by upland areas with elevations generally higher than those of the Pacific and Caribbean lowlands, but vegetation characteristic of those two regions extends deeply into the highlands along valleys and lower slopes. The highlands proper extend from the Honduran border to the valley of the Río Grande de Matagalpa approximately 30 km south of the city of Matagalpa. This locality is defined as the termination because the upland *Pinus*

oocarpa, one of the characteristic tree species of the highlands, reaches its natural southern limit a few kilometers north of this valley. To the south of the river, there are some peaks and ridges that are mostly well under 1,000 m in elevation, and all lack pines and other vegetational associations typical of the highlands. There is thus a broad lowland gap between the Nicaraguan and the Costa Rican highlands.

In general, habitats characteristic of the Pacific and Caribbean regions extend into the highlands up to moderate elevations of about 500–600 m. Above that level to ~1,300 m (rarely to higher altitudes), pine forest is often present—irregularly scattered in the southern part of the highlands, extensive in the northern Cordillera Segoviana. Oaks (*Quercus*) of several species are often found mixed with the pines or in fairly pure stands around them. Pines are absent, so far as known, in the eastern reaches of the Cordilleras Isabelia and Dariense. Denevan (1961) described in detail the distribution of the upland pines, which has been influenced by human activity since pre-Hispanic times. There are only three species of pines present in the highlands—*Pinus oocarpa*, the most widespread; *P. pseudostrabus*, only at high elevations; and *P. caribaea*, at low to medium elevations. There are no records of high-altitude conifers such as *Cupressus* or *Abies* from Nicaragua. Above the upper level of the pines there is cloud forest. The Nicaraguan highlands do not have many extensive areas above 1,300 m, and the distribution of cloud forest is patchy. No cloud forest occurs south of the vicinity of Matagalpa except for the isolated stand on Volcán Mombacho, near Granada in the Pacific Region, and Volcán Maderas, on Isla de Ometepe nearby. The eastward extensions of the Cordilleras Isabelia and Dariense are virtually unexplored biologically. From aerial surveys, it appears that the Caribbean rain forest merges directly into cloud forest at higher elevations. Many of the highest peaks in Nicaragua occur within these ranges, including Peñas Blancas (1,745 m) and Cerro Kilambé (1,750 m), Depto. de Jinotega, and the isolated Cerro Salaya (1,652 m), RAAN. These peaks have not been investigated ornithologically. Although they are among the highest in Nicaragua, they are considerably lower than many peaks and ranges found in countries immediately to the north and south, and they are below the usual altitudinal range of a number of Middle American montane bird species.

The Central Highlands of Nicaragua are of ecological interest as, in some places, five distinct

habitats—thorn scrub, deciduous forest, pine or pine-oak, cloud forest, and humid forest—may be found in close proximity and sometimes partly intermixed. These highlands are also of biogeographic significance, as they constitute the southern termination of Nuclear Central America, the ancient land mass that has remained above the sea and maintained terrestrial continuity with North America throughout the Cenozoic Era. South of the Nicaraguan highlands, there were seaways across the lowlands at various times until the end of the Pliocene, when the continuous land connection with South America was established.

Caribbean Region (CRB). This region, which occupies most of the land area of Nicaragua, is largely of low relief and is swept for most of the year by moisture-laden winds from the Caribbean Sea that produce heavy rainfall and a large expanse of humid forest. These conditions extend into the Central Highlands to moderate elevations but not across to the Pacific Region. South of the highlands proper, there are uplands of moderate elevation oriented roughly from northwest to southeast that probably create a partial rain shadow so that most of the area immediately to the east of the great lakes lies within the relatively arid Pacific Region. Farther south, humid Caribbean slope conditions merge with and largely (but not completely) replace those of the Pacific Region along the southeast and southern shores of Lago de Nicaragua (see Pacific Region).

Although most of the Caribbean Region is covered by humid forest, in the northeast sector there is an extensive lowland pine savanna, sharply demarcated from other habitats. *Pinus caribaea* is the only pine species present, and a single species of oak, *Quercus oleoides*, is sparsely distributed within the savanna and at its edge. In some areas, trees of any kind are absent or nearly so, and the habitat becomes grassland. This savanna is continuous within that part of Nicaragua and eastern Honduras known as the Mosquitia; its extent, ecological characteristics, and avifauna were discussed by Radley (1960), Howell (1965, 1971, 1972), Monroe and Howell (1966), and Monroe (1968). Similar habitat occurs discontinuously to the north in the pine "ridges" of Belize (Russell 1964).

Many large rivers drain eastward through the Caribbean Region into the sea, and as these rivers are heavily silt-laden, the coastal waters are virtually always turbid. The coastline includes steep bluffs, narrow silty-sand and rock cobble beaches, mangroves and muddy estuaries, and lagoons

that merge inland into marshes and swamps, often with extensive stands of palms. There are extensive swamps near the mouth of the Río Coco, inland from Cabo Gracias a Dios, RAAN. These coastal habitats have been little investigated ornithologically. Along the Caribbean coast, there are numerous small cays that are essentially unknown ornithologically; many are probably used as roosting and nesting sites for seabirds, but this requires documentation.

The Islas del Maíz or Corn Islands are Nicaraguan territory and lie ~70 km east of the south-central coast, approximately opposite Bluefields, Región Autónoma del Atlántico Sur (RAAS). There are two, Great Corn and Little Corn islands, that are ~11.5 km apart. They are of low relief, and the vegetation had been greatly modified by human residents by the time of the first and only published ornithological survey (Peters 1929). During a visit from December 1927 to early January 1928, Peters found only three resident landbird species, all of which are widespread on Caribbean islands. He also recorded a number of sea, shore, and aquatic birds, some of which may nest there in other seasons, and various winter residents from North America. Silliman also visited Great Corn Island in December 1982 and January 1983 and recorded his sightings. Records from the Corn Islands are specifically noted in the check-list. I use the English name of these islands, which is used throughout Nicaragua even though the Spanish name is the official one.

HABITAT

The following habitat designations are very broad and intended only to indicate the general association(s) in which a bird species is usually found. With slight modifications, I use the terminology of Monroe (1968) for Honduras.

Thorn forest and scrub. These are natural areas with annual precipitation below 150 mm, high temperatures, and marked seasonality. Savannas dominated by jicaro (*Crescentia alata*) and carbón (*Mimosa tenuifolia*) are characteristic of this formation, which has been greatly expanded by cattle ranching and other human activities. Thorn forest extends from sea level in the Pacific Region to 1,400 m in the Central Highlands.

Deciduous (monsoon) forest. Also known as dry forest, this forest is characterized by the presence of trees that lose their leaves during the dry season. It is the typical forest type of the Pacific

Region, where the dry season is pronounced. Near rivers and in areas where the water table is close to the surface, it is replaced by gallery forest with taller trees and a greater number of evergreen species.

Humid lowland forest. Also known as tropical moist forest or rain forest, this forest is typical of areas with at least 2,000 mm of annual precipitation, usually with minimal seasonality in the precipitation cycle. True primary rain forests are dominated by trees of many different species often reaching 60 m in height. Trees are heavily buttressed and form a close, dense canopy. In Nicaragua, typical rain forest ranges in elevation from sea level to 700–800 m.

Cloud forest. These forests are also sometimes known as lower montane or montane rain forest. Tree trunks and branches support large numbers of epiphytes that retain humidity. At elevations above 800 m, lowland forests transition to forests with smaller trees and lower canopies, and there is often a broad transitional zone between rain forest and cloud forest. In areas with deep soils and high relative humidity throughout the year, cloud forest can occur near the summits of Nicaraguan mountains at 2,100 m. On windswept ridges and mountaintops, cloud forest is replaced by elfin forest.

Highland pine or pine–oak. Extensive areas of the northern highlands of Nicaragua are covered by stands of *Pinus oocarpa*, usually in association with one or several oak species (*Quercus* spp.). Highland pine and pine–oak forest ranges in elevation from 800 m to at least 1,800 m. This forest type usually replaces cloud forest in areas with poor sandy soils and lower precipitation.

Lowland pine savanna. In the Caribbean Region, areas with high precipitation and temperatures and poor sandy soils are dominated by a single species of pine, *P. caribaea*. Fires play a critical role in preventing lowland rain forest from gradually replacing pine savannas.

Grassland. These are natural or manmade areas dominated by grasses and with little or no tree cover. Annual fires during the dry season prevent trees from becoming established. In areas in the Caribbean Region subjected to seasonal flooding, grasslands replace the pine savanna.

Aquatic habitats. These include marshes, ponds, and watercourses in both coastal and interior areas covered with scattered vegetation or no vegetation at all. Artificial lakes (e.g., Apanás or Las Canoas) are also included in this category.

Mangroves. This habitat, dominated primarily by Red Mangrove (*Rhizophora mangle*), is scattered along both coasts but covers much more extensive areas in the Caribbean Region.

The above categories may be modified by the following additional designations:

Forest edge, low second growth. In areas opened naturally or by human intervention, the forest is dominated by a successional stage in which the undergrowth is dense, the canopy is broken, and canopy height is shorter.

Moderate elevation. This designation applies especially to deciduous and humid forests at or above 500–600 m in the absence of pines, locally up to 1,300 m.

ABUNDANCE

There is no simple way to express quantitatively the abundance of a species in an area as large and ecologically diverse as Nicaragua; any verbal description of abundance can only be qualitative and largely subjective. No resident species occurs throughout all habitats, even when these are as broadly delineated as in the previous section, and abundance is bound to vary from place to place. In some region of their overall range, however, most species appear to reach a peak density within a certain habitat or subdivision thereof. If this level of abundance is assumed to approximate the maximum density within the most favorable habitat, it may be used as a standard for estimating lesser degrees of abundance.

Another consideration is abundance in terms of absolute numbers. Some eurytopic species have populations within Nicaragua that probably total in the millions of individuals and thus are absolutely abundant (e.g., *Tyrannus melancholicus*). Other species with highly specialized food or habitat requirements may be locally abundant but have a total population (in Nicaragua) of only a few hundred individuals or less and thus are absolutely scarce (e.g., *Rostrhamus sociabilis*). Still others may be abundant in a certain habitat type in one part of the species' total range, but less abundant to scarce in apparently similar habitat elsewhere—especially as the geographic limits of the bird's range are approached (e.g., *Electron platyrhynchum*, which is scarce in Nicaragua). If a species breeds successfully within a given habitat, that habitat may be considered "appropriate." If its abundance in a particular area of appropriate habitat is distinctly less than it is within the species' region of

peak density, this suggests that some local combination of factors—climate, food resources, competition, etc.—is acting to reduce abundance. Thus, an estimate of the species' degree of abundance in appropriate habitat in relation to peak (maximum) density is of potential ecological interest.

Taking all this into consideration, I propose using the following categories of abundance:

Common: absolutely abundant; density in appropriate habitat estimated as at least two-thirds of maximum.

Fairly common: less abundant absolutely than common; density in appropriate habitat estimated as from two-thirds to one-third of maximum.

Uncommon: not abundant absolutely, may approach scarcity; density in appropriate habitat estimated as less than one-third of maximum.

Rare: scarce in absolute numbers, or known only from one to a few records.

For those few species that are absolutely in one category and relatively in another, I use designations such as "absolutely rare but locally common."

As initially mentioned, these categories are essentially subjective and not even qualitatively rigorous. Obviously, I have not censused more than a tiny fraction of the Nicaraguan avifauna, and the estimates are based on a combination of my own experience (if any) and the literature pertaining to these species in Nicaragua and throughout their ranges. I hope that my use of these categories may prompt other observers to correct the estimates and improve the criteria.

ORDER TINAMIFORMES
FAMILY TINAMIDAE

Tinamus major. Great Tinamou.

Permanent resident. CNHL: Probably rare in humid forest; CRB: Fairly common in humid forest, and forest edges and second-growth forest in pine savanna.

The only records from the Central Highlands are two Richardson specimens from San Rafael del Norte. The labels have no altitude or habitat data and presumably the birds came from an incursion of broad-leaved forest at mid-elevation.

Ssp.: *robustus*; I do not recognize *fuscipennis* Salvadori 1925, type locality Río Escondido, RAAS.

Crypturellus soui. Little Tinamou.

Permanent resident. CNHL: Uncommon in forest edge, low second-growth deciduous forest

at moderate elevations; CRB: Uncommon in forest edge and low second-growth humid forest at moderate elevations.

Ssp.: *meserythrus*.

Crypturellus cinnamomeus. Rufescent Tinamou [Thicket Tinamou].

Permanent resident. PAC: Fairly common in thorn forest and scrub, and forest edge and low second-growth deciduous forest at moderate elevations; CNHL: Uncommon in forest edge and low second-growth deciduous forest at moderate elevations.

Ssp.: *delatirii* Bonaparte 1854, type locality "Nicaragua," probably from the vicinity of El Realejo, Depto. de Chinandega.

Crypturellus boucardi. Slaty-breasted Tinamou.

Permanent resident. CNHL: Rare in humid forest, probably at moderate elevations; CRB: Fairly common in humid forest.

As in *Tinamus major*, the only records from the Central Highlands consist of two Richardson specimens (from Matagalpa and San Rafael del Norte) without altitude or habitat data; presumably they came from incursions of broad-leaved forest at mid-elevation.

Ssp.: *costaricensis*.

ORDER PROCELLARIIFORMES
FAMILY HYDROBATIDAE

Oceanodroma tethys. Wedge-rumped Storm-Petrel.

Status unknown. PAC: Rare, at sea.

This species is known from Nicaraguan waters from one specimen taken on 30 April 1962 in the Pacific Ocean at 12°06.5'N and 87°07.7'W. The location is ~37 km WSW of Puerto Sandino (formerly Puerto Somoza), Depto. de León. The specimen is in the U.S. National Museum.

Ssp.: It was originally identified as *kelsalli* by A. Wetmore, and reidentified by Roger D. Clapp as *O. t. tethys*. I accept Clapp's reidentification.

ORDER PODICIPEDIFORMES
FAMILY PODICIPEDIDAE

Tachybaptus dominicus. Least Grebe.

Permanent resident. PAC: Absolutely uncommon but locally common in aquatic habitats; CRB: Uncommon in aquatic habitats.

Reidel (1965) reported "rather dense flocks" of this species and *Podilymbus podiceps* (see below) at Laguna de Moyúa, Depto. de Matagalpa, during the period of his studies of the introduced fish *Tilapia mossambica* from November 1961 to October 1962, but no specific numbers or dates are given.

Ssp.: *brachypterus*.

***Podilymbus podiceps*. Pied-billed Grebe.**

Probably a winter visitor or permanent resident.

PAC: Probably locally common in aquatic habitats; CNHL and CRB: Rare in aquatic habitats.

There are no nesting records and no certain evidence of permanent resident status. Reidel (1965) reported that this species and *T. dominicus* (see above) were present in "rather dense flocks" at Laguna de Moyúa, Depto. de Matagalpa, between November 1961 and October 1962, but no specific numbers or dates are given. In addition, James Silliman saw three birds on 2 April 1983 at Lago de Apanás, Depto. de Jinotega; J. C. Martínez-Sánchez saw four birds at Chiltepe, Depto. de Managua, 26 April 1985, and one bird was seen repeatedly on a pond in the lowland pine savanna during March and November 1966 (Howell 1972). Tom Will reported three birds on 17 November and six on 12 April 1990 at Laguna de Masaya, Depto. de Masaya; over 15 on Lago de Nicaragua near Granada, Depto. de Granada, on 13 April 1990; between 2 and 10 birds on visits to Las Playitas, Depto. de Matagalpa, between December 1990 and February 1991; and two individuals on the lagoons near San Juan del Norte, Depto. de Río San Juan, 13 May 1991.

Ssp.: Presumably *podiceps*; no specimens available.

ORDER PELICANIFORMES
FAMILY SULIDAE

***Sula sula*. Red-footed Booby.**

Richmond (1893) reported two seen and one caught aboard ship between Kingston, Jamaica, and Greytown [= San Juan del Norte], Nicaragua, but the exact locality is not given. Probably the species does occur in Nicaraguan waters but as yet there are no specimens or more precise sight records.

***Sula leucogaster*. Brown Booby.**

Visitor, permanent resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats, also in the Corn Islands.

Richmond reported this species as "very abundant along the coast, nesting on the various keys" (Caribbean Sea), the only evidence of breeding in Nicaraguan territory. The only specimen is from the Corn Islands. Most records from the Pacific Region are from the Golfo de Fonseca, where the species may breed in Honduran territory (Monroe 1968). Nutting (1884) stated that (in 1883) this booby was "abundant along the entire Pacific coast" but gave no specific records; no other observers have found it numerous in Nicaraguan waters. James Silliman found a weak bird on the beach at Isla Juan Venado, Depto. de León, on 22 May 1982.

Ssp.: In the Caribbean, presumably *leucogaster*; in the Pacific, presumably *etesiaca*.

FAMILY PELECANIDAE

***Pelecanus erythrorhynchus*. White Pelican.**

[*Pelecanus erythrorhynchus*. American White Pelican.]

Winter visitor. PAC: Rare in aquatic habitats.

The only records are two band recoveries, both from the northwestern region near Chinandega, Depto. de Chinandega. One was banded in Montaña on 4 July 1964 and taken in Nicaragua on 20 February 1966. The other was banded in North Dakota on 11 July 1964 and taken sometime in December 1964.

***Pelecanus occidentalis*. Brown Pelican.**

Visitor, permanent resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats, also in the Corn Islands.

There are no definite breeding records, but possibly the species nests on some Caribbean cays. It occurs along both coasts but only rarely visits the great lakes. A bird banded in Florida on 21 July 1939 was taken on the Caribbean coast on 14 March 1941.

Ssp.: *carolinensis*.

FAMILY PHALACROCORACIDAE

***Phalacrocorax brasilianus*. Olivaceous Cormorant [Neotropical Cormorant].**

Permanent resident. PAC: Absolutely fairly common but locally common in aquatic habitats; CRB: Fairly common in aquatic habitats, uncommon in the Corn Islands.

Recorded nesting sites are all in Lago de Nicaragua. The species occurs along both coasts as well.

Ssp.: Uncertain; the few specimens appear to be intermediate between *P. b. mexicanus* and *P. b. brasiliensis*.

FAMILY ANHINGIDAE

Anhinga anhinga. Anhinga.

Permanent resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats.

Ssp.: *leucogaster*.

FAMILY FREGATIDAE

Fregata magnificens. Magnificent Frigatebird.

Permanent resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats, including the Corn Islands.

There are no definite nesting records, but the species occurs regularly on both coasts and on the great lakes throughout the year.

ORDER CICONIIFORMES FAMILY ARDEIDAE

Botaurus pinnatus. Pinnated Bittern.

Permanent resident. PAC and CRB: Rare in aquatic habitats.

This marsh-dwelling species is probably not as rare as the few records suggest.

Ssp.: *pinnatus*.

{*Botaurus lentiginosus*. American Bittern.

There are no Nicaraguan records, but the species occurs both to the north and south and presumably reaches Nicaragua as a transient or winter visitor.}

Ixobrychus exilis. Least Bittern.

Probably a winter visitor or a permanent resident. PAC and CRB: Rare in aquatic habitats.

The only Pacific Region record is a bird collected by A. H. Miller when it flew aboard ship in the harbor of San Juan del Sur, Depto. de Rivas, on 29 January 1959. He identified it as the subspecies *exilis*; it could have been a winter visitor or a local permanent resident. The only Caribbean Region specimen record consists of a single male in breeding condition collected at Los Sábalo, Río San Juan, 15

May 1917 (Miller and Griscom unpubl. ms.), which also represents *exilis*. Tom Will saw three individuals along the Río Cucaracha near San Carlos, Río San Juan, on 6 April 1991. The species is probably not as rare as the few records suggest.

Ssp.: *exilis*.

Tigrisoma lineatum. Rufescent Tiger-Heron.

Probably a visitor or permanent resident. CRB: Rare in aquatic habitats.

The only two specimen records are from Río Segovia [= Río Coco], RAAN, and Río Escondido, RAAS. The latter record is that of Richmond, who wrote: "One specimen shot on the Escondido, and others supposed to belong to this species, heard on the same river." The specimen cannot be found in the U.S. National Museum, and as Richmond wrote only that he shot one, perhaps it was not saved. His account of the bird's nocturnal groaning call matches Wetmore's (1965) description for this species and adds credibility to the record. On 18 February 1977, an adult was seen in a small marsh within semideciduous forest just north of the Nicaraguan-Costa Rican border north of Los Chiles, Costa Rica (F. G. Stiles pers. comm.). This heron seems to be rare north of Panama but its nocturnality may be partly responsible for the scarcity of records.

Ssp.: *lineatum*.

Tigrisoma mexicanum. Bare-throated Tiger-Heron.

Permanent resident. PAC and CRB: Uncommon in aquatic habitats.

Ssp.: *mexicanum*.

Ardea herodias. Great Blue Heron.

Winter resident and probably a permanent resident. PAC and CRB: Uncommon in aquatic habitats, including the Corn Islands.

The only specimen record is a single bird taken in January 1883 by Nutting at San Juan del Sur (Pacific Region), where he said it was common. Peters's (1929) sight record of about six birds on Great Corn Island was in December 1927. Although the sample of five band recoveries (Table 2) is small, it spans 17 years, and all of the birds recovered in Nicaragua were banded in the same general area in the mid-western United States. That area is due north of Nicaragua, and a bird flying due south and crossing the Gulf of Mexico-Caribbean Sea would first encounter land in Honduras-Nicaragua. The only potential summer records are sightings by Tom

TABLE 2. Great Blue Heron band recoveries from Nicaragua.

Banding date	Banding locality	Recovery date	Recovery locality
3 July 1940	Michigan	January 1943	Caribbean Coast
30 June 1948	Michigan	15 October 1949	San Carlos, Río San Juan
24 June 1956	Michigan	December 1956	Near Puerto Cabezas, RAAN
31 May 1957	Michigan	5 January 1958	Corinto, Pacific Region
9 June 1957	Ohio	October 1959	Near Ciudad Darío, Pacific Region

Will along the Río San Juan of three individuals on 16 May and a single bird on 11 June 1991, but there is no definite evidence of nesting.

Ssp.: Only *herodias* is certain.

***Casmerodius albus* [*Ardea alba*].** Great Egret.

Transient, winter resident, permanent resident. PAC and CRB: Fairly common in aquatic habitats, rare in the Corn Islands.

A bird banded in Mississippi in 1947 was taken near Corinto, Depto. de Chinandega, in 1949.

Ssp.: *egretta*.

***Egretta thula*.** Snowy Egret.

Transient, winter resident, permanent resident. PAC: Fairly common in aquatic habitats; CRB: Uncommon in aquatic habitats.

Birds banded in Mississippi (1) and Oklahoma (2) have been taken in Nicaragua.

Ssp.: *thula*.

***Egretta caerulea*.** Little Blue Heron.

Transient, winter resident, permanent resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats, including the Corn Islands.

Birds banded in Mississippi (1), Oklahoma (3), and Texas (1) have been taken in Nicaragua from September to March.

***Egretta tricolor*.** Tricolored Heron.

Transient, winter resident, permanent resident. PAC and CRB: Uncommon in aquatic habitats, including the Corn Islands.

A bird banded in Florida on 30 May 1970 was taken on 15 January 1971 near Puerto Cabezas, RAAN.

Ssp.: *ruficollis*.

***Egretta rufescens*.** Reddish Egret.

Winter visitor. PAC and CRB: Rare in aquatic habitats.

Robert Ridgely photographed one on 21 February 1975 near Puerto Sandino (formerly Puerto Somoza), Depto. de León. Tom Will sighted one at Isla Juan Venado, Depto. de León, 28 October 1990; single birds at Casares, Depto. de Carazo, 16 December 1990 and 4 January 1991; and on the Caribbean side of the country, one at San Juan del Norte, Depto. Río San Juan, 11 May 1991.

Ssp.: Presumably *rufescens*.

***Bubulcus ibis*.** Cattle Egret.

Winter resident, permanent resident. PAC: Common in grasslands and aquatic habitats; CRB: Fairly common in grasslands and aquatic habitats, including the Corn Islands.

The species is more abundant in the Pacific Region, where there are more livestock pastures, than in the Caribbean Region. It was first recorded in 1962 but was already widespread then. A bird banded in Florida on 7 June 1973 was taken in the Caribbean Region of Nicaragua on 5 March 1974. James Silliman found that the species was "generally common, with cattle or mules" on Great Corn Island on 30 December 1981.

Ssp.: *ibis*; all New World populations are derived from this subspecies.

***Butorides virescens*.** Green Heron.

Transient, winter resident, permanent resident. PAC: Fairly common in aquatic habitats; CNHL: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats, uncommon in the Corn Islands.

There are breeding records (June 1917) from the Pacific Region (Miller and Griscom unpubl. ms.) but none definite from the Central Highlands or the Caribbean Region. A bird banded in Maryland on 1 July 1967 was taken in Nicaragua on 26 October 1967 (Thurber et al. 1987).

Ssp.: *virescens*; neither *maculatus* nor *mesatus* Oberholser 1912, type locality Managua, is recognizably distinct from *virescens*.

{*Agamia agami*. Chestnut-bellied Heron [Agami Heron].

There are no records, but the species occurs in lowland humid forest to the north and south of Nicaragua and it will probably be recorded there eventually.

Nycticorax nycticorax. Black-crowned Night-Heron.

Transient, winter resident, and probably a permanent resident. PAC: Fairly common but local in aquatic habitats; CRB: Probably fairly common but local in aquatic habitats.

Birds banded in New York (1), Minnesota (1), and Michigan (1) have been taken in Nicaragua, the latter on 1 May.

Ssp.: *hoactli*.

Nyctanassa violacea. Yellow-crowned Night-Heron.

Probably a winter visitor or permanent resident. PAC: Absolutely rare but locally fairly common in aquatic habitats; CNHL: Rare in forest edge, low second-growth deciduous forest; CRB: Uncommon in aquatic habitats and rare in the Corn Islands.

The only specimen record of this species from the Pacific Region is that of Nutting, but James Silliman had sightings of single birds at coastal localities in the Depto. de León in February and March 1982 and 1983, and Tom Will recorded 12 individuals at Casares, Depto. de Carazo, on 5 January 1991 and six on 28 May 1991. In the Caribbean Region, there is one record from Great Corn Island, and Tom Will sighted three on 25 February and four on 28 February 1992 along the Río Escondido N of Bluefields and a single individual along the Río Kukra south of Bluefields, RAAS, on 10 July 1991. J. C. Martínez-Sánchez collected one of three birds at Santa María de Ostuma, Depto. de Matagalpa, 1,400 m elevation, on 7 March 1983.

Ssp.: Presumably *violacea*.

Cochlearius cochlearius. Boat-billed Heron.

Permanent resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats.

Its nocturnal habits make this species less conspicuous than most other herons, and it appears to be locally distributed.

FAMILY THRESKIORNITHIDAE

Eudocimus albus. White Ibis.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in aquatic habitats; CRB: Rare in aquatic habitats.

James Silliman recorded a young juvenile (still with down on the head) at PoneLOYA, Depto. de León, on the Pacific coast, on 24 November 1982. This is probable evidence of breeding in Nicaragua, which was previously presumed.

Plegadis falcinellus. Glossy Ibis.

Probably a winter visitor or permanent resident. CRB: Rare in aquatic habitats.

Tom Will sighted a single individual in breeding plumage along the Río San Juan near El Castillo on 16 May 1991. A first record for Nicaragua, the species is not unexpected, as Stiles and Skutch (1989) report scattered records on the Caribbean slope in Costa Rica (where "probably a rare migrant") but regular occurrence in the Río Frío region.

Mesembrinibis cayennensis. Green Ibis.

Probably a permanent resident. CRB: Rare in aquatic habitats.

This species was not recorded from Nicaragua until the 1990s, but there are specimens from Costa Rica and sight records from eastern Honduras (Marcus 1983). Tom Will sighted two individuals along the Río San Juan on 11 May and again on 13 May and four individuals in swamp forest near San Juan del Norte on 12 May 1991. He also made voice recordings of the species along the Río Santa Cruz 13 km NNE of El Castillo on 4 November 1990 and again on 15 June 1991.

Ajaia ajaja [*Platalea ajaja*]. Roseate Spoonbill.

Probably a permanent resident. PAC: Uncommon and local in aquatic habitats; CRB: Rare and local in aquatic habitats.

All the records from the Caribbean Region are from the Río San Juan at or near Lago de Nicaragua. The species probably nests, but there are no definite breeding records.

FAMILY CICONIIDAE

Jabiru mycteria. Jabiru.

Permanent resident. PAC and CRB: Uncommon and local in aquatic habitats.

Camacho (1983) summarized data on distribution and nesting. The species now occurs primarily in three geographic regions: the extreme northwest (Depto. de Chinandega); the vicinity of Lago de Nicaragua other than the western edge, with nesting recorded in western Depto. de Chontales (Pacific Region); and swampy areas in the pine savannas of the northeast, where nesting is also recorded. Miller and Griscom (unpubl. ms.) observed two birds at Los Sábalo, Río San Juan.

Mycteria americana. Wood Stork.

Permanent resident. PAC and CRB: Uncommon in aquatic habitats.

This species is probably less abundant than formerly, and is locally distributed.

ORDER ANSERIFORMES
FAMILY ANATIDAE

Dendrocygna autumnalis. Black-bellied Whistling-Duck.

Permanent resident. PAC: Fairly common in aquatic habitats; CRB: Locally fairly common in aquatic habitats.

Ssp.: *fulgens*.

Dendrocygna bicolor. Fulvous Whistling-Duck.

Probably a winter resident. PAC: Probably fairly common locally in aquatic habitats.

Somewhat surprisingly, since it ranges from the southern United States to Costa Rica, to the best of my knowledge this species was not recorded from Nicaragua until recently. Tom Will found it with other waterfowl on the shallow wetlands of Las Playitas, Depto. de Matagalpa, in numbers ranging from six on 22 November 1990 to a maximum of ~250 birds on 11 April 1991.

Cairina moschata. Muscovy Duck.

Permanent resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats.

Anas crecca. Green-winged Teal.

Winter visitor. CRB: Rare in aquatic habitats.

The only record is a band recovery from the northeast Caribbean coast in January 1958 from a bird banded in British Columbia on 27 July 1957.

Ssp.: *carolinensis*.

Anas platyrhynchos. Mallard.

Probably a winter resident. PAC: Expected in aquatic habitats but status is unknown.

C. Bovallius (Rendahl 1919) reported "great flocks" of this and the following five other species at El Boquete, Península El Menco, on the northwest shore of Lago de Nicaragua. All the other five species are documented by specimens or subsequent sight records. Mallards are only casual elsewhere in Middle America south of Mexico; this and the absence of specimen records puts Bovallius's observation of "great flocks" in question. J. C. Martínez-Sánchez, however, has several sight records including one of two males and three females at Laguna de Las Playitas, Depto. de Matagalpa, on 23 October 1988.

Ssp.: *platyrhynchos*.

Anas acuta. Northern Pintail.

Transient, winter resident. PAC: Probably fairly common in aquatic habitats; CRB: Uncommon in aquatic habitats.

There are 13 band recoveries from Nicaragua, mostly from the Pacific Region, of birds banded from localities in midwestern and western North America.

Anas discors. Blue-winged Teal.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CNHL: Probably uncommon in aquatic habitats at moderate elevations; CRB: Common in aquatic habitats.

As of 1980, there were 108 band recoveries of this species from Nicaragua, mostly from Caribbean localities, from birds banded in North America.

Anas cyanoptera. Cinnamon Teal.

Winter resident. PAC: Absolutely rare but locally fairly common in aquatic habitats; CRB: Rare in aquatic habitats.

The only specimen record is that of C. Bovallius (Rendahl 1919), who collected a female at San Juan del Norte, Río San Juan, on 7 November 1982. All Pacific Region records are sightings.

Ssp.: If any recognized, *septentrionalium*.

Anas clypeata. Northern Shoveler.

Winter resident. PAC: Absolutely uncommon but locally common in aquatic habitats; CRB: Rare in aquatic habitats.

J. R. Alcorn (pers. comm.) recorded "over five hundred" on the Laguna Las Playitas, Depto. de

Matagalpa, from 11 April to 8 May. C. Bovallius (Rendahl 1919) collected one male at San Juan del Norte, Río San Juan, on 7 November 1882, and observed "great flocks" at El Boquete (see *A. platyrhynchos*) early in 1883. This appears to be the only specimen from Nicaragua. A band from a bird banded in Saskatchewan on 7 July 1957 was recovered from the Pacific Region on 17 January 1959.

***Anas americana*.** American Wigeon.

Winter resident. PAC and CRB: Uncommon in aquatic habitats.

There are several banding recoveries from both Pacific Region and Caribbean Region localities, but no specimens. I have sight records for the Pacific Region only. C. Bovallius reported seeing this species at El Boquete (see above).

***Aythya americana*.** Redhead.

Winter visitor.

The only record is a band recovery from an unspecified locality in Nicaragua in January 1967 from a bird banded in Maryland on 24 January 1964. This is the southernmost occurrence of the species, which has not previously been recorded south of Guatemala.

***Aythya valisineria*.** Canvasback.

Winter visitor. PAC: Rare in aquatic habitats.

I saw two Canvasbacks on the east side of Lago de Nicaragua at Puerto Díaz, Depto. de Chontales, on 19 January 1957. The species has been recorded south of Mexico only rarely and probably does not winter regularly in Nicaragua.

***Aythya collaris*.** Ring-necked Duck.

Winter resident. PAC: Rare in aquatic habitats; CRB: Rare in aquatic habitats.

The only record is a band recovery on 21 February 1959 from the vicinity of Puerto Cabezas, RAAN, of a bird banded in Maine on 24 June 1958. Tom Will reported sightings of two to four individuals at Las Playitas, Depto. de Matagalpa, from December 1990 to February 1991.

***Aythya affinis*.** Lesser Scaup.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CRB: Probably fairly common in aquatic habitats, and uncommon in the Corn Islands.

A specimen from Great Corn Island was taken on 13 December 1927. J. R. Alcorn (pers. comm.)

reported five seen and one collected at Las Playitas, Depto. de Matagalpa, on 8 May 1956. There are numerous band recoveries from Nicaragua, including one from a bird banded at Mackenzie, Northwest Territories, Canada, on 25 August 1967 and recovered on 7 November 1967.

***Oxyura jamaicensis*.** Ruddy Duck.

Winter resident. PAC: Uncommon in aquatic habitats.

I have sight records from several localities, including many on 19 January 1957 on the northeast side of Lago de Nicaragua at Puerto Díaz, Depto. de Chontales. J. R. Alcorn (pers. comm.) reported 10 seen at Las Playitas, Depto. de Matagalpa, on 25 April and one at the same place on 8 May 1956; Tom Will recorded from 2 to 12 individuals at the same location between November 1990 and February 1991. Nicaragua is probably the southern limit of the regular winter range in Middle America.

Ssp.: Presumably *rubida*.

***Oxyura dominica* [*Nomonyx dominicus*].** Masked Duck.

Permanent resident. PAC: Rare in aquatic habitats; CRB: Uncommon in aquatic habitats.

J. C. Martínez-Sánchez (in. litt.) has sight records of up to 11 birds in the Río Bocay, Depto. de Jinotega, in April 1981, and two pairs at Isla Zapatera, off Granada in Lago de Nicaragua, on 18 August 1983. These are the first records for Nicaragua, although the species' presence was to be expected.

ORDER FALCONIFORMES
FAMILY CATHARTIDAE

***Coragyps atratus*.** Black Vulture.

Permanent resident. PAC and CNHL: Common at moderate elevations in all open habitats; CRB: Common in all open habitats.

Like the following species, this one is virtually ubiquitous but there are almost no specimens.

***Cathartes aura*.** Turkey Vulture.

Permanent resident. PAC and CNHL, Common at moderate elevations; CRB: Common in all open habitats.

Despite its common and ubiquitous status, there are no skins available from Nicaragua and thus no subspecific determination.

Cathartes burrovianus. Lesser Yellow-headed Vulture.

Permanent resident. CRB: Rare in forest edge and low second-growth areas of lowland pine savanna.

This species is probably confined to the Caribbean Region but has doubtless been overlooked and should prove more common than the few sight records (Howell 1972) indicate.

Sarcoramphus papa. King Vulture.

Permanent resident. PAC: Rare in deciduous forest at moderate elevations; CRB: Absolutely uncommon but locally fairly common in humid forest, including forest edge and low second-growth areas.

Deforestation will undoubtedly make this species increasingly rare to the point of extirpation in the Pacific Region.

FAMILY ACCIPITRIDAE

Pandion haliaetus. Osprey.

Transient, winter resident, and probably permanent resident. PAC: Uncommon in aquatic habitats; CRB: Probably fairly common in aquatic habitats; rare in the Corn Islands.

There are no definite breeding records, but Miller and Griscom (unpubl. ms.) were told by Chávez that the Osprey bred around Lago de Managua. On the Caribbean slope, Richmond found it "common during the winter months, particularly near the coast. Observed as late as May," which suggests that he considered it a winter resident only. The only specimen records are one collected by William Beebe at Corinto, Depto. de Chinandega, 3 January 1938 (AMNH), and one collected by Ponsol (Howell 1964a). J. R. Alcorn (pers. comm.) reported two sightings from the Pacific Region, on 23 March and 14 April 1956; James Silliman recorded single birds along the coast at Isla Juan Venado, Depto. de León, on 8 November 1981, 6 March 1982, and 1 March 1983; and Tom Will reported single birds at Laguna de Masaya on 11 February and 17 November 1990, 5 January 1990 at Casares, Depto. de Carazo, and a remarkable 15 individuals in Lago de Nicaragua near Granada on 13 April 1990. J. L. Peters sighted a single bird at Great Corn Island in December 1927. I saw one over a large artificial lake in the interior at El Salto, RAAN, on 29 April 1962.

Ssp.: *carolinensis*.

Gampsonyx swainsonii. Pearl Kite.

Permanent resident. PAC: Uncommon in thorn forest and scrub, forest edge, low second-growth deciduous forest and grasslands.

This species is found in arid open country where there are high perching sites overlooking grassy areas. The Pearl Kite is widespread in South America but until recently the isolated Nicaraguan population was the only one in Middle America. The species was first recorded in the Canal Zone, Panama, in 1977 and has since been recorded from other Panamanian localities but without certain evidence of breeding. These birds are probably emigrants from South America as deforestation has opened areas of suitable habitat from Colombia to Panama. In Nicaragua it has been recorded only between Chinandega to the north and Granada to the south. Its absence from adjacent El Salvador, southwestern Honduras, and northwestern Costa Rica (despite the presence of similar habitats there) must be real, as these are thoroughly studied regions. The Nicaraguan birds are not recognizably different in color or size from those of northern South America. The subspecific name *leoniae* (type locality León, Nicaragua) has priority and thus applies to the populations of both those areas. Although the dates of specimen collection (January, April, June, October, November, December) indicate that the Pearl Kite is a permanent resident in Nicaragua, no nests have been recorded there, nor are there any precise data on its population size or limits of range.

Ssp.: *leoniae* Chubb, 1918; type locality León.

Leptodon cayanensis. Gray-headed Kite.

Permanent resident. PAC: Probably rare in deciduous forest; CRB: Uncommon in humid forest.

A single Richardson specimen from Chinandega, 21 August 1908, is the only collected record from the Pacific Region, but James Silliman saw a single adult at Cosigüina, Depto. de Chinandega, 11 February 1983. A pair nested in my rain forest study area at 25 km SSW of Waspan, Comarca de El Cabo, RAAN, in April 1967 (Howell 1971:193, 203). Tom Will saw two individuals 25 km SW of Bluefields, RAAS, on 3 February 1991.

Ssp.: *cayanensis*.

Chondrohierax uncinatus. Hook-billed Kite.

Permanent resident. PAC: Rare in aquatic habitats; CNHL: Probably rare in cloud forest; CRB: Absolutely rare but probably fairly common locally in aquatic habitats.

Miller and Griscom (unpubl. ms.) obtained the only Pacific Region record from a marshy area at Tipitapa, Depto. de Managua, between the two great lakes. Richardson specimens from the Central Highlands have no altitude or habitat data, but J. C. Martínez-Sánchez collected a male (testes not enlarged) on 25 May 1983 at Santa María de Ostuma, Depto. de Matagalpa, at 1,400 m (lower extent of cloud forest). The BMNH has six Richardson specimens from Caribbean Region habitats—one from Río Grande, Depto. de Matagalpa, and five from San Emilio, Depto. de Rivas.

Ssp.: *uncinatus*.

***Elanoides forficatus*.** Swallow-tailed Kite.

Transient, probably a winter resident and permanent resident. PAC: Rare in deciduous forest at moderate elevations; CNHL: Rare; CRB: Common in humid forest and fairly common in the lowland pine savanna.

Huber (1932) obtained definite breeding records, and there are sight records at all seasons. Presumably some of the birds which are seen in large flocks are transients or winter residents. Richardson's specimens from the Central Highlands lack habitat data.

Ssp.: *yetapa* (permanent resident); presumably *forficatus* is a transient or a winter resident.

***Elanus leucurus*.** Black-shouldered Kite [White-tailed Kite].

Transient, winter resident, permanent resident. PAC: Uncommon in thorn forest and scrub, forest edge, low second-growth deciduous forest and grasslands; CRB: Uncommon in forest edge and low second-growth humid forest; rare in the lowland pine savanna.

My sight record of a single bird at 10 km E of Villa Sandino (formerly Villa Somoza), 500 m, Depto. de Chontales, on 22 January 1957 is the earliest for Nicaragua. The habitat was partly cleared humid forest, near the broad region where the humid Caribbean and arid Pacific regions merge. The first specimen was not obtained until February 1961 in the Pacific Region (Bond 1964), and nesting was reported in Nicaragua in 1962 (Davis and Davis 1962). The species has since continued to expand its winter and breeding range southward in Middle America (Eisenmann 1971).

Ssp.: *majusculus*.

***Rostrhamus sociabilis*.** Snail Kite.

Permanent resident. PAC and CRB: Absolutely rare but locally fairly common in aquatic habitats.

All records are from Lago de Nicaragua and along the Río San Juan to the Caribbean Region. Distribution is patchy and presumably dependent on the presence of *Pomacea* snails, but the kites are not invariably found wherever snails are abundant, even where there are enough to support Limpkins (*Aramus guarauna*).

Ssp.: *sociabilis*.

***Harpagus bidentatus*.** Double-toothed Kite.

Permanent resident. PAC: Uncommon in deciduous forest; CNHL: Probably rare; CRB: Uncommon in humid forest.

This forest-dwelling species is probably rarer than before in the Pacific Region because of habitat destruction. The only records from the Central Highlands are two Richardson specimens from San Rafael del Norte, Depto. de Jinotega, which lack altitude and habitat data.

Ssp.: *fasciatus*.

***Ictinia mississippiensis*.** Mississippi Kite.

Transient. PAC: Rare in deciduous forest.

The species presumably migrates through all of Middle America, but the only Nicaraguan records are of two birds sighted by James Silliman just outside Managua on the road to León on 23 November 1981 and a single individual sighted by Tom Will on the Carretera Sur 12 km S of Managua on 10 October 1990.

***Ictinia plumbea*.** Plumbeous Kite.

Transient, summer resident. PAC: Common in forest edge, and low second-growth deciduous forest; CNHL: Fairly common in forest edge and low second-growth deciduous forest at moderate elevations; CRB: Common at forest edge and low second-growth humid forest, and fairly common in forest edge and low second-growth lowland pine savanna.

There are no Nicaraguan records outside the period from the end of February through July, and the species was not found in other months at the same localities where it occurred in the spring and summer.

Ssp.: None recognized, including *vagans* Miller and Griscom 1921, type locality Pena Blanca [= Peñas Blancas], Depto. de Jinotega.

Circus cyaneus. Northern Harrier.

Transient, winter resident. PAC: Uncommon in grasslands; CRB: Probably common in cleared humid forest.

The only published record is that of Richmond, whose single specimen was collected at 50 miles (~80 km) up the Río Escondido from Bluefields, RAAS, on 2 October 1892; it is in the BMNH. Richmond considered the species "common in the winter," but there are no other specimen records except one taken near Managua by Chávez, who considered it "uncommon" (Miller and Griscom unpubl. ms.). I saw an adult male foraging at the Managua airport on 3 March 1962, and J. R. Alcorn (pers. comm.) saw lone individuals at Managua from 25 February to 15 May 1956.

Ssp.: *hudsonius*.

Accipiter superciliosus. Tiny Hawk.

Permanent resident. CRB: Rare in humid forest.

Cherrie (1891) reported a specimen taken "near Greytown, Nicaragua" [= San Juan del Norte], Río San Juan, and the only other specimen record is a male that I collected 20 km SSW of Waspan, Comarca de El Cabo, RAAN, 1 February 1962. It was eating a female Red-capped Manakin (*Pipra mentalis*). This constitutes the northernmost record for the hawk. As Richardson never obtained a specimen in Nicaragua, the species is probably genuinely rare there. Tom Will saw single adult birds from a rural road in humid forest 13 km NNE of El Castillo, Río San Juan on 4 September and 1 December 1990.

Ssp.: *fontanieri*; *exitiosus* is not recognized.

Accipiter striatus. Sharp-shinned Hawk.

A. s. velox: Winter visitor. PAC: Probably rare; CHNL: Probably rare in the highland pine and pine-oak forest; CRB: Rare in humid forest.

A. s. chionogaster: Permanent resident. CHNL: Fairly common in highland pine and pine-oak forest.

There are five records of the North American migrant form *velox* over a span of ~110 years—three from the Central Highlands and one each from the Pacific and Caribbean regions. The Pacific Region specimen was taken near Managua by Chávez (Miller and Griscom unpubl. ms.). One of the Central Highland records consists of a report of a band number of a hawk killed near Matagalpa on 15 February 1979, banded in Minnesota on 24 September 1976. J. C. Martínez-Sánchez collected a

male immature at Santa María de Ostuma, Depto. de Matagalpa, on 22 March 1984. The scarcity of records suggests that *velox* is a rare visitor and not a regular winter resident. The resident white-breasted form *chionogaster* has sometimes been considered a separate species. J. C. Martínez-Sánchez collected a male with enlarged testes on 17 March 1984 at 10 km N of Matagalpa, elevation 1,250 m.

Ssp.: See discussion above.

Accipiter cooperi. Cooper's Hawk.

Probably a transient or winter resident.

There are no records, but the species has been recorded in winter in Costa Rica and some birds presumably reach Nicaragua.

Accipiter bicolor. Bicolored Hawk.

Permanent resident. CNHL: Probably rare; CRB: Uncommon in humid forest.

Ssp.: *bicolor*.

Geranospiza caerulescens. Crane Hawk.

Permanent resident. PAC: Uncommon in deciduous forest; CNHL: Probably uncommon; CRB: Probably rare in humid forest.

The species is probably not truly rare in the Caribbean Region, but there are very few specific records.

Ssp.: *nigra*.

***Leucopternis semiplumbea* [*Leucopternis semiplumbeus*]**. Semiplumbeous Hawk.

Probably visitor or permanent resident. CRB: Rare in humid forest.

A bird collected along the Río Segovia [= Río Coco] by Townsend in 1887 constitutes the earliest specimen record for Honduras and Nicaragua recorded for this species. In the U.S. National Museum there is a single specimen of *semiplumbea* from "Nicaragua" that was one of 20 specimens from that country donated by Charles E. Kern and accessioned on 20 May 1889 by R. Ridgway. There is no specific locality for most of the specimens, including this one, but six were catalogued as from "San Francisco, 40 miles (64 km) from Greytown, Río San Juan, 1888," which would be in the Caribbean Region. Presumably Ridgway was satisfied that all were obtained in Nicaragua. This specimen was not listed by Friedmann et al. (1950). If resident throughout the Caribbean Region of Nicaragua, the species must be

very rare there. Marcus (1983) reported sighting a single bird in eastern Honduras on 7 February 1982. Tom Will sighted a single individual along the Río Kukra, 25 km SW of Bluefields, RAAS, 11 March 1990, and another along the Río Kama, 45 km NW of Bluefields, RAAS, 15 March 1990.

***Leucopternis albicollis*.** White Hawk.

Permanent resident. PAC: Rare in deciduous forest and cloud forest; CNHL: Probably uncommon in deciduous forest; CRB: Fairly common in humid forest.

The only records (sight) from the Pacific Region are from Volcán Mombacho, Depto. de Granada, from deciduous forest up to the cloud forest at the summit.

Ssp.: *costaricensis*.

***Buteogallus anthracinus*.** Common Black-Hawk.

Permanent resident. PAC: Uncommon in aquatic habitats, forest edge and low second-growth deciduous forest; CNHL: Probably uncommon; CRB: Fairly common in aquatic habitats, forest edge, and low second-growth humid forest.

This species is more abundant in the Caribbean than in the Pacific Region and is usually found near water.

{***Buteogallus subtilis*.** Mangrove Black-Hawk.

This form, which has been considered conspecific with *anthracinus*, is apparently confined to Pacific coastal mangroves from El Salvador south to northwest Peru. No specimens are known from Nicaragua, but the species presumably occurs there in suitable habitat. Sight records by James Silliman of *B. anthracinus* from coastal Isla Juan Venado, Depto. de León, where mangroves occur, probably pertain to this form.}

***Buteogallus urubitinga*.** Great Black-Hawk.

Permanent resident. PAC: Fairly common in aquatic habitats, forest edge, and low second-growth deciduous forest; CRB: Fairly common in aquatic habitats, forest edge and low second-growth humid forest.

Ssp.: *ridgwayi*.

***Parabuteo unicinctus*.** Harris's Hawk.

Permanent resident. PAC: Uncommon in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Probably rare; CRB: Rare in grasslands.

The only Central Highlands record is an immature male taken by Richardson at San Rafael del Norte, Depto. de Jinotega, on 23 March 1892 (BMNH). The only record from the Caribbean Region is that of Miller and Griscom (unpubl. ms.), who wrote: "we encountered this species on the grassy plains near San Francisco on the San Juan River, but were unable to procure a specimen." They were there in May 1917. The species is probably only a straggler to cleared areas in the humid forest from open Pacific Region habitats.

Ssp.: *harrisi*.

***Busarellus nigricollis*.** Black-collared Hawk.

Permanent resident. PAC and CRB: Absolutely rare but locally fairly common in aquatic habitats.

All records are from the two great lakes and the Río San Juan drainage. It is evidently locally distributed, as Richardson obtained no specimens and I never encountered the species even in apparently suitable habitats.

Ssp.: *nigricollis*.

{***Harpyhaliaetus solitarius*.** Solitary Eagle.

This species may be a rare permanent resident in Nicaragua, as it occurs to the north and south and is not confined to high altitudes, but I know of no specific records from the country.}

***Buteo nitidus*.** Gray Hawk.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Probably rare at moderate elevations.

This is predominantly a Pacific Region species. Richardson's specimens from the Central Highlands (Matagalpa) were probably taken at low altitudes, and one specimen from San Emilio, Depto. de Rivas, was probably obtained in a dry habitat near that locality.

Ssp.: Birds from western Nicaragua are decidedly small, as claimed by Miller and Griscom (1921) in their description of *micrus* (type locality 4 miles [6.4 km] NE of Chinandega, Depto. de Chinandega), and I recognize it on that basis. The color characters claimed (darker gray ventral barring, number of white tail bands) are too variable to be diagnostic.

Buteo magnirostris. Roadside Hawk.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Common in forest edge, low second-growth deciduous forest at moderate elevations; common in forest edge and low second-growth highland pine and pine-oak forest; CRB: Common in forest edge and low second-growth humid forest and lowland pine savanna.

This species seems equally abundant in all the regions and habitats where it is found.

Ssp.: I follow Stresemann and Amadon (1979) in referring Nicaraguan populations to the wide-ranging *griseocauda*; *direptor* and *argutus* are not recognized.

Buteo platypterus. Broad-winged Hawk.

Transient, winter resident. PAC: Fairly common in forest edge and low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest, and rare in forest edge and low second-growth cloud forest; CRB: Uncommon in forest edge and low second-growth humid forest.

During migration these hawks may become common, at least in spring. On 4 April 1962 at San Carlos, Río San Juan, I saw a circling flock of ~25 and noted a few with larger flocks of *B. swainsoni* between 29 March and 4 April.

Ssp.: *platypterus*.

Buteo brachyurus. Short-tailed Hawk.

Permanent resident. PAC: Probably rare in deciduous forest; CNHL: Probably rare in cloud forest; CRB: Rare in humid forest.

Miller and Griscom (unpubl. ms.) reported two specimens "in the black phase in the Managua Museum taken locally." James Silliman observed two birds, a light and a dark morph, soaring over Volcán Casita, Depto. de Chinandega, on 18 February 1983. The light bird was pulling twigs from branches with its feet, presumably gathering nest material. J. C. Martínez-Sánchez has specimens from Chiltepe, Depto. de Managua; Volcán Mom-bacho, Depto. de Granada; and Santa María de Ostuma, Depto. de Matagalpa. The only record from the Caribbean Region is Richmond's (1893) single specimen from the Río Escondido, RAAS.

Ssp.: *fuliginosus*.

Buteo swainsoni. Swainson's Hawk.

Transient and probably a winter resident. PAC: Common over thorn forest and scrub; CRB: Common over humid forest.

About 200 were seen overhead on 25 March 1962 at Chiltepe, Depto. de Managua, and J. R. Alcorn (pers. comm.) saw a flock of ~30 near Managua on 10 April 1956. Between 28 March and 5 April 1962, I saw many circling flocks consisting of hundreds of birds in the vicinity of San Carlos, Río San Juan. The species is a common transient in spring and probably also in the fall, but observations from that period are lacking. There are no specimens from Nicaragua, Honduras, or El Salvador, and most transients probably pass over these regions without ever descending to land. The habitats listed above are those over which the migrating flocks were seen. I saw one bird soaring at Hato Grande, Depto. de Chontales (grassland, thorn forest and scrub), on 27 January 1956 and five there on 13 January 1957, which indicates that individuals occasionally winter that far north. James Silliman notes of 10 February 1983 record: "7 km N of El Viejo [town, not Volcán], Depto. de Chinandega, 25 individuals in all phases of maturity, landing in dirt of cotton field being plowed; getting something in dirt, picking with beak. 35 more seen in flock ~1 km further N." On 13 February: "About 5 in same area. Note feeding while migrating." These February records, however, may pertain to wintering birds.

Buteo albicaudatus. White-tailed Hawk.

Probably a winter visitor or permanent resident. PAC: Rare in grasslands; CNHL: Rare; CRB: Fairly common in lowland pine savanna.

I have elsewhere (Howell 1971, 1972) discussed the resident population of the pine savanna. The few records from other areas are probably of visitors.

Ssp.: *hypospodius*.

Buteo albonotatus. Zone-tailed Hawk.

Permanent resident. PAC: Uncommon in deciduous forest at moderate elevations; CNHL: Rare in deciduous forest, probably at moderate elevations.

Miller and Griscom (unpubl. ms.) listed three specimens in the Managua Museum and said it was "reported as common near Managua." James Silliman saw one over the road from León to

Managua on 23 November 1981, and Tom Will saw single individuals in the Sierras de Managua 13 km SSW of Managua in November 1990 and January 1991. Perhaps the species was common before extensive deforestation, but the only other recent records from the Pacific Region are from Volcán Mombacho. I saw a pair there gathering nest material on 14 March 1962, and Silliman saw one bird there on 25 September 1982.

Ssp.: None recognized.

***Buteo jamaicensis*.** Red-tailed Hawk.

Probably a winter resident or permanent resident. PAC: Rare in highland pine and pine-oak forest; CNHL: Uncommon in highland pine and pine-oak forest; CRB: Uncommon in lowland pine savanna.

Breeding populations in Nicaragua are all assignable to *B. j. kemsiesi* and are recorded only from pine forest. The only PAC specimen record is one in the BMNH taken on 28 April 1891 at "El Volcán, 6000 ft (1830 m), Chinandega" [= Volcán San Cristóbal, Depto. de Chinandega] collected by Richardson. His estimate of the altitude is too high, but there was only pine forest at the higher elevations on that mountain. J. C. Martínez-Sánchez has records from nearby Volcán Casita. Whether or not the species breeds there is uncertain, but James Silliman reported an adult seen soaring over Volcán Casita on 27 March 1983. The only other BMNH specimen from Nicaragua was taken by Richardson at Matagalpa in 1891; the original label is missing and neither sex nor exact date is given. This bird is in erythristic plumage and was assigned by Salvin and Godman to "*Buteo rufescentior*." As this name is a synonym of *B. j. calurus*, that form has been listed in subsequent references as ranging to Nicaragua in winter. The Matagalpa specimen is probably not identifiable to subspecies, as it is unsexed and as there is overlap in size between *calurus* and *kemsiesi*. The erythristic morph has not been reported in *kemsiesi*, but melanistic birds are known, including a male in the AMNH taken by Richardson at San Rafael del Norte on 9 April 1907. This specimen is essentially all black except for a rufous tail, and Storer (1962) assigned it to *kemsiesi*. The occurrence of *calurus* in Nicaragua is thus questionable but possible as there are specimens from Costa Rica and Panama identified as that subspecies. These should be reexamined. Nutting's listing of this species from San Juan del Sur, Depto. de Rivas, was based on hearsay and there

are no specimen records from the Pacific Region lowlands. Silliman, however, reported sightings of an immature with banded tail at coastal Isla Juan Venado, Depto. de León, in December 1981 and 12 September 1982. These island records must be considered uncertain, but young birds may wander to the coastal lowlands.

Ssp.: Only *kemsiesi* is certain.

{***Morphnus guianensis*.** Crested Eagle.

This lowland form presumably occurs in Nicaragua as it is recorded from localities to the north and south, but there are no definite records.}

***Harpia harpyja*.** Harpy Eagle.

Permanent resident. PAC: Probably rare and habitat undetermined; CRB: Probably rare in humid forest.

There are only two definite records. The one from the Pacific Region is a specimen taken by Chávez at San Juan del Sur, Depto. de Rivas, and it is doubtful that any remain in that region. The other is from Savala, Depto. de Matagalpa, 19 October 1907, collected by Richardson and in the AMNH. Miller and Griscom (unpubl. ms.) wrote that "Richardson informs us that the specimen he collected is the only one he ever saw in many years in Central America."

***Spizastur melanoleucas* [*Spizaetus melanoleucus*].** Black-and-white Hawk-Eagle.

Permanent resident. CNHL: Rare and habitat undetermined; CRB: Rare in humid forest.

There are only two records. One in the BMNH is from Matagalpa taken by Richardson in 1891; the label is grease-soaked and the exact date illegible, and there are no altitude or habitat data. The other is a Richardson specimen from San Emilio, Depto. de Rivas, in the Field Museum, Chicago.

***Spizaetus tyrannus*.** Black Hawk-Eagle.

Permanent resident. PAC: Rare in deciduous forest; CRB: Rare in humid forest.

Miller and Griscom (unpubl. ms.) cite a specimen taken by Chávez in "the mountains east of Managua." This must mean south or southeast, where there are some hills and ridges that reach a maximum elevation of ~900 m. In the BMNH, there is an immature bird taken by Richardson on Volcán Mombacho, "3,000 ft" (915 m), 12 February 1896. If the altitude is precise, the habitat would be deciduous forest ~200 m below the lower limit of cloud forest. A third specimen (AMNH) is another

immature bird taken by Richardson at Vizagua [= Bijagua], Depto. de Matagalpa, 21 March 1909.

Ssp.: Presumably *serus*.

Spizaetus ornatus. Ornate Hawk-Eagle.

Permanent resident. PAC: Rare in deciduous forest; CRB: Uncommon in humid forest.

The only Pacific Region record consists of two Chávez specimens "taken in the mountains 4 miles east (= south?) of Managua" (Miller and Griscom unpubl. ms.; see *S. tyrannus*). Although uncommon in Nicaragua, this species is still much more frequently encountered than *S. tyrannus*. Richardson collected *S. ornatus* at Bijagua, Depto. de Matagalpa, on 24 March 1909, three days after obtaining *S. tyrannus* at the same locality.

Ssp.: *vicarius*.

FAMILY FALCONIDAE

***Daptrius americanus* [*Ibycter americanus*]**. Red-throated Caracara.

Permanent resident. CRB: Fairly common in humid forest.

A female collected at Cum, RAAN, on 17 April 1962, had a shelled egg in the oviduct.

Ssp.: I do not recognize any, as size (the only criterion) is too variable in this species (Blake 1977, Stresemann and Amadon 1979).

***Polyborus plancus* [*Caracara cheriway*]**. Crested Caracara.

Permanent resident. PAC: Common in thorn forest and scrub; CRB: Locally fairly common in the lowland pine savanna.

The populations in the Caribbean Mosquitia are locally distributed and tend to be concentrated, as expected, near human habitation (Howell 1971, 1972). The species is not recorded from any other Caribbean localities.

Ssp.: *cheriway*.

Herpetotheres cachinnans. Laughing Falcon.

Permanent resident. PAC: Rare in deciduous forest; CNHL: Uncommon in highland pine and pine-oak forest; CRB: Fairly common in humid forest and lowland pine savanna.

There is no definite evidence of breeding within the pine savanna, but individuals are often seen there on lookout perches (usually dead pines) not

far from the rain forest edge. The label on a female taken 25 March 1917 at San Rafael del Norte, Depto. de Jinotega (AMNH), includes the information "laying; pines; 3500 ft" (~1,060 m).

Ssp.: *cachinnans*.

Micrastur ruficollis. Barred Forest-Falcon.

Permanent resident. PAC: Rare and habitat undetermined; CNHL: Uncommon in deciduous to cloud forest; CRB: Uncommon in humid forest.

Salvin and Godman's record from Lago de Managua is based on a specimen with the label of A. Bouvier (Paris) on which the only locality datum is "Lac Managua." The exact locality is uncertain and there are no other Pacific Region records, but the species may have occurred there in well-forested areas, as it is also recorded from El Salvador.

Ssp.: Although most recent references assign Nicaraguan birds to *guerilla* (Blake 1977, Stresemann and Amadon 1979), the generally small size and tail much shorter than wing as shown by Nicaraguan specimens place them better in *interstes*.

Micrastur semitorquatus. Collared Forest-Falcon.

Permanent resident. PAC: Fairly common in deciduous forest at moderate elevations; CRB: Rare in forest edge, and low second-growth humid forest.

This is the only raptor species that occurs in forest in both the Pacific and Caribbean regions that is decidedly less common in the latter region.

Ssp.: *naso* Lesson 1842, type locality El Realejo, Depto. de Chinandega.

Falco sparverius. American Kestrel.

F. s. sparverius: Transient, winter resident. PAC: Common in thorn forest and scrub, and grasslands; CNHL: Uncommon in forest edge, low second-growth deciduous forest, and highland pine and pine-oak forest; CRB: Rare in forest edge, low second-growth humid forest, and lowland pine savanna; rare also in the Corn Islands.

F. s. nicaraguensis: Permanent resident. CRB: Fairly common in lowland pine savanna.

The distribution and ecology of these two forms in Nicaragua are discussed in detail in my paper describing the very small form *nicaraguensis* (Howell 1965). There is only one specimen and one sight record of *F. s. sparverius* from the lowland pine

savanna, but December birds from Great Corn Island are referable to that subspecies. Miller and Griscom (unpubl. ms.) give dates of occurrence of *F. s. sparverius* as 16 October to 30 March, and all of my records fall within that period. A band from a bird banded in North Dakota on 21 April 1968 was recovered near Managua on 19 October 1968.

Ssp.: See discussion above; type locality of *nicaraguensis* Howell 1965, 12 miles (19 km) NW of Puerto Cabezas, RAAN.

***Falco columbarius*.** Merlin.

Probably a transient and winter visitor. PAC: Rare; CRB: Rare in the Corn Islands.

Salvin and Godman cited a record from Chinandega, and the only other one is from Great Corn Island (14 December 1927). As the species winters throughout Middle America, it presumably occurs in Nicaragua both as a transient and as a winter visitor.

Ssp.: *columbarius*.

***Falco femoralis*.** Aplomado Falcon.

Permanent resident. PAC: Probably rare in thorn forest and scrub; CRB: Uncommon in the lowland pine savanna.

This species is almost certainly a breeding resident in the pine savanna (Howell 1972). The only Pacific Region records are two birds taken in April at San Jerónimo [= Jerónimo], Depto. de Chinandega, which may have been visitors. The specimen labels give no data on breeding condition.

Ssp.: I have elsewhere (Howell 1972) discussed the subspecific status of Nicaraguan specimens. Those from San Jerónimo are not identifiable with certainty; those from the pine savanna are *femoralis*.

***Falco rufigularis*.** Bat Falcon.

Permanent resident. PAC: Probably rare in urban areas; CRB: Fairly common in humid forest and lowland pine savanna.

The only Pacific Region records are sightings in the cities of Granada and Managua. Bat Falcons often range out into the pine savanna of the Mosquitia but seldom far from the humid forest edge.

Ssp.: *rufigularis*.

***Falco deiroleucus*.** Orange-breasted Falcon.

Permanent resident. CNHL: Probably rare in cloud forest; CRB: Rare in humid forest edge.

One specimen from each of the above regions constitute the only records. The Caribbean Region bird and Griscom's possibly erroneous sight records are discussed by Howell (1972). The Central Highlands specimen, in the BMNH, was taken by Richardson on 21 June 1891 at "Matagalpa, 4000 ft" (1,220 m). That altitude is above the level of the town and approximates the lower edge of cloud forest.

***Falco peregrinus*.** Peregrine Falcon.

Probably a transient or winter visitor. PAC: Probably rare.

This species presumably migrates through Nicaragua and may be a winter visitor there, but there are no absolutely certain specimen records. A mounted bird in the collection of B. Ponsol (Howell 1964a) lacks attached data, but Ponsol's catalogue lists a female of this species collected on 21 February 1943 at "Orilla del Lago (Guayabo)." On the same day, he collected five other birds at other localities (including Tepetate) within <10 km of Granada, so this unmapped locality must be equally close and the mounted bird may be the specimen. James Siliman reported a Peregrine Falcon at Isla Juan Venado, Depto. de León, on 8 December 1982 "flying over breakers on the ocean shore." J. R. Alcorn (pers. comm.) saw two "flying 40 feet overhead" at Las Playitas, Depto. de Matagalpa, on 11 March 1956. Tom Will sighted single individuals in the Sierras de Managua 13 km SSW of Managua, March 1990 and again March 1991; over Lago de Nicaragua near Granada, 13 April 1990; at Chacocente, Depto. de Rivas, 20 November 1990; and at Las Playitas, Depto. de Matagalpa, 9 December 1990 and 11 April 1991.

Ssp.: Presumably *anatum*.

ORDER GALLIFORMES
FAMILY CRACIDAE

***Ortalis vetula*.** Plain Chachalaca.

Permanent resident. PAC: Probably uncommon in thorn forest and scrub; CNHL: Probably uncommon in thorn forest and scrub, and deciduous forest at moderate elevations.

Miller and Griscom (unpubl. ms.) reported this species as "common . . . in the arid scrub country of the central highlands between 1000 and 2500 feet" (350–800 m), but specific records are scarce. The label of a specimen from El Tanque (~9 km S of Jinotega, Depto. de Jinotega) is marked "3000 ft" (915 m); one from San Rafael del Norte (BMNH) lacks altitude

data. Only a few specimens are known from Nicaragua, none from the lowlands west of the great lakes, but the species is recorded from Volcán Casita, Depto. de Chinandega. James Silliman, however, reported a "student project bird" (collected, perhaps preserved) taken on 23 November 1982 at El Cru-cero, 23 km S of Managua. Were it not for Miller and Griscom's statement, I would consider this form rare in Nicaragua. Possibly it has been extirpated over much of its former range. (See *O. leucogastra*).

Ssp.: *vetula*; *plumbiceps* is not recognized.

***Ortalis leucogastra*.** White-bellied Chachalaca.

Permanent resident. PAC: Uncommon in thorn forest and scrub, probably at moderate elevations.

This species is recorded from the lowlands west of the great lakes south at least to Volcán Mombacho. No contacts between *vetula* and *leucogastra* are known from Nicaragua, but there has been no special search in the field for any. James Silliman frequently recorded this species in forest on Isla Juan Venado, Depto. de León, in all seasons.

***Ortalis cinereiceps*.** Gray-headed Chachalaca.

Permanent resident. CRB: Common in forest edge, and low second-growth humid forest.

This species occurs even in small "islands" of broad-leafed vegetation in the pine savanna, but not out in the pines themselves.

***Penelopina nigra*.** Highland Guan.

Permanent resident. CNHL: Fairly common in cloud forest.

This species does not occur in the cloud forest of Volcán Mombacho, and the southern limit of the species' range is the Central Highlands of Nicaragua.

Ssp.: None recognized, including *rufescens* van Rossem 1934, type locality Ocotol, Depto. de Nueva Segovia.

***Penelope purpurascens*.** Crested Guan.

Permanent resident. PAC: Probably rare in deciduous forest at moderate elevations; rare in cloud forest; CNHL: Probably uncommon in undetermined habitat; CRB: Fairly common in humid forest at moderate elevations.

This guan doubtless had a wider range and was more numerous in earlier times, especially in the Pacific Region and Central Highlands. I have

a sight record from the cloud forest on Volcán Mombacho. The only other records from the Pacific Region are as follows: Volcán Cosigüina and Volcán Mombacho (J. C. Martínez-Sánchez), Volcán Concepción (C. Bovallius) and Volcán Maderas (J. C. Martínez-Sánchez), Isla de Ometepe, presumably in deciduous forest (introduced? see *Crax rubra*). James Silliman saw two birds at Cosigüina, Depto. de Chinandega, on 11 February 1983.

Ssp.: *aequatorialis* ranges through most of Nicaragua but intergrades with *purpurascens* in the north. A UCLA specimen (d) from 25 km SSW of Waspan, Comarca de El Cabo, RAAN, has the coloration of *aequatorialis* but is within the larger size range of *purpurascens*.

***Crax rubra*.** Great Curassow.

Permanent resident. PAC: Rare in cloud forest and probably in deciduous forest; CRB: Rare in humid forest.

In 1883, C. Bovallius reported this species as "common" on Isla Ometepe, especially at an altitude of ~600 m, which would be in deciduous forest. The closest distance to the mainland from this island is ~8 km. It is exceedingly unlikely that a curassow could fly that far, and the birds may have been introduced by local people. I saw a female and heard the booming call of a male in the cloud forest of Volcán Mombacho on 18 March 1962.

Ssp.: *rubra*.

FAMILY PHASIANIDAE

***Dendrortyx leucophrys*.** Buffy-crowned Wood-Partridge.

Permanent resident. CNHL: Rare in cloud forest; probably rare in highland pine and pine-oak forest.

This species is known from only two localities in Nicaragua. I found it in the cloud forest at Santa María de Ostuma, 1,300 m, Depto. de Matagalpa. Richardson collected it only near Jalapa, Depto. de Nueva Segovia, in 1909. Miller and Griscom stated that he told them "it occurs in the pine forest in the mountains near Jalapa at an altitude of 4000 ft" (1,220 m) (Miller and Griscom unpubl. ms.). A specimen label reads "Jalapa (3-4000 ft)" (980-1,220 m), with no habitat information. As this is a cloud forest species in most of its range, I think it likely that the birds taken near Jalapa were from a cloud forest-highland pine interface. This species can be secretive, but it is notable that Richardson did not find it near

Matagalpa. The southern limit of the species' range is Costa Rica, and there is no suitable habitat for it within Nicaragua south of the Central Highlands.

Ssp.: *leucophrys*; *nicaraguae* Miller and Grissom 1925, type locality Jalapa, Depto. de Nueva Segovia, is not recognized.

Odontophorus erythrops*.** Rufous-fronted Wood-Quail. [Odontophorus malanotis*.** Black-eared Wood-Quail.]

Permanent resident. CRB: Fairly common in humid forest.

Ssp.: *melanotis*.

***Odontophorus guttatus*.** Spotted Wood-Quail.

Permanent resident. CNHL: Fairly common in cloud forest.

This secretive species may be more common than early specimen records indicate. W. B. Richardson collected a juvenile on 4 April 1898 at Jalapa, Depto. de Nueva Segovia, and J. C. Martínez-Sánchez found young birds at Santa María de Ostuma, Depto. de Matagalpa, from February to May.

***Cyrtonyx ocellatus*.** Ocellated Quail

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

This species does not occur in the pine forests of Volcán San Cristóbal or Casita in the Pacific Region, and the southern limit of the species' range is in the Central Highlands.

***Rhynchortyx cinctus*.** Tawny-faced Quail.

Permanent resident. CRB: Fairly common in humid forest.

Ssp.: Birds from 25 km SSW of Waspan, near the Río Coco, are closest to *pudibundus*; all known from more southern localities are closest to *cinctus*.

***Colinus cristatus*.** Crested Bobwhite.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Common in forest edge, low second-growth deciduous forest, at moderate elevations.

No Nicaraguan specimens have any trace of the leucistic condition found in El Salvador populations of *C. c. hypoleucas*.

Ssp.: *sclateri* Bonaparte 1856, type locality "western Nicaragua."

***Colinus nigrogularis*.** Black-throated Bobwhite.

Permanent resident. CRB: Common in lowland pine savanna.

This species reaches the southern limit of its range in the Nicaraguan Mosquitia. I have elsewhere (Howell 1971, 1972) discussed its habits and time of breeding and the validity of the subspecies *segoviensis*.

Ssp.: *segoviensis* Ridgway 1888, type locality Segovia River [= Río Coco], Honduras.

ORDER GRUIFORMES
FAMILY RALLIDAE

***Laterallus ruber*.** Ruddy Crane.

Permanent resident. CNHL: Rare in aquatic habitats; CRB: Fairly common in aquatic habitats.

The only specimen from the Central Highlands was taken at a half-dried pond in a pasture on the outskirts of Jinotega, in country which is otherwise arid; Miller and Griscom (unpubl. ms.) described this bird as a new species *ruberrimus* (see below). The only definite Caribbean Region records are from marshy places in the pine savanna where the birds are difficult to see but reveal themselves by their distinctive calls. Nicaragua has been considered the southern limit of the range, but Slud (1980) reported a sight record in Guanacaste Province, Costa Rica.

Ssp.: None recognized, including *ruberrimus* Miller and Grissom 1921, type locality Jinotega; its characteristics are attributable to immaturity.

***Laterallus albigularis*.** White-throated Crane.

Permanent resident. CRB: Common in aquatic habitats.

This species occurs among dense grasses and reeds along rivers and the edges of ponds in open situations.

Ssp.: *cinereiceps*.

***Laterallus exilis*.** Gray-breasted Crane.

Permanent resident. CRB: Rare in aquatic habitats.

This species seems to have habitat requirements similar to those of *L. albigularis* but is much rarer. There are only three specimens from Nicaragua, one of which (Howell 1957) was overlooked by Olson (1974) and Ripley (1977).

Ssp.: None recognized, including *vagans* Ridgway 1888, type locality Segovia River [= Río Coco], Honduras.

Aramides cajanea. Gray-necked Wood-Rail.

Permanent resident. PAC: Uncommon in aquatic habitats; CNHL: Uncommon in aquatic habitats, at moderate elevations; CRB: Common in aquatic habitats and humid forest.

The Pacific Region records are all from the margins of the great lakes. Elsewhere, the species is usually found in wet places within forests.

Ssp.: *pacifica* Miller and Griscom 1921, type locality, Tipitapa, Depto. de Managua.

Aramides axillaris. Rufous-necked Wood-Rail.

Permanent resident. PAC: Rare in deciduous forest, at moderate elevations.

There are only two Nicaraguan records, both from forest on the slopes of different volcanic peaks. A female taken 6 June 1917 at 2,100 feet (640 m), Volcán San Cristóbal, had the ovary greatly enlarged; a male taken 4 May 1917 at 3,500 feet (1,070 m), Volcán Mombacho, had the testes slightly enlarged. The habitat is noteworthy, as this species has usually been found elsewhere in coastal mangroves. Thurber et al. (1987) also reported this rail from humid forest above 700 m in El Salvador.

Amaurolimnas concolor. Uniform Crake.

Permanent resident. CRB: Rare, probably in humid forest.

There are no habitat notes for any of the four Nicaraguan specimens, but elsewhere in its range this secretive species inhabits forest.

Ssp.: *guatemalensis*.

Porzana carolina. Sora.

Transient, winter resident. PAC: Uncommon in aquatic habitats.

There are only three Nicaraguan records, but the species is probably not as rare as these few suggest.

Porzana flaviventer. Yellow-breasted Crake.

Permanent resident. CRB: Rare in aquatic habitats.

The only record is of a female (ovary slightly enlarged) collected on 22 May 1917 at San Francisco, 7 miles E of San Carlos, Río San Juan. The species probably occurs in suitable habitat elsewhere.

Ssp.: *woodi*.

{*Pardirallus maculatus*. Spotted Rail.

There are no Nicaraguan records, but the species occurs in lowland marshy areas both to the

north and south and will probably be found in Nicaragua as well.}

Porphyrio martinica. Purple Gallinule.

Permanent resident. PAC: Rare in aquatic habitats; CNHL: Probably rare in aquatic habitats; CRB: Uncommon in aquatic habitats.

The only Central Highlands record is a Richardson specimen in the BMNH from "Matagalpa, 1891" (no exact date or original label). The only Pacific Region specimen record is that of Chávez from Lago de Managua (Miller and Griscom unpubl. ms.), but I saw one at 15.8 km E of Managua on 13 May 1962. Possibly some transients or winter residents occur in Nicaragua, but there is no definite evidence of this, as the only three dated specimens are from April, May, and July.

Gallinula chloropus. Common Moorhen.

Permanent resident. PAC: Rare in aquatic habitats; CNHL: Uncommon in aquatic habitats, at moderate elevations; CRB: Rare in aquatic habitats.

This is a locally distributed species, and there is no certain evidence that transients or winter residents from farther north occur in Nicaragua.

Ssp.: *cachinnans*; *centralis* Miller and Griscom 1921, type locality 12 miles (19 km) S of Metapa [= Ciudad Darío], Depto. de Matagalpa, is not recognized.

Fulica americana. American Coot.

Permanent resident and probably a winter resident. PAC: Absolutely rare but locally fairly common in aquatic habitats; CNHL: Uncommon in aquatic habitats, at moderate elevations; CRB: Rare in aquatic habitats; fairly common in the Corn Islands.

Richardson collected two coots at Muy Muy, Depto. de Matagalpa, on 25 and 27 July 1908, showing that the species is not just a winter resident as it seems to be in Costa Rica and Panama. Probably there is an influx of birds from farther north in winter, but this is uncertain. The coots on Great Corn Island were recorded in December; whether they breed there is unknown.

Ssp.: Presumably all *americana*.

FAMILY HELIORNITHIDAE

Heliornis fulica. Sungrebe.

Permanent resident. CRB: Fairly common in aquatic habitats.

This species is found along streams and flooded swamps within the humid forest habitat.

FAMILY EURYPYGIDAE

Eurypyga helias. Sunbittern.

CRB: Uncommon in aquatic habitats within humid forest.

C. Bovallius's sight record from Isla Ometepe is probably erroneous, as he reported individuals "here and there in the highest tree tops" around a small lagoon. All other reports indicate that this species is found on or near the ground in dense forest, usually along rocky streams.

Ssp.: *major*.

FAMILY ARAMIDAE

Aramus guarauna. Limpkin.

Permanent resident. PAC and CRB: Absolutely rare but locally fairly common in aquatic habitats.

The distribution of the Limpkin is limited by the availability of the snails on which it feeds, and it has been recorded mostly from areas around Lago de Nicaragua and along the Río San Juan. Tom Will recorded at least eight individuals around Lago de Nicaragua near Granada, 13 April 1990; eight birds in the Río San Juan marshes near San Carlos, 4 April 1991; four birds along the Río Papaturro, Depto. de Río San Juan; and a single individual along the shoreline of Bluefields Bay, RAAS, 31 January 1991.

Ssp.: *dolosus*.

ORDER CHARADRIIFORMES
FAMILY BURHINIDAE

Burhinus bistriatus. Double-striped Thick-knee.

Permanent resident. PAC: Uncommon in grasslands; CNHL: Probably rare in grasslands at moderate elevations.

This largely nocturnal species is inconspicuous during the day and may be more abundant than the few records indicate. It is an arid-country bird, and two Richardson specimens from Jalapa, Depto. de Nueva Segovia, were probably taken near the eastern limits of that habitat and at a relatively low altitude. Von Frantzius (1869) reported a captive bird at San Juan del Norte (Greytown), Río San Juan, but there is not reason to believe that the species occurs naturally in that extremely wet region.

Ssp.: *vigilans*.

FAMILY CHARADRIIDAE

Pluvialis squatarola. Black-bellied Plover.

Transient, winter resident, summer visitor.

PAC: Fairly common in aquatic habitats; CRB:

Rare in aquatic habitats in the Corn Islands.

James Silliman recorded small numbers along coastal beaches from Corinto, Depto. de Chinandega, to Poneloya, Depto. de León at almost every month, with a few basic-plumaged (probably) summering birds (31 July and 14 August 1982). Migrants appear to arrive in early September, some remain all winter, and most have departed by late April to early May. The only Caribbean Region records are from Great Corn Island on 10 and 22 December, but the species probably occurs on the mainland coast as well.

Pluvialis dominica. Lesser Golden-Plover [American Golden-Plover].

Transient. PAC: Rare in grasslands.

The only specimen record is that of Ponsol, from Granada on 7 April 1942 (Wetmore 1945). I saw a single bird in a grassy area at the Managua airport on 30 April 1962; it was changing to alternate plumage and showed blotches of black ventrally. There are no fall records.

Ssp.: *dominica*.

Charadrius collaris. Collared Plover.

Permanent resident. PAC and CRB: Fairly common in aquatic habitats.

This species occurs primarily around the great lakes and along rivers. There is one record from the Caribbean coast (Puerto Cabezas) and none from the Pacific coast although it probably occurs there.

{*Charadrius alexandrinus*. Snowy Plover.

This species is a casual winter visitor to Middle America from Guatemala to Panama, but there are no definite Nicaraguan records. James Silliman noted two birds he thought to be this species on 1 March 1983 on the Pacific coast at Salinas Grandes, Depto. de León, but his identification was tentative.}

Charadrius wilsonia. Wilson's Plover.

Winter resident, summer visitor. PAC: Uncommon in aquatic habitats.

James Silliman observed this species regularly on the Pacific coast in the Depto. de León virtually

throughout the year (including May, July, and August 1982) but without evidence of breeding. Usually only one or two birds were seen, but occasionally there were flocks of 10 to 22 (December to February). There are no records from the Caribbean coast, but the species probably occurs there.

Ssp.: Presumably *beldingi*.

Charadrius semipalmatus. Semipalmated Plover.

Transient, winter resident, and probably a summer visitor. PAC: Uncommon in aquatic habitats; CNHL: Rare in aquatic habitats, at moderate elevations; CRB: Uncommon in aquatic habitats, including the Corn Islands.

Extreme dates of occurrence on the Pacific coast from James Silliman are 31 July to 30 April. Tom Will reported four at Casares, Depto. de Carazo, 28 May 1991. I saw two at Puerto Cabezas (CRB) on 14 August 1965.

Charadrius vociferus. Killdeer.

Transient, winter resident. PAC: Uncommon in grasslands, aquatic habitats; CNHL: Uncommon in grasslands, aquatic habitats, at moderate elevations; CRB: Uncommon in grasslands, aquatic habitats; uncommon in the Corn Islands.

There are no breeding records. A specimen collected by Ponsol at Granada on 6 May 1942 is the latest spring record.

Ssp.: *vociferus*.

FAMILY RECURVIROSTRIDAE

Himantopus mexicanus. Black-necked Stilt.

Probably permanent resident, transient, or winter resident. PAC: Uncommon in aquatic habitats; CRB: Rare in aquatic habitats.

This species presumably breeds in Nicaragua, but there are no definite nesting records. The occurrence of transients and winter residents from farther north is also presumptive. However, the species can apparently reach considerable densities, as Tom Will reported over 80 birds at Las Playitas on 11 April 1991.

Ssp.: *mexicanus*.

{***Recurvirostra americana***. American Avocet.

As this species has been recorded south to Costa Rica, it may occur rarely as a transient or winter visitor in Nicaragua, but at present there are no records.}

FAMILY JACANIDAE

Jacana spinosa. Northern Jacana.

Permanent resident. PAC: Common in aquatic habitats; CHNL: Common in aquatic habitats, at moderate elevations; CRB: Common in aquatic habitats.

This species is found almost everywhere that suitable marshy areas and lily ponds are present.

Ssp.: *spinosa*.

FAMILY HAEMATOPODIDAE

{***Haematopus palliatus***. American Oystercatcher.

This species is recorded once from the Caribbean coast of Honduras (Monroe 1968) and is a rare resident on the Pacific coast of Costa Rica (Stiles and Skutch 1989), so it probably occurs rarely on one or both coasts of Nicaragua.}

FAMILY SCOLOPACIDAE

Tringa melanoleuca. Greater Yellowlegs.

Transient, winter resident. PAC: Fairly common in aquatic habitats.

This species is probably more widespread and abundant than indicated by the two specimen records. Nutting reported it "common" at San Juan del Sur, Depto. de Rivas, in January 1883, and collected one. Richardson obtained the other specimen on 23 May 1891 at Momotombo, Depto. de León, on the northwest shore of Lago de Managua. James Silliman recorded as many as 105 birds along the Pacific coast, Depto. de León, from December to March.

Tringa flavipes. Lesser Yellowlegs.

Transient, winter resident. PAC: Uncommon in aquatic habitats; CRB: Uncommon in aquatic habitats.

Dates of recorded occurrence extend from 16 October to 27 May.

Tringa solitaria. Solitary Sandpiper.

Transient, winter resident. PAC, CNHL, and CRB: Uncommon in aquatic habitats.

Dates of occurrence extend from 17 August to 28 April. A Richardson specimen from San Juan de Telpaneca, Depto. de Madriz, on 9 January 1909 specifies an altitude of 3,500 feet (1,070 m).

Ssp.: Both *solitaria* and *cinnamomea* are recorded, the latter only as a transient.

***Catoptrophorus semipalmatus* [*Tringa semipalmata*].** Willet.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CRB: Probably rare in aquatic habitats.

There are no specimens from Nicaragua, but there are sight records from both coasts. I saw one at Puerto Cabezas, RAAN, on 13 August 1965. James Silliman reported a few along the Pacific coast, Depto. de León, on dates from 30 July to 20 May. Tom Will recorded birds as late as 28 May at Casares, Depto. de Carazo, and 26 May at San Juan del Sur, Depto. de Rivas.

Ssp.: Uncertain, as there are no specimens; the ssp. *semipalmatus* and *inornatus* are recorded from both coasts of Honduras (Monroe 1968).

***Heteroscelus incanus* [*Tringa incana*].**

Wandering Tattler.

Summer visitor, winter resident. PAC: Uncommon in aquatic habitats.

James Silliman recorded a few individuals in every month of the year along the Pacific coast, Depto. de León, usually on rocks but occasionally on sand. His initial sighting was on 21 November 1981.

***Actitis macularia* [*Actitis macularius*].** Spotted Sandpiper.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats; fairly common in Corn Islands.

Dates of occurrence extend from 31 July to 22 May.

***Bartramia longicauda*.** Upland Sandpiper.

Transient. PAC: Rare in grasslands; CRB: Probably in aquatic habitats, rare in grasslands.

The only PAC records are of a bird collected by Ponsol at Granada on 20 April 1940 (Howell 1964a) and another listed in his catalogue as taken there on 15 September 1942. Oddly, the only Caribbean records are for the month of November. Richmond wrote "one seen November 26 [1892] on the Escondido." On 17 November 1966, I saw two birds on a baseball field in the town of Puerto Cabezas, RAAN. As the known wintering area is southern South America, the November birds were presumably late transients.

***Numenius phaeopus*.** Whimbrel.

Transient, winter resident, probably a summer visitor. PAC: Uncommon in aquatic habitats.

The only specimen record is from Granada, taken by Ponsol on 15 September 1942 (Howell 1964a). The species is apparently a transient, winter resident, and probably a summer visitor, as James Silliman recorded a few individuals along the Pacific coast, Depto. de León, virtually throughout the year (no June records).

Ssp.: *hudsonicus*.

{*Numenius americanus*. Long-billed Curlew.

As this species is recorded rarely from Costa Rica and Panama, it may also be a rare transient or winter resident in Nicaragua, but at present there are no records.}

{*Limosa haemastica*. Hudsonian Godwit.

This species is a rare spring migrant on the Pacific coast of Costa Rica (one sighting, Stiles and Skutch 1989), so it may also occur along the Pacific coast of Nicaragua.}

{*Limosa fedoa*. Marbled Godwit.

There are no records from Nicaragua, but the species presumably occurs there, as it is known to winter both to the north and south.}

***Arenaria interpres*.** Ruddy Turnstone.

Transient, summer visitor, winter resident. PAC: Uncommon in aquatic habitats; CRB: Uncommon in aquatic habitats in the Corn Islands.

James Silliman recorded small numbers (usually <10) along the Pacific coast, Depto. de León, throughout the year, including June, July, and August. The only Caribbean records (Silliman: sight only) are from Great Corn Island from 22 to 28 December. Ponsol's catalogue lists a specimen taken at Masachapa, Depto. de Managua, on the Pacific coast on 5 February 1945.

Ssp.: Uncertain; the only specimen has not been subspecifically identified.

***Aphriza virgata*.** Surfbird.

Transient, summer visitor, winter resident. PAC: Uncommon in aquatic habitats.

James Silliman recorded small numbers (usually <10) at Las Peñitas and Poneloya, Depto. de León, where there are some rocky outcrops along the mostly sandy Pacific coast. The species was found throughout the year, including June and July.

{*Calidris canutus*. Red Knot.

This species has been recorded as a transient or winter resident in parts of Middle America both

north and south of Nicaragua, but there are no records from that country. A mounted specimen in the Ponsol collection was doubtless collected in Nicaragua but it lacks any data.}

***Calidris alba*.** Sanderling.

Transient, winter resident, probably a summer visitor. PAC: Fairly common in aquatic habitats. CRB: Rare in aquatic habitats in the Corn Islands.

James Silliman recorded small flocks (usually <40, maximum 130) throughout most months of the year on the Pacific coast, Depto. de León. Extreme dates of occurrence are from 24 July to 20 May; records from July and early August may have been summer visitors. Silliman also noted two birds at Great Corn Island on 31 December 1981; J. L. Peters did not record this species there in December–January, 1927–1928.

***Calidris pusilla*.** Semipalmated Sandpiper.

Transient. PAC: Rare in aquatic habitats; CRB: Uncommon in aquatic habitats.

The only specimen records are a female taken by C. Bovallius at San Juan del Norte (Greytown) on 9 November 1882 and a female taken at Prinzapolka, RAAN, on 7 May 1922 (Huber 1932). I identified two birds as this species at Puerto Cabezas, RAAN, on 13 August 1965. Ponsol's catalogue lists three specimens collected at El Subidero, Depto. de Granada, on 19 April 1943, but the specimens have not been found.

***Calidris mauri*.** Western Sandpiper.

Probably winter resident or transient. PAC: Uncommon in aquatic habitats; CRB: Rare in aquatic habitats.

James Silliman recorded this species in small numbers (1 to 16) along the Pacific coast, Depto. de León, from 14 August to 27 March. He was uncertain about some identifications during this period, however. Tom Will found four individuals at Casares, Depto. de Carazo, 14 April 1991. The only specimen record is from Great Corn Island (12 December 1927). I saw from two to five at Puerto Cabezas, RAAN, 13–17 August 1965.

***Calidris minutilla*.** Least Sandpiper.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats.

Extreme dates of occurrence at PoneLOYA, Depto. de León, are 14 August to 20 May (James Silliman).

***Calidris fuscicollis*.** White-rumped Sandpiper.

Transient. PAC: Rare in aquatic habitats.

This species is recorded on two late spring dates—28 April 1917 and 23 May 1891—from localities at Lago de Managua. J. R. Alcorn (pers. comm.) also obtained a specimen on 28 April 1956 at Las Playitas, Depto. de Matagalpa.

{***Calidris bairdii*.** Baird's Sandpiper.

There are no Nicaraguan records, but the species has been recorded as a spring transient in Middle America both to the south and north.}

***Calidris melanotos*.** Pectoral Sandpiper.

Transient. PAC: Fairly common in aquatic habitats.

There are no fall records, but the species is a fall transient in El Salvador to the north and presumably continues south through Nicaragua. Spring records are from 24 March to 23 May; Tom Will recorded six birds at Isla Juan Venado, Depto. de León, 23 April 1990. I consider a Richardson specimen from San Emilio to be a Pacific Region (not Caribbean Region) record, as the shorebird habitat there is doubtless the same as that at similar localities along the southwest shore of Lago de Nicaragua.

{***Calidris alpina*.** Dunlin.

Sharpe (1896: 611) listed an "ad. sk. Momotombo, Nicaragua, May 23 (W. B. Richardson). Salvin-Godman Coll." I could not find this specimen at the BMNH in 1977 and believe that the listing from Nicaragua is an error. Richardson collected specimens of *Calidris fuscicollis* (2 males, ad.), *C. melanotos* (2 females), *C. himantopus* (1 adult male), and *Tringa melanoleuca* (1 female) at the same locality on 23 May 1891. *Calidris alpina* is a casual winter visitor in Middle America south to Panama, so its occurrence in Nicaragua in company with other spring transients would not be extraordinary, but in the absence of a specimen it seems more likely that a record of another species was inadvertently placed under *C. alpina*. On p. 577 of the catalogue, only one Richardson specimen of *fuscicollis* from Momotombo is listed instead of two, which suggests a possible error of that kind.}

***Calidris himantopus*.** Stilt Sandpiper.

Transient. PAC: Rare in aquatic habitats.

The only record is a Richardson specimen, an adult male in alternate plumage, taken on 23 May 1891 at Momotombo, Depto. de León. Presumably

the species is also a fall transient, as it is recorded elsewhere in Middle America in that season.

Tryngites subruficollis. Buff-breasted Sandpiper.

Transient. PAC: Rare, habitat undetermined.

The only record is a specimen taken by Ponsol at Granada on 30 October 1942 (Howell 1964a). Probably the species also occurs as a spring transient, as it winters in South America.

Limnodromus griseus. Short-billed Dowitcher.

Transient, winter resident. PAC: Uncommon in aquatic habitats.

James Silliman recorded one to four birds on the Pacific coast, Depto. de León, from 23 January to 20 February, and 41 on 1 March 1983. There are no specimen records. As the species winters south of Nicaragua also, it presumably occurs as a transient.

Ssp.: Presumably *hendersoni*.

[*Limnodromus scolopaceus*. Long-billed Dowitcher.

At this species has been recorded rarely from Costa Rica and Panama, it is presumably a rare winter resident or transient in Nicaragua, but as yet there are no records.]

Gallinago gallinago. Common Snipe.

[*Gallinago delicata*. Wilson's Snipe.]

Transient, winter resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats; rare in the Corn Islands.

All Pacific Region records are from the east side of Lago de Nicaragua in January, but the species probably occurs in other lowland marshy areas in the Pacific Region in winter.

Phalaropus lobatus. Red-necked Phalarope.

Transient, winter resident. PAC: Uncommon in aquatic habitats.

James Silliman recorded from 1 to 60 birds from 11 September 1982 to 30 April 1983 on the Pacific coast in the Depto. de Chinandega and León. He noted two birds changing to alternate plumage on 30 April, and two still in basic plumage. As the species winters south of Nicaragua, there are presumably transients as well. Other species of phalaropes (*tricolor*, *fulicaria*) probably occur as transients, but there are no definite records.

FAMILY LARIDAE

Stercorarius pomarinus. Pomarine Jaeger.

Transient. CRB: Rare in aquatic habitats.

This species undoubtedly occurs in Nicaraguan waters, as it is a rare and sporadic visitor to both coasts in Costa Rica from August through April (Stiles and Skutch 1989), but I know of no definite records prior to 1992, when Tom Will provided the first record for Nicaragua. A subadult-plumaged bird seen from a boat in Bluefields Bay, RAAS, on 25 February was probably this species, but at least two different *pomarinus* were positively identified flying <30 m over the town of Bluefields on 29 February 1992 as part of what appeared to be a rather unusual migratory event. The two *pomarinus*, a light-phase adult and a light-phase subadult, were seen circling over the buildings and out over the bay together with a number of Parasitic Jaegers (see below).

Stercorarius parasiticus. Parasitic Jaeger.

Transient. CRB: Rare in aquatic habitats.

I know of no definite records for this species prior to the 1990s, although the species is not unexpected along the coast and certainly offshore, as it occurs regularly in small numbers in Costa Rica during migration, August–October and March–April (Stiles and Skutch 1989). Tom Will sighted a dark-phase bird offshore from the barrier beach at San Juan del Norte, Río San Juan, 11 May 1991. He also reported what appeared to be a rather unusual migratory event on 29 February 1992, and to a lesser extent during 2–6 March, when perhaps as many as 20 different birds passed through Bluefields, RAAS. On 29 February in particular, the birds circled directly over the town at heights between 20 and 40 m. As many as six different individuals were sighted at one time, but as most of the birds were subadults in various stages of molt, some light-phase and some dark-phase, it was possible to distinguish individuals on this basis. The birds circled rapidly over the town and over the bay; some may have lingered for several days, but as the composition of uniquely identifiable individuals changed over the course of the week, it is likely that most of the birds were migrating north, and the number of individuals in the total event may have been considerably higher than 20 (Tom Will pers. comm.).

Larus atricilla [*Leucophaeus atricilla*].

Laughing Gull.

Transient, summer visitor, winter resident. PAC: Fairly common in aquatic habitats; CRB: Fairly common in aquatic habitats; rare in the Corn Islands.

There are no specimen records, but between 1947 and 1978 there have been 38 band recoveries from

Nicaragua extending from 26 October to 8 May and one recovery (Caribbean Region) on 21 June. Most are from December through February. Banding localities are Florida (1), Maryland (4), New Jersey (24), North Carolina (1), South Carolina (1), Virginia (7), and Texas (1). The recovery localities include 11 from the Pacific Region, 9 from the great lakes of Managua and Nicaragua, and 18 from the Caribbean Region. Thus, birds from the U.S. Atlantic and Gulf coasts range across Nicaragua to the Pacific coast, probably following major rivers (especially the Río San Juan) west to the vicinity of the lakes and thence to the Pacific. Peters saw two Laughing Gulls on 22 December 1927 at Great Corn Island, and James Silliman saw two there on 31 December 1981. James Silliman recorded flocks of up to 400 at various Pacific coastal localities from the Golfo de Fonseca to the Depto. de León from 13 September to 20 May. He noted that a bird on 6 February 1982 had a largely black hood and a red bill.

{*Larus philadelphia* [*Chroicocephalus philadelphia*]. Bonaparte's Gull.

This species is a rare winter visitor to the Pacific coast of Costa Rica (Stiles and Skutch 1989), so it probably occurs rarely along the Pacific coast of Nicaragua.}

Larus pipixcan [*Leucophaeus pipixcan*]. Franklin's Gull.

Transient, winter resident. PAC: Fairly common in aquatic habitats; CRB: Rare in aquatic habitats.

I have seen this species as a presumed transient inland in central western Nicaragua in November and in winter (January) on Lago de Nicaragua. Two records in May are recoveries of bands from birds banded in Montana, and a specimen was collected by Ponsol near Granada on 26 May 1942 (Howell 1964a). James Silliman recorded up to 200 birds along the Pacific coast, Depto. de León from 7 March to 20 May 1983. The only record from the Caribbean Region is a single bird sighted by Tom Will in Bluefields, RAAS, 31 January 1991.

Larus delawarensis. Ring-billed Gull.

Winter resident. CRB: Rare in aquatic habitats.

This species is a rare but regular winter visitor to both coasts of Costa Rica (Stiles and Skutch 1989), so it probably occurs rarely along the Nicaraguan coasts. Tom Will recorded a single bird in Bluefields, RAAS, on 31 January 1991 and resighted it on 22 February.

Larus argentatus. Herring Gull.

Winter visitor. CRB: Rare in aquatic habitats.

A band recovery near Laguna de Perlas (RAAS) on 8 February 1938 was from a bird banded in Michigan on 26 June 1937. Tom Will recorded this species in Bluefields, RAAS—three individuals on 31 January 1991, one on 22 February 1991, and two on 29 February 1992.

Ssp.: Presumably *smithsonianus*.

Sterna nilotica [*Geochelidon nilotica*].

Gull-billed Tern.

Probably a winter visitor. PAC: Rare in aquatic habitats.

I know of only two records of this species—R. Ridgely (in litt.) saw a flock of ~25 at Puerto Sandino (formerly Puerto Somoza), Depto. de León, on the Pacific coast on 21 February 1976, and Tom Will sighted a single bird along the shore of Lago de Managua on 28 June 1991.

Ssp.: Uncertain; no specimens.

Sterna caspia [*Hydroprogne caspia*]. Caspian Tern.

Winter resident. PAC: Uncommon in aquatic habitats. CRB: Rare in aquatic habitats.

In addition to previous records from the great lakes (Howell 1964a), there is from the same area a band recovery dated 4 November 1966 from a bird banded in Ontario, Canada, on 16 June 1965. Tom Will reported a single bird along the Pacific coast at Casares, Depto. de Carazo, 5 January 1991. He also recorded birds from Bluefields Bay, RAAS—three on 31 January and one on 22 February 1991.

Sterna maxima [*Thalasseus maximus*]. Royal Tern.

Transient, summer visitor, winter resident.

PAC: Uncommon in aquatic habitats; CRB:

Fairly common in aquatic habitats; fairly common in the Corn Islands.

The only specimen is from Great Corn Island, 21 December 1927, but there are 19 recoveries of bands from Caribbean localities between 1931 and 1978. All were banded in North Carolina (8), South Carolina (2), and Virginia (9). Recovery dates include two each from June and July, which indicates occasional summering of birds from North America. James Silliman recorded 1 to 12 birds along the Pacific coast, Depto. de León, from 23 January to 16 April 1983. He also noted ~20 offshore at Great Corn Island on 30 December 1981.

Ssp.: Presumably *maxima*.

***Sterna elegans* [*Thalasseus elegans*].** Elegant Tern.

Transient, winter resident. PAC: Uncommon in aquatic habitats.

James Silliman recorded one to four birds at Las Peñitas and PoneLOYA, Depto. de León, from 23 January to 30 April 1983. His notes give detailed descriptions and comparisons with *S. maxima*. Tom Will also recorded the species resting on the sand at Casares, Depto. de Carazo, two individuals on 5 January and one on 21 April 1991. As the species winters to Chile, transients presumably pass along the Nicaraguan coast.

***Sterna sandvicensis* [*Thalasseus sandvicensis*].** Sandwich Tern.

Probably a transient, summer visitor, winter visitor. PAC: Uncommon in aquatic habitats; CRB: Rare in aquatic habitats.

James Silliman recorded from 1 to 17 birds at localities along the Pacific coast, Depto. de León, from 22 January to 30 April 1983, and Tom Will counted over 40 birds moving offshore at Casares, Depto. de Carazo, 14 April 1991. In Bluefields Bay, RAAS, Will recorded 15 birds, 31 January 1991, and from 3 to >10 birds, 29 February through 7 March 1992. Several other records are band recoveries. The single Pacific Region recovery is dated July 1964, from a bird banded in Louisiana 25 June 1963. Another bird banded on the same day, same locality, was recovered on the Caribbean coast on 12 May 1964. The third recovery, from the Caribbean coast, dated 11 December 1977, was banded 24 June 1977 in North Carolina, near the northern limit of the North American breeding range. This species does not breed anywhere along the Pacific coast but has an extensive winter range there from southern Mexico to South America, and Middle America must be crossed. Nicaragua is a likely area for this, as birds could follow large rivers to the vicinity of the great lakes, from which the Pacific is within sight from a suitable altitude. At present, however, there are no interior records.

Ssp.: *acutiflavidus*.

***Sterna dougallii*.** Roseate Tern.

Probably a transient or winter visitor. CRB: Rare in aquatic habitats.

The only record is a band recovery from the vicinity of the Corn Islands made in October 1955. The bird was banded in Massachusetts on 29 July 1955.

Ssp.: *dougallii*.

***Sterna hirundo*.** Common Tern.

Transient, winter visitor. PAC: Uncommon in aquatic habitats; CRB: Rare in aquatic habitats.

James Silliman recorded one to five birds present along the Pacific coast, Depto. de León, on dates between 31 October (1981) and 30 April (1983). He sighted a single bird at PoneLOYA, Depto. de León, on 24 July 1982. All other records are band recoveries, a total of six between 1931 and 1973, and all were banded in the interior of north-central and northeastern North America—Michigan (3), Minnesota (1), Saskatchewan (1), and Ontario (1). Dates of recovery are from September to late May. The September bird, banded in Michigan, is the only Caribbean record. One other recovery is from the Pacific coast, and the others from the Nicaraguan great lakes.

Ssp.: *hirundo*.

{*Sterna forsteri*. Forster's Tern.

As this species occurs rarely in both the Pacific and Caribbean regions in Costa Rica, it may be a rare transient or winter resident in Nicaragua, but at present there are no records.}

***Sterna antillarum* [*Sternula antillarum*].**

Least Tern.

Winter resident. PAC: Fairly common in aquatic habitats.

James Silliman regularly recorded from 2 to 40 birds along the Pacific coast, Depto. de León, from 13 March to 20 May 1982 and from 5 September 1982 to 30 April 1983. The species was not previously recorded from Nicaragua.

Ssp.: Uncertain without specimens.

***Sterna fuscata* [*Onychoprion fuscatus*].**

Sooty Tern.

Visitor. PAC: Rare in aquatic habitats; CNHL: Probably rare in aquatic habitats; CRB: Uncommon in aquatic habitats.

The only specimen record is a Ponsol specimen from Lago de Nicaragua (Howell 1964a), but there are 10 band recoveries between 1970 and 1977. One is recorded as taken "at sea 27 April 1971 off the Pacific coast of Nicaragua"; the record is remarkable, as the bird was banded on Norfolk Island, off Australia. All others (9) were banded in Florida in May, June, and July, and the recovery dates are from 30 June to 19 September. Only three were taken in the same year as they were banded; others were taken about 1 year (4),

2 years (1), and 6 years (1) after banding. The latter bird had crossed to the Pacific coast. Others were taken at both interior and coastal localities.

Ssp.: Birds banded in Florida must be *fuscata*; others uncertain.

***Chlidonias niger*.** Black Tern.

Transient, winter resident. PAC: Common in aquatic habitats; CRB: Locally fairly common in aquatic habitats.

I have sight records for November over interior lakes in the Pacific Region; the only spring specimens are those of Ponsol (Howell 1964a) taken on the west side of Lago de Nicaragua on 26 May 1942. James Silliman recorded varying numbers along the Pacific coast, Depto. de León, from 5 December (1981) through 8 May (1983). He estimated hundreds in flocks of 10–20 flying south on 7 April 1982 and nearly 2,000 on 17 April 1983, declining to ~30 by 8 May. Numbers from January and February were mostly from 2 to 30, with 100 on 22 January. J. C. Martínez-Sánchez collected a female on the coast at Masachapa, Depto. de Managua, on 22 December 1982. In the Caribbean Region, Tom Will estimated over 200 birds foraging at the source of the Río San Juan opposite San Carlos 4 April and 9 May 1991; he recorded 50 birds at San Juan del Norte, 11 May 1991.

Ssp.: *surinamensis*.

***Anous stolidus*.** Brown Noddy.

Probably a visitor. CRB: Rare in aquatic habitats.

The only records are two band recoveries off the Caribbean coast. A juvenile banded at Dry Tortugas, Florida, on 15 June 1965 was caught 4 miles offshore from Cabo Gracias a Dios, RAAN, on 24 October 1965 (W. B. Robertson, Jr. in litt.). The other bird was recovered on 9 May 1970 from a bird banded in Florida on 22 June 1969. This species occurs around islets off northwestern Guanacaste Province, Costa Rica, and many breed there (Stiles and Skutch 1989); if so, some may range north to the Pacific coast of Nicaragua.

Ssp.: Birds banded in Florida are *stolidus*.

***Rhynchops niger*.** Black Skimmer.

Visitor, winter resident. PAC: Uncommon in aquatic habitats; CRB: Rare in aquatic habitats.

James Silliman recorded single birds along the Pacific coast, Depto. de León, from 4 October 1982 to 8 May 1983. R. Ridgely (in litt.) saw 250 skimmers

near Puerto Sandino (formerly Puerto Somoza), Depto. de León, on 21 February 1976. Ridgely identified these as the North American subspecies *R. n. niger*. Ponsol's catalogue lists a male of this species taken at El Subidero, Depto. de Granada, on 26 September 1942. Rendahl (1919) described *R. n. intermedia* from a single specimen collected by C. Bovallius on 22 November 1882 at San Juan del Norte (Greytown) at the mouth of the Río San Juan. Subsequent authors find the type indistinguishable from the South American subspecies *cinerascens*, for which there is no evidence of breeding in Nicaragua or elsewhere in Middle America. The only other Caribbean records are from Nutting, who found a skull at Los Sábalo on the Río San Juan, and from Tom Will, who recorded four along the Río San Juan at San Carlos on 4 April and three on 9 May 1991. The evidence suggests that Nicaragua is visited by skimmers from populations breeding both to the north and to the south.

Ssp.: *niger*; *cinerascens* (see discussion above).

ORDER COLUMBIFORMES
FAMILY COLUMBIDAE

***Columba livia*.** Rock Dove [Rock Pigeon].

Permanent resident. PAC, CNHL: Fairly common in urban areas up to moderate elevations.

Feral Rock Doves are found around human habitations, primarily in towns, in drier parts of the country.

***Columba cayennensis* [*Patagioenas cayennensis*].** Pale-vented Pigeon.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest, and in forest edge, low second-growth lowland pine savannas.

Two nests of this species, one with a single egg and one with a chick, were found on the ground in a grassy area in the lowland pine savanna on 23 April 1967 (Howell 1972).

Ssp.: *pallidicrissa*.

***Columba speciosa* [*Patagioenas speciosa*].** Scaled Pigeon.

Permanent resident. CRB: Fairly common in humid forest and lowland pine savanna.

This species is usually seen in the tops of tall trees. It visits the pine savanna and feeds on berries of mistletoe and other plants (Howell 1972).

The species ranges to the edge of the Pacific Region habitat in Depto. de Chontales, where Richardson collected one at La Libertad on 7 January 1892 (see *Columba flavirostris*).

***Columba leucocephala* [*Patagioenas leucocephala*].**
White-crowned Pigeon.

Permanent resident. CRB: Common in the Corn Islands.

There are no records except those from the Corn Islands, but the species may occur on some of the other islands off the Caribbean coast.

***Columba flavirostris* [*Patagioenas flavirostris*].**
Red-billed Pigeon.

Permanent resident. PAC: Common in thorn forest and scrub; CNHL: Common in thorn forest and scrub, at moderate elevations.

Like *C. speciosa*, this species ranges to the edge of the Caribbean Region in Depto. de Chontales, where Richardson collected one at La Libertad on 8 January 1892.

Ssp.: *flavirostris*; *minima* is not recognized.

***Columba fasciata* [*Patagioenas fasciata*].**
Band-tailed Pigeon.

Probably a permanent resident. CNHL: Rare, but formerly common in highland pine and pine-oak forest.

The status of this species in Nicaragua is uncertain. Richardson collected two specimens at Matagalpa in 1891 (15 August and 14 September) and one at San Rafael del Norte on 18 March 1892. These three are the only ones from Nicaragua. Miller and Griscom wrote that this species "was found commonly by Richardson in the high pine forests of northern Nicaragua in 1891 and 1892. Since then it seems to have disappeared from the localities where he found it, and though he looked assiduously in 1907, he saw no signs of it, nor could we obtain any evidence of its presence in 1917" (Miller and Griscom unpubl. ms.). Griscom (1935) paraphrased this but suggested that oak forests were the bird's probable habitat, and he described the Nicaraguan specimens as a new subspecies *parva*. I have examined the three specimens and agree with Monroe (1968) that the alleged differences in size and color are not constant or distinctive and that *parva* is not taxonomically separable. Possibly the species does not regularly range into Nicaragua (although Monroe

considered it common in Honduras) and its presence in 1891–1892 may have been the result of a population irruption.

Ssp.: Uncertain; *parva* is not recognized (see above discussion), *letonai* dubious.

***Columba nigrirostris* [*Patagioenas nigrirostris*].**
Short-billed Pigeon.

Permanent resident. CRB: Common in humid forest.

***Zenaida asiatica*.** White-winged Dove.

Winter resident, permanent resident, and probably a transient. PAC: Common in thorn forest and scrub.

Bands have been recovered in Nicaragua from 32 birds from Texas (1952–1975) and 60 from Mexico (1959–1971), and presumably some transients are included.

Ssp.: Birds banded in Texas must be *asiatica*; those from Mexico are uncertain. Saunders (1968) reviewed the taxonomy of this species in Central America and described several new subspecies, including *collina*, type locality near Progreso, Guatemala, ranging from southeastern Oaxaca south in the Pacific Region to northwestern Costa Rica. This form is doubtfully distinct from *alticola* Saunders, 1951, type locality Patzun, elevation 6,900 feet (2,100 m), Guatemala. I do not know of any records of this species from the Caribbean Region of Nicaragua, although birds assigned to the subspecies *australis* are recorded from that slope in Honduras and Costa Rica. Thus, *asiatica* is definitely a winter resident, presumably a transient; *collina* [= *alticola*?] a permanent resident, and *australis* possibly a permanent resident, but this requires confirmation.

***Zenaida macroura*.** Mourning Dove.

Winter resident and probably permanent resident and transient. PAC: Common in thorn forest and scrub; CNHL: Rare in undetermined habitat.

There are no breeding records from Nicaragua and few specimens. The only Central Highlands record is from San Rafael del Norte. Bands have been recovered in Nicaragua from 40 birds banded between 1967 and 1976. Banding localities were Iowa (3), Louisiana (2), Minnesota (5), Wisconsin (1), Colorado (1), Kansas (4), Nebraska (4), North Dakota (5), Oklahoma (2), South Dakota (11), and Texas (2), which indicates that most

of these doves wintering in Nicaragua come from the central United States. Presumably some birds pass through as transients.

Ssp.: Birds banded in the United States within the breeding ranges of both *macroura* and *marginella* have been recovered in Nicaragua.

***Columbina inca*.** Inca Dove.

Permanent resident. PAC: Common in thorn forest and scrub.

Unlike the other Nicaraguan species in this genus, *inca* appears to be confined to the Pacific Region. James Silliman found a nest with two eggs at León on 21 January 1982.

Ssp.: None recognized.

***Columbina passerina*.** Common Ground-Dove.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge and low second-growth deciduous forest and grasslands; CNHL: Fairly common in thorn forest and scrub, at moderate elevations; CRB: Uncommon in lowland pine savanna.

This species is known with certainty from the Caribbean Region only from the Mosquitia, in and around the town of Puerto Cabezas and probably other settled areas; it is not recorded from the open savanna. At Isla Juan Venado, Depto. de León, James Silliman found a nest with two eggs on 12 December 1981 and one with a hatchling on 20 February 1982.

Ssp.: Pacific Region birds are darker than *pallascens* and are referred to *neglecta*. Richmond (1893) stated "one shot at San Carlos" but it may not have been preserved, as I could not find it in the U.S. National Museum in 1991. San Carlos, Río San Juan, is a meeting place for many Pacific Region and Caribbean Region species, but since Pacific Region birds are *neglecta* it is unlikely that *pallascens* would occur at San Carlos. There are no specimens from the Caribbean Region, but *neglecta* is presumably the form found there.

***Columbina minuta*.** Plain-breasted Ground-Dove.

Permanent resident. CNHL: Rare in forest edge, and low second-growth deciduous forest, at moderate elevations; CRB: Rare in lowland pine savanna, locally uncommon in forest edge and low second growth.

I have elsewhere discussed the rare and local status of this species in the lowland pine savanna

(Howell 1972). The only record from the Central Highlands is a pair collected at El Corozo, 600 m, Depto. de Nueva Segovia, on 11 January 1955, at the edge of an open field. Tom Will reported flushing ~25 individuals on a dirt track through a sugar cane plantation 35 km NNW of Bluefields, RAAS, 11 July 1991.

Ssp.: *interrupta*.

***Columbina talpacoti*.** Ruddy Ground-Dove.

Permanent resident. PAC: Fairly common in thorn forest and scrub; CNHL: Uncommon in thorn forest and scrub, at moderate elevations; CRB: Common in forest edge and low second-growth humid forest.

This species does not occur within the pine savanna, although it is common in clearings in the humid forest in the same general region. At León, James Silliman found a nest with two eggs on 21 January 1982 and two recently fledged young on 27 November 1982.

Ssp.: *rufipennis*.

***Claravis pretiosa*.** Blue Ground-Dove.

Permanent resident. PAC: Rare in thorn forest and scrub; uncommon in deciduous forest; CRB: Fairly common in forest edge and low second-growth humid forest.

This species is decidedly less abundant in the Pacific Region than in the Caribbean Region.

{***Claravis mondetoura*.** Maroon-chested Ground-Dove.

This montane species has not been recorded from Nicaragua, although it occurs to the north and south and is presumably absent because of insufficient extent of high-altitude habitat.}

***Leptotila verreauxi*.** White-tipped Dove.

Permanent resident. PAC: Common in thorn forest and scrub, and deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations.

Ssp.: At UCLA there are two specimens from Volcán Casita, Depto. de Chinandega, three from Hato Grande (Pacific Region), Depto. de Chontales, and three from Volcán Mombacho, Depto. de Granada. All except one adult male from Hato Grande have the broad rufous edgings to the inner web of the proximal part of the primaries that are ascribed to *nuttingi*. The

exceptional male from Hato Grande has the rufous edgings very narrow (~1 mm) and the underwing color in general is unusually dark. This individual (perhaps aberrant) is not certainly identifiable; all the others fit the characterization of *nuttingi* Ridgway 1915, type locality Ometepe [= Isla de Ometepe, Lago de Nicaragua]. The Ponsol collection (UCLA) has one from Santa María de Ostuma, Depto. de Matagalpa (Central Highlands), and two from Granada. All three have wide rufous margins to the primaries as in *nuttingi*. Others (AMNH) from the Pacific Region and Central Highlands of Nicaragua, however, have very narrow rufous edgings to the primaries, only 1–4 mm wide. These include five from the vicinity of Chinandega and also one from Matagalpa (no elevation given). All these are closest to *bangsi*, described from El Salvador. Birds from Costa Rica (*verreauxi*) have wide rufous areas covering most of the underside of the inner webs of the primaries. I tentatively refer the Chinandega birds to *bangsi* and those from Hato Grande and Isla de Ometepe to *nuttingi*. I can only assume that *bangsi* and *nuttingi* meet in the vicinity of Matagalpa. A larger, geographically continuous series might show relatively smooth clinal variation in the characters now used to distinguish three subspecies.

***Leptotila plumbeiceps*.** Gray-fronted Dove
[Gray-headed Dove].

Permanent resident. PAC: Rare in deciduous forest, at moderate elevations; CNHL: Rare in undetermined habitat; CRB: Rare in humid forest.

This secretive species is probably not as rare as the few records indicate, especially in the Caribbean Region. The only Pacific Region record is from Volcán Mombacho, where several other primarily Caribbean Region species also occur. The only record from the Central Highlands is a Richardson specimen from Matagalpa, without habitat data.

Ssp.: *plumbeiceps*.

***Leptotila cassinii* [*Leptotila cassini*].**
Gray-chested Dove.

Permanent resident. CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest.

Miller and Griscom (unpubl. ms.) refer to this species as a bird "of the Caribbean forest," and presumably the several Central Highlands records

came from mid-elevation localities near the western edge of the Caribbean habitat.

Ssp.: *cerviniventris*.

***Geotrygon albifacies*.** White-faced Quail-Dove.

Permanent resident. CNHL: Fairly common in cloud forest.

All records are from high altitudes except one; Richardson obtained a single specimen from Pena Blanca [= Peñas Blancas], Depto. de Jinotega, which Miller and Griscom (unpubl. ms.) stated was taken at "only 1500 feet." This must have been verbal information, as Richardson's label has no altitude data. The species reaches the southern limit of its range in Nicaragua.

Ssp.: *silvestris*.

***Geotrygon lawrencii*.** Purplish-backed Quail-Dove.

This montane species is unrecorded from Nicaragua, although it occurs to the north and south and is presumably absent because of insufficient extent of high-altitude habitat.}

***Geotrygon violacea*.** Violaceous Quail-Dove.

Permanent resident. CRB: Rare in humid forest.

This species is known from Nicaragua from only three specimens. Two were obtained by Richardson at Pena Blanca [= Peñas Blancas], Depto. de Jinotega; the altitude was not recorded. The other is from Los Sábalos, Río San Juan. Tom Will reported sighting one 15 km NNE of El Castillo, Río San Juan, 3 November 1990. Nicaragua is the northern limit of the range of this species.

Ssp.: *albiventer*.

***Geotrygon montana*.** Ruddy Quail-Dove.

Permanent resident. PAC: Uncommon in deciduous forest; CRB: Uncommon in humid forest.

A juvenile was taken on 14 May 1917 at Los Sábalos, Río San Juan.

Ssp.: *montana*.

ORDER PSITTACIFORMES
FAMILY PSITTACIDAE

***Aratinga holochlora*.** Green Parakeet.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in forest edge and low second-growth deciduous forest; CNHL: Fairly

common in forest edge, low second-growth highland pine, and pine-oak forest.

Nicaraguan populations are all of the red-throated subspecies *rubritorquis*. There are Pacific Region records from San Jerónimo and Volcán Casita, Depto. de Chinandega, where I found the birds to be fairly common during the last week of November 1961 in maize and sorghum fields (cleared from deciduous forest) at an altitude of ~300 m. J. C. Martínez-Sánchez has recorded this subspecies from Volcán Maderas, Isla de Ometepe, where it is presumably sympatric with *A. strenua*. All other records are from the Central Highlands, in the pines or the interface of pines and deciduous and cloud forests. The species reaches its southern limit in Nicaragua.

Ssp.: *rubritorquis*.

***Aratinga strenua*.** Pacific Parakeet.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, and low second-growth deciduous forest.

On 16 June 1982, James Silliman confirmed reports of this species inhabiting the Santiago Crater, in Volcán Masaya National Park. He observed 30 to 40 birds using holes in the vertical wall of the crater. They readily flew through the volcanic fumes to reach the cavities. I collected a bird of this species and *A. holochlora* on the same day (26 November 1961) on Volcán Casita (see *A. holochlora*). Neither species was in breeding condition. *Aratinga strenua* also reaches the southern limit of its range in Nicaragua. The type locality of the species is Ometepe Island in Lago de Nicaragua (Ridgway 1915). *Aratinga strenua* is not only larger than *A. h. rubritorquis* in obvious characteristics such as bill size and foot size but is considerably greater in body mass. The female mentioned above weighed 184.0 g; the mean mass of four female *rubritorquis* collected at the same place and date was 132.0 g (127.2–137.8 g). Species limits among these taxa nevertheless remain unclear. In Nicaragua, *strenua* and (*h.*) *rubritorquis* differ in morphology, voice, behavior, and breeding habitat and seem clearly to belong to different species. It is possible, however, that *rubritorquis* is a species distinct from *holochlora*, or that *strenua* instead is a subspecies of *holochlora*. The endemic form *brevipes* of Isla Socorro, Mexico, is very similar in size and color to topotypical *strenua* and could be conspecific with that form (if specifically distinct) and not with *holochlora* as it is currently placed. Relationships in this complex may have

to be analyzed genetically and biochemically to clarify the situation.

***Aratinga finschi*.** Crimson-fronted Parakeet.

Permanent resident. CRB: Fairly common in forest edge and low second-growth humid forest.

This species reaches its northern limit in Nicaragua and has not been recorded north of the Río Escondido. Its range is nowhere in contact with or close to those of *A. holochlora* or *A. strenua*.

***Aratinga nana*.** Olive-throated Parakeet.

Permanent resident. CRB: Common in forest edge and low second-growth humid forest; fairly common in forest edge and low second-growth lowland pine savanna.

This species often ranges into the pine savanna but never far from the edge of the humid forest, and there was no indication that they nest in the pines.

Ssp.: *astec*.

***Aratinga canicularis*.** Orange-fronted Parakeet.

Permanent resident. PAC: Common in thorn forest and scrub.

Ssp.: *canicularis*.

***Ara ambigua* [*Ara ambiguus*].** Great Green Macaw.

Permanent resident. PAC: Probably rare in deciduous forest; CRB: Uncommon in humid forest.

This species sometimes flies over the lowland pine savanna but is not known to alight in the pines or to use them in any way (see *A. macao*). Nutting's record of "*Ara militaris*" from Los Sábalos (1884) applies to this species. The only Pacific Region record is of a single bird listed in Ponsol's catalogue as *Ara ambigua*, "Lapa verde," a male collected on 29 December 1943 at a "Montaña virgen cercana al Río Jabillo, km 138 carretera a C.R." The habitat was "virgin forest" and the locality is on the highway 9 km NW of Peñas Blancas, Depto. de Rivas, which is on the Costa Rican border. This locality is ~35 km WNW of San Emilio, where Richardson collected two birds of this species in March 1896 (BMNH). A mounted Great Green Macaw without attached data in Ponsol's collection may be this specimen.

***Ara macao*.** Scarlet Macaw.

Permanent resident. PAC: Absolutely rare but locally fairly common in deciduous forest; CNHL: Rare in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest and lowland pine savanna.

This species was undoubtedly more abundant formerly in all suitable habitats in Nicaragua. It is now rare or extirpated over most of the Pacific Region, but survives there in fair numbers in remote forested areas (Camacho 1983). It is rapidly becoming less abundant in the Caribbean Region because of deforestation and taking of birds for the pet trade. Unlike *A. ambigua*, *A. macao* sometimes visits the lowland pine savanna, and I have described an apparent nesting attempt in a pine (Howell 1972).

***Bolborhynchus lineola*.** Barred Parakeet.

Probably a visitor or permanent resident. CNHL: Rare in cloud forest.

Martínez-Sánchez (1989) collected one bird from a flock of 15 on 4 May 1985 at Santa María de Ostuma, Depto. de Matagalpa, at 1,400 m. This is the first record for Nicaragua, but as yet there is not sure evidence of residence or breeding. Richardson would surely have collected examples of this species if it was established in the Matagalpa region in his time.

Ssp.: *lineola*.

***Brotogeris jugularis*.** Orange-chinned Parakeet.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Uncommon in forest edge and low second-growth humid forest.

This species is recorded from the Caribbean Region only where there are extensive clearings (Howell 1957), and it may become more abundant there as deforestation continues.

Ssp.: *jugularis*.

***Pionopsitta haematotis* [*Pyrrhula haematotis*].**

Brown-hooded Parrot.

Permanent resident. CRB: Uncommon in humid forest.

These parrots are usually visually inconspicuous and may be more numerous than the few records indicate.

Ssp.: *haematotis*.

***Pionus senilis*.** White-crowned Parrot.

Permanent resident. PAC: Rare in deciduous forest; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Common in humid forest; uncommon in lowland pine savanna.

This species may formerly have occurred in the Pacific Region when more extensive deciduous forest was still present (Howell 1964a). Miller and Griscom (unpubl. ms.) stated that "Richardson informs us that on the Pacific side of the continental divide at Matagalpa it is very rare or casual." Tom Will sighted two individuals in the Sierras de Managua 13 km SSW of Managua on 23 April 1991 and again on 24 February 1992, which suggests seasonal movement. The species frequently ventures into the pine savanna, but no nests have been found there.

Ssp.: None recognized.

***Amazona albifrons*.** White-fronted Parrot.

Permanent resident. PAC: Common in thorn forest and scrub. CNHL: Probably fairly common in thorn forest and scrub, at moderate elevations.

Richardson's specimens from several Central Highlands localities are without data on altitude but were presumably taken near the upper limit of the typical habitat of the species. A specimen in the AMNH taken by M. G. Palmer labeled "Camoapa [Depto. de Boaco] 2600 ft" (792 m) was probably obtained on Cerro Mombachito (elevation 975 m) near the town.

Ssp.: *nana*.

***Amazona autumnalis*.** Red-lored Parrot.

Permanent resident. PAC: Rare in deciduous forest; CNHL: Rare in humid forest, at moderate elevations; CRB: Common in humid forest; fairly common in forest edge, and low second-growth lowland pine savanna.

This species often ventures into the pine savanna but usually not as far as *A. auropalliata*. Miller and Griscom (unpubl. ms.) reported a specimen from Managua in the Museo Nacional, and Nutting (1884:388) listed this species at Sucuyá, Depto. de Rivas, but stated only that "I saw several parrots which I refer, with some doubt, to this species." J. C. Martínez-Sánchez has since recorded the species from Volcán Maderas, Isla de Ometepe, within the Pacific Region and not far from Sucuyá. W. B. Richardson collected specimens of *A. albifrons* and *A. autumnalis* on the same day (23 July 1891) at Matagalpa (specimens in BMNH).

Ssp.: Intermediate between *autumnalis* and *salvini*; almost all show varying amounts of yellow in the cheeks, greater in the north and less to only traces in the south.

Amazona farinosa. Mealy Parrot.

Permanent resident. CNHL: Rare in cloud forest; CRB: Uncommon in humid forest.

This species is basically a lowland humid-forest dweller but ranges west from that habitat into the cloud forest of the Central Highlands.

Ssp.: *virenticeps*.

Amazona auropalliata. Yellow-naped Parrot.

Permanent resident. PAC: Fairly common in thorn forest and scrub; CRB: Fairly common in forest edge, low second-growth humid forest, and lowland pine savanna.

The Yellow-naped Parrot is now considered a distinct species rather than a subspecies of *A. ochrocephala*. There are two disjunct populations in Nicaragua, one (*A. a. auropalliata*) in the Pacific Region continuous with those from SE Mexico to NW Costa Rica, and an isolated one in the pine savanna and edge of the humid forest in the Caribbean Region. The latter is a distinct subspecies (*parvipes*) confined to the Mosquitia of Nicaragua and Honduras. This situation is discussed in detail by Monroe and Howell (1966), Monroe (1968), and Howell (1971, 1972). In the AMNH there is a formerly mounted specimen without data except the locality "Great Corn Island" and "gift of Miss F. Booth." Neither J. L. Peters nor James Silliman found the species there, and if the locality is correct the bird was almost certainly an introduced captive.

Ssp.: PAC: *auropalliata* Lesson 1842, type locality Realejo, Centre Amerique [= El Realejo, Depto. de Chinandega, Nicaragua]; CRB: *parvipes* Monroe and Howell 1966, type locality Leicus Creek, Comarca de El Cabo, 56 miles (90 km) NW of Puerto Cabezas, RAAN.

ORDER CUCULIFORMES
FAMILY CUCULIDAE

Coccyzus erythrophthalmus. Black-billed Cuckoo.

Transient. PAC and CNHL: Rare in undetermined habitat; CRB: Probably rare in humid forest.

There are four specimens, none of which has habitat data. The localities and dates are as follows: Matagalpa, 15 September 1914; Savala (Caribbean Region), Matagalpa, 10 October 1907; Volcán Viejo [= San Cristóbal], Depto. de Chinandega, 9 May 1907; and Managua (no date), Museo Nacional.

Coccyzus americanus. Yellow-billed Cuckoo.

Transient. PAC: Rare in undetermined habitat.

There are two specimens, both from Volcán Viejo [= San Cristóbal], Depto. de Chinandega, 20 April 1891 (BMNH) and 11 May 1907 (AMNH). Tom Will saw one in the Sierras de Managua 13 km SSW of Managua, 15 April 1991. James Silliman saw one in León on 21 October 1982, the only fall record.

Coccyzus minor. Mangrove Cuckoo.

Permanent resident. PAC: Uncommon in mangroves, thorn forest, and scrub; CRB: Probably rare in mangroves; common in the Corn Islands.

There are only two specimens from the Caribbean Region, both from San Juan del Norte (Greytown), but the species probably occurs along the entire Caribbean coast. Peters (1929) stated that "Mangrove Cuckoos are easily the most numerous of the few resident land birds on the Corn Islands."

Ssp.: Banks and Hole (1991) have reviewed geographic variation in this species and concluded that individual variation (especially in color) in all populations is so great that no subspecies are recognizable. The present conventional treatment is to recognize in mainland Central America a smaller and darker interior-dwelling form (*continentalis*) and a larger and paler coastal-mangrove population (*palloris*). I agree that color differences between these forms appear to be too inconsistent for use in defining subspecies, but the size difference may provide a valid distinction between them. This can be determined only from a much larger sample of measurements than is provided in publications to date. Peters's (1929) specimens from the Corn Islands, listed as *C. m. minor*, will require redetermination.

Piaya cayana. Squirrel Cuckoo.

Permanent resident. PAC: Common in forest edge and low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest, and low second-growth of cloud forest; CRB: Common in forest edge, low second-growth humid forest.

Ssp.: PAC: *stirtoni*; CRB: *thermophila*; CNHL: variously intermediate.

Tapera naevia. Striped Cuckoo.

Permanent resident. PAC: Fairly common in thorn forest and scrub; CNHL: Probably fairly

common in thorn forest and scrub, and possibly in low second-growth forest edge in highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) record the species as occurring up to 4,000 feet (1,220 m) in dry thickets, which at that altitude would probably be at the edge of pine forest. A juvenile was collected at Matagalpa on 27 June 1891.

Dromococcyx phasianellus. Pheasant Cuckoo.

Permanent resident. PAC: Rare in deciduous forest; CNHL: Fairly common in deciduous forest; CRB: Probably rare in humid forest.

Specimens taken at Jalapa, Depto. de Nueva Segovia, and Savala, Depto. de Matagalpa, are from the western limits of the Caribbean Region, and there are no other records from that habitat. J. C. Martínez-Sánchez reported the species as fairly common at the forest edge at Santa María de Ostuma, 1,400 m, Depto. de Matagalpa.

Ssp.: *rufigularis*.

Morococcyx erythropygus. Lesser Ground-Cuckoo.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest.

A Richardson specimen from Volcán Mombacho, Depto. de Granada, was taken at 3,000 feet (915 m).

Ssp.: *erythropygus*.

Geococcyx velox. Lesser Roadrunner.

Permanent resident. PAC: Uncommon in thorn forest and scrub, grasslands; CNHL: Fairly common in thorn forest and scrub, at moderate elevation; fairly common in highland pine and pine-oak forest, and grasslands.

This species is more common in grassy areas among pines (up to ~1,000 m) than in the arid lowlands. Richardson obtained a specimen on 20 October 1904 at "Río Grande," Depto. de Matagalpa, a locality from which most of his specimens were of Caribbean Region affinities. The headwaters of the river, however, extended well into the Pacific Region. The southern limit of the species' recorded range seems to be near Juigalpa, Depto. de Chontales, where I saw one in thorn forest and scrub habitat at 15 km southwest of the town, elevation ~80 m, on 20 January 1956.

Ssp.: *affinis*; *longisignum* is not recognized, as the tail pattern proves highly variable, even bilaterally in some individuals.

Neomorphus geoffroyi. Rufous-vented Ground-Cuckoo.

Permanent resident. CRB: Uncommon in humid forest.

Nicaragua is the northern limit of the known range of this species, but it doubtless ranges into eastern Honduras, as it occurs close to the Honduras border (Howell 1971).

Ssp.: *salvini*.

Crotophaga ani. Smooth-billed Ani.

Permanent resident. CRB: Uncommon in the Corn Islands.

There are no records of this species from the mainland, but it may occur on other islands off the Caribbean coast.

Crotophaga sulcirostris. Groove-billed Ani.

Permanent resident. PAC: Common in grasslands, thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Fairly common in grasslands, thorn forest and scrub, forest edge, low second-growth deciduous forest, at moderate elevations, and forest edge, low second-growth highland pine and pine-oak forest; CRB: Common in forest edge, low second-growth humid forest.

James Silliman recorded "large nestlings" on 22 and 25 November 1982 at León.

Ssp.: *sulcirostris*.

ORDER STRIGIFORMES
FAMILY TYTONIDAE

Tyto alba. Barn Owl.

Permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Rare in forest edge, low second-growth humid forest.

The Barn Owl is probably more common than the few records indicate, and its occurrence in the Caribbean Region possibly depends on manmade clearings.

Ssp.: The type specimen of *T. a. guatemalae* Ridgway 1873 is from Chinandega, Nicaragua, not Guatemala. This subspecies is characterized by generally dark pigmentation—darker gray and buffy-ochraceous dorsally and more heavily spotted with black and deeper buff ventrally.

than the tawny or buffy morph of *T. a. pratincola*. Birds from the Pacific slope of Central America south of Mexico are generally referable to the dark form *guatemalae*, but those from the Caribbean Region are of the white morph and usually indistinguishable from examples of *pratincola* from North America. This includes known breeding birds (Bond 1936) and those taken in the presumed breeding season. Monroe (1968) tentatively assigned birds from the Caribbean Region of Honduras to *pratincola* and others to *guatemalae*. I considered a single specimen taken at El Recreo (RAAS) on 29 June to represent a pale, buffy example of *guatemalae* (Howell 1957). Richmond (1893) referred his one specimen from the Río Escondido (50 miles [80 km] from Bluefields, close to El Recreo, RAAS) taken on 19 September 1892 to *guatemalae* without comment. I have examined this specimen in the U.S. National Museum (USNM), and it is a strikingly "white" individual. Richmond's original label has no name on it, and an additional USNM label reads "*Tyto a. pratincola*." This was probably Ridgway's determination, as he included this specimen in *pratincola* (Ridgway 1914:606–607). Dorsally, this bird is as pale as any *pratincola* from North America; ventrally, it is almost entirely pure white with small, sparse black spots and with only traces of pale buff on the flanks and legs. The face is slightly buffy, not slightly grayish or pure white. The date of collection probably does not rule out the possibility that the bird was a migrant. It seems unlikely that *pratincola* has a breeding range extending south along the Caribbean Region at least to Nicaragua, but neither is there sure evidence that *pratincola* migrates that far. I can see no basis, however, for not calling the Richmond specimen *pratincola*. The U.S. National Museum also has a previously unreported specimen of *Tyto alba* from Nicaragua (no specific locality or date), an adult female collected by Capt. J. M. Dow. As Capt. Dow's ship traveled only along the Pacific coast in Central America, the bird was surely collected in the Pacific Region. It is generally dark and very buffy and clearly referable to *guatemalae*.

FAMILY STRIGIDAE

Otus cooperi [*Megascops cooperi*]. Pacific Screech-Owl.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest;

CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations.

A female in the AMNH collected on 12 March 1917 at 15 miles (24 km) NE of Tipitapa, Depto. de Managua, was noted by Miller and Griscom (unpubl. ms.) as "about to lay." The altitude given for three specimens taken at Matagalpa is 2,200 feet (670 m).

Ssp.: *cooperi*. Marshall (1967) considered *cooperi* a subspecies of *O. asio* and assigned all Pacific Region birds from the Isthmus of Tehuantepec, Mexico, south to northwestern Costa Rica (the southern limit of the range) to *O. c. cooperi*. If *cooperi* is recognized as a distinct species (American Ornithologists' Union 1983), Nicaraguan birds represent *O. c. cooperi* (type locality Santa Ana, Guanacaste Province, Costa Rica).

Otus trichopsis. Spotted Screech-Owl.
[*Megascops trichopsis*. Whiskered Screech-Owl.]

Permanent resident. PAC: Rare in forest edge, low second-growth deciduous forest, at moderate elevations; CNHL: Rare in undetermined habitat.

This species is known in Nicaragua from two specimens. I collected an adult male (testes 7 × 4 mm) from a clump of deciduous trees at an altitude of 1,200 m on Volcán Casita, Depto. de Chinandega, on 25 November 1961. There is pine forest on part of the upper slopes above ~1,000 m although not within sight of the collecting locality. The second specimen (AMNH) is a juvenile with downy body feathers taken by Richardson at "Río Coco" on 29 March 1898. It was originally identified as "*Scops cooperi*" and reidentified by G. P. Hekstra as *O. trichopsis*, with which I concur. Richardson's specimens from "Río Coco" include both highland pine and lowland forms, and as pine forest is the typical nesting habitat of the species it may have been collected in the pines. Northern Nicaragua is the southern limit of the range of this species.

Ssp.: *mesamericanus*.

Otus guatemalae [*Megascops guatemalae*]. Vermiculated Screech-Owl.

CNHL: Probably rare in cloud forest; CRB: Probably fairly common in humid forest.

This species is known from Nicaragua only from three specimens collected in January 1909 by Richardson at Jalapa, Depto. de Nueva Segovia. These constitute the type series and still the only

specimens of *O. g. dacrysiactus* Moore and Peters (1939). The typical habitat of the species in Central America is cloud forest, and, as the town of Jalapa is well below the level of that association, the specimens probably came from the Montes de Jalapa to the west, along the Honduran border. Tom Will, however, reported hearing this species on a number of occasions and observing it twice at low elevations in the Caribbean Region, specifically 13 km NNE of El Castillo, Río San Juan, 25 km SW of Bluefields along the Río Kukra, and 35 km NNW of Bluefields, RAAS, from March 1990 through February 1993. Presumably these birds represented the *vermiculatus* group found on the Caribbean slope of Costa Rica (Stiles and Skutch 1989). Additional study is needed.

Ssp.: Presumably *dacrysiactus*. Monroe (1968) tentatively assigned all Honduras specimens to *O. g. guatemalae*. Marshall (1967) did not recognize *dacrysiactus* as distinct from *O. g. guatemalae* but noted that it might prove distinct with more specimens from Nicaragua. So far none has been obtained. As noted above, Caribbean birds may represent *O. g. vermiculatus*.

***Lophostrix cristata*.** Crested Owl.

Permanent resident. CNHL: Probably rare in deciduous forest.

The only records are from Pena Blanca [= Peñas Blancas] (no altitude given), Depto. de Jinotega, and from Matagalpa. The specimen from Matagalpa is labeled 2,300 feet (700 m), which is well below the level of cloud forest. Miller and Griscom (unpubl. ms.) stated only that the species "prefers thick forest," and the designation "deciduous forest" is presumptive.

Ssp.: *stricklandi*.

***Pulsatrix perspicillata*.** Spectacled Owl.

Permanent resident. PAC: Fairly common in deciduous forest; CRB: Fairly common in humid forest.

Although I have listed this species as fairly common on the basis of numerous specimen records, I have never encountered it in Nicaragua.

Ssp.: *saturata*.

***Bubo virginianus*.** Great Horned Owl.

Permanent resident. PAC: Rare in deciduous forest, at moderate elevations; CNHL: Rare in undetermined habitat; CRB: Rare in lowland pine savanna.

One was seen at Volcán Casita, ~1,000 m, Depto. de Chinandega, by the late O. M. Buchanan in November 1961, and I have previously discussed sight records from the pine savanna (Howell 1972). The only specimen record is from Matagalpa and it lacks habitat data.

Ssp.: Presumably *mesembrinus*.

***Glaucidium minutissimum*.** Least Pygmy-Owl.
[***Glaucidium griseiceps*.** Central American Pygmy-Owl.]

Permanent resident. CRB: Fairly common in humid forest.

Tom Will provided the first records for Nicaragua for this species, although since it occurs in humid forest elsewhere in Middle America, presumably it had been overlooked prior to 1990. He encountered the species at ~100 m elevation in primary and selectively logged lowland humid forest 13 km NNE of El Castillo, Río San Juan. He heard or sighted single individuals on a number of occasions and found three birds on 2 September 1990, four on 3 and 4 November 1990, six on 2 December 1990, and two on 12 and 14 June 1991. He recorded vocalizations of several individuals; the song consisted of a series of hollow, ringing hoots, often clustered together in groups separated by longer pauses, and often with an additional hoot added to each cluster. Twice in September 1990 and once in June 1991, he recorded a single long series in which the owl began with two or three hoots, paused, then added a hoot to each group as the series progressed from 3 to 4, 5, 6, 7 . . . all the way to 16–18 notes per group (T. Will pers. comm.)

Ssp.: Presumably *griseiceps*? More study is needed.

***Glaucidium brasilianum*.** Ferruginous Pygmy-Owl.

Permanent resident. PAC: Rare in thorn forest and scrub; CNHL: Rare in undetermined habitat; CRB: Fairly common in humid forest; rare in forest edge, low second-growth lowland pine savanna.

Although Monroe found this species to be common in the arid Pacific lowlands in Honduras, there is only one Pacific Region record from Nicaragua. The only Central Highlands records are two specimens from Quilalí, elevation 1,800 feet (550 m), Depto. de Nueva Segovia. I have elsewhere (Howell 1972) discussed the species' occurrence in the pine savanna.

Ssp.: *ridgwayi*.

{Athene cunicularia. Burrowing Owl.

There are no records from Nicaragua, but the species may occur as a rare transient, as there are a few records of wintering birds from Costa Rica and Panama.}

Ciccaba virgata. Mottled Owl.

Permanent resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Uncommon in forest edge, low second-growth humid forest.

Specimens from the Central Highlands without habitat data may have come from cloud forest edge and low secondary habitats. A juvenile was collected at Matagalpa on 10 March 1909.

Ssp.: *centralis*.

Ciccaba nigrolineata. Black-and-white Owl.

Permanent resident. PAC: Rare in deciduous forest; CRB: Rare in humid forest.

The only two Pacific Region records are from Volcán San Cristóbal, 2,100 feet (640 m), and Volcán Mombacho (no altitude given).

Asio stygius. Stygian Owl.

Permanent resident. CNHL: Probably rare in cloud forest.

The only records are three Richardson specimens—one from Matagalpa and two from San Rafael del Norte. One of the latter is a juvenile female in downy plumage taken on 30 April 1898. Cloud forest is the probable habitat, but no altitude is given on the specimen labels.

Ssp.: *robustus*.

Asio clamator [*Pseudoscops clamator*].

Striped Owl.

Permanent resident. PAC: Rare in undetermined habitat; CRB: Rare in humid forest, forest edge, and low second growth.

Miller and Griscom (unpubl. ms.) reported three Chávez specimens in the Managua museum said by him to have been "taken locally." I have elsewhere discussed the single Caribbean record (Howell 1957). The species is doubtless more widespread than these few records indicate.

Ssp.: *forbesi*.

{Aegolius ridgwayi. Unspotted Saw-whet Owl.

This high-altitude species is unrecorded from Nicaragua although it occurs to the north and

south. It is probably absent because of insufficient extent of suitable habitat.}

ORDER CAPRIMULGIFORMES

FAMILY CAPRIMULGIDAE

Lurocalis semitorquatus. Short-tailed Nighthawk.

Probably a permanent resident. CRB: Rare in humid forest.

The only specimen record, the northernmost for the species, is that of Huber (1923, 1932), who obtained one bird on 6 June 1922 from a flock of 15 or 20 birds flying over the Banbana [= Bambana] River 10 miles above its junction with the Río Prinzapolka, RAAN. The locality is in lowlands, not greatly above sea level. Huber (1923) described the bird as a new species, *L. stonei*, which is now considered only subspecifically distinct. Wetmore (1968) discussed the forest-dwelling habits of the species, which probably accounts for the scarcity of records. Tom Will saw the species 13 km NNE of El Castillo, Depto. Río San Juan—one individual foraging over the Río Santa Cruz on 29 November and two in forest clearings at a different locality on 3 December 1990; he also observed a single individual flying over the Río Kukra, 25 km SW of Bluefields, RAAS, on the evening of 3 February 1991.

Ssp.: *stonei* Huber 1923 (see above).

Chordeiles acutipennis. Lesser Nighthawk.

C. a. micromeris: Permanent resident. PAC: Rare in grasslands, thorn forest and scrub, forest edge, low second-growth deciduous forest.

C. a. texensis: Transient, winter resident. PAC: Fairly common in grasslands, thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Fairly common in highland pine and pine-oak forest.

The subspecies *micromeris*, which breeds locally in tropical Middle America, has been recorded once as nesting in Nicaragua; Miller and Griscom (unpubl. ms.) collected a female with one addled egg and a downy chick at Tipitapa, Depto. de Managua, on 28 April 1917. Eisenmann and Howell (1962) discussed the distribution and status of this form. The subspecies *texensis* is a transient and winter resident. It has been recorded in the Central Highlands up to 1,100 m in pines but has not been recorded from the Caribbean Region.

Ssp.: Permanent resident: *micromeris*; transient, winter resident: *texensis*.

Chordeiles minor. Common Nighthawk.

Transient, summer resident. PAC: Uncommon in undetermined habitat; CRB: Probably common in forest edge, low second-growth humid forest; common in lowland pine savanna.

I have elsewhere discussed the uncertain subspecific status of the breeding population of the Mosquitia (Howell 1972). The only other specimen records for this species in Nicaragua are those of Richmond, who found it "Exceedingly abundant during fall and winter on the [Rio] Escondido. First seen August 17." Richmond gave no specific winter dates, and his latest specimen date is 28 October. Richmond's term "winter" probably refers to late fall, as the North American breeding populations winter in South America. Miller and Griscom (unpubl. ms.) said that they "saw night-hawks migrating north on several occasions during the spring of 1917," and James Silliman saw a flock of 30 or 40 on the Pacific Coast at Poneloya, Depto. de León, on 22 May 1983.

Ssp.: Uncertain; Richmond's fall specimens from the Río Escondido (U.S. National Museum) have been subspecifically identified as *howelli* and *hesperis*; *chapmani* is probably a transient, and a summer resident that breeds in the pine savanna may be an undescribed subspecies (Howell 1972).

Nyctidromus albicollis. Common Pauraque.

Permanent resident. PAC: Common in thorn forest and scrub, and deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Common in humid forest, forest edge, low second-growth lowland pine savanna.

In Nicaragua this widespread species has not been collected at elevations above 700 m, although it must surely occur at higher altitudes as well.

Ssp.: *albicollis*.

Nyctiphrynus ocellatus. Ocellated Poorwill.

Probably a permanent resident. CRB: Rare in humid forest.

The only Nicaraguan record, and until 1988 the only one outside of South America, is a single female collected by Richardson at Pena Blanca [= Peñas Blancas], Depto. de Jinotega, on 5 June 1909. The label gives no indication of altitude, habitat, or gonad size. Miller and Griscom (1925a) described it as a new species, *N. lautus*, which is

now considered a subspecies of *ocellatus*. Stiles (1988) obtained a male specimen in breeding condition on 28 March 1988 in Costa Rica which he refers to *N. o. lautus*.

Ssp.: *lautus* Miller and Griscom 1925a, type locality Pena Blanca [= Peñas Blancas], Depto. de Jinotega.

Caprimulgus carolinensis. Chuck-will's-widow.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Rare in deciduous forest.

There are six specimen records from 12 September 1917 to 19 March 1984. Two Richardson specimens in the BMNH, taken at León on 9 and 14 December 1892, seem not to have been reported previously. Nutting collected two specimens at San Juan del Sur, Depto. de Rivas, in January 1883 and considered the bird "common," but this seems unlikely in view of the scarcity of subsequent records.

Caprimulgus salvini. Tawny-collared Nightjar.

Probably a winter visitor or permanent resident. CNHL: Rare in deciduous forest, at moderate elevations.

The only record is of a female, ovary not enlarged, taken at Matagalpa, 2,200 feet (670 m), on 13 April 1917. The specimen is in the AMNH. Miller and Griscom (unpubl. ms.) did not report the habitat, but deciduous forest is probable at that elevation. The specimen was originally referred to *C. badius*, a form described from Belize and now considered a subspecies of *salvini*, which was described earlier from northeastern Mexico. Peters (1940) tentatively referred both *badius* and *salvini* (including the Nicaraguan specimen) to the species *C. serico-caudatus*, which was then of unknown origin. As the range of that form is now known to be from eastern Peru to northern Argentina, conspecificity with *salvini* seems unlikely. The Nicaraguan locality is the southernmost for the species *salvini*, which has not been recorded from Honduras. The mid-April date of the Matagalpa specimen does not certainly indicate residency, and the bird was not in breeding condition. The specimen is in poor condition and it cannot be unequivocally identified to subspecies. Russell (1964) suggested that the species may be migratory, and the Nicaraguan bird might have been a late-staying winter visitor.

Ssp.: Indeterminate.

Caprimulgus ridgwayi. Buff-collared Nightjar.

Probably a permanent resident. PAC: Rare in thorn forest and scrub; CNHL: Probably uncommon in deciduous forest, at moderate elevations.

The first specimen is one collected at Hato Grande, Depto. de Chontales, in arid habitat on 22 January 1956. It was one of two birds found in a dry rocky streambed. Ben B. Coffey informs me (in litt., 2 April 1972) that on 23 March 1970 he heard the distinctive "cookachee" calls of at least three individuals near Matagalpa at an elevation of ~800 m, and J. C. Martínez-Sánchez collected a male at 10 km N of Sébaco, Depto. de Matagalpa on 28 July 1985. These data suggest but do not definitely establish breeding. There are no other records from Nicaragua, which represents the southern limit of the range.

Ssp.: *trogloodytes*.

Caprimulgus vociferus. Whip-poor-will.

Transient, winter resident, and probably a permanent resident. PAC: Rare in deciduous forest, at moderate elevations; CNHL: Probably rare in deciduous forest, at moderate elevations; CRB: Rare in humid forest.

The dates of collection of the only three Nicaraguan specimens are, respectively, 2 December 1961, 15 February 1917, and 22 March 1909. There is no evidence as yet of a breeding population in Nicaragua, but the species breeds south to El Salvador and Honduras. It is presumably a transient also, as it winters casually south to Costa Rica and Panama.

Ssp.: Only *vociferus* is certainly recorded.

Caprimulgus maculicaudus. Spot-tailed Nightjar.

Summer resident. CRB: Fairly common in grasslands and lowland pine savanna.

I have elsewhere discussed the occurrence and breeding of this species in the Mosquitia and its systematics (Howell 1972). The Middle American populations occur discontinuously from southeastern Mexico to northeastern Nicaragua, and the species is also widespread in tropical South America; no subspecies are recognized.

FAMILY NYCTIBIIDAE

Nyctibius grandis. Great Potoo.

Permanent resident. CRB: Rare in humid forest.

The only specimen record is a bird in the BMNH from San Emilio, Depto. de Rivas, taken on 24 March 1896 by Richardson. This record was not

included in the *Biología Centrali-Americana* and was thus overlooked until mentioned by Wetmore (1968), who referred it to the nominate subspecies and not the larger form *guatemalensis*. The wing and tail measure 390 mm and 257 mm, respectively—smaller than the two known specimens of *guatemalensis* but near the maximum size for *N. g. grandis*, to which it is best referred. Tom Will encountered the species in mature lowland humid forest 35 km NNW of Bluefields, RAAS, on 8 March 1990, 24 February 1991, 16 July 1991 (6 individuals, voice recordings), 28 February 1992, and 24 February 1993. The 1990 individual was observed feeding on bats as they emerged from a cavity in a dead *Dipteryx* snag (T. Will pers. comm.)

Ssp.: *grandis*.

Nyctibius griseus. Common Potoo.

Permanent resident. PAC: Uncommon in deciduous forest; CRB: Uncommon in humid forest-lowland pine savanna.

I have elsewhere discussed the status of this species in the interface between humid forest and pine savanna (Howell 1972). The only other Caribbean record is a recording of distant, descending, melancholy notes made 13 km NNE of El Castillo, Río San Juan, 17 June 1991 (T. Will pers. comm.). In November 1961 at Volcán Casita, Depto. de Chinandega, at an elevation of 1,100 m, I heard on several nights the loud series of notes of descending pitch characteristic of this species in most of its range. I did not hear the "rough, squalling" calls given by birds in the Valle Central and Guanacaste region of Costa Rica (Stiles and Skutch 1989). I heard no vocalizations of this species in the pine savanna.

Ssp.: *mexicanus*.

ORDER APODIFORMES

FAMILY APODIDAE

Cypseloides niger. Black Swift.

Probably transient. PAC: Rare in deciduous forest.

There are no specimen records from Nicaragua, although the species ranges south to Costa Rica. In tropical Middle America it is largely a montane form and generally rare, and it may be either altogether absent or merely undetected in Nicaragua as a resident. A sighting of a single individual over the Sierras de Managua 13 km SSW

of Managua, October 1990, suggested migration; other individuals were suspected, but not as confidently identified (T. Will pers. comm.).

Cypseloides cryptus. White-chinned Swift.

Probably permanent resident. CRB: Absolutely rare but locally fairly common in humid forest.

I have elsewhere discussed the occurrence of this swift in Nicaragua (Howell 1957), and there have been no new data since then. The breeding range is uncertain, but Kiff (1975) reported a male in breeding condition from Costa Rica in June.

{*Cypseloides rutilus* [*Streptoprocne rutila*]. Chestnut-collared Swift.

This species is unrecorded from Nicaragua but occurs both to the north and south, usually in montane regions but also at lower elevations. It will probably be found in Nicaragua eventually on the Caribbean side of the Central Highlands.)

Streptoprocne zonaris. White-collared Swift.

Permanent resident. CNHL: Fairly common in highland pine and pine-oak forest, and cloud forest; CRB: Absolutely uncommon but locally common in humid forest, at moderate elevations.

Huber found this species in "great flocks" and apparently nesting in the vicinity of Edén, RAAN, in April 1922. The area includes low mountains from about 500 to 800 m in altitude. There are no other Caribbean Region records.

Ssp.: *albicincta*; *bouchellii* Huber 1923, type locality Edén, RAAN, is not recognized.

Chaetura pelagica. Chimney Swift.

Transient. CRB: Absolutely rare but locally fairly common in humid forest, at moderate elevations.

The only specimen record is that of Huber who obtained two birds from a "large flock" on 2 April 1922. The species is possibly a fall transient as well.

Chaetura vauxi. Vaux's Swift.

Permanent resident. PAC: Rare in cloud forest; CNHL: Probably uncommon in grasslands; CRB: Fairly common in grasslands, forest edge, low second-growth humid forest.

The only PAC specimen record is one taken from a flock over cloud forest near the summit of Volcán Mombacho, elevation 1,300 m, Depto. de

Granada. Those from other areas have usually been taken over clearings.

Ssp.: *richmondi*.

Chaetura cinereiventris. Gray-rumped Swift.

Permanent resident. CRB: Fairly common in humid forest.

A specimen from 18 miles (29 km) NE of Siuna, RAAN, is the northernmost record for the species.

Ssp.: *phaeopygius*.

Panyptila cayennensis. Lesser Swallow-tailed Swift.

Permanent resident. CRB: Absolutely rare but locally common in humid forest.

The earliest record is that of Richmond, who found the species to be common at 50 miles (80 m) W of Bluefields on the Río Escondido, RAAS, in 1892. He also reported a nest there in August (Richmond 1893). This swift is evidently very locally distributed north of Costa Rica.

Ssp.: *cayennensis*.

Panyptila sanctihieronymi. Greater Swallow-tailed Swift.

Probably a permanent resident. CNHL: Rare in undetermined habitat.

The only record is a single male specimen collected by J. G. Montrello at El Corozo, ~700 m elevation, Depto. de Nueva Segovia, on 15 September 1954. The gonads were not enlarged. Montrello informed me that the bird was alone, flying over a road through clearings in a region where pines and broad-leaved forest interdigitated. This constitutes the southernmost record for the species, but there is still no evidence of breeding in Nicaragua.

FAMILY TROCHILIDAE

Glaucis aenea [*Glaucis aeneus*]. Bronzy Hermit.

Permanent resident. CRB: Absolutely rare but locally common in humid forest.

Richmond found this species "common" on the Río Escondido. This locality represents the northern limit of the range.

Ssp.: *aenea*.

Threnetes ruckeri. Band-tailed Barbthroat.

Permanent resident. CRB: Fairly common in humid forest.

Richmond found this species less common than *G. aenea* at his locality on the Río Escondido, but *T. ruckeri* proves much more abundant elsewhere.

Ssp.: *ventosus*.

Phaethornis superciliosus. Long-tailed Hermit.

[***Phaethornis longirostris***. Long-billed Hermit.]

Permanent resident. CNHL: Uncommon in forest edge, low second-growth cloud forest; CRB: Common in humid forest.

I have specimens of this species from the edge of cloud forest at 12 km N of Matagalpa, at ~1,300 m elevation.

Ssp.: I have previously (Howell 1957) discussed subspecific variation in this species and doubted the validity of *cephalus* Bourcier and Mulsant, 1848, type locality Río San Juan, Nicaragua. This river closely parallels or actually constitutes the boundary between Nicaragua and Costa Rica in the Caribbean Region, but the placement of the type locality within Nicaragua fosters the supposition that *cephalus* probably occupies the entire Caribbean Region of that country. The only distinguishing characters usually ascribed to *cephalus* are somewhat darker sides of the throat as well as more distinct barring in the same area. Birds from Costa Rica average somewhat dusker on the sides of the throat and tend to show more distinct barring there than birds from farther north, but the degree of difference is slight and highly variable. Birds from areas throughout Nicaragua (and Honduras; Monroe 1968) may show as much barring as Costa Rican examples, or more, or less, or none. R. C. Banks (unpubl. ms.) pointed out that birds from the more northern parts of the range have whitish tips, not buffy or tawny, to all rectrices but the long central pair (which are always white-tipped) and that the undertail coverts of those northern populations are paler buff than those from farther south. This is generally true, but there is a wide and gradual transition zone through Nicaragua. Birds from the Río Coco region, northern Nicaragua, have more whitish rectrix tips and paler undertail coverts; those from Matagalpa, north-central Nicaragua, have more buffy rectrix tips and undertail coverts; those from the Río Escondido region are slightly darker and more extensively buffy or tawny. The trend continues to the Río San Juan region of Nicaragua-Costa Rica and on south to Panama, where the name *cassini* is applied

to the still darker population there. The variation appears to me so smoothly clinal through Nicaragua that any division there into different subspecies is at best arbitrary. If a northern *longirostris* and a southern *cephalus* are recognized, the Nicaraguan populations are intermediate.

Pygornis adolphi. Boucard's Hermit.

[***Phaethornis striigularis***. Stripe-throated Hermit.]

Permanent resident. PAC: Uncommon in deciduous forest, at moderate elevations; CRB: Common in humid forest.

The only records from the Pacific Region are from Volcán San Cristóbal, Volcán Casita, and Volcán Mombacho. R. C. Banks (unpubl. ms.) gives reasons for recognizing *Pygornis* as distinct from *Phaethornis*, and *adolphi* as a monotypic species within that part of Central America that includes Nicaragua. Nicaraguan birds have previously been treated as *Phaethornis longuemareus saturatus*.

Ssp.: *saturatus*.

Phaeochroa cuvierii. Scaly-breasted Hummingbird.

Permanent resident. CRB: Fairly common in humid forest.

Ssp.: *roberti*.

Campylopterus hemileucurus. Violet Sabrewing.

Permanent resident. CNHL: Fairly common in cloud forest; CRB: Rare in humid forest, at moderate elevations.

In the nonbreeding season, there is some wandering into humid forest at lower elevations than the breeding range.

Ssp.: None recognized.

Florisuga mellivora. White-necked Jacobin.

Permanent resident. PAC: Rare in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest.

In the Pacific Region this species has been found only on Volcán Casita and Volcán Mombacho.

Ssp.: *mellivora*.

Colibri delphinae. Brown Violet-ear

[Brown Violetear].

Permanent resident. CNHL: Rare in forest edge, low second-growth cloud forest; CRB: Uncommon in humid forest.

I obtained one female specimen at the edge of cloud forest at 11 km N of Matagalpa, Depto. de Matagalpa, elevation ~1,300 m, on 2 January 1952. This is the only record for the Central Highlands. The only Caribbean records are three specimens without dates in the BMNH collected by Thomas Belt in "Chontales," presumably near Santo Domingo.

Colibri thalassinus. Green Violet-ear
[Green Violetear].

Probably a permanent resident. PAC: Rare in highland pine and pine-oak forest, and deciduous forest; CNHL: Rare in cloud forest.

Martínez-Sánchez (1989) reported the first record for this species in Nicaragua, a male with enlarged testes collected at Volcán Casita, Depto. de Chinandega, at 1,250 m elevation in a mixed pine-deciduous woodland on 3 December 1983. No others were found, and establishment of a population remains uncertain. Tom Will reported one from Santa María de Ostuma, 10 km N of Matagalpa, Depto. de Matagalpa, 9 September 1990.

Ssp.: *thalassinus*.

Anthracothorax prevostii. Green-breasted Mango.

Permanent resident. PAC: Uncommon in deciduous forest, forest edge, low second growth; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: I recognize *gracilirostris* on the basis of a shorter (if not slenderer) bill. Exposed culmens of seven Nicaraguan males measure 22.5–24.4 mm, \bar{x} = 23.4 mm; those of four females measure 24.6–25.5 mm, \bar{x} = 25.0 mm.

Klais guimeti. Violet-headed Hummingbird.

Permanent resident. CNHL: Rare in deciduous forest; CRB: Absolutely uncommon but locally fairly common in humid forest.

In Nicaragua this species usually is found in lowlands, but from the Central Highlands there is a Richardson specimen from San Juan de Telpaneca, Depto. de Madriz, labeled 3,500 feet (1,070 m).

Ssp.: *merritti*; the males of this Central American form have blue crowns rather than violet crowns as in the South American form. Howell (1957:84) had these characteristics reversed.

Abeillia abeillei. Emerald-chinned Hummingbird.

Permanent resident. CNHL: Fairly common in cloud forest; probably rare in deciduous forest.

Miller and Griscom (unpubl. ms.) reported this species breeding in the cloud forest above San Rafael del Norte at the end of March 1917. A Richardson specimen from Quilali, Depto. de Nueva Segovia, is labeled 1,800 feet (550 m), which is too low for cloud forest, and the habitat was presumably deciduous forest.

Ssp.: *aurea* Miller and Griscom 1925a, type locality San Rafael del Norte, Depto. de Jinotega.

Lophornis helenae. Black-crested Coquette.

Permanent resident. CNHL: Rare in forest edge, low second-growth cloud forest; CRB: Probably rare in forest edge, low second-growth humid forest.

This tiny species seems to range from lowland Caribbean humid forest to the edge of cloud forest in the Central Highlands.

Chlorostilbon canivetii. Fork-tailed Emerald
[Canivet's Emerald].

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; rare in highland pine forest; CNHL: Fairly common in deciduous forest, at moderate elevations; uncommon in forest edge, low second-growth cloud forest.

One bird was collected at the summit of Volcán San Cristóbal, where there was pine forest only, on 4 June 1917—probably a wanderer from lower elevations.

Ssp.: *canivetii*; *osberti*, and *salvini* are not recognized.

Thalurania colombica. Crowned Woodnymph
[Violet-crowned Woodnymph].

Permanent resident. CRB: Common in humid forest, at moderate elevations.

I have elsewhere (Howell 1957) discussed the taxonomy and distribution of this species in Nicaragua.

Ssp.: Adult males from the Río Coco region of Honduras and Nicaragua (north to Belize and Guatemala) have the abdomen largely or entirely glittering green, concolor with the throat, instead of purple. This population was described as *Thalurania townsendi* by Ridgway (1888), type locality Río Segovia, Honduras [= Río Coco, Honduras-Nicaragua boundary]. Nicaraguan birds from this region (Comarca de El Cabo, RAAN) have this color pattern. Birds

from farther south in the Caribbean Region usually have green throats and purple abdomens, but many individuals from as far south as Costa Rica and Panama have a mixture of green and purple feathers on the abdomen, usually mostly purple but rarely mostly (never entirely) green. Huber (1932) found that his series of 13 birds from northern Zelaya, RAAN, included two that closely approached *townsendi* and the rest variable but closer to *venusta*. The best course on the basis of present information is to recognize *townsendi* as the form found in the northern part of the Caribbean Region in Nicaragua, intergrading broadly with *venusta* farther south. Some individual variation in the presence and extent of green abdominal feathers may appear in populations assigned to *venusta*.

***Hylocharis eliciae*.** Blue-throated Goldentail.

Permanent resident. PAC: Absolutely uncommon but locally common in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest.

This species was common and singing on territories in deciduous forest at 700 m at Volcán Casita, Depto. de Chinandega, in late November 1961, and was recorded also in similar habitat on Volcán Mombacho. It seems to be absent from the Pacific Region lowlands but is widespread in the Caribbean lowlands.

***Hylocharis leucotis*.** White-eared Hummingbird.

Permanent resident. PAC: Rare in highland pine and pine-oak forest; CNHL: Fairly common in highland pine and pine-oak forest, forest edge, low second-growth cloud forest.

Miller and Griscom (unpubl. ms.) reported one individual only, seen and collected in the crater of Volcán San Cristóbal on 4 June 1917. There was no evidence of a breeding population, and there are no other Pacific Region records. In the Central Highlands the species is often found at the interface between highland pine forest (the usual habitat) and the cloud forest edge.

Ssp.: *pygmaea*. Simon and Hellmayr 1908, type locality Matagalpa.

***Amazilia candida*.** White-bellied Emerald.

Permanent resident. CNHL: Uncommon in deciduous forest, at moderate elevations, to forest edge, low second-growth cloud forest; CRB: Fairly common in humid forest.

Although this species is primarily a lowland dweller, it ranges to the lower edge of cloud forest at ~1,300 m.

Ssp.: *candida*.

***Amazilia amabilis*.** Blue-chested Hummingbird.

Permanent resident. CRB: Uncommon in humid forest.

The northern limit of the range of this species as presently known is 20 km SSW of Waspan, Comarca de El Cabo, RAAN, but it is likely that the species ranges into eastern Honduras.

Ssp.: *costaricensis*.

***Amazilia cyanocephala*.** Red-billed Azurecrown [Azure-crowned Hummingbird].

Permanent resident. *A. c. guatemalensis*: CNHL: Fairly common in highland pine and pine-oak forest; *A. c. chlorostephana*: CRB: Common in lowland pine savanna.

The green-crowned subspecies *chlorostephana* of the Mosquitia is without competing species in the pines (Howell 1972) and is somewhat more abundant within its range than the montane form *guatemalensis* in Nicaragua. The ranges of the two are not known to be in contact. The species reaches its southern limit in Nicaragua.

Ssp.: CNHL: *guatemalensis*; CRB: *chlorostephana* Howell 1965, type locality 15 km SSW of Waspan, Comarca de El Cabo, RAAN.

***Amazilia cyanura*.** Blue-tailed Hummingbird.

Permanent resident. PAC: Common in deciduous forest at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations to forest edge, low second-growth cloud forest; CRB: Probably rare in humid forest.

In the Pacific Region the species ranges south to León, and in the Central Highlands to the lower edge of cloud forest at ~1,300 m. It has also been taken at Río Grande, Matagalpa, Depto. de Matagalpa (presumably in the Caribbean Region), but the locality is not precisely known.

Ssp.: *cyanura* Gould 1859, type locality El Realejo, Depto. de Chinandega.

***Amazilia saucerrottei*.** Steely-vented Hummingbird.

Permanent resident. PAC: Absolutely uncommon but locally common in forest edge, low second-growth deciduous forest, up to

moderate elevations; CRB: Rare in undetermined habitat.

This species reaches the northern limit of its range in Nicaragua and appears to be allopatric with the similar *A. cyanura*. The closest approach is at Muy Muy, Depto. de Matagalpa, which is ~18 km S of Uluse, where *A. cyanura* was taken by Richardson. Muy Muy appears to be within the Caribbean Region but may be at the eastern edge of the Pacific Region. Richardson also obtained several specimens from San Emilio, which is at the western limit of the Caribbean humid forest, and some birds typical of the Pacific Region occur in that vicinity. The species is abundant on Volcán Mombacho from about 400 to 1,200 m.

Ssp.: *hoffmanni*.

Amazilia tzacatl. Rufous-tailed Hummingbird.

Permanent resident. CNHL: Uncommon in deciduous forest, at moderate elevations and possibly cloud forest; CRB: Common in humid forest.

A specimen taken at San Rafael del Norte on 23 March 1917 is labeled "decid. forest 4200 ft" (1,280 m); at that altitude, cloud forest would be expected. It is primarily a lowland species of the Caribbean Region.

Ssp.: *tzacatl*.

Amazilia rutila. Cinnamon Hummingbird.

Permanent resident. PAC: Common in mangroves, thorn forest and scrub, forest edge, low second-growth deciduous forest; CRB: Uncommon in humid forest, forest edge and low second-growth lowland pine savanna.

This species is primarily a Pacific Region form but also occurs around clearings and forest edges in the Caribbean Region. James Silliman observed nest building at Poneloya, Depto. de León, on 18 November 1981 and found a nest with a chick in nearby coastal mangroves in March 1982.

Ssp.: *rutila*.

Eupherusa eximia. Stripe-tailed Hummingbird.

Permanent resident. CNHL: Fairly common in cloud forest; CRB: Probably rare in humid forest.

One Richardson specimen from Río Grande, Depto. de Matagalpa, presumably came from humid forest in the Caribbean lowlands; all others are from montane localities.

Ssp.: *eximia*.

Microchera albocoronata. Snowcap.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

No specimens are known from north of Nicaragua, and my sight record from extreme southeast Honduras (Monroe 1968) is the northernmost.

Ssp.: *parvirostris*.

Chalybura urochrysis. Bronze-tailed Plumeteer.

Permanent resident. CRB: Common in humid forest.

The northern limit of the species' known range was formerly northern Nicaragua, but it has subsequently been found in eastern Honduras (Marcus 1983).

Ssp.: *melanorrhoea*.

Lampornis sybillae. Green-breasted Mountain-gem.

Permanent resident. CNHL: Fairly common in cloud forest.

This species, closely related to *L. viridipallens* and sometimes considered conspecific, is endemic to the highlands of eastern Honduras and north-central Nicaragua. It was described by Salvin and Godman (1892); type locality Matagalpa.

Lampornis calolaema [*Lampornis calolaemus*]. Purple-throated Mountain-gem.

Permanent resident. PAC: Fairly common in cloud forest.

This species was formerly known in Nicaragua only from the cloud forest of Volcán Mombacho. This is the only species of hummingbird regularly present in the cloud forest on Mombacho. These records represent the northern limit of the range. J. C. Martínez-Sánchez has found it abundantly above 1,000 m on Volcán Maderas, Isla de Ometepe (unpubl. data 1988).

Ssp.: *pectoralis*.

Eugenes fulgens. Magnificent Hummingbird.

Permanent resident. CNHL: Rare in highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) stated that this is "a rare bird in Nicaragua, only four specimens having been collected, all in the pine forest belt in the northern highlands." I could find only three specimens, one in the BMNH from San Rafael del Norte, another from the same locality (labeled 3,500 feet [1,070 m]) and one from Ocotal, Depto. de Nueva

Segovia, both in the AMNH. The species must not occur in the pines around Matagalpa or Richardson would surely have collected it there. Nicaragua is the southern limit of the montane pine-dwelling populations of this species; populations in the Costa Rica and Panama highlands, where no pines are native, are primarily cloud-forest-dwellers.

Ssp.: *viridiceps*.

Heliothryx barroti. Purple-crowned Fairy.

Permanent resident. CRB: Fairly common in humid forest.

Ssp.: None recognized.

Heliomaster constantii. Plain-capped Starthroat.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Probably rare in deciduous forest, at moderate elevations.

The only record from the Central Highlands is one taken "between San Rafael del Norte and Jinotega, 2500–3000 ft" (760–915 m) on 4 April 1917 (Miller and Griscom unpubl. ms.).

Ssp.: *constantii*.

Heliomaster longirostris. Long-billed Starthroat.

Permanent resident. PAC: Rare in deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

Two specimens from Chinandega (without habitat data) taken by Richardson on 18 and 21 August 1908 are the only definitely Pacific Region specimen records; James Silliman saw it at Isla Juan Venado, Depto. de León, on 7 March 1983.

Ssp.: *pallidiceps*. Zimmer (1953) rejected *pallidiceps* and referred all Central American specimens to nominate *longirostris*. Subsequent authors have recognized *pallidiceps*, and adult males from Nicaragua all have the blue-green crown characteristic of that form.

Tilmatura dupontii. Sparkling-tailed Hummingbird.

Permanent resident. CHNL: Probably uncommon in highland pine and pine-oak forest; CRB: Rare in undetermined habitat.

Richardson collected one specimen labeled Río Grande [Depto. de Matagalpa] on 14 April 1908. Birds thus labeled are usually Caribbean humid forest dwellers, and this individual was presumably a wanderer from the typical montane habitat. Nicaragua is the southern limit of the species' range.

Archilochus colubris. Ruby-throated Hummingbird.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Rare in forest edge, low second-growth cloud forest; CRB: Uncommon in forest edge, low second-growth humid forest.

The only Central Highlands record is a bird taken at the lower edge of cloud forest at ~1,300 m, 12 km N of Matagalpa, Depto. de Matagalpa. There are no specimen records from the Caribbean Region, but the species probably occurs there.

ORDER TROGONIFORMES
FAMILY TROGONIDAE

Trogon massena. Slaty-tailed Trogon.

Permanent resident. PAC: Rare in deciduous forest; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Common in humid forest.

One of two specimens in the BMNH presumably collected by Bridges is secondarily labeled "found in the forests near Virgin Bay, Lake of Nicaragua"; the original label is half of a printed card which reads "St. Charles Hotel, near the steamboat landing, Virgen Bay, Nicaragua." This locality is probably La Virgen, Depto. de Rivas, on the west shore of the lake, but there is no certainty that the birds were actually collected there. I have, however, a male collected on 14 March 1962 in heavy deciduous forest at ~450 m on Volcán Mombacho, which confirms that the species occurs in suitable habitat in the Pacific Region. James Silliman had two uncertain sight records from Volcán Casita in 1983.

Ssp.: *massena*.

Trogon clathratus. Lattice-tailed Trogon.

Probably a permanent resident CRB: Rare in humid forest.

Tom Will sighted a single adult male of this species at ~160 m elevation near a small logging-camp clearing, 13 km NNE of El Castillo, Depto. de Río San Juan, 1 December 1990. The bird was first heard calling, then observed sitting on a limb 8–10 m high in mature humid forest, where its distinctive yellow-white eye, bright yellow bill, and narrow white tail-barring were noted. This first record for Nicaragua was not totally unexpected, as the species occurs in similar habitat on the Caribbean slope in Costa Rica to the south.

Trogon melanocephalus. Black-headed Trogon.

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

This is the only trogon species found on both slopes which is more abundant in the Pacific Region.

Trogon elegans. Elegant Trogon.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest.

This is the only trogon species that is restricted to the Pacific Region and the one found in the driest habitat.

Ssp.: *lubricus*.

Trogon collaris. Collared Trogon.

Permanent resident. CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Rare in humid forest at moderate elevations.

The altitudinal range of this species in Nicaragua seems to be between ~400 m in the Caribbean Region of the Central Highlands and ~1,500 m in cloud forest. This species is not recorded from any of the Pacific Region volcanic peaks.

Ssp.: *puella*.

Trogon rufus. Black-throated Trogon.

Permanent resident. CRB: Common in humid forest.

Ssp.: *tenellus*.

Trogon violaceus. Violaceous Trogon.

Permanent resident. PAC: Uncommon in deciduous forest up to moderate elevations; CRB: Uncommon in humid forest.

This species has been recorded at altitudes up to ~1,100 m.

Ssp.: *braccatus*.

Pharomachrus mocinno. Resplendent Quetzal.

Permanent resident. CHNL: Formerly fairly common, now uncommon to rare in cloud forest.

The numbers of this species have been greatly reduced in recent years by destruction of its habitat.

Ssp.: *mocinno*.

ORDER CORACIIFORMES
FAMILY MOMOTIDAE***Hylomanes momotula***. Tody Motmot.

Permanent resident. CRB: Rare in humid forest.

The only Nicaraguan records are two males taken by Richardson at Pena Blanca [= Peñas Blancas], Depto. de Jinotega (no elevation given), on 18 and 26 May 1909. It may be genuinely rare, not just overlooked, as Richardson obtained no others, nor have any other collectors in Nicaragua.

Ssp.: *momotula*.

Momotus momota. Blue-crowned Motmot.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest.

M. m. lessonii is sometimes considered a species distinct from *momota*.

Ssp.: *lessonii* Lesson 1842 type locality Realejo, Centre Amerique [= El Realejo, Depto. de Chinandega].

***Baryphthengus ruficapillus* [*Baryphthengus martii*]**. Rufous Motmot.

Permanent resident. CRB: Uncommon in humid forest.

The northern limit of the species' known range was formerly Nicaragua, but Marcus (1983) has obtained records from eastern Honduras.

Ssp.: *semirufus*.

Electron carinatum. Keel-billed Motmot.

Permanent resident. CRB: Absolutely uncommon but, locally fairly common in humid forest, at moderate elevations.

This species seems to be locally distributed and not abundant anywhere in Nicaragua.

Electron platyrhynchum. Broad-billed Motmot.

Permanent resident. CRB: Uncommon in humid forest.

This species is decidedly less common than *E. carinatum* but is not absolutely rare, as there are seven specimens from Nicaragua from six different localities.

Ssp.: *minor*.

Eumomota superciliosa. Turquoise-browed Motmot.

Permanent resident. PAC: Fairly common in thorn forest and scrub; common in forest edge, low second-growth deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations.

This species ranges from the Pacific Region around the lower Central Highlands to the edge of the Caribbean Region.

Ssp.: *apiaster*.

FAMILY ALCEDINIDAE

Ceryle torquata [*Megaceryle torquata*].

Ringed Kingfisher.

Permanent resident. PAC: Fairly common in aquatic habitats of thorn forest and scrub and deciduous forest; CRB: Fairly common in aquatic habitats of humid forest.

This species is confined to streams and lakes, but within a variety of habitats.

Ssp.: *torquata*.

Ceryle alcyon [*Megaceryle alcyon*]. Belted Kingfisher.

Transient, winter resident. PAC: Fairly common in aquatic habitats of mangroves, thorn forest and scrub and deciduous forest; CRB: Uncommon in aquatic habitats of humid forest; fairly common in the Corn Islands.

Peters (1929) found that it was fairly common on both Corn Islands in December 1927, and James Silliman saw one male along the coast of Great Corn Island on 30 December 1981. The earliest fall–winter record is by James Silliman on 31 October 1981 at Isla Juan Venado, Depto. de León. He observed the species in mangroves and estuarine habitat during the winter months in that vicinity. J. R. Alcorn's (pers. comm.) sighting at Tipitapa, Depto. de Managua, on 24 March 1956 is the latest spring date.

Chloroceryle amazona. Amazon Kingfisher.

Permanent resident. PAC: Uncommon in aquatic habitats; CRB: Fairly common in aquatic habitats of humid forest.

This species seems to occur in the Pacific Region only around the great lakes.

Ssp.: None recognized, including *mexicana*.

Chloroceryle americana. Green Kingfisher.

Permanent resident. PAC: Fairly common in aquatic habitats of thorn forest and scrub and deciduous forest; CNHL: Fairly common in aquatic habitats of deciduous forest, at moderate elevations; CRB: Common in aquatic habitats of humid forest.

This small species is much more widely distributed than the larger *C. amazona*.

Ssp.: *septentrionalis*.

Chloroceryle inda. Green-and-rufous Kingfisher.

Permanent resident. CRB: Rare in aquatic habitats of humid forest.

This species reaches its northern limits in Nicaragua. Lawrence (1867) recorded one specimen from Greytown. Richmond (1893) mentioned seeing one near Greytown but did not specifically record it from the Río Escondido. Miller and Griscom (unpubl. ms.) found it at Los Sábalos, Depto. de Río San Juan, and obtained one specimen there. Tom Will sighted one along Río Kukra, 25 km SW of Bluefields, RAAS, 2 February 1990.

Ssp.: *chocoensis*.

Chloroceryle aenea. American Pygmy Kingfisher.

Permanent resident. PAC: Rare in aquatic habitats; CRB: Absolutely rare but locally fairly common in aquatic habitats of humid forest.

Most records are from the eastern and southern shore of Lago de Nicaragua and along the Depto. de Río San Juan which drains it. I have a sight record from the lakeshore at Puerto Díaz, Depto. de Chontales, at which the terrestrial habitat is within the arid Pacific Region. The label of a Richardson specimen taken at San Emilio includes the notation "Very rare; never seen in N. Nic." Richardson did, however, obtain at least six specimens at San Emilio. Ridgway's (1914) record from Granada appears to be an error. In the Caribbean Region, Tom Will encountered the species more frequently along forest trails or as a capture in mist nets set within the forest, presumably where it foraged in small streams or forest pools, than along major waterways—specifically at sites 25 km SW of Bluefields, 35 km NNW of Bluefields, RAAS, 13 km NNE of El Castillo, and in *Raphia* swamp forest at San Juan del Norte, Depto. de Río San Juan.

Ssp.: *stictoptera*.

ORDER PICIFORMES
FAMILY BUCCONIDAE

Bucco macrorhynchos [*Notharchus hyperrhynchos*].
White-necked Puffbird.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: PAC: *cryptoleucus*; CRB: *hyperrhynchos*.

Notharchus tectus. Pied Puffbird.

Probably a permanent resident. CRB: Rare in forest edge, low second-growth humid forest.

Tom Will sighted two birds perched high on dead snags in a cleared area south of the small settlement of Papaturo on the south side of Lago de Nicaragua, Depto. Río San Juan, not far from the Costa Rican border. This sighting constitutes a first record for Nicaragua, although not unexpected, as the species is found in the Caribbean lowlands of Costa Rica (Stiles and Skutch 1989).

Malacoptila panamensis. White-whiskered Puffbird.

Permanent resident. CRB: Fairly common in humid forest.

The type of *fuliginosa* Richmond 1893, Río Escondido (RAAS), is an abnormally dark individual, and the name is a synonym of *inornata* (Wetmore 1968).

Ssp.: *inornata*.

Monasa morphoeus. White-fronted Nunbird.

Permanent resident. CRB: Absolutely uncommon but locally fairly common in humid forest.

This species reaches its recorded northern limit just beyond the Nicaraguan boundary in the Ol-ancho region of Honduras.

Ssp.: *grandior*.

FAMILY GALBULIDAE

Galbula ruficauda. Rufous-tailed Jacamar.

Permanent resident. CRB: Fairly common in humid forest, including forest edge and low second-growth areas.

This species ranges marginally into the Central Highlands on the Caribbean side where humid forest habitat extends to mid-elevations.

Ssp.: *melanogenia*.

FAMILY RAMPHASTIDAE

Aulachorhynchus prasinus. Emerald Toucanet.

Permanent resident. CNHL: Common in cloud forest.

This species does not occur in the cloud forest on Volcán Mombacho.

Ssp.: *virescens*.

Pteroglossus torquatus. Collared Aracari.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in deciduous forest up to moderate elevations; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Common in humid forest.

This species was probably more abundant in the Pacific lowlands prior to extensive deforestation. In the Central Highlands, at San Rafael del Norte, specimens have been taken at altitudes up to 1,300 m.

Ssp.: *torquatus*.

Selenidera spectabilis. Yellow-eared Toucanet.

Permanent resident. CRB: Uncommon in humid forest, at moderate elevations.

A Richardson specimen in the AMNH from San Juan de Telpaneca, Depto. de Madriz, is labeled 3,500 feet (1,070 m). This estimate of altitude is probably too high, but the locality is near the eastern limit of the Caribbean Region habitat in that region.

Ramphastos sulfuratus. Keel-billed Toucan.

Permanent resident. PAC: Absolutely rare but locally fairly common in deciduous forest at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Common in humid forest.

The only Pacific Region locality of certain occurrence is Volcán Mombacho, where this species is found generally above 900 m. J. C. Martínez-Sánchez did not find it on Volcán Maderas, Isla de Ometepe, in habitat similar to that on Mombacho. Rendahl (1919) recorded a skull found on Isla Zapatera, Depto. de Granada, maximum elevation 740 m, but this may have been brought there from elsewhere. The species does not occur on the volcanic peaks near Chinandega. In the Central Highlands, the species has been recorded at elevations up to 4,000 feet (1,220 m).

Ssp.: *brevicarinatus*.

Ramphastos swainsonii. Swainson's Toucan [Chestnut-mandibled Toucan].

Permanent resident. CRB: Fairly common in humid forest.

This species is sympatric with *R. sulfuratus* in the Caribbean Region but is less widespread and less abundant. I recorded it north to Arenal, now within El Paraíso, Honduras, which is the northernmost record for the species.

FAMILY PICIDAE

Picumnus olivaceus. Olivaceous Piculet.

Permanent resident. CRB: Rare in forest edge, low second-growth humid forest.

This species is known from Nicaragua only from a few localities along the southern boundary, from the south shore of Lago de Nicaragua (San Emilio) and along the Río San Juan near the lake (San Carlos, San Francisco). The absence of this species elsewhere in Nicaragua is probably real, although no reason for this is obvious; Monroe found the piculet "fairly common to common" in Honduras.

Ssp.: *dimotus*.

Melanerpes formicivorus. Acorn Woodpecker.

Permanent resident. CNHL: Fairly common in highland pine-oak forest; CRB: Fairly common in lowland pine-oak savanna.

This species is restricted to the immediate vicinity of oaks but it frequently ranges into pines (Howell 1972). Richardson obtained a specimen at "Río Grande," Depto. de Matagalpa, on 13 April 1908; most of his birds so labeled are from humid forest, but the locality is not precise and the river runs through a variety of habitats.

Ssp.: *lineatus*.

Melanerpes pucherani. Black-cheeked Woodpecker.

Permanent resident. CNHL: Rare at moderate elevations in undetermined habitat; CRB: Common in forest edge, low second-growth humid forest.

There are Richardson specimens from Matagalpa and San Rafael del Norte without altitude or habitat data. Presumably these came from the western edge of Caribbean Region habitat in the vicinity of those highland localities as Miller and Griscom (unpubl. ms.) stated that the species was "strictly confined to the Caribbean slope."

Ssp.: *pucherani*.

Melanerpes hoffmannii. Hoffmann's Woodpecker.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations.

This species occurs primarily in the arid Pacific lowlands but ranges up to the lower edge of cloud forest in the Central Highlands and to the interface with Caribbean humid forest (10 km S of San Carlos, Depto. de Río San Juan). No contact with the range of *M. aurifrons* is known in Nicaragua, but presumably it occurs along the western edge of the Central Highlands.

Melanerpes aurifrons. Golden-fronted Woodpecker.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

This form reaches the southern limit of its range in northern Nicaragua, and it is allopatric with *M. hoffmannii*. The two are often considered conspecific, but only one locality of hybridization is known—Río Pespire, southwestern Honduras (Monroe 1968). The BMNH has a previously unreported Richardson specimen from Santa Cruz, Río Coco, Depto. de Jinotega—a male taken on 30 April 1896. I have a pair collected on 29 January 1953 in pine forest at ~700 m at El Corozo, Depto. de Nueva Segovia, and Miller and Griscom (unpubl. ms.) report one specimen from Jalapa, Depto. de Nueva Segovia. The species is not recorded from the highland pine forest or any other habitat on the volcanic peaks near Chinandega. All Nicaraguan specimens are typical of the subspecies *santacruzii* and show no approach to *hoffmannii*.

Ssp.: *santacruzii*.

Sphyrapicus varius. Yellow-bellied Sapsucker.

Transient, winter resident. CNHL: Rare in highland pine and pine-oak forest; CRB: Uncommon in forest edge, low second-growth humid forest, and lowland pine savanna; rare in Corn Islands.

This species is known from the Central Highlands from only two specimens. It seems to be more abundant in the Mosquitia, particularly in the pines (Howell 1972). James Silliman saw one immature on Great Corn Island on 1 January 1982; the species was not recorded by Peters (1929).

Ssp.: *varius*, if not monotypic.

Picoides scalaris. Ladder-backed Woodpecker.

Visitor, permanent resident. PAC: Rare in mangroves; CRB: Uncommon in lowland pine savanna.

I have elsewhere (Howell 1972) discussed the status and distribution of this species in the Mosquitia of Nicaragua, where it reaches the southern limit of its breeding range. James Silliman noted a pair at the edge of mangrove forest on the Pacific coast at Isla Juan Venado, Depto. de León, on 24 November 1982. His notes stated "seen quite clearly for 5 min . . . heard one call . . . facial stripes, ladder-back seen well. Unmistakable." The species occurs locally in the Pacific lowlands of southwestern Honduras, whence these visitors probably came. There are no other Nicaraguan records outside of the Mosquitia.

Ssp.: *leucoptileurus*.

Picoides villosus. Hairy Woodpecker.

Permanent resident. CNHL: Fairly common in highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) mention only pine forest as the habitat of this species, but Monroe found it ranging into cloud forest in Honduras.

Ssp.: *sanctorum*: I follow Monroe (1968) and Short (1982) in referring all Central American birds from Chiapas to Nicaragua to this subspecies, including those from Nicaragua described as *fumeus* Oberholser, 1911, type locality San Rafael del Norte, Depto. de Jinotega.

Veniliornis fumigatus. Smoky-brown Woodpecker.

Permanent resident. CNHL: Rare in cultivated cloud forest; CRB: Fairly common in humid forest.

Specimens from Matagalpa (1,450 m) and San Rafael del Norte were taken near the western edge of Caribbean slope habitat in those regions. There are no Pacific slope records, although the species occurs in the lowlands of El Salvador.

Ssp.: *sanguinolentus*.

***Piculus rubiginosus* [*Colaptes rubiginosus*]**. Golden-olive Woodpecker.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Fairly common at moderate elevations in deciduous forest to highland pine, pine-oak forest, and cloud forest; CRB: Fairly common

in forest edge, low second-growth humid forest, and in forest edge, low second-growth lowland pine savanna.

The only Pacific slope records are from medium elevations on the group of volcanic peaks near Chinandega and on Volcán Mombacho. In the Central Highlands it ranges into the pines and the lower edge of the cloud forest. On the Caribbean slope it occurs primarily in edge and second-growth habitats, including the lowland pine savanna (Howell 1972).

Ssp.: *yucatanicus*. I follow Short (1982) in referring all Nicaraguan populations to this subspecies.

***Piculus leucolaemus* [*Piculus simplex*]**.

Rufous-winged Woodpecker.

Permanent resident. CRB: Uncommon in humid forest.

Populations from Honduras to western Panama have often been considered a separate species, *P. simplex*.

Ssp.: *simplex*. Monroe (1968) recognizes *allophyeus* from southern Honduras, including a UCLA specimen from Arenal (formerly in Nicaragua), El Paraíso, Honduras. This form is doubtfully distinct, and I refer all specimens from within the present boundaries of Nicaragua to *simplex*.

Colaptes auratus. Northern Flicker.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

This species reaches the southern limit of its range in the pine forests of the Central Highlands, and it is not recorded elsewhere in Nicaragua.

Ssp.: *mexicanoides*.

Celeus loricatus. Cinnamon Woodpecker.

Probably permanent resident. CRB: Absolutely rare but locally uncommon in humid forest.

The only Nicaraguan specimen record is a single female taken by Huber (1932) at Edén, RAAN, on 7 April 1922 "in heavy forest about 900 ft" (275 m). No others were found. The specimen is correctly identified and is not a "dilute" example of *C. castaneus*. The locality is ~350 km N of the closest known population in northeastern Costa Rica. This species is unlikely to be a long-distance wanderer, but if its range is continuous it must be rare in most of eastern Nicaragua to have been missed

by every other observer and collector, including Richardson. Tom Will did, however, find it relatively easy to find at forest sites 13 km NNE of El Castillo, Depto. de Río San Juan, where at different localities he sighted four individuals on 30 November 1990, two on 14 June, one on 13 June, and two on 15 June 1991.

Ssp.: *diversus*.

Celeus castaneus. Chestnut-colored Woodpecker.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

This species occurs sparingly within forest and inhabits primarily secondary forest and edge situations. A Richardson specimen from Quilali, 1,800 feet (550 m), Depto. de Nueva Segovia, 11 January 1909, represents a close approach to the Central Highlands.

Dryocopus lineatus. Lineated Woodpecker.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations, to highland pine and pine-oak forest; CRB: Fairly common in forest edge, low second-growth humid forest, and forest edge, low second-growth lowland pine savanna.

(See comments under *Campephilus guatemalensis*).

Ssp.: *similis*.

Campephilus guatemalensis. Pale-billed Woodpecker.

Permanent resident. PAC: Fairly common in deciduous forest to moderate elevation; CNHL: Fairly common in deciduous forest, at moderate elevations to cloud forest; CRB: Fairly common in humid forest.

This species has a range and habitat distribution similar to that of *Dryocopus lineatus*, but it also ranges into the lower edge of cloud forest and does not venture into pine forest.

Ssp.: *guatemalensis*.

ORDER PASSERIFORMES
FAMILY FURNARIIDAE

Synallaxis brachyura. Slaty Spinetail.

Permanent resident. CNHL: Probably rare in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

There are numerous Richardson specimens from Matagalpa, presumably from the western edge of the Caribbean Region, and there is one in the AMNH from San Rafael del Norte, Depto. de Jinotega, taken on 30 March 1917 with the notation "3500 ft, deciduous forest" (1,070 m). Although Miller and Griscom were with Richardson at that time, their manuscript states only "A common bird in clearings in the Caribbean forest." Apparently the species occasionally ranges into the edge of broad-leafed forest in the Central Highlands. In my experience it is entirely an inhabitant of low thickets, not forest.

Ssp.: *nigrofumosa* Lawrence 1865; type locality Greytown [= San Juan del Norte], Depto. de Río San Juan.

Hyloctistes subulatus. Striped Woodhaunter.

Permanent resident. CRB: Uncommon in humid forest.

This species reaches its northern limits in Nicaragua and is known from six specimens from three localities. Richardson obtained two from Río Grande, Depto. de Matagalpa, and one from Pena Blanca [= Peñas Blancas], Depto. de Jinotega. I obtained three specimens in April 1962 at Cum, RAAN. Miller and Griscom (1925a) described a subspecies based on Richardson's three specimens as *Hyloctistes virgatus nicaraguae*, allegedly differing from nominate *virgatus* from Costa Rica by darker dorsal coloration. I have compared the type series and my own three specimens with Costa Rican material and am unable to see any appreciable differences.

Ssp.: *virgatus; nicaraguae* Miller and Griscom 1925a, type locality Río Grande, Depto. de Matagalpa is not recognized.

Anabacerthia variegaticeps. Spectacled Foliage-gleaner [Scaly-throated Foliage-gleaner].

This highland species has not been recorded in Nicaragua, although it occurs to the north and south. Nicaragua presumably lacks sufficient extent of high-altitude habitat for its requirements.}

Automolus ochrolaemus. Buff-throated Foliage-gleaner.

Permanent resident. CNHL: Probably rare in deciduous forest at moderate elevations; CRB: Common in humid forest.

Richardson specimens in the AMNH from Matagalpa are labeled 2,200 to 3,000 feet (670 to 915 m),

but without habitat data. Apparently the species ranges into mid-elevation habitats in the Central Highlands, but it is typically a Caribbean lowland forest-dweller.

Ssp.: *hypophaeus*.

Automolus rubiginosus. Ruddy Foliage-gleaner.

Permanent resident. CNHL: Rare in cloud forest.

This species is known in Nicaragua from only two specimens, one at UCLA and one at AMNH which I have elsewhere discussed (Howell 1964a). Tom Will also reported the species from Santa María de Ostuma, Depto. de Matagalpa, 10 April 1991.

Ssp.: *rubiginosus*. Although in 1964 I recorded the two specimens listed above as *umbrinus*, I now agree that this form is not separable from nominate *rubiginosus* (Monroe 1968).

Xenops minutus. Plain Xenops.

Permanent resident. PAC: Rare in deciduous forest, at moderate elevations; CNHL: Rare in forest edge, low second-growth cloud forest; CRB: Common in humid forest.

The only PAC records are from Volcán Mombacho. A female collected there on 12 March 1962 had ovulated follicles, and the species evidently breeds at that locality.

Ssp.: Intermediate in characters ascribed to *mexicanus* and "*ridgwayi*" (Howell 1957). Variation in Central America appears to be clinal without sharp breaks, and only one subspecies (*mexicanus*) is recognizable.

{***Sclerurus mexicanus***. Tawny-throated Leaf-tosser.

This largely montane species (which is confined to cloud forest in Honduras) has not been recorded from Nicaragua, although it occurs to the north and south, and it is presumably absent because of insufficient extent of suitable habitat.}

Sclerurus guatemalensis. Scaly-throated Leaf-tosser.

Permanent resident. CRB: Fairly common in humid forest.

This is the only terrestrial furnariid found in Nicaragua.

Ssp.: *guatemalensis*.

FAMILY DENDROCOLAPTIDAE

Dendrocincla fuliginosa. Plain-brown Woodcreeper.

Permanent resident. CRB: Uncommon in humid forest.

The northernmost record is a specimen taken by Townsend on the Honduras–Nicaragua boundary along the Río Coco (Ridgway 1888). I found the species regularly at 25 km SSW of Waspan, Comarca de El Cabo, RAAN (Howell 1971), and obtained two specimens there. It will probably be found to range farther north into eastern Honduras.

Ssp.: *ridgwayi*.

Dendrocincla anabatina. Tawny-winged Woodcreeper.

Permanent resident. CRB: Fairly common in humid forest.

This species is most likely to be found around army ants and is seldom observed when these are not present.

Ssp.: *anabatina*.

Dendrocincla homochroa. Ruddy Woodcreeper.

Permanent resident. PAC: Uncommon in deciduous forest, at moderate elevations; CRB: Rare in humid forest.

In Nicaragua this species is largely confined to the Pacific Region, and most records are from Volcán San Cristóbal and vicinity; it also occurs on Volcán Mombacho. There are only three records from the Caribbean Region—Uluse and Río Grande, Depto. de Matagalpa, and San Emilio, Depto. de Rivas—all of which are at or near the interface with Pacific Region habitat in their respective regions.

Ssp.: *acedesta*.

Sittasomus griseicapillus. Olivaceous Woodcreeper.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Uncommon in forest edge, low second-growth humid forest.

This species appears to be somewhat more abundant in the Pacific Region than in the Caribbean Region. In the Central Highlands, a Richardson specimen from San Juan de Telpaneca, Depto. de Madriz, is labeled 3,500 feet (1,070 m), which is probably about the upper altitudinal limit of the range.

Ssp.: *sylvioides*.

Deconychura longicauda. Long-tailed Woodcreeper.

Probably a permanent resident. CRB: Rare in humid forest.

I recorded two specimens from Arenal (Howell 1956), which is now within Honduras. This is the northernmost locality for the species. There are no specimen records elsewhere in Nicaragua, although the species is doubtless a scarce permanent resident in humid forest (at mid-elevations?) in the Caribbean Region. Tom Will provided the first records for the country with three sightings (and a recorded vocalization) at two separate localities 13 km NNE of El Castillo, Depto. de Río San Juan, on 13, 17, and 18 June 1991.

Ssp.: *typica*.

Glyphorhynchus spirurus. Wedge-billed Woodcreeper.

Permanent resident. CRB: Common in humid forest.

This is the smallest of the Nicaraguan woodcreepers and is strictly confined to the Caribbean Region, although there is no similar species found in the Pacific Region.

Ssp.: *pectoralis*.

Xiphocolaptes promeropirhynchus. Strong-billed Woodcreeper.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

In Nicaragua this large species occurs only in highland pine and pine-oak associations, although it occupies other habitats to the south of Nicaragua.

Ssp.: *emigrans*.

Dendrocolaptes certhia. Barred Woodcreeper.

[***Dendrocolaptes sanctithomae***. Northern Barred-Woodcreeper.]

Permanent resident. PAC: Uncommon in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations, to cloud forest; CRB: Fairly common in humid forest.

This species reaches the lower edge of cloud forest in the Central Highlands but is primarily an inhabitant of lower elevations.

Ssp.: *sanctithomae*.

Dendrocolates picumnus. Black-banded Woodcreeper.

This highland species is unrecorded from Nicaragua although it occurs to the north and south; Nicaragua probably lacks sufficient extent of suitable habitat.}

Xiphorhynchus guttatus. Buff-throated Woodcreeper. [***Xiphorhynchus susurrans***. Cocoa Woodcreeper.]

Permanent resident. CRB: Common in humid forest.

This species and *X. flavigaster* appear to replace each geographically in the Caribbean and Pacific regions, respectively.

Ssp.: *nanus*; *costaricensis* is not recognized.

Xiphorhynchus flavigaster. Ivory-billed Woodcreeper.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations.

This species is known only from the Pacific Region in Nicaragua, although it occurs in both the Pacific and Caribbean regions (sympatrically with *guttatus*) to the north.

Ssp.: *eburneirostris* Des Murs 1847, type locality Realejo [= El Realejo], Depto. de Chinandega.

Xiphorhynchus lachrymosus. Black-striped Woodcreeper.

Permanent resident. CRB: Locally fairly common in humid forest.

This species is at the northern limit of its range in Nicaragua. Wickham obtained one near Bluefields, RAAN (Sclater and Salvin 1867). Belt obtained one in "Chontales," and Richardson took three specimens in January 1892 at La Libertad, Depto. de Chontales, probably close to Belt's locality. None has been obtained in Nicaragua since that time, but Tom Will encountered the species regularly at several localities 13 km NNE of El Castillo, Depto. de Río San Juan, 80–160 m elevation, August 1990 to June 1991. Maximum numbers at different localities were six on 30 November 1990, four on 13 June 1991, and six on 15 June 1991 (voice recording).

Ssp.: *lachrymosus*.

Xiphorhynchus erythropygius. Spotted Woodcreeper.

Permanent resident. CNHL: Uncommon in cloud forest; CRB: Uncommon in humid forest, at moderate elevations.

This species is primarily an inhabitant of highlands north of Nicaragua and lowlands farther south, and in Nicaragua it occurs in both situations but is uncommon. The northernmost locality in the Nicaraguan lowlands is 25 km SSW of Waspan, Comarca de El Cabo, RAAN. One taken at Los Sábalos, Depto. de Río San Juan, on 19 May 1917 was noted as "laying."

Ssp.: CNHL: *parvus*; a specimen from near Waspan, Comarca de El Cabo, RAAN, and another from Cum, RAAN, both in the Caribbean humid forest, are closer to *parvus* than to *punctigula*, to which birds from Los Sábalos are referred.

***Lepidocolaptes souleyetii*.** Streak-headed Woodcreeper.

Permanent resident. PAC: Common in deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

This species and *L. affinis* appear to replace each other altitudinally.

Ssp.: *compressus*.

***Lepidocolaptes affinis*.** Spot-crowned Woodcreeper.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest, and cloud forest.

This species has not been recorded from the cloud forest of Volcán Mombacho, or from the pines or other forests of the northwest volcanic peaks.

Ssp.: *affinis*.

FAMILY FORMICARIIDAE

***Cymbilaimus lineatus*.** Fasciated Antshrike.

Permanent resident. CRB: Fairly common in humid forest.

The northernmost record for the species is Arenal, El Paraíso, Honduras, just north of the Nicaraguan border. It will probably be found to have a more extensive range in eastern Honduras. A bird taken at Los Sábalos, Depto. de Río San Juan, on 12 May 1917 was noted as "laying."

Ssp.: *fasciatus* Ridgway 1884, type locality Los Sábalos, Depto. de Río San Juan.

***Taraba major*.** Great Antshrike.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

Thamnophilus hollandi Lawrence, 1865, type locality Greytown [= San Juan del Norte], Depto. de Río San Juan, is a synonym.

Ssp.: *melanocrissus*.

***Thamnophilus doliatus*.** Barred Antshrike.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

The Pacific Region and Caribbean Region populations constitute well-marked paler and darker subspecies, *pacificus* and *intermedius*, respectively.

Ssp.: PAC: *pacificus* Ridgway 1908, type locality Chinandega; CRB: *intermedius*.

***Thamnophilus punctatus*.** Slaty Antshrike.

[***Thamnophilus atrinucha*.** Western Slaty Antshrike.]

Permanent resident. CRB: Fairly common in humid forest, including forest edge and low second growth.

This is more of a within-forest inhabitant than *T. doliatus*, although it also visits edge situations.

Ssp.: *atrinucha*.

***Thamnistes anabatinus*.** Russet Antshrike.

Permanent resident. CRB: Uncommon in humid forest.

This is the most arboreal of the Nicaraguan antshrikes, often found in the tree-top foliage.

Ssp.: *saturatus*.

{***Dysithamnus mentalis*.** Plain Antvireo.

This species has not been recorded from Nicaragua, although it occurs to the north and south and is not confined to high altitudes but occurs in lowlands in other parts of its range. If not actually absent from Nicaragua, it must be much rarer than *D. striaticeps* (see below).}

***Dysithamnus striaticeps*.** Streak-crowned Antvireo.

Permanent resident. CRB: Uncommon in humid forest.

The northernmost record for this species is Arenal, El Paraíso, Honduras, just north of the Nicaraguan boundary.

Myrmotherula fulviventris [***Epinecrophylla fulviventris***]. Checker-throated Antwren.

Permanent resident. CRB: Common in humid forest.

This species reaches the northern limit of its range in Honduras just north of the Nicaraguan boundary (Marcus 1983).

Ssp.: *fulviventris*; *costaricensis* is not recognized.

Myrmotherula axillaris. White-flanked Antwren.

Permanent resident. CRB: Uncommon in humid forest.

Like *M. fulviventris*, this species reaches the northern limit of its range in Honduras just north of the Nicaraguan boundary (Marcus 1983).

Ssp.: *albigula*.

Myrmotherula schisticolor. Slaty Antwren.

Permanent resident. CNHL: Uncommon at moderate elevations in undetermined habitat; CRB: Fairly common in humid forest.

Richardson obtained specimens at Matagalpa, Ocotal, and San Rafael del Norte in the Central Highlands, but the specimens lack data on habitat and altitude. Presumably the species ranges from the western edge of Caribbean habitat into deciduous forest, mid-elevation or even the lower edge of cloud forest in the Central Highlands.

Ssp.: *schisticolor*.

Microrhophias quixensis. Dot-winged Antwren.

Permanent resident. CRB: Common in humid forest, including forest edge and low second growth.

This is the most abundant and eurytopic of the Nicaraguan antwrens.

Ssp.: *virgata*.

Cercomacra tyrannina. Dusky Antbird.

Permanent resident. PAC: Absolutely rare but locally fairly common in deciduous forest at moderate elevations; CRB: Common in humid forest.

This species has been recorded in the Pacific Region only in deciduous forest on Volcán Mombacho, and at Sucuyá, Depto. de Rivas (Nutting 1884).

Gymnocichla nudiceps. Bare-crowned Antbird.

Permanent resident. CRB: Uncommon in humid forest, including forest edge and low second growth.

Ssp.: *chiroleuca*.

Myrmeciza exsul. Chestnut-backed Antbird.

Permanent resident. CRB: Uncommon in humid forest.

This species reaches the northern limit of its range in eastern Honduras just north of the Nicaraguan border (Marcus 1983).

Ssp.: *exsul*.

Hylophylax naevioides. Spotted Antbird.

Permanent resident. CNHL: Probably rare in deciduous forest; CRB: Common in humid forest.

Miller and Griscom (unpubl. ms.) comment that this species ranges up to 4,000 feet (1,220 m), presumably referring to a Richardson specimen from San Rafael del Norte.

Ssp.: *capnitis*.

Myrmornis torquata. Wing-banded Antbird.

Permanent resident. CRB: Uncommon in humid forest.

This species is known from Nicaragua from 16 specimens—15 taken by Richardson and one by Huber (1932). The distribution is unusual, as the species is unrecorded between Nicaragua (its northern limit) and central Panama. Richardson collected a juvenile male at Pena Blanca [= Peñas Blancas], Depto. de Jinotega, on 19 May 1909 (AMNH). The Nicaraguan form *stictoptera* is sometimes considered specifically distinct from Panamanian and South American populations.

Ssp.: *stictoptera* Salvin 1893, type locality Santo Domingo, Depto. de Chontales.

Gymnopithys leucaspis. Bicolored Antbird.

Permanent resident. CRB: Common in humid forest.

A Richardson specimen in the AMNH is labeled "Río Coco, 5000 ft" (1,520 m). The altitude is certainly much too high, but he obtained many other typically Caribbean Region species at "Río Coco."

Ssp.: *olivascens*.

Phaenostictus mcleannani. Ocellated Antbird.

Permanent resident. CRB: Uncommon in humid forest.

The species reaches the northern limit of its range in eastern Honduras just north of the Nicaraguan boundary.

Ssp.: *saturatus* Richmond 1896, type locality Río Escondido, 50 miles (80 km) from Bluefields, RAAS.

Formicarius analis. Black-faced Antthrush.

Permanent resident. CRB: Common in humid forest.

A Richardson specimen from Ocotal, Depto. de Nueva Segovia, taken 10 May 1908, was surprisingly far west and indicates that Caribbean Region habitat extends along the valley of the Río Coco well into the Central Highlands.

Ssp.: *umbrosus*.

Grallaria guatemalensis. Scaled Antpitta.

Permanent resident. CNHL: Uncommon in cloud forest; CRB: Rare in humid forest.

Richardson collected a juvenile at Matagalpa on 31 August 1891. Richardson also obtained two specimens from altitudes below cloud-forest level—one from Quilalí, 1,800 feet (550 m), on 19 January 1909, and one on 30 March 1909 at Río Tuma, Depto. de Matagalpa (no altitude given). Other Richardson specimens from these localities are of species typical of the Caribbean lowland forests; presumably some of these antpittas wander to lower elevations in the nonbreeding season. The species has not been found on Volcán Mombacho.

Ssp.: *guatemalensis*.

Hylopezus perspicillatus. Spectacled Antpitta [Streak-chested Antpitta].

Permanent resident. CRB: Uncommon in humid forest.

(See comments under *H. fulviventris*).

Ssp.: *intermedius*

Hylopezus fulviventris. Fulvous-bellied Antpitta. [***Hylopezus dives***. Thicket Antpitta.]

Permanent resident. CRB: Common in humid forest.

This species and *H. perspicillatus* have very similar geographic ranges, and in Nicaragua both species have been obtained in the same habitat at the same locality. Both reach the northern limits of their ranges in Honduras just north of the Nicaraguan boundary. *Hylopezus fulviventris* appears to be the more common of the two, but both are secretive and estimates of relative abundance are difficult.

Ssp.: *dives*.

FAMILY TYRANNIDAE

Schiffornis turdinus [***Schiffornis turdina***].

Thrush-like Schiffornis.

Permanent resident. CRB: Fairly common in humid forest.

This genus and species, formerly placed in the manakins (Pipridae), apparently belongs in the Tyrannidae (Sibley and Monroe 1990).

Ssp.: *veraepacis*.

Zimmerius vilissimus. Paltry Tyrannulet.

Permanent resident. CNHL: Probably rare in cloud forest; CRB: Uncommon in forest edge, low second-growth humid forest.

There is an isolated resident population in El Salvador, but this species is not recorded from the Pacific Region of Nicaragua. Tom Will recorded it once 10 km N of Matagalpa, Depto. de Matagalpa, 21 July 1991.

Ssp.: *parvus*.

Ornithion semiflavum. Yellow-bellied Tyrannulet.

Permanent resident. CRB: Uncommon in forest edge, low second-growth humid forest.

Following *Myiornis atricapillus*, and considering both body mass (~6 g) and external linear dimensions, this species is the second-smallest passeriform found in Nicaragua.

Camptostoma imberbe. Northern Beardless Tyrannulet.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest. CRB: Rare in undetermined habitat.

This species has been found in the Caribbean Region in Nicaragua at San Francisco and San Carlos, Depto. de Río San Juan, but Monroe found it to be "fairly common locally in scrubby situations in the Mosquitia" in Honduras. Tom Will recorded three individuals at Papaturo, 5 April 1991, and eight in the Islas Solentiname, Depto. de Río San Juan, 6 April 1991, both in edge habitat in the transition zone between humid lowland and deciduous forest.

Ssp.: *imberbe*.

Myiopagis viridicata. Greenish Elaenia.

Permanent resident. PAC: Fairly common, forest edge, low second-growth deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

Ssp.: PAC: *pacificus*; CRB: *placens*.

Elaenia flavogaster. Yellow-bellied Elaenia.

Permanent resident. PAC: Rare in forest edge, low second-growth deciduous forest; CNHL: Fairly common in undetermined habitat; CRB: Common in forest edge, low second-growth humid forest.

I have elsewhere (Howell 1972) discussed the taxonomy and distribution of this species in Middle America.

Ssp.: PAC: *subpagana*; CRB: *saturata* may be recognizable; see reference above.

Elaenia frantzii. Mountain Elaenia.

Permanent resident. PAC: Fairly common in deciduous forest at moderate elevations; common in cloud forest; CNHL: Common in cloud forest.

In the Pacific Region this species occurs only on Volcán Mombacho, in cloud forest and in open deciduous forest down to ~1,000 m, and on Isla Ometepe (Nutting 1884). It is absent from the volcanic peaks near Chinandega.

Ssp.: *ultima*.

Mionectes oleagineus. Ochre-bellied Flycatcher.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest, including forest edge, low second-growth.

In the Pacific Region this species has been recorded only from Volcán Mombacho and not from the volcanic peaks near Chinandega.

Ssp.: *assimilis*.

Leptopogon amaurocephalus. Sepia-capped Flycatcher.

Permanent resident. CRB: Rare in humid forest.

There are four Richardson specimens in the BMNH taken from 1892 to 1898, and Miller and Griscom (unpubl. ms.) reported a female with two fledged juveniles collected at Los Sábalo on 14 May 1917 (AMNH). The only record since then is a male taken at Siuna, RAAN, by J. C. Martínez-Sánchez on 10 October 1982.

Ssp.: *pileatus*.

Capsiempis flaveola. Yellow Tyrannulet.

Permanent resident. CRB: Absolutely uncommon but locally common in forest edge, low second-growth humid forest.

In Nicaragua this species is recorded only from open, brushy habitat and the edges of clearings. It has not been taken north of the Río Escondido, which is thus the northern limit of the species' known range.

Ssp.: *semiflava* Lawrence 1865, type locality Greytown [= San Juan del Norte], Depto. de Río San Juan.

Myiornis atricapillus. Black-capped Pygmy-Tyrant.

Permanent resident. CRB: Uncommon in humid forest, including forest edge and low second-growth.

Tom Will found this species at three localities in the Caribbean Region. His records are the first for Nicaragua, so presumably it had been overlooked as a consequence of its small size, rather inconspicuous frog- or cricket-like song, and predilection for dense tangles. With its short tail and body mass of ~5.5 g, this species is the smallest passeriform found in Nicaragua. It was seen (and vocalizations were recorded) 35 km NNW of Bluefields, RAAS (one 3 February, two on 12 July 1991); 40 km NW of Bluefields (2 on 13 July, again on 16 July 1991); 45 km NW of Bluefields (one 28 February 1991); and 13 km NNE of El Castillo, Depto. de Río San Juan (one 15 June 1991).

Lophotriccus pileatus. Scale-crested Pygmy-Tyrant.

Marcus (1983) reported sight records by Ridgely in Honduras, the only report from north of Costa Rica. If this is an established range extension, the species will presumably be found in Nicaragua.

Oncostoma cinereigulare. Northern Bentbill.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

This species, along with *Ornithion semiflavum* and *Myiornis atricapillus*, has the smallest body mass (~6 g) of all of the Nicaraguan passerines.

Todirostrum sylvia [*Poecilotriccus sylvia*]. Slate-headed Tody-Flycatcher.

Permanent resident. PAC: Uncommon in deciduous forest; CNHL: Uncommon in deciduous forest, up to moderate elevations; CRB: Locally fairly common forest edge, low second-growth humid forest.

In the Pacific Region this species has been recorded only from the volcanic peaks near Chinandega and not from Volcán Mombacho.

Ssp.: *schisteiceps*.

Todirostrum cinereum. Common Tody-Flycatcher.

Permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: *finitum*.

Rhynchocyclus brevirostris. Eye-ringed Flatbill.

Permanent resident. CNHL: Rare in cloud forest; CRB: Fairly common in humid forest.

The only Central Highlands specimen record is a male collected by J. C. Martínez-Sánchez at Santa María de Ostuma, elevation 1,500 m, 30 March 1983; the testes were slightly enlarged. Tom Will found single birds at the same locality, 9 September 1990, 11 November 1990, and 10 April 1991, and three birds on 19 May 1991. The species may breed there, but it is primarily an inhabitant of the Caribbean lowlands.

Ssp.: *brevirostris*.

Tolmomyias sulphurescens. Yellow-olive Flycatcher.

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Uncommon in forest edge, low second-growth humid forest.

Ssp.: *cinereiceps*.

Tolmomyias assimilis. Yellow-margined Flycatcher.

Probably a permanent resident. CRB: Uncommon in forest edge, low second-growth humid forest.

The species was first recorded in Nicaragua in 1991 by Tom Will, who identified four different individuals in two localities, 13 km NNE of El Castillo, Depto. de Río San Juan, 13–18 June 1991 (voice recordings), and another individual 35 km NNW of Bluefields, RAAS, 14 July 1991. All of the birds were found high in the canopy of tall trees (>40 m) on the edge of forest openings and were difficult to observe. Like several other species thought to reach the northern terminus of their range in Costa Rica but otherwise known to be common in the Caribbean lowlands, the species was not unexpected in Nicaragua, given the

essentially continuous lowland humid forest between the two countries.

Platyrinchus cancrominus. Stub-tailed Spadebill.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Rare in deciduous forest; CRB: Fairly common in humid forest.

Miller and Griscom (1925a) described *P. c. dilutus* with Volcán Viejo [= San Cristóbal], Depto. de Chinandega, as the type locality. This allegedly pale form was based primarily on birds in worn plumage taken in May, July, and early August. The paleness is not evident in fresher-plumaged birds from the Pacific Region of Nicaragua, and I do not regard *dilutus* as recognizable. A specimen obtained by J. C. Martínez-Sánchez at 1,300 m at Santa María de Ostuma, 10 km N of Matagalpa, Depto. de Matagalpa, and a sighting by Tom Will, 8 July 1991, from the same locality are the only records from the Central Highlands.

Ssp.: *cancrominus*; *dilutus* Miller and Griscom 1925a, type locality Volcán Viejo [= San Cristóbal], Depto. de Chinandega, is not recognized.

Platyrinchus coronatus. Golden-crowned Spadebill.

Permanent resident. CRB: Uncommon in humid forest.

Ssp.: *superciliaris*.

Onychorhynchus coronatus. Royal Flycatcher.

Permanent resident. CNHL: Probably rare in deciduous forest at moderate elevations; CRB: Uncommon in humid forest.

Although this species occurs in El Salvador in the Pacific Region, its distribution becomes almost exclusively Caribbean in Honduras and Nicaragua. J. C. Martínez-Sánchez has, however, obtained records from the Central Highlands at Santa María de Ostuma, Depto. de Matagalpa. Richardson obtained specimens at San Juan de Telpaneca, Depto. de Madriz, and at Las Cañas, Depto. de Matagalpa; the localities in the Central Highlands are close to incursions of Caribbean Region habitat.

Ssp.: *fraterculus*.

Terenotriccus erythrurus. Ruddy-tailed Flycatcher.

Permanent resident. CRB: Fairly common in humid forest, including forest edge and low second growth.

Ssp.: *fulvicularis*.

Myiobius sulphureipygius. Sulphur-rumped Flycatcher.

Permanent resident. CRB: Common in humid forest.

Ssp.: *aureatus*.

Aphanotriccus capitalis. Tawny-chested Flycatcher.

Permanent resident. CRB: Uncommon in humid forest.

This species is not known to range north of Nicaragua, but I have two specimens collected along the Río Laimos 16 km SW of Waspan, Comarca de El Cabo, RAAN. This is the northernmost locality record and is so close to Honduran territory that it seems probable that the species will be found in eastern Honduras. These flycatchers are often found around stands of giant bamboo at the edge of small quiet streams.

Mitrephanes phaeocercus. Tufted Flycatcher.

Permanent resident. CNHL: Uncommon in cloud forest.

Miller and Griscom (unpubl. ms.) stated that in Nicaragua the species was confined to cloud forest, and there are no records specifically from pine forest, although it occurs in that habitat in regions north of Nicaragua. The Tufted Flycatcher does not occur on any of the volcanic peaks of the Pacific Region.

Ssp.: *nicaraguae* Miller and Griscom 1925a, type locality San Rafael del Norte, Depto. de Jinotega.

***Contopus borealis* [*Contopus cooperi*]**. Olive-sided Flycatcher.

Transient, winter resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Probably uncommon in highland pine and pine-oak forest; CRB: Rare in forest edge, low second-growth humid forest.

I have elsewhere (Howell 1964a, 1972) discussed the wintering of this species in Middle America. Extreme dates of occurrence are 24 September to 6 May.

Contopus pertinax. Greater Pewee.

Permanent resident. PAC: Rare, probably in highland pine and pine-oak forest; CNHL: Fairly common in highland pine and pine-oak forest.

A female taken at Matagalpa at 3,800 feet (1,160 m), on 8 April 1917, was noted as "laying." The only Pacific Region record is a male taken by Richardson at El Volcán, Depto. de Chinandega [= Volcán San Cristóbal], on 2 May 1891 (BMNH). There are no altitude or habitat data, but the bird was presumably in highland pine forest. The date is evidently within the breeding season, but as no others have been recorded from that locality (which was worked by Richardson and Miller in early June 1917) it is likely that the bird was a vagrant. The species reaches the southern limit of its range in the northern Nicaraguan highlands.

Ssp.: *minor* Miller and Griscom 1925a, type locality between Jinotega and San Rafael del Norte, Depto. de Jinotega.

Contopus sordidulus. Western Wood-Pewee.

Transient, probably a summer resident. PAC: Rare in undetermined habitat; CNHL: Uncommon in highland pine and pine-oak forest; CRB: Rare in humid forest.

This species breeds as far south as Honduras (Monroe 1968), but there is no sure evidence at present that it nests in Nicaragua. In the AMNH there are three spring specimens, all from the Central Highlands, labeled as follows:

t. n. e. San Rafael del Norte, pines, 3500 ft (1070 m), 17 March 1917.

o. n. e. Matagalpa. 4100 ft (1250 m) 16 April 1917, Ocotal 6 May 1908.

The first two birds were noted as not in breeding condition, but there is no notation on gonad condition of the bird taken on 6 May. Richardson collected individuals (BMNH) on 17 April and 8 May 1891 at "Chinandega," presumably in the lowlands near the town, as his specimens from Volcán San Cristóbal were at that time labeled "Volcán El Viejo." These could have been birds en route to the montane pine forests on the volcano, but none was recorded there in June 1917 by Richardson and Miller. Huber (1932) collected a male on 11 May 1922 in the Caribbean lowlands, where the species certainly does not breed, which shows that spring transients are present as late as the first part of May. There are no records between 11 May and 13 September. There are no winter records, and the earliest spring record is 8 March 1956 at 6 miles (10 km) WSW of Managua in the Pacific lowlands, where the species does not breed (J. R. Alcorn pers. comm.). Dickey and van Rossem (1938) stressed that they found no evidence that

this species breeds in El Salvador despite careful searching of suitable-looking montane pine-oak habitat, and Miller and Griscom (unpubl. ms.) made no mention of breeding. It thus seems unlikely that this species breeds in Nicaragua.

Ssp.: Miller and Griscom (unpubl. ms.) referred all Nicaraguan specimens known to them (in the 1920s) to the subspecies *richardsonii* (= *veliei*) of western North America. Huber (1932) could not surely identify his specimen. Few others have been taken or subspecifically identified. J. G. Montrello collected one at El Corozo, Depto. de Nueva Segovia, in pine forest on 13 September 1954 which has a notably large bill (exposed culmen, 13.4 mm; from nostril, 11.1 mm.). These dimensions place it in the subspecies *peninsulae*, which breeds in Baja California, Mexico. As Huber gave the exposed culmen length of his specimen as 14.2 mm, it may also prove to be *peninsulae*.

***Contopus virens*.** Eastern Wood-Pewee.

Transient. CNHL: Uncommon, probably in deciduous forest at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Two specimens in the AMNH from San Rafael del Norte taken 15 and 19 April 1907 lack altitude or habitat data, but two taken at Matagalpa on 18 and 20 April 1917 are labeled 2,200 feet (760 m), which probably indicates deciduous forest. Richmond (1893) wrote as follows: "A common migrant; but few seen during the winter months. First heard August 21, and a few days later its familiar whistle was frequently heard. It was very abundant September 27." This refers to his observations along the Río Escondido. Richmond's statement about wintering is without specific dates and is probably in error, as the usual winter range is in South America.

***Contopus cinereus*.** Tropical Pewee.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations, probably into cloud forest; CRB: Common in forest edge, low second-growth humid forest.

A male in the AMNH taken on 16 April 1917 is labeled "Matagalpa 4100 ft, t. d. e. (nesting)" (1,250 m). That altitude approximates the lower edge of cloud forest in the Central Highlands.

Ssp.: *brachytarsus*.

***Empidonax flaviventris*.** Yellow-bellied Flycatcher.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Extreme dates of recorded occurrence are from 14 September to 10 May.

***Empidonax virescens*.** Acadian Flycatcher.

Transient, winter resident. CRB: Probably uncommon in forest edge, low second-growth humid forest.

I have one specimen taken on 17 February 1962 at 10 km SSW of Waspan, Comarca de El Cabo, RAAN, which represents the northernmost winter record. Richmond obtained one on 22 October, presumably a fall transient; I have one taken 20 April 1962 at Cum, RAAN, which was very fat and presumably a transient. These are the only specimen records from Nicaragua, but it is doubtless more common, at least as a transient, than the scarcity of these indicates. Tom Will encountered it twice 45 km NW of Bluefields, RAAS, on 1 March 1992 and 21 February 1993 (voice recordings) and several times at two different localities 13 km NNE of El Castillo, Depto. de Río San Juan—three on 30 November 1990 and four on 3 December 1990.

***Empidonax alnorum*.** Alder Flycatcher.

Transient. PAC: Probably uncommon in deciduous forest; CRB: Probably uncommon in forest edge, low second-growth humid forest.

Miller and Griscom (unpubl. ms.) identified Richmond's specimens of "*Empidonax pusillus traillii*" from the Río Escondido as *alnorum*. Richmond stated that it was "common on the Escondido and at San Carlos during the winter. Taken in fall as early as September 4, and in the spring until May 6." There are, however, no certain winter-taken specimens, and sight records cannot be definite.

***Empidonax traillii*.** Willow Flycatcher.

Transient, winter resident. PAC: Uncommon in deciduous forest; CRB: Rare in forest edge, low second-growth humid forest.

Ssp.: *brewsteri*.

***Empidonax albigularis*.** White-throated Flycatcher.

Permanent resident. CNHL: Rare in forest edge, low second-growth cloud forest.

This species is known from Nicaragua from only one specimen, the type of the subspecies *australis* Miller and Griscom (1925a) from San Rafael del Norte taken by Richardson on 11 April 1907. The altitude and habitat were not specified by Miller and Griscom either in their description (1925a) or in their manuscript; they mentioned only that it is apparently a highland bird. Monroe found this species in Honduras inhabiting grassy fields at altitudes from 600 to 1,800 m in the breeding season, sometimes descending to sea level at other times. Marshall (1943) found it in similar habitat in highlands in El Salvador. Monroe discussed the confusing variation in this species and doubted the validity of dividing Middle American populations into subspecies. The validity of *australis*, at least, must await the acquisition of additional specimens from Nicaragua. Tom Will found the species on three occasions at Santa María de Ostuma, Depto. de Matagalpa, in shrubby openings in the forest near small wet areas—one individual on 22 November 1990, two on 10–11 April 1991, and one on 19 May 1991.

Ssp.: Uncertain; *australis*, if recognizable; otherwise, *albigularis*.

***Empidonax minimus*.** Least Flycatcher.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Uncommon in undetermined habitat.

This species probably occurs in the Caribbean Region, but there are no specific records.

***Empidonax flavescens*.** Yellowish Flycatcher.

Permanent resident. CNHL: Common in cloud forest.

This species does not occur in the cloud forest on Volcán Mombacho.

Ssp.: *salvini*; *dwrighti* is not recognized.

***Sayornis nigricans*.** Black Phoebe.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest; CRB: Uncommon in forest edge, low second-growth humid forest.

This species is confined to the vicinity of streams, and I found a nest with two young in April 1962 at Cum, RAAN, in the Caribbean Region.

Ssp.: *aquatica*.

***Pyrocephalus rubinus*.** Vermilion Flycatcher.

Permanent resident. CRB: Fairly common in lowland pine savanna.

I have elsewhere discussed the taxonomy, distribution, and ecology of this species in the Mosquitia (Howell 1965, 1971, 1972), where it reaches the southern limit of its Middle American range. I described (Howell 1965) the Mosquitia population as *P. r. pinicola*; the correct type locality is 56 miles (90 km) (not 32 miles [51 km]) NW of Puerto Cabezas (Howell 1966).

Ssp.: *pinicola*.

***Colonia colonus*.** Long-tailed Tyrant.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

This species reaches the northern limit of its range in Honduras just north of the Nicaraguan border.

Ssp.: *leuconota*.

***Attila spadiceus*.** Bright-rumped Attila.

Permanent resident. PAC: Uncommon in deciduous forest; CRB: Fairly common in humid forest, including forest edge and low second growth.

The genus *Attila* was formerly placed in the family Cotingidae.

Ssp.: *citreopygius* Bonaparte 1854, type locality "Nicaragua."

***Laniocera rufescens*.** Speckled Mourner.

Permanent resident. CRB: Fairly common in humid forest.

This genus was formerly placed in the Cotingidae.

Ssp.: *rufescens*.

***Rhytipterna holerythra*.** Rufous Mourner.

Permanent resident. CRB: Fairly common in humid forest.

This genus was formerly placed in the Cotingidae.

Ssp.: *holerythra*.

***Myiarchus tuberculifer*.** Dusky-capped Flycatcher.

Permanent resident. PAC: Common in deciduous forest, at moderate elevations; CNHL: Common in deciduous forest, up to moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

This is the most widespread of the resident *Myiarchus* species, and also the smallest.

Ssp.: PAC: *connectens* Miller and Griscom 1925a, type locality Las Canas [= Las Cañas], Depto. de Matagalpa (elevation ~1,000 m); CNHL: Matagalpa; intermediate *connectens* > *nigricapillus*;

CRB: San Carlos, Depto. de Río San Juan, intermediate *connectens* > *nigricapillus*; all others from Caribbean Region, *nigricapillus*. I am unable to recognize *littoralis* Zimmer 1953, of the Pacific coastal lowlands, as distinct from *connectens*. Although a Nutting specimen from Sucuyá, Depto. de Rivas, represents *connectens*, three other Nutting specimens from nearby Isla de Ometepe have the dark, blackish-brown crown characteristic of *nigricapillus*. This island, however, has other subspecies of Caribbean Region affinities (see *Turdus assimilis*).

***Myiarchus cinerascens*.** Ash-throated Flycatcher.

Winter resident. PAC: Rare in thorn forest and scrub.

This species is known from Nicaragua from only one specimen, taken at 15 km SW of Juigalpa, Depto. de Chontales, on 25 January 1956. It is probably fairly regular in winter but is easily overlooked because of its similarity to resident *Myiarchus* species.

Ssp.: *cinerascens*.

***Myiarchus nuttingi*.** Nutting's Flycatcher.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest, and mangroves.

James Silliman found this species throughout the year in mangroves on Isla Juan Venado, Depto. de León.

Ssp.: Lanyon (1961) discussed subspecific variation in this species. I have at UCLA two males and two females from Hato Grande, Depto. de Chontales (which should be *n. nuttingi* according to Lanyon's map), and one male from Volcán Casita, Depto. de Chinandega, and three males and one female from 12 km E of Managua, Depto. de Managua, which should be *flavidior* according to the same map. The four birds from Hato Grande are very slightly paler yellow on the abdomen than the four from Chinandega and Managua, but the difference is barely perceptible. Dorsal coloration is variable, and individuals in the two groups are indistinguishable. As Lanyon showed, there is no difference in size between these two forms. On the basis of my Nicaraguan specimens, I could not find these races distinguishable, but it is possible that there is intergradation between them in Nicaragua that obscures differences. I tentatively refer the birds from the western

Pacific Region (Chinandega, Managua) to *flavidior* and those from the western Depto. de Chontales to *nuttingi*.

***Myiarchus crinitus*.** Great Crested Flycatcher.

Transient, winter resident. PAC: Fairly common in deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

The seasonal status of this species in Nicaragua is poorly known because of a scarcity of specimens.

***Myiarchus tyrannulus*.** Brown-crested Flycatcher.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest.

This species and *M. nuttingi* are broadly sympatric in similar habitats in Nicaragua.

Ssp.: *brachyurus* Ridgway 1887, type locality Ometepe [= Isla de Ometepe], Depto. de Rivas.

***Pitangus sulphuratus*.** Great Kiskadee.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

This is one of the few species that is found in both the Pacific and Caribbean regions and is more abundant on the Pacific side. James Silliman found it nesting between 28 March and 16 May 1982 in the Depto. de León.

Ssp.: *guatemalensis*.

***Megarhynchus pitangua*.** Boat-billed Flycatcher.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CRB: Common in forest edge, low second-growth humid forest.

James Silliman noted this species feeding on palm fruits at PoneLOYA, Depto. de León, 26 February 1983.

Ssp.: *mexicanus*.

***Myiozetetes similis*.** Social Flycatcher.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth cloud forest; CRB: Common in forest edge, low second-growth humid forest.

James Silliman found nests in the Depto. de León on 16 and 29 May 1982.

Ssp.: *texensis*.

***Myiozetes granadensis*.** Gray-capped Flycatcher.

Probably a permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Probably rare in forest edge, low second-growth cloud forest; CRB: Fairly common in forest edge, low second-growth humid forest.

Nutting (1884:384) included the following statements in his list of birds of Sucuyá, Depto. de Rivas: "*Myiozetetes granadensis* Lawr. Abundant. One specimen. *Myiozetetes texensis* (Giraud). Two specimens." There are no other records for *granadensis* from the Pacific Region, and I believe this one to be an error. I could not find Nutting's specimen of *granadensis* in the U.S. National Museum in 1982, and I could find only one *M. similis texensis* from Sucuyá. On p. 402 of the same paper, in the account of the birds of Los Sábalos, Depto. de Río San Juan, Nutting wrote of a strange "bob-tailed" condition in *granadensis* at that locality. This is followed by: "*Myiozetetes texensis* (Giraud). [NOTE: The foregoing remarks refer to this species also, which had been overlooked until after the list had been written.—R. R.]" Judging from this note by Robert Ridgway, it seems probable that there was confusion about the specific differences between *granadensis* and *similis*, and without a specimen to reexamine, the record of *granadensis* from Sucuyá is at best hypothetical. However, Tom Will recorded two individuals of the species in Solentiname, 6 April 1991, and eight at Papaturo, 5 April 1991, on the south side of Lago de Nicaragua, where there is a mixing of the Caribbean and Pacific avifaunas. He also found it in the Central Highlands at Santa María de Ostuma, Depto. de Matagalpa—one on 11 November and two on 22 November 1990. In the Caribbean Region, my impression is that *granadensis* is generally less abundant than *M. similis*, which shares the same habitat there. The northern limit of the range of *granadensis* is in southeastern Honduras just north of the Nicaraguan border.

***Coryphotriccus albovittatus* [*Conopias albovittatus*].** White-ringed Flycatcher.

Permanent resident. CRB: Probably uncommon in forest edge, low second-growth humid forest.

There are sight records of this species (as *Conopias parva*) from lowland eastern Honduras (Marcus 1983). As the range extends from Costa Rica to South America, the species was expected in Nicaragua and presumably was overlooked. Tom Will provided the first records for the country. He identified up to four individuals on five occasions 30 August 1990 to 18 June 1991 (voice recordings) from localities 13 km NNE of El Castillo and two birds at Papaturo, Depto. de Río San Juan; one 25 km SW of Bluefields, RAAS, 18 February 1993 (voice recording); and one 45 km NW of Bluefields, 20 February 1993. In most cases, the birds were found in the canopy of tall trees around pasture edges or small forest openings.

***Mviodynastris maculatus*.** Streaked Flycatcher.

This species is unrecorded from Nicaragua although its breeding range extends from eastern Mexico to South America. Populations north of Nicaragua are migratory and presumably pass through during spring and fall, but as yet there are no records.

***Myiodynastes luteiventris*.** Sulfur-bellied Flycatcher.

Transient, summer resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Uncommon, probably in forest edge, low second-growth highland pine and pine-oak forest; CRB: Uncommon in forest edge, low second-growth humid forest.

There are no winter records for this migratory species. Dates of occurrence in Nicaragua are from mid-March to mid-October. Miller and Griscom (unpubl. ms.) recorded specimens taken in the Central Highlands at 4,000 feet in pine forest in late March and early April but gave no indication of breeding in that habitat.

Ssp.: None recognized.

***Legatus leucophaeus*.** Piratic Flycatcher.

Transient, summer resident. PAC: Rare, probably in deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

All records are from March and April (earliest date 2 March 1896, San Emilio, Depto. de Rivas), but the species undoubtedly occurs in summer and transients must pass through Nicaragua. I noted two pairs at Siuna, RAAN, on 14 April 1967, occupying nests that appeared to be those of *Myiozetetes* species. The only records from the Pacific Region are three birds collected from 19

to 22 April 1904 at San Gerónimo [= Jerónimo], Depto. de Chinandega.

Ssp.: *leucophaeus*.

***Tyrannus melancholicus*.** Tropical Kingbird.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest, and mangroves; CNHL: Common in forest edge, low second-growth deciduous forest and highland pine and pine-oak forest; CRB: Common in forest edge, low second-growth humid forest, and lowland pine savanna.

James Silliman found this species to be a dominant one in Pacific coast mangroves.

Ssp.: *satrapa*.

***Tyrannus verticalis*.** Western Kingbird.

Winter resident. PAC: Fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest, and mangroves; CNHL: Uncommon in undetermined habitat.

Extreme dates of occurrence are from 26 November to 14 May (James Silliman). The Central Highlands specimens are from localities at ~3,000 feet (915 m) (Miller and Griscom unpubl. ms.), without habitat notes.

***Tyrannus tyrannus*.** Eastern Kingbird.

Transient. PAC: Probably fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

There are no winter records. Fall dates range from 8 September to 29 October; spring dates are from 19 April to 18 May. This kingbird is probably a common transient, but there are very few specific records.

***Tyrannus dominicensis*.** Gray Kingbird.

Transient, and probably a summer resident. CRB: Probably fairly common in undetermined habitat.

The only records are from Greytown [= San Juan del Norte], where Richmond reported it as "rather common . . . for a short time late in March." The species probably occurs as a transient all along the Caribbean coast. Neither Peters nor James Silliman recorded this kingbird from the Corn Islands, but their visits were during December and

early January. It probably occurs there as a transient and possibly as a summer resident.

Ssp.: *dominicensis*. I follow Monroe (1968) in not recognizing the subspecies *sequax* Brod-korb, recorded from Greytown [= San Juan del Norte], Depto. de Río San Juan.

***Tyrannus forficatus*.** Scissor-tailed Flycatcher.

Transient, winter resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest, grasslands, and urban areas; CNHL: Uncommon in thorn forest and scrub, forest edge, low second-growth deciduous forest, at moderate elevations.

This species occurs in all parts of the Pacific Region wherever there are open areas with perching sites above ground level (including urban areas) and to mid-elevation on the Pacific side of the Central Highlands. There are no definite records earlier than 10 October (James Silliman), but some birds undoubtedly arrive earlier. The latest spring date is 10 May (James Silliman). Monroe (1968) recorded a large northward migratory flight from NW Nicaragua across the Golfo de Fonseca to Honduras on 1 February 1963, which seems unusually early. Miller and Griscom (unpubl. ms.) recorded "hundreds or even thousands" passing over Matagalpa in mid-April.

***Tyrannus savana*.** Fork-tailed Flycatcher.

Permanent resident, and probably a transient. CRB: Uncommon and local in forest edge, low second-growth humid forest; common in lowland pine savanna and grasslands.

Outside of the lowland pine savanna, this species is found mainly where cutting of forest has produced extensive grassy clearings. In the pine savanna it usually occurs where trees are sparse or absent, perching on grass clumps or small shrubs. Some transients probably pass through the Caribbean Region, but none has been distinguished from the residents. I have elsewhere (Howell 1972) discussed the mutually exclusive distribution of this and the preceding species.

Ssp.: *monachus*.

***Pachyramphus cinnamomeus*.** Cinnamon Becard.

Permanent resident. CNHL: Probably rare in cloud forest; CRB: Fairly common in humid forest.

This genus was formerly placed in the Cotingidae. A specimen in the AMNH was taken on 16 April 1917 at 10 miles (16 km) NW of Matagalpa, elevation 4,100 feet (1,250 m), which would be about the lower edge of cloud forest. All other records are from the Caribbean Region.

Ssp.: *fulvidior*.

Pachyramphus polychopterus. White-winged Becard.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: *cinereiventris*.

Pachyramphus albogriseus. Black-and-white Becard.

This species was recorded from Nicaragua on the basis of a female becard taken by Salvin at El Realejo, Depto. de Chinandega, on 16 May 1863. It was reported as *albogriseus* and figured in color in plate 43 of the *Biologia Centrali-Americana*. The identification is erroneous; the specimen is a typical example of *polychopterus* (Snow 1979). There are no other records from Nicaragua, and the northern limit of the range of *albogriseus* is thus Costa Rica.)

Pachyramphus major. Gray-collared Becard.

Permanent resident. CNHL: Uncommon in cloud forest, highland pine and pine-oak forest.

Miller and Griscom (1925a) described *P. m. australis* with a range from Guatemala to northern Nicaragua on the basis of one male and two females from Guatemala and one male (the type) and three females from Nicaragua. The males were said to have less black on the interscapulum than those from Mexico, and the females were characterized as darker cinnamon-rufous dorsally and more yellowish ventrally, slightly smaller than nominate *major* from eastern Mexico but larger than *itzensis* from Yucatan. I previously expressed doubt about the validity of *australis* (Howell 1964a) on the basis of a second male from Nicaragua that did not have less black dorsally. The females from Nicaragua, however, are definitely darker dorsally and with darker edges to the wing feathers and are thus distinguishable from populations in Mexico. Size may differ from that of those from Mexico, but the sample from

Nicaragua is too small to be certain. The species reaches the southern limit of its range in north-central Nicaragua.

Ssp.: *australis* Miller and Griscom 1925a, type locality San Rafael del Norte, Depto. de Jinotega (see comments above).

Pachyramphus aglaiae. Rose-throated Becard.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest.

The very pale Pacific Region subspecies *latirostris* and the very dark *hypophaeus* of the Caribbean Region are presumably in geographic contact in Nicaragua, but I have not seen any intermediate specimens.

Ssp.: PAC: *latirostris* Bonaparte 1854, type locality "Nicaragua," restricted to Chinandega by Zimmer; CRB: *hypophaeus*.

Tityra semifasciata. Masked Tityra.

Permanent resident. PAC: Common in deciduous forest; CNHL: Fairly common at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

Ssp.: Most specimens from Nicaragua are variously intermediate between the slightly larger and darker *personata* and the slightly smaller and paler *costaricensis*. The apparent zone of intergradation is wide, and individuals with characteristics close to typical of each form have been collected near both the Honduran and Costa Rican borders. In view of this, I consider all Nicaraguan populations as intermediate.

Tityra inquisitor. Black-crowned Tityra.

Permanent resident. CRB: Uncommon in humid forest.

Ssp.: *fraserii*.

FAMILY COTINGIDAE

Lipaugus unirufus. Rufous Piha.

Permanent resident. CRB: Uncommon in humid forest.

Ssp.: Hellmayr (1929) assigned Central American populations from Nicaragua south to the subspecies *castaneotinctus*. I follow Wetmore (1972) and Snow (1982) in restricting the range

of that form to South America and in considering Central American birds to represent the subspecies *unirufus*.

***Cotinga amabilis*.** Lovely Cotinga.

Permanent resident. CRB: Absolutely uncommon but locally fairly common in humid forest.

In Nicaragua this species is seldom found except among berry-bearing trees.

***Carpodectes nitidus*.** Snowy Cotinga.

Permanent resident. CRB: Uncommon in humid forest.

This is another species that is primarily a berry-tree feeder.

***Querula purpurata*.** Purple-throated Fruitcrow.

Permanent resident. CRB: Probably uncommon in humid forest.

Tom Will provided the first records for Nicaragua for this species, although it was not unexpected, especially along the Río San Juan, as it is a "fairly common resident in lowlands and foothills the length of the Caribbean slope" in Costa Rica (Stiles and Skutch 1989). He recorded birds at three different locations 13 km NNE of El Castillo, Depto. de Río San Juan—2 September 1990, four birds 3 November, four on 29 November, eight on 4 December, four on 15 June 1991 (voice recordings), and four at a different location on 17 June (voice recordings)—and three individuals in *Raphia* swamp forest at San Juan del Norte, 14 May 1991.

***Procnias tricarunculata* [*Procnias tricarunculatus*].** Three-wattled Bellbird.

Permanent resident. PAC: Rare in cloud forest; CNHL: Absolutely rare but locally fairly common in cloud forest; CRB: Rare in humid forest at moderate elevations.

Records from altitudes below cloud-forest levels pertain to nonbreeding birds, which evidently descend into the lowlands. J. C. Martínez-Sánchez has records (including males calling) from the upper slopes from Volcán Maderas, Isla de Ometepe. There were no prior records from anywhere on the island, and the species is absent from Volcán Mombacho.

FAMILY PIPRIDAE

***Piprites griseiceps*.** Gray-headed Manakin [Gray-headed Piprites].

Permanent resident. CRB: Rare in humid forest.

There are only two records from Nicaragua, a Richardson specimen from San Carlos, Depto. de Río San Juan, taken on 29 May 1892 (BMNH), and one taken by Huber at Edén, RAAN. Huber stated that he found only that one individual, "in a tall tree high up, and its actions were very vireo-like." If such habits are typical, that could account for the scarcity of records throughout the known range. The familial relationships of this species, like those of *Schiffornis*, remain uncertain and it may not belong in the Pipridae.

***Manacus candei*.** White-collared Manakin.

Permanent resident. CRB: Common in forest edge, low second-growth humid forest.

Miller and Griscom (unpubl. ms.) said that they saw this species "at Las Cañas, near Matagalpa, at an altitude of 3000 ft" (915 m)—unusually high. My description of displays tentatively attributed to this species (Howell 1957) undoubtedly pertain to *Pipra mentalis* instead.

***Corapipo altera*.** White-ruffed Manakin.

Permanent resident. CRB: Rare in humid forest.

My specimen from Arenal, now in El Paraiso, Honduras, represents the northern limit of the species' range (Monroe 1968). The few Nicaraguan specimens lack altitude data, but elsewhere the species breeds in forest from 500 to 1,700 m, which would extend into cloud forest in Nicaragua. It ranges to lower elevations in the nonbreeding season. Tom Will reported one at 140 m in primary forest 13 km NNE of El Castillo, Depto. de Río San Juan, 4 December 1990.

Ssp.: *altera*.

***Chiroxiophia linearis*.** Long-tailed Manakin.

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; rare in cloud forest.

This species has been recorded up into the lower edge of cloud forest on Volcán Mombacho.

Ssp.: None recognized, including *fastuosa* Lesson 1842, type locality Realejo [= El Realejo], Depto. de Chinandega.

***Pipra mentalis*.** Red-capped Manakin.

Permanent resident. CRB: Common in forest edge, low second-growth humid forest.

Ssp.: *mentalis*.

FAMILY CORVIDAE

Cyanocitta stelleri. Steller's Jay.

Permanent resident. CNHL: Absolutely uncommon but locally fairly common in highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) stated that this species is "the commonest member of the family in the pine forests of the mountains of northern Nicaragua," but all records are from a single locality. There are 11 specimens in the AMNH and five in the BMNH, all collected by Richardson and Miller and Griscom, and all are from San Rafael del Norte. I know of no others. Altitudes given on labels range from 4,000 to 5,000 feet (1,220 to 1,525 m; the latter is probably too high an estimate). The species reaches the southern limit of its range in Nicaragua and seems to be confined to areas where there are extensive pine forests above 1,220 m. Steller's Jay apparently does not occur south to Matagalpa or Richardson would surely have collected it there. I did not find it near Matagalpa in pine forest at or below 1,220 m. The species does not occur on the north-west volcanic peaks nor in the lowland pine savanna (Howell 1972).

Ssp.: *suavis* Miller and Griscom 1925c, type locality San Rafael del Norte, Depto. de Jinotega.

Calocitta formosa. White-throated Magpie-Jay.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, and low second-growth deciduous forest.

This is the only corvid known to be resident in the Pacific Region lowlands (but see *Corvus corax*).

Ssp.: *pompata*.

{*Cyanocorax yncas*. Green Jay.

This species does not range south of Honduras in Middle America but occurs widely in northern South America. The Honduran-Nicaraguan Mosquitia appears to provide potentially suitable habitat, but there are no Green Jays there.}

Cyanocorax morio. Brown Jay.

Permanent resident. CNHL: Fairly common in forest edge, low second-growth deciduous forest at moderate elevations; CRB: Common in forest edge, low second-growth humid forest; fairly common in lowland pine savanna.

This species reaches the Central Highlands from the Caribbean Region; in the latter area it is the only corvid present. In the pine savanna it is a visitor from the adjacent humid forest (Howell 1972).

Ssp.: *cyanogenys* Sharpe 1877, type locality Pearl Bay Lagoon [= Laguna de Perlas], near Bluefields, RAAS.

Cyanocorax melanocyaneus. Bushy-crested Jay.

Permanent resident. CNHL: Fairly common in cloud forest and probably highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) found this species to be "fairly common in the oak and pine forests," but in the vicinity of Matagalpa I found it mainly in and around the edge of cloud forest (which includes oak) and not in pines. There are no other jays resident in the Nicaraguan cloud forest. Sclater (1873) recorded this species from Chontales on the basis of specimens collected by Thomas Belt. These undoubtedly came from near Matagalpa, as Belt mentioned seeing this species there.

Ssp.: I share Monroe's (1968) reasons for regarding *chavezii* Miller and Griscom 1925c, type locality Matagalpa, as not consistently distinguishable from other populations. The species is best regarded as monotypic.

Corvus corax. Common Raven.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest; PAC: Fairly common in thorn forest and scrub.

Miller and Griscom (unpubl. ms.) found a nesting pair at San Rafael del Norte, Depto. de Jinotega, and reported sightings south to Matagalpa, where I have also seen it. I have sight records south into the arid Pacific Region lowlands to the vicinity of Juigalpa, Depto. de Chontales, but without evidence of breeding. The sightings were in relatively open country used for cattle ranching, and there are many isolated rocky inselbergs up to several hundred meters in elevation with cliffs possibly suitable for nest sites. Agriculture and livestock may provide enough foraging opportunities for ravens to extend their breeding range into the lowlands. At present, the sightings near Juigalpa represent the southernmost New World records for the species.

Ssp.: San Rafael del Norte, Depto. de Jinotega, is the type locality of *C. c. richardsoni*, Miller

and Griscom 1925c, based on a single specimen which is still the only one from Nicaragua. Monroe (1968) synonymizes this form with *C. c. sinuatus*, a decision with which I agree.

FAMILY HIRUNDINIDAE

Progne subis. Purple Martin.

Transient. PAC: Rare in thorn forest and scrub. CRB: Fairly common in forest edge, low second-growth humid forest and lowland pine savanna.

I have elsewhere (Howell 1972) discussed the status of this species in the pine savanna. The only specimen record from another habitat is that of Richmond at 50 miles (80 km) W of Bluefields, RAAS, on 13 September, but Griscom sighted a "fine adult male" on 10 April at Las Cañas, Depto. de Matagalpa. A martin banded in Tennessee on 23 June 1943 was recovered on 6 October 1943 at 14°50'N, 83°10'W, a locality in the northeast corner of Nicaragua. This is the latest fall date. Combining all records, the extreme dates of occurrence were 13 August to 6 October and 1 February to 10 April until Tom Will reported ~200 migrating along the barrier beach at San Juan del Norte, Depto. de Río San Juan, on 11 May 1991.

Ssp.: I regard *hesperis* as too slightly differentiated for recognition and regard the species as monotypic.

Progne chalybea. Gray-breasted Martin.

Probably transient, summer resident, winter resident, or permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest and urban habitats; CNHL: Fairly common at moderate elevation in undetermined habitat; CRB: Fairly common in forest edge, low second-growth humid forest, forest edge, low second-growth lowland pine savanna.

This species has become largely urbanized for nesting, especially in the Pacific Region. Monroe (1968) found the species to be absent in Honduras between 19 October and 21 January and believed that it migrates to the south for that 3-month interval. I noted the species commonly at Managua and Granada on 4 and 8 January, respectively, in 1953 and on 12 January 1957 at Managua. Tom Will recorded the species along the Carretera Sur, 12 km S of Managua during June, August–November, and January–March,

1990–1991, along Lago de Managua in June, and during February–March at Volcán Mombacho. James Silliman had sight records (mostly near León) for January–May and August–October, and I feel sure that there are permanent resident populations in Nicaragua. Probably there are some transients that breed farther north and migrate through, and some may winter as well.

Ssp.: *chalybea*.

Tachycineta bicolor. Tree Swallow.

Winter resident. CRB: Common in lowland pine savanna.

This species has been recorded from Nicaragua only in January and February 1963. I have elsewhere (Howell 1972) discussed the circumstances and the irregular occurrence of the Tree Swallow anywhere south of Honduras.

Tachycineta albilinea. Mangrove Swallow.

Permanent resident. PAC: Fairly common in aquatic habitats; CRB: Common in aquatic habitats.

This swallow is confined to the vicinity of lakes, ponds, and watercourses in the lowlands of both slopes.

Ssp.: *albilinea*.

Tachycineta thalassina. Violet-green Swallow.

Probably transient or winter resident. CNHL: Rare in grasslands, forest edge, low second growth, and aquatic habitats.

This species reaches Honduras regularly in winter and is recorded as casual in Costa Rica and Panama. Presumably, it is also a casual transient or winter resident in Nicaragua, but it was not reported until recently. Tom Will saw ~20 birds foraging low over an open pasture 15 km NW of Ocotal, Depto. de Nueva Segovia, 29 January 1990, and ~60 individuals at Las Playitas, Depto. de Matagalpa, 9 December 1990.

Pygochelidon cyanoleuca. Blue-and-white Swallow.

Summer visitor. CRB: Rare in forest edge, low second-growth humid forest.

The only record for this species from Nicaragua is a single specimen representing the South American breeding subspecies *patagonica* taken 9 July 1954 at El Recreo, 10 miles (16 km) W of Rama, RAAS (Howell 1955). The term "summer visitor" is somewhat misleading here, as July is

midwinter in the bird's breeding range and it was not in breeding condition.

Ssp.: *patagonica*.

Stelgidopteryx serripennis. Northern Rough-winged Swallow.

Transient, winter resident, and permanent resident. PAC: Fairly common in aquatic habitats, grasslands, and mangroves; CNHL: Fairly common at forest edge, low second-growth deciduous forest at moderate elevations; CRB: Fairly common in aquatic habitats, forest edge, low second-growth humid forest.

This species includes the permanent resident subspecies *fulvipennis* and a transient and winter resident subspecies *serripennis* from farther north. There are few specimens from Nicaragua, and the exact distribution of the resident and migrant subspecies is not known. The species is usually found around rivers or lakes—especially on the arid Pacific Region but also over fields and among mangroves along the Pacific coast (James Silliman).

Ssp.: See discussion above.

Stelgidopteryx ruficollis. Southern Rough-winged Swallow.

Permanent resident. CRB: Common in aquatic habitats, forest edge, low second-growth humid forest.

This form has previously been considered conspecific with *serripennis*. The northern limit of the range of *ruficollis* is just beyond the Nicaraguan boundary in extreme southeastern Honduras (Howell 1972).

Ssp.: *uropygialis*.

Riparia riparia. Bank Swallow.

Transient, probably winter resident. PAC: Fairly common in aquatic habitats; CNHL: Rare in aquatic habitats; CRB: Probably uncommon in aquatic habitats; rare in lowland pine savanna.

There are only two specimen records, but the species is presumably a regular transient. Miller and Griscom (unpubl. ms.) collected one bird on 28 April 1917 from a flock of ~100 flying along the edge of Lago de Managua. I collected a single bird on 26 August 1965 from among a group of Barn Swallows at the edge of an airstrip in the pine savanna (Howell 1972). A bird banded in Alaska on 3 July 1961 was recovered in the Depto. de Masaya (Pacific Region) on 12 September 1964.

James Silliman saw large flocks along the Pacific coast (Depto. de León) and the shores of Lago de Nicaragua from 12 to 15 September 1982, and small numbers to 30 October; in spring 1991, Tom Will recorded two individuals at Las Playitas, Depto. de Matagalpa, 14 April; two at Papaturro, Depto. de Río San Juan, 5 April; 20 at San Juan del Norte, 13 May; and 30 along the Río San Juan, 16 May. Silliman's sight records for 16 and 31 January 1982 and Will's sightings of a bird at Chacocente, Depto. de Carazo, 20 November 1990, and five at Las Playitas, Depto. de Matagalpa, 16 January 1991 indicate wintering, but that requires confirmation by specimens.

Ssp.: *riparia*.

***Hirundo pyrrhonota* [*Petrochelidon pyrrhonota*]**. Cliff Swallow.

Transient. PAC: Uncommon in urban, coastal habitats; CRB: Fairly common in forest edge, low second-growth humid forest.

There are no published records, but I have two specimens: El Corozo, Depto. de Nueva Segovia, 16 September 1954; 10 km S. San Carlos, Depto. de Río San Juan, 2 April 1962. The specimens were collected from flocks, and the species is presumably a regular transient. James Silliman recorded a few Cliff Swallows in the Depto. de León on 10 October 1982 and on 9–10 May 1983; his sight records of six birds on 8 December 1982 at Isla Juan Venado, Depto. de León, suggest winter residence, but confirmation by specimens is needed.

Ssp.: Only *pyrrhonota* is confirmed by specimens.

Hirundo rustica. Barn Swallow.

Transient, winter resident. PAC, CNHL, CRB: Common in all open and urban habitats.

There are no specimen records in winter, but there are many sight records. Richmond stated that this species was "Abundant in winter and during migrations. Arrive late in August . . . in March large numbers were seen . . . small numbers . . . as late as 3 May." I have a sight record for 25 August at 16 km SSW of Waspan. James Silliman noted this species as common in the Depto. de León on numerous dates in every month from September through April, with a few present as late as 10 May. J. R. Alcorn (pers. comm.) reported seeing Barn Swallows "from February until May 18" in the vicinity of Managua, and I saw them from 13 to 15 January 1956 at Granada.

Ssp.: *erythrogaster*.

FAMILY CERTHIDIDAE

Certhia americana. Brown Creeper.

Permanent resident. CNHL: Fairly common in highland pine and pine-oak forest.

This species reaches the southern limit of its range in Nicaragua, extending south to Matagalpa. The subspecies *extima* is characterized by a distinctive long bill.

Ssp.: *extima* Miller and Griscom 1925b, type locality San Rafael del Norte, Depto. de Jinotega.

FAMILY CINCLIDAE

Cinclus mexicanus. American Dipper.

Permanent resident. CNHL: Rare in aquatic habitats in highland pine and pine-oak forest.

Richardson collected three specimens at San Rafael del Norte in March 1892 but failed to find others on subsequent visits to the same locality. Miller and Griscom (unpubl. ms.) stated that "in 1917 the banks of the same stream for a mile above the town were denuded of vegetation, and the stream itself was thronged with washerwomen, satisfactory reasons for the local disappearance of the bird." None has been recorded elsewhere in Nicaragua, and there is probably no suitable habitat for the species south of the Central Highlands until the highlands of Costa Rica are reached. As expected, the Nicaraguan specimens (BMNH) resemble those from more northern populations and not those from Costa Rica.

Ssp.: *anthonyi*.

FAMILY TROGLODYTIDAE

Campylorhynchus zonatus. Band-backed Wren.

Permanent resident. CNHL: Fairly common in forest edge, low second-growth highland pine and pine-oak forest up to moderate elevations.

In Nicaragua this species is confined to the Central Highlands and the vicinity of pines, although it ranges into adjacent habitats for short distances.

Ssp.: *vulcanicus*.

Campylorhynchus rufinucha. Rufous-naped Wren.

Permanent resident. PAC: Common in thorn forest and scrub; CNHL: Common in thorn forest and scrub at moderate elevations.

This species is primarily a bird of the arid Pacific lowlands but ranges to the lower edges of the pines in the Central Highlands. It does not occur anywhere in the Caribbean Region in Nicaragua.

Ssp.: I refer all Nicaraguan populations to *capistratus* and do not recognize *nicaraguae* Miller and Griscom 1925a, type locality Matagalpa. This is in accord with the treatment of Selander (1964) of the range and characters of this form in Nicaragua. A submalar stripe in Nicaraguan birds may be present or absent, or partial, or asymmetrical; it appears to be too variable and unstable to serve as a subspecific character. The species is highly variable in coloration, sometimes independent of geography, and no useful purpose is served by taxonomic recognition of many local variations.

Ssp.: *capistratus*; see discussion above.

Salpinctes obsoletus. Rock Wren.

Permanent resident. PAC: Fairly common in highland rocky grasslands at moderate elevations.

In Nicaragua this species occurs only among the rocky outcrops in open grassland on the upper slopes of Volcán San Cristóbal and Volcán Casita, Depto. de Chinandega. On the latter mountain its range extends down to 1,200 m. Volcán Viejo [= San Cristóbal] is the type locality of the subspecies *fasciatus* Salvin and Godman, 1891.

Ssp.: *guttatus*. On 30 November 1961, I obtained four adult specimens in good plumage at Volcán Casita, 5 km NE of San Cristóbal. These are virtual topotypes of *fasciatus*. I have compared these with a series of 15 adults collected in El Salvador in February and March 1926. There is much individual variation in the ventral markings, ranging from a barred to a spotted appearance, and the Nicaraguan specimens are matched by some from El Salvador. Dorsal coloration is variable and not consistently different geographically, and wing, tail, and culmen measurements of birds from both areas overlap. I therefore consider *fasciatus* a synonym of *guttatus* (which has page priority) Salvin and Godman 1891, type locality Volcán San Miguel, El Salvador.

Thryothorus atrogularis. Black-throated Wren.

Permanent resident. CRB: Uncommon in humid forest.

This species reaches the northern limit of its known range along the Río Escondido.

Ssp.: *atrogularis*.

***Thryothorus nigricapillus*.** Bay Wren.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

This wren is usually found along the edges of streams. The northern limit of its known range is northeastern Nicaragua, but it is fairly common near the Honduran border and should occur in eastern Honduras.

Ssp.: *costaricensis*.

***Thryothorus thoracicus*.** Stripe-breasted Wren.

Permanent resident. CRB: Fairly common in humid forest.

This species also reaches the northern limit of its known range in northeastern Nicaragua but probably will be found in eastern Honduras.

Ssp.: *thoracicus*.

***Thryothorus maculipectus*.** Spot-breasted Wren.

Permanent resident. CRB: Fairly common in forest edge, low second-growth humid forest.

I have elsewhere (Howell 1957) discussed the distribution and taxonomy of this species in Nicaragua. It occurs throughout the Caribbean Region and south into northeastern Costa Rica.

Ssp.: *umbrinus*.

***Thryothorus rufalbus*.** Rufous-and-white Wren.

Permanent resident. PAC: Fairly common in deciduous forest, including forest edge and low second-growth habitats; CNHL: Uncommon in deciduous forest.

This species ranges to the western edge of the Caribbean Region habitat at San Carlos, Depto. de Río San Juan, and up to 1,200 m in the Central Highlands (J. C. Martínez-Sánchez in litt.).

Ssp.: *castanonotus*.

***Thryothorus pleurostictus*.** Banded Wren.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest.

This species is partly sympatric with *T. modestus* but occupies drier habitats than that species.

Ssp.: Five males and four females from Chinandega to western Depto. de Chontales and Granada are within the small size range of *lateralis*. The type locality of the slightly larger *ravus*, Ridgway 1903, is San Juan del Sur, Depto. de Rivas, near the Costa Rican border, and that is probably close to the northern limit of its range.

***Thryothorus ludovicianus*.** Carolina Wren.

Permanent resident. PAC: Probably rare in thorn forest and scrub and deciduous forest.

Until recently, this species was known in Nicaragua from a single specimen taken at 5 miles (8 km) S of Metapa [= Ciudad Darío], Depto. de Matagalpa, 5 March 1917, which was described by Miller and Griscom (1925a) as a new subspecies *Thryothorus albinucha subfulvus*. They described its song as "almost exactly like that of a Carolina Wren." They reported hearing many such songs in the same area on 23 to 25 April but were unable to secure other specimens as "the wren lives in dense thickets of thorny or spiny shrubs in which it cannot be seen." The *albinucha* group has since been merged with the *ludovicianus* species group, in which case the type locality of *subfulvus* is the southern limit of the known range of that species. On 4 August 1984, Martínez-Sánchez (1989) obtained two males at Hacienda Las Rojas, elevation 750 m, Volcán San Cristóbal, Depto. de Chinandega. These have not yet been compared with the unique type of *subfulvus* and may represent an undescribed subspecies. Phillips (1986) retains *albinucha* as a distinct species.

Ssp: See discussion above.

***Thryothorus modestus*.** Plain Wren.

Permanent resident. PAC: Fairly common in deciduous forest, forest edge, low second growth; uncommon in cloud forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest at moderate elevations; CRB: Fairly common in grasslands, forest edge, and low second-growth humid forest.

This species occurs throughout the Pacific Region lowlands and ranges up to the lower edges of cloud forest in the Central Highlands. On Volcán Mombacho it ranges up to the summit and within small patches of cloud forest. The Caribbean population belongs to a distinct subspecies *zeledoni*, reaching the northern limit of its range in

Nicaragua where it is confined to the canebrakes and thickets along the Río San Juan. This form has been considered a distinct species, *T. zeledoni*.

Ssp.: PAC: *modestus*; CRB: *zeledoni*.

***Troglodytes aedon*.** House Wren.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; fairly common but local in cloud forest; CNHL: Fairly common in deciduous forest at moderate elevations and cloud forest; CRB: Common in forest edge, low second-growth humid forest.

This wren is absent from the Pacific lowlands but ranges into cloud forest in the Central Highlands; J. C. Martínez-Sánchez found that it was locally common in elfin forest near the summit of Volcán Mombacho, at 1,200 m, 30 September 1987 and 7 October 1988; at Volcán Maderas, Isla de Ometepe, he secured four males and one female in a similar forest type near the crater rim, elevation 1,000 m, 27 March and 11 April 1988.

Ssp.: *intermedius*; *oreopolus* Chapman and Griscom 1924, type locality Ocotal, Depto. de Nueva Segovia, is not recognized.

***Troglodytes rufociliatus*.** Rufous-browed Wren.

Permanent resident. CNHL: Rare in cloud forest.

Martínez-Sánchez (1989) recorded this species from Nicaragua in forest at Finca La Hamonia, elevation 1,250 m, 8 km N of Matagalpa on 14 May 1985. This represents the southernmost locality for the species and the first Nicaraguan record. Tom Will also noted this species at the same locality—two individuals on 8 July 1990, one on 14 March 1991, and two on 10 April 1991 (voice recordings).

Ssp.: Undetermined.

***Cistothorus platensis*.** Sedge Wren.

Permanent resident. CNHL: Rare in aquatic habitats with grasslands; CRB: Probably rare in aquatic habitats with grasslands.

This species is known from Nicaragua by only two specimens—one from 9 miles (14 km) SE of San Rafael del Norte and one in a marshy area in the pine savanna ~25 miles (40 km) NW of Puerto Cabezas. I have elsewhere (Howell 1972) discussed these records. The Sedge Wren is probably

more abundant and widely distributed in Nicaragua but has been overlooked.

Ssp.: *elegans*.

***Henicorhina leucosticta*.** White-breasted Wood-Wren.

Permanent resident. CNHL: Fairly common in cloud forest; CRB: Common in humid forest.

This wren is primarily a lowland species but extends from the Caribbean Region into cloud forest in the Central Highlands (see *H. leucophrys*).

Ssp.: *prosthaleuca*.

{***Henicorhina leucophrys*.** Gray-breasted Wood-Wren.

This high-altitude species is apparently absent from Nicaragua, although it is widely distributed to the north and south.}

***Microcerculus philomela*.** Nightingale Wren.

Permanent resident. CNHL: Probably rare in cloud forest; CRB: Probably uncommon in humid forest at moderate elevations.

The only specimen recorded within the present borders of Nicaragua was taken by Richardson at Pena Blanca [= Peñas Blancas], Depto. de Jinotega, but I obtained one at Arenal, now in El Paraíso, Honduras, on 26 January 1953. The species is probably fairly common but so secretive as to go largely undetected except for its song. Tom Will found at least six different individuals at one location, 13 km NNE of El Castillo, Depto. de Río San Juan, 2–4 September, 4 November, 30 November 1990, and 12–16 June 1991; and one individual at a different location, 4 December 1990. He also recorded the species at Santa María de Ostuma, 8 July 1990 and 19 May 1991, and at Matapalo, Depto. de Matagalpa, 31 July 1991. Eight voice recordings were all the “long series of clear whistles on different pitches . . . sounding like a slightly tone-deaf person whistling a tune” (Stiles and Skutch 1989) typical of *philomela*.

Ssp.: Presumably *philomela*.

***Cyphorhinus phaeocephalus*.** Song Wren.

Permanent resident. CRB: Common in humid forest.

This species reaches the northern limit of its range in Honduras just north of the Nicaraguan border.

Ssp.: *richardsoni* Salvin 1893, type locality Santo Domingo, Depto. de Chontales.

FAMILY MUSCIPIDAE
SUBFAMILY SYLVIINAE

Microbates cinereiventris. Half-collared Gnatwren [Tawny-faced Gnatwren].

Permanent resident. CRB: Rare in humid forest. The only specimen record from Nicaragua was collected at Los Sábalos, Depto. de Río San Juan, on 13 May 1917 (AMNH). Tom Will encountered the species three times in primary forest 13 km NNE of El Castillo, Depto. de Río San Juan, on 30 August, 4 December 1990 (4 individuals), and 17 June 1991; his sightings are the northernmost records for the species.

Ssp.: *semitorquatus*.

Ramphocaenus melanurus. Long-billed Gnatwren.

Permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

In the Pacific Region this species is found principally where there are good stands of deciduous forest around coffee plantings.

Ssp.: *rufiventris*.

Polioptila albiloris. White-lored Gnatcatcher.

Permanent resident. PAC: Fairly common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Rare in highland pine and pine-oak forest.

Miller and Griscom (unpubl. ms.) obtained one specimen at San Rafael del Norte labeled 4,000 feet (1,220 m) and said that the species reaches "the lower edge of the pine forest in the highlands."

Ssp.: *albiloris*; *bairdi* Ridgway 1903, type locality San Juan del Sur, Depto. de Rivas, is not recognized.

Polioptila plumbea. Tropical Gnatcatcher.

Permanent resident. CRB: Common in forest edge, low second-growth humid forest.

Ssp.: *superciliosus*.

SUBFAMILY TURDINAE

Sialia sialis. Eastern Bluebird.

Permanent resident. PAC: Uncommon in highland pine and pine-oak forest; CNHL: Fairly

common in highland pine and pine-oak forest; CRB: Absolutely uncommon but locally common in lowland pine savanna.

Two distinct subspecies, not in contact with each other, are found in Nicaragua. *Sialia s. meridionalis* occurs in the highlands, and the smaller *S. s. caribaea* (Howell 1965) occurs in the Mosquitia in the lowlands. The species is closely associated with pine forest in Nicaragua and reaches its southern limit in the southern extent of the pines. The type locality of *caribaea* is 4 miles (6.4 km) NW of Leicus Creek, 60 miles (96 km) (not 36 miles [58 km]) NW of Puerto Cabezas (Howell 1966).

Ssp.: See discussion above.

Myadestes unicolor. Slate-colored Solitaire.

Permanent resident. CNHL: Fairly common in cloud forest.

The Central Highlands of Nicaragua is the southern limit of the species' range; it does not occur on Volcán Mombacho.

Ssp.: *pallens* Miller and Griscom 1925b, type locality San Rafael del Norte, Depto. de Jinotega.

Catharus aurantirostris. Orange-billed Nightingale Thrush.

Permanent resident. PAC: Rare in deciduous forest at moderate elevations; CNHL: Fairly common in deciduous forest at moderate elevations.

Miller and Griscom (unpubl. ms.) described the habitat in the Central Highlands as "scrub, lying just below the pine forest belt." James Silliman found it in the same kind of habitat at Santa María de Ostuma, Depto. de Matagalpa, and J. C. Martínez-Sánchez collected the species in the same region from 1,200 to 1,450 m. Tom Will found it in the Sierras de Managua 13 km SSW of Managua, June 1990, in a brushy border of an abandoned coffee plantation.

Ssp.: *melpomene*; *albidior* Miller and Griscom 1925b, type locality between Jinotega and San Rafael del Norte, is not recognized.

Catharus frantzii. Ruddy-capped Nightingale-Thrush.

Permanent resident. CNHL: Uncommon in cloud forest.

All previous records from Nicaragua are from San Rafael del Norte and San Sebastián de Yalí, Depto. de Jinotega (elevation 850 m), 11 km to the

northwest, from which *C. aurantirostris* is also recorded. J. C. Martínez-Sánchez obtained males with enlarged testes in April and May 1984, at 1,500 m elevation, at Santa María de Ostuma, Depto. de Matagalpa.

Ssp.: *alticola*.

***Catharus mexicanus*.** Black-headed Nightingale-Thrush.

Permanent resident. PAC: Rare in cloud forest; CNHL: Fairly common in cloud forest; CRB: Uncommon in humid forest.

This species is probably an inhabitant of the cloud forest in most of its range and occurs in that habitat in Nicaragua. In April 1962, I found these thrushes in song in the Caribbean lowland forest at Cum, 250 m, RAAN. Three males in full breeding condition were collected, which suggests that these were not post-reproductive wanderers from the highlands. J. C. Martínez-Sánchez has recorded this species from Volcán Maderas, Isla de Ometepe, the only Pacific Region record.

Ssp.: *fumosus*.

{***Catharus dryas*.** Spotted Nightingale-Thrush.

This high-altitude species ranges from Oaxaca and Chiapas south into Honduras and also occurs widely in South America. Its absence from Nicaragua is not unexpected, as it is quite rare in Honduras}

{***Catharus fuscescens*.** Veery.

This species probably occurs as a transient in the Caribbean Region of Nicaragua, but there are no records from the country.}

{***Catharus minimus*.** Gray-checked Thrush.

This species may be a transient along the Caribbean Region of Nicaragua, but there are no definite records. I do not know the basis for the inclusion of "Nicaragua" within the winter range of this species in the fifth edition (1957) of the American Ornithologists' Union's *Check-list*.}

***Catharus ustulatus*.** Swainson's Thrush.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest; CRB: Fairly common in humid forest.

This species may be more common as a transient than as a winter resident. An individual banded in Illinois on 6 September 1963 was recovered

near Puerto Cabezas, RAAN, in October 1964. Extreme dates of recorded occurrence are 3 October to 25 April.

Ssp.: Most specimens are referable to *swainsonii*, but *ustulatus* is recorded in the Central Highlands from Quilalí, Depto. de Nueva Segovia, and from Matagalpa (Miller and Griscom unpubl. ms.).

***Hylocichla mustelina*.** Wood Thrush.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Rare in coffee groves; CRB: Uncommon in humid forest.

Wood Thrushes were seen and heard singing at Cum, RAAN, on 15 April 1962. Extreme dates of recorded occurrence are 7 November to 17 April.

***Turdus plebejus*.** Mountain Robin [Mountain Thrush].

Permanent resident. CNHL: Fairly common in cloud forest.

This species does not occur in the cloud forest of Volcán Mombacho.

Ssp.: *differens*; *rafaelensis* Miller and Griscom 1925b, type locality San Rafael del Norte, Depto. de Jinotega, is not recognized.

***Turdus grayi*.** Clay-colored Robin [Clay-colored Thrush].

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; CNHL: Common in forest edge, low second-growth deciduous forest at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

This is by far the most abundant and widely distributed of the species of *Turdus* in Nicaragua.

Ssp.: *grayi*; *megas* Miller and Griscom 1925b, type locality Matagalpa, is not recognized.

***Turdus assimilis*.** White-throated Robin [White-throated Thrush].

Permanent resident. PAC: Uncommon in humid forest; CNHL: Uncommon in deciduous forest; CRB: Uncommon in humid forest to moderate elevations.

This seems to be primarily a Caribbean Region species that ranges into humid forest in the Central Highlands and to that habitat on Volcán Maderas, Isla de Ometepe (J. C. Martínez-Sánchez records). It is locally distributed, often congregating at fruiting trees.

Ssp.: *atrotinctus* Miller and Griscom 1925c, type locality Tuma, Depto. de Matagalpa.

FAMILY MIMIDAE

Dumetella carolinensis. Gray Catbird.

Transient, winter resident. CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Fairly common in humid forest, including forest edge and low second growth.

A bird banded in Rhode Island on 23 September 1961 was recovered near Waspan, Comarca de El Cabo, RAAN, on 19 January 1962. Extreme dates of recorded occurrence are from 28 October to 23 April. This species, a nonbreeder, is the only member of the family Mimidae regularly found in Nicaragua.

Mimus gilvus. Tropical Mockingbird.

Probably a permanent resident. PAC: Rare in thorn forest and scrub, forest edge, low second growth, and urban areas.

Tom Will sighted a single individual near the shore of Lago de Managua, 29 June 1990. Presumably this is the first record of this species for Nicaragua, although it occurs in Honduras to the north and is compatible with agriculture and other human alteration of the landscape. It is possible that this individual was introduced, as was apparently the case with a population later established in Panama.

FAMILY BOMBYCILLIDAE

Bombycilla cedrorum. Cedar Waxwing.

Transient, probably winter resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in undetermined habitat.

This species probably occurs also in the Caribbean Region but there are no definite records. All specimens are from March and April, with 16 April the latest date, but it is probably a winter resident also.

FAMILY VIREONIDAE
SUBFAMILY VIREONINAE

Vireo griseus. White-eyed Vireo.

Winter visitor. CNHL: Rare in forest edge, low second-growth deciduous forest at moderate elevations.

On 29 January 1955, I obtained an adult female at El Corozo, Depto. de Nueva Segovia. This is the only record for Nicaragua; the species occurs only casually south of Honduras.

Ssp.: *noveboracensis*.

Vireo pallens. Mangrove Vireo.

Permanent resident. PAC: Fairly common in mangroves; CRB: Probably uncommon in mangroves.

This species has been recorded from only three localities in Nicaragua: El Realejo and Corinto (on the same bay), Depto. de Chinandega, in the Pacific Region, and at Greytown [= San Juan del Norte], Depto. de Río San Juan and at Bluefields, RAAS, in the Caribbean Region. Miller and Griscom (unpubl. ms.) reported it as common in the mangroves of the lagoon back of Corinto. It is probably found wherever there are coastal mangroves, but there are no other definite locality records.

Ssp.: PAC: *pallens*; CRB: *semiflavus*.

Vireo bellii. Bell's Vireo.

Probably a winter visitor. CNHL: Rare in undetermined habitat.

Miller and Griscom (unpubl. ms.) obtained one specimen at Matagalpa on 20 April 1917; this is the only record for Nicaragua and the southernmost for the species.

Ssp.: Presumably *bellii*.

Vireo solitarius. Solitary Vireo [Blue-headed Vireo].

Probably a transient or winter resident. PAC: Rare in highland pine and pine-oak forest; CNHL: Uncommon in highland pine and pine-oak forest.

I collected a female in pines on 20 November 1961 at Volcán Casita, elevation 1,300 m, Depto. de Chinandega; no others of this species were seen. Miller and Griscom (unpubl. ms.) wrote that they encountered Solitary Vireos in the Central Highlands on several occasions between 25 March and 8 April 1917 in pine forest, and J. C. Martínez-Sánchez collected one at 1,250 m at Santa María de Ostuma, Depto. de Matagalpa, on 28 March 1984. The species may occur as a transient, as there are a few records from farther south. There is no evidence of a breeding population in Nicaragua.

Ssp.: Only *solitarius* has been recorded.

Vireo flavifrons. Yellow-throated Vireo.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Extreme dates of recorded occurrence are 22 October and 4 April.

Vireo gilvus. Warbling Vireo.

Winter resident. PAC: Rare in deciduous forest.

The only specimen record for Nicaragua is a male that I collected at Volcán Casita, 700 m, Depto. de Chinandega, on 21 November 1961. There is a sight record farther south in Costa Rica, so the species is probably only a casual winter resident in Nicaragua. In the Sierras de Managua 13 km SSW of Managua, Tom Will recorded the species in April and November 1990; again 15 February 1991; two birds on 17 April 1991; and five birds on 24 February 1992.

Ssp.: *gilvus*.

Vireo leucophrys. Brown-capped Vireo.

This montane species is resident both north and south of Nicaragua but is not recorded there, presumably because of an insufficiency of suitable high-altitude habitat.)

Vireo philadelphicus. Philadelphia Vireo.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest at moderate elevations; CRB: Uncommon in humid forest.

Extreme dates of occurrence are 21 October to 9 April.

Vireo olivaceus. Red-eyed Vireo.

Transient. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Extreme dates of recorded occurrence are 12 August to 27 October; 8 April to 6 May.

Vireo flavoviridis. Yellow-green Vireo.

Transient, summer resident. PAC: Fairly common in deciduous forest; CNHL: Probably rare in deciduous forest, at moderate elevations.

Most records of this species are from the Pacific Region, where James Silliman found it arriving on 26 March. His latest fall record was on 12 September. Miller and Griscom (unpubl. ms.) obtained two specimens (9 and 11 April 1917) at 2,200 feet (670 m) and 3,000 feet (980 m) near Matagalpa. I follow Johnson and Zink (1985) in considering *olivaceus* and *flavoviridis* specifically distinct.

Ssp.: The type locality of *flavoviridis* Cassin 1851, "San Juan de Nicaragua," almost certainly refers to San Juan del Sur, Depto. de Rivas, in the Pacific Region, as there are no records from San Juan del Norte, Depto. de Río San Juan, or elsewhere in the Caribbean Region.

Hylophilus ochraceiceps. Tawny-crowned Greenlet.

Permanent resident. CRB: Common in humid forest, including forest edge and low second growth.

Ssp.: *pallidipectus*. Although I did not previously recognize this subspecies (Howell 1957), I now believe that it is recognizable on the basis of less ochraceous color on the chest compared with birds from Chiapas, Mexico, and Guatemala.

Hylophilus decurtatus. Lesser Greenlet.

Permanent resident. PAC: Fairly common in deciduous forest, including forest edge and low second growth; CRB: Common in humid forest, including forest edge and low second growth.

Ssp.: PAC: *pallidus*; CRB: *decurtatus*.

SUBFAMILY VIREOLANIINAE

Vireolanius pulchellus. Green Shrike-Vireo.

Permanent resident. CRB: Fairly common in humid forest, at moderate elevations.

A fallen nestling found on the ground on 17 April 1962 at Cum, RAAN, is evidence of breeding in that month.

Ssp.: *verticalis*.

SUBFAMILY CYCLARHINAE

Cyclarhis gujanensis. Rufous-browed Peppershrike.

Permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Fairly common in forest edge, low

second-growth deciduous forest, at moderate elevations.

This species presumably occurs in humid forest edge habitats in the Caribbean Region, but the only record is a bird sighted by Tom Will in a pasture border at San Carlos, Depto. de Río San Juan, 11 June 1991.

Ssp.: *nicaraguae* Miller and Griscom 1925b, type locality Matagalpa.

FAMILY EMBERIZIDAE
SUBFAMILY PARULINAE

Vermivora pinus. Blue-winged Warbler.

Probably a transient and winter resident. CRB: Rare in humid forest.

There are only five Nicaragua records: a specimen from Greytown [= San Juan del Norte] on 8 February, a sight record on the Río Escondido on 17 January (Richmond 1893), one that I saw on 30 January 1962 at 20 km SSW of Waspan, Comarca de El Cabo, RAAN, and two sightings by Tom Will—one 45 km NW of Bluefields, 17 March 1990, and one 25 km SW of Bluefields, RAAS, 17 February 1993. The species presumably occurs as a transient, as there are records from farther south.

Vermivora chrysoptera. Golden-winged Warbler.

Transient, winter resident. CNHL: Uncommon in deciduous forest, moderate elevation; probably in cloud forest; CRB: Uncommon in forest edge, low second-growth humid forest.

Prior to 1990, there were only a few definite records, all from the Caribbean Region. The earliest fall date is 23 September. Tom Will recorded the species from two separate localities 13 km NNE of El Castillo, Depto. de Río San Juan, on 3 and 4 November 1990, and from the Central Highlands at Santa María de Ostuma, Depto. de Matagalpa, on 13 January and 14 March, and three individuals on 10 April 1991.

Vermivora peregrina. Tennessee Warbler.

Transient, winter resident. PAC: Common in deciduous forest, including forest edge, low second growth; CNHL: Common in deciduous forest, at moderate elevations, and cloud forest; CRB: Common in humid forest, including forest edge, low second growth.

This species is found in all parts of the country and is common in all suitable habitats. Extreme

dates of recorded occurrence are 26 October to 11 April, but the species probably arrives earlier and remains later.

Parula americana. Northern Parula.

Winter visitor. CRB: Rare in humid forest; rare in the Corn Islands.

There are only two records from mainland Nicaragua (Howell 1972). James Silliman saw one on Great Corn Island on 1 January 1982. I have elsewhere (Howell 1972) discussed the winter distribution of this species in mainland Central America, where it is only casual south of Guatemala and Belize.

Parula pitiayumi. Tropical Parula.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in deciduous forest, at moderate elevations; CNHL: Fairly common in deciduous forest at moderate elevations and cloud forest; CRB: Rare in humid forest.

In the Pacific Region, the species is recorded only from Volcán Mombacho above ~1,000 m, and on Isla Sonzapote in Lago de Nicaragua near Granada (Ponsol). The few records from the Caribbean Region are near the western edge of that region.

Ssp.: *speciosa*.

Parula superciliosa. Crescent-chested Warbler.

Permanent resident. CNHL: Rare in cloud forest and oak forest.

There are only two Nicaragua records. Miller and Griscom (unpubl. ms.) obtained one specimen, the only one encountered, "in the oak forest above Jinotega at an altitude of 3500 ft" (1,070 m) on 6 April 1917. This is the type of *Vermivora superciliosa parva* Miller and Griscom 1925b. I saw one bird on 2 January 1952 in cloud forest at Santa María de Ostuma, Depto. de Matagalpa. There are no other reports from Nicaragua, and the species must be rare there, at the southern limit of its range, or Richardson would surely have obtained other specimens. The subspecies *parva* is recognized by Monroe (1968), with a range extending into Honduras.

Ssp.: See discussion above.

Dendroica petechia. Yellow Warbler.

The *aestiva* group: Transient, winter resident. PAC: Common in deciduous forest, including

forest edge and low second growth; CNHL: Common in deciduous forest, at moderate elevations; CRB: Common in humid forest, including forest edge and low second growth.

Yellow Warblers of this group from North America are found throughout Nicaragua in their non-breeding season. Extreme dates of recorded occurrence are from 9 August to 5 May.

The *erithacorides* group: Permanent resident. PAC: Fairly common in mangroves.

Members of this group doubtless occur also on the Caribbean coast, but there are no definite records. The mangrove habitat in Nicaragua, however, has been little investigated.

Ssp.: The *aestiva* group: Other than *D. a. aestiva*, I have not positively identified other subspecies. Some of these cannot be identified with certainty except in definitive adult plumage. Almost any of the migratory North American subspecies, from *rubiginosa* to *sonorana*, might range widely into Nicaragua as transients or winter residents. Monroe (1968) found that, in Honduras, *rubiginosa* and *morcomi* occurred primarily in the Pacific Region and *aestiva* and *annicola* primarily in the Caribbean Region; probably the same is true for Nicaragua.

Ssp.: The *erithacorides* group: these coastal mangrove dwellers are probably permanent residents except for minor local movements. The following distributions are highly probable but require confirmation by specimens. Pacific Region: *xanthotera*; Caribbean Region: *bryanti*.

***Dendroica magnolia*.** Magnolia Warbler.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Probably uncommon in cloud forest; CRB: Common in humid forest, including forest edge and low second growth; rare in the Corn Islands.

The extreme dates of recorded occurrence are 27 October to 18 April. James Silliman saw one on Great Corn Island on 1 January 1982. This species was not recorded there by Peters (1929). Tom Will provided the first records from the Central Highlands, with four birds at Finca La Praga, 5 km E of Matagalpa, 22 December 1990; six at the same location, 26 January 1991; and two at Santa María de Ostuma, Depto. de Matagalpa, 13 January 1991.

***Dendroica tigrina*.** Cape May Warbler.

Winter visitor. PAC: Rare in deciduous forest.

The only record is a specimen taken 12 km E of Managua on 13 January 1957 (Howell 1958).

{*Dendroica caerulescens*. Black-throated Blue Warbler.

This species has been recorded in Central America both to the north (Guatemala and Belize) and south (Costa Rica), but as yet there are no records from Nicaragua.}

***Dendroica coronata*.** Yellow-rumped Warbler.

Transient, winter resident. CRB: Uncommon in forest edge, low second-growth humid forest; fairly common in lowland pine savanna; common in the Corn Islands.

The extremes of recorded dates are 28 November to 10 April. All records pertain to the *coronata* group; the *auduboni* group is unrecorded from Nicaragua.

Ssp.: *coronata*.

***Dendroica townsendi*.** Townsend's Warbler.

Probably a transient and winter resident. PAC: Probably rare in highland pine and pine-oak forest; CNHL: Uncommon in highland pine and pine-oak forest.

This species has been recorded only from the montane pines and does not occur in the lowland pine savanna. Extreme dates of recorded occurrence are from 29 September to 2 April. Nicaragua was formerly the southern limit of the known winter range, but it has since been recorded in Costa Rica and Panama.

***Dendroica occidentalis*.** Hermit Warbler.

Probably a transient and winter resident. CNHL: Uncommon in highland pine and pine-oak forest.

This species is also known only from the montane pine forest; extreme dates of recorded occurrence are from 29 September to 26 March. It had not been recorded farther south until 1973, when the first of several sight records from Panama was reported. It is possible that both this species and *D. townsendi* have extended their winter ranges southward as introduced conifers have become more widespread.

***Dendroica virens*.** Black-throated Green Warbler.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Common in

deciduous forest at moderate elevations, and cloud forest; CRB: Fairly common in humid forest.

Extreme dates of recorded occurrence are from 28 November to 19 April.

***Dendroica chrysoparia*.** Golden-cheeked Warbler.

Winter visitor. CNHL: Rare, probably in highland pine and pine-oak forest.

The only records are two birds, a male and a female, collected on 22 September and 19 September 1891 at Matagalpa by Richardson, close to the dates on which he collected *D. townsendi* and *D. occidentalis*. The specimens are in the BMNH. There are no habitat data on the labels, but highland pine and pine-oak forest seems probable. There are no records farther south, and the species may reach Nicaragua only occasionally.

***Dendroica fusca*.** Blackburnian Warbler.

Transient. PAC: Rare in deciduous forest; CNHL: Probably fairly common in deciduous and cloud forest; CRB: Rare in humid forest.

The species is probably more common than the few specimen records indicate. W. B. Richardson collected 10 specimens between 22 August and 22 September 1891 at Matagalpa; J. C. Martínez-Sánchez collected two at Santa María de Ostuma, Depto. de Matagalpa, on 6 October 1984; and I collected a male at 33 miles (53 km) NNW of Puerto Cabezas, Comarca de El Cabo, RAAN, on 23 April 1967. A specimen in the BMNH from Chontales has no other data. Tom Will sighted single individuals in the Pacific Region in the Sierras de Managua 13 km SSW of Managua, on 21 September and at Casares, Depto. de Carazo, on 23 September 1990; 10 birds at Santa María de Ostuma, Depto. de Matagalpa, on 9 September 1990, and two on 10 April 1991; and single birds 13 km NNE of El Castillo, Depto. de Río San Juan, 3 September 1990, and at San Juan del Norte, 14 May 1991.

***Dendroica dominica*.** Yellow-throated Warbler.

Transient, winter resident. PAC: Rare in urban areas; CNHL: Rare in highland pine and pine-oak forest; CRB: Fairly common in lowland pine savanna; rare in Corn Islands.

The only PAC records are sightings in Managua during the months of December and January. I have elsewhere (Howell 1972) discussed the status of this species in the pine savanna; extreme

dates of recorded occurrence are from 21 August to mid-March. James Silliman saw one on Great Corn Island on 1 January 1982; the species was not recorded by Peters (1929).

Ssp.: All specimens are referable to *albilora*.

***Dendroica graciae*.** Grace's Warbler.

Permanent resident. PAC: Uncommon in highland pine and pine-oak forest; CNHL: Fairly common in highland pine and pine-oak forest; CRB: Common in lowland pine savanna.

I have elsewhere (Howell 1971, 1972) discussed the taxonomic status of this pine-dwelling species in Nicaragua in detail. In the Pacific Region, it has been recorded only in pines on Volcán San Cristóbal and the adjacent Volcán Casita. It may no longer exist on San Cristóbal (the type locality of *remota*) since the destruction of the pines by fire in 1970.

Ssp.: PAC, CNHL: *remota* Griscom 1935, type locality Volcán Viejo [= San Cristóbal], Depto. de Chinandega; CRB: *decora* Ridgway 1873, type locality Belize.

***Dendroica discolor*.** Prairie Warbler.

Winter visitor. CRB: Rare in lowland pine savanna; rare in Corn Islands.

The only mainland record is a sighting 4 miles (6.4 km) NW of Puerto Cabezas, RAAN, on 7 January 1963 (Howell 1972). Peters reported only one on Great Corn Island, a specimen collected on 2 January 1928. Stiles (1988) recently obtained a specimen in Costa Rica, the southernmost record.

***Dendroica palmarum*.** Palm Warbler.

Winter resident. CRB: Fairly common in lowland pine savanna; rare in the Corn Islands.

I have elsewhere (Howell 1971, 1972) discussed the status of this species, which reaches the southern limit of its regular winter range in Nicaragua. James Silliman saw single birds on Great Corn Island on 31 December 1981 and 1 January 1982; the species was not recorded there by Peters (1929). Tom Will sighted a single bird in an open area at San Juan del Norte, 12 May 1991. Stiles (1988) recently obtained the first record for Costa Rica.

Ssp.: *palmarum*.

***Dendroica pensylvanica*.** Chestnut-sided Warbler.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Fairly common in

deciduous forest at moderate elevations; CRB: Fairly common in humid forest.

Extreme dates of recorded occurrence are from 29 September to 14 May. Tom Will estimated over 100 individuals in a single day 13 km NNE of El Castillo, Depto. de Río San Juan, 5 December 1990.

Dendroica castanea. Bay-breasted Warbler.

Transient. PAC: Rare in deciduous forest; CRB: Uncommon in humid forest.

The only known occurrence in the Pacific Region was a single individual recorded by Tom Will in the Sierras de Managua 13 km SSW of Managua, April 1990. Extreme dates of recorded late occurrence countrywide are 26 October and 12 May. Three birds recorded on 5 November and one on 5 December 1990 at 3 km NNE of Boca de Sábalo, Depto. de Río San Juan, and five individuals seen on 3 and 4 November 1990 at 13 km NNE of El Castillo, Depto. de Río San Juan, indicate wintering in Nicaragua.

Dendroica cerulea. Cerulean Warbler.

Transient. CNHL: Rare in deciduous and cloud forest; CRB: Rare in humid forest.

The only Nicaragua specimen record is one collected at Matagalpa by Richardson on 2 September 1891 (BMNH). Tom Will reported one at Santa María de Ostuma, Depto. de Matagalpa, 9 September 1990, and another 10 April 1991. In the Caribbean Region, he saw single birds 13 km NNE of El Castillo, Depto. de Río San Juan, 3 September 1990, and another in a patchy second-growth forest along the Río Kama, 40 km NW of Bluefields, RAAS, 15 March 1990.

Mniotilta varia. Black-and-white Warbler.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; uncommon in cloud forest; CRB: Fairly common in humid forest; rare in the Corn Islands.

Extreme dates of recorded occurrence are from 22 August to 10 April. Peters collected one specimen on Little Corn Island on 24 December 1927, and James Silliman saw one on Great Corn Island on 1 January 1982.

Setophaga ruticilla. American Redstart.

Transient, winter resident, PAC: Fairly common in mangroves, and in deciduous forest at moderate elevations; CNHL: Fairly common in

deciduous forest, at moderate elevations; CRB: Fairly common in humid forest.

Extreme dates of recorded occurrence are from 10 September to 12 May.

Protonotaria citrea. Prothonotary Warbler.

Transient, winter resident. PAC: Absolutely rare but locally fairly common in forest edge, low second-growth deciduous forest, and mangroves; CRB: Probably fairly common in forest edge, low second-growth humid forest.

James Silliman found and mist netted a few individuals of this species at Isla Juan Venado, Depto. de León, on dates ranging from 4 October to 27 February in 1981–1983. The only other record from the Pacific Region is a single bird reported by Tom Will at Casares, Depto. de Carazo, 4 January 1991. Richmond reported this species as "Quite common through the winter months; first seen September 2," but no specimens are mentioned. The only specimen recorded was taken by Huber at Edén, RAAN, 23 March 1922. I saw two birds at Puerto Cabezas, RAAN, on 16 August 1965.

***Helminthos vermivorus* [*Helminthos vermivorum*]**. Worm-eating Warbler.

Transient, winter resident. PAC: Probably uncommon in deciduous and cloud forest; CNHL: Rare in undetermined habitat; CRB: Probably rare in humid forest.

Extreme dates of recorded occurrence are from 18 October to 29 March. J. C. Martínez-Sánchez has records from Volcán Chonco, Depto de Chinandega, 20 February 1986; and Río Ulí, 10 km W of Siuna, RAAN, 24 January 1987 and 18 October 1988. Tom Will reported one 25 km SW of Bluefields, RAAS, 4 March 1992.

***Seiurus aurocapillus* [*Seiurus aurocapilla*]**. Ovenbird.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Fairly common in deciduous forest, at moderate elevations; CRB: Fairly common in humid forest; rare in the Corn Islands.

Extreme dates of recorded occurrence are from 7 October to 6 May. Corn Islands records are of two birds on Little Corn Island, 24 December 1927, one of them collected (Peters 1929).

Ssp.: All specimens appear to be referable to *aurocapillus*; the species may be monotypic.

Seiurus noveboracensis. Northern Waterthrush.

Transient, winter resident. PAC: Uncommon in aquatic habitats, deciduous forest; fairly common in mangroves; CNHL: Fairly common in aquatic habitats in highland pine and pine-oak forest; CRB: Fairly common in aquatic habitats in humid forest; rare in the Corn Islands.

Extreme dates of recorded occurrence are from 3 September to 16 May. James Silliman recorded the species among mangroves at Isla Juan Venado, Depto. de León. Peters (1929) gave sight records from Little Corn Island, December 1927.

Ssp.: Both *noveboracensis* and *notabilis* have been recorded from the Central Highlands and Caribbean Region; *noveboracensis* is also recorded from the Pacific Region.

Seiurus motacilla. Louisiana Waterthrush.

Transient, winter resident. CNHL: Probably rare in aquatic habitats; CRB: Uncommon in aquatic habitats in humid forest.

This species is less abundant everywhere than *S. noveboracensis* and has not been recorded from the Pacific Region. J. C. Martínez-Sánchez recorded a single individual in a flooded secondary forest at Río Ulí, 10 km W of Siuna, RAAN, 24 August 1988.

Oporornis formosus. Kentucky Warbler.

Transient, winter resident. PAC: Uncommon in deciduous forest; CRB: Common in humid forest.

Extreme dates of recorded occurrence are 19 September and 21 April.

Oporornis philadelphia. Mourning Warbler.

Transient and probably a winter resident. PAC: Probably rare in deciduous forest; CRB: Rare in humid forest.

Extreme dates of recorded occurrence (specimens) are 17 September to 4 February (the only two specimen records), but James Silliman saw one on Volcán Mombacho, 15 September 1982, and Tom Will reported one from Sierras de Managua, 13 km SSW of Managua, 21 April 1991. The 4 February record is from Greytown (San Juan del Norte), Depto. de Río San Juan, just north of the Costa Rican border, and marks the northern limit of the winter range.

Oporornis tolmiei. MacGillivray's Warbler.

Transient and probably a winter resident. CNHL: Rare in highland pine and pine-oak

forest, forest edge, low second-growth deciduous forest; CRB: Rare in humid forest.

Extreme dates of specimens are from 24 March to 1 May. Only four specimens have been taken, all of which could have been transients, not winter residents, but James Silliman saw one at Santa María de Ostuma, elevation ~1,000 m, Matagalpa, on 13 February 1982.

Geothlypis trichas. Common Yellowthroat.

Transient, winter resident. PAC, CNHL, and CRB: Fairly common in aquatic habitats, forest edge and low second growth; rare in the Corn Islands.

Extreme dates of recorded occurrence are from 28 October to 12 May. James Silliman saw several on Great Corn Island on 1 January 1982. Peters (1929) identified a specimen he took there on 15 December 1927 as *G. t. brachydactyla*.

Ssp.: Most specimens are referable to *brachydactyla*, but two from the Caribbean Region closely approach *occidentalis* and both forms probably reach Nicaragua.

Geothlypis semiflava. Olive-crowned Yellowthroat.

Permanent resident. CRB: Absolutely uncommon but locally common in aquatic habitats, forest edge, and low second growth.

This species is recorded only along major rivers in the Caribbean Region, particularly the Río San Juan along the southern border. Richmond found it to be rare on the Río Escondido, and there is only one record from the Río Segovia [= Coco], which is the northernmost record of the species.

Ssp.: *bairdi* Ridgway 1884, type locality Los Sábalos, Depto. de Río San Juan.

Geothlypis poliocephala. Gray-crowned Yellowthroat.

Permanent resident. PAC: Common in grasslands, forest edge, low second-growth highland pine and pine-oak forest; CNHL: Fairly common in grasslands, forest edge, low second-growth highland pine and pine-oak forest, at moderate elevations; CRB: Common in grasslands, forest edge, low second-growth lowland pine savanna. I have elsewhere (Howell 1972) discussed geographic variation in this species in Central America.

Ssp.: *caninucha* in northwestern Nicaragua at least; other areas uncertain (Howell 1972).

Wilsonia citrina. Hooded Warbler.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Rare in undetermined habitat; CRB: Common in humid forest; rare in the Corn Islands.

Extreme dates of recorded occurrence are from 28 September to 13 April. James Silliman netted one at Santa María de Ostuma, Matagalpa, on 24 December 1981. This is the only Central Highlands record. J. L. Peters saw one on Little Corn Island on 24 December 1927.

Wilsonia pusilla. Wilson's Warbler.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Fairly common deciduous forest, at moderate elevations, forest edge, low second-growth highland pine and pine-oak forest; CRB: Uncommon in forest edge, low second-growth humid forest.

Extreme dates of recorded occurrence are from 9 September to 19 May.

Ssp.: Miller and Griscom (unpubl. ms.) recorded *pusilla* (Caribbean Region), *pileolata* (Pacific Region and Central Highlands), and *chryseola* (Central Highlands); these three forms were also recorded from Honduras by Monroe (1968), and all three doubtless range into Nicaragua.

Wilsonia canadensis. Canada Warbler.

Transient. PAC: Uncommon in deciduous forest; CNHL: Uncommon in deciduous forest, at moderate elevations and probably in cloud forest; CRB: Fairly common in humid forest.

Extreme dates of recorded occurrence are from 9 September to 30 October and 9 May. This species was seen regularly in humid forest at Cum, RAAN, from 14 to 25 April 1962.

Myioborus pictus. Painted Redstart.

Permanent resident. CNHL: Fairly common in highland pine and pine-oak forest.

Nicaragua is the southern limit of the range of this species.

Ssp.: *guatemalae*.

[*Myioborus miniatus*. Slate-throated Redstart.

This montane forest species is not recorded from Nicaragua and is probably absent because of insufficient extent of suitable habitat; it occurs both to the north and south.]

Euthlypis lachrymosa. Fan-tailed Warbler.

Permanent resident. PAC: Fairly common in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations.

Isla de Ometepe, Lago de Nicaragua, is the southernmost record for the species. J. C. Martínez-Sánchez collected one male at Volcán Maderas, in an abandoned cacao plantation, elevation 400 m, 1 April 1988, and a second male at Volcán San Cristóbal, Depto. de Chinandega, elevation 750 m, 13 November 1985. It is not recorded from Volcán Mombacho, where it might be expected to occur.

Basileuterus culicivorus. Golden-crowned Warbler.

Permanent resident. CNHL: Fairly common in cloud forest; CRB: Uncommon in humid forest at moderate elevations.

This species has a limited range in Nicaragua, concentrated in the Central Highlands and the adjacent Caribbean Region, but not throughout the Caribbean lowlands nor south of the vicinity of Matagalpa. It recurs in the Costa Rican highlands.

Ssp.: *culicivorus*.

Basileuterus rufifrons. Rufous-capped Warbler.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest at moderate elevations; CNHL: Fairly common in forest edge, low second-growth deciduous forest at moderate elevation; CRB: Rare in forest edge, low second-growth humid forest.

In Nicaragua this species is recorded from the Caribbean Region only marginally, along the western edge of that habitat.

Ssp.: *delatirii* Bonaparte 1854, type locality "Nicaragua."

Phaeothlypis fulvicauda. Buff-rumped Warbler.

Permanent resident. CRB: Fairly common in aquatic habitats in humid forest.

This species is usually found near streams and in shaded places on the ground.

Ssp.: *leucopygia*.

Icteria virens. Yellow-breasted Chat.

Transient, winter resident. PAC: Rare in deciduous forest; CRB: Uncommon in forest edge, low second-growth humid forest. Extreme

dates of recorded occurrence are from 13 October to 4 April.

Ssp.: Only *virens* is recorded.

***Peucedramus taeniatus*.** Olive Warbler.

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

This species is known from Nicaragua only from six specimens, three each from San Rafael del Norte and Matagalpa, collected by Richardson. Miller and Griscom (unpubl. ms.) did not find it "in spite of careful search... in 1917." The southern limit of its range is reached in Nicaragua.

Ssp.: *micrus* Miller and Griscom 1925b, type locality San Rafael del Norte, Depto. de Jinotega.

SUBFAMILY COEREBINAE

***Coereba flaveola*.** Bananaquit.

Permanent resident. CRB: Absolutely uncommon but locally fairly common in forest edge, low second-growth humid forest.

This species is patchily distributed in the Caribbean Region. A specimen from "San Rafael del Norte" lacks altitude and habitat data and was probably taken in nearby lowlands.

Ssp.: *mexicana*.

SUBFAMILY THRAUPINAE

***Tangara lavinia*.** Rufous-winged Tanager.

Permanent resident. CNHL: Probably fairly common in cloud forest; CRB: Fairly common in humid forest.

Miller and Griscom (unpubl. ms.) stated that this species breeds in cloud forest and disperses to the lowlands at other seasons, but the species permanently inhabits lowlands as well.

Ssp.: *cara*.

***Tangara larvata*.** Golden-masked Tanager [Golden-hooded Tanager].

Permanent resident. CNHL: Probably uncommon in humid forest; CRB: Common in humid forest, at moderate elevations, including forest edge and low second-growth areas.

Tom Will reported sightings from Finca La Praga, 5 km E of Matagalpa, in the Central Highlands

Region—one on 26 January, two on 14 March, and two on 21 July 1991.

Ssp.: *larvata* only, including the Río San Juan region.

***Dacnis cayana*.** Blue Dacnis.

Permanent resident. CRB: Uncommon in forest edge, low second-growth humid forest.

This species reaches the northern limit of its range in eastern Honduras just north of the Nicaraguan boundary (Marcus 1983).

Ssp.: *ultramarina*.

***Chlorophanes spiza*.** Green Honeycreeper.

Permanent resident. CRB: Common in humid forest, including forest edge and low second-growth areas.

I gave measurements (Howell 1957) showing that *arguta* is the subspecies found in Nicaragua.

***Cyanerpes lucidus*.** Shining Honeycreeper.

Permanent resident. CRB: Absolutely uncommon but locally fairly common in forest edge, low second-growth humid forest.

This species is quite locally distributed, and its distribution does not follow any obvious ecological pattern.

Ssp.: *lucidus*.

***Cyanerpes cyaneus*.** Red-legged Honeycreeper.

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: *carneipes*.

***Chlorophonia occipitalis*.** Blue-crowned Chlorophonia.

Permanent resident. CNHL: Uncommon in cloud forest.

This species reaches the southern limit of its range in Nicaragua in the Central Highlands and does not occur on Volcán Mombacho.

Ssp.: *occipitalis*.

***Euphonia affinis*.** Scrub Euphonia.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Fairly common in

forest edge, low second-growth deciduous forest, at moderate elevations.

According to Miller and Griscom (unpubl. ms.), the range of this species and that of *E. luteicapilla* are in contact in the Central Highlands (see below).

Ssp.: *affinis* Lesson 1842, type locality Realejo [= El Realejo], Depto. de Chinandega.

***Euphonia luteicapilla*.** Yellow-crowned Euphonia.

Permanent resident. CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

This species reaches the northern limit of its recorded range in Nicaragua, but it probably extends into eastern Honduras. It ranges as far west as Quilalí, Depto. de Nueva Segovia, in the Central Highlands, but it is mainly a bird of the Caribbean Region.

***Euphonia hirundinacea*.** Yellow-throated Euphonia.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in forest edge, low second-growth deciduous forest; CNHL: Fairly common forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Miller and Griscom (unpubl. ms.) stated that this species ranges up to the lower limits of pine forest in the Central Highlands; it also occurs at the edges of the pine savanna in the Mosquitia.

Ssp.: the large-billed subspecies *gnatho* is found in the Pacific Region, and *E. h. hirundinacea* is found in Caribbean localities. The ranges of the two are not known to be in contact in Nicaragua but may meet at lower elevations in the Central Highlands.

***Euphonia minuta*.** White-vented Euphonia.

Permanent resident. CRB: Rare in forest edge, low second-growth humid forest.

There are only two authentic specimen records: an adult male taken 24 November 1966 at 25 km SSW of Waspan, Comarca de El Cabo, RAAN, at UCLA, and one adult male from Chontales (Sclater 1873, specimen in BMNH). The latter is from Thomas Belt's collection and lacks precise locality data. Unfortunately, the tail and undertail coverts are missing, but the small bill and sharply

defined yellow crown patch distinguish the specimen from *luteicapilla*. Nutting's record (1884) of "*E. humilis*" from San Juan del Sur in the Pacific Region is based on a specimen of *E. affinis* (R. C. Banks pers. comm.). *Euphonia minuta* is easily overlooked or misidentified and is probably less rare than the two records suggest. Tom Will confirmed sightings of two individuals 13 km NNE of El Castillo, Depto. de Río San Juan, 2 September 1990, and three individuals 35 km NNW of Bluefields, RAAS, 16 July 1991.

Ssp.: *humilis*.

***Euphonia elegantissima*.** Blue-hooded Euphonia [Elegant Euphonia].

Permanent resident. CNHL: Uncommon in highland pine and pine-oak forest.

I have elsewhere (Howell 1964a) discussed the status of this species in Nicaragua. It is surprisingly scarce (Richardson never obtained a specimen) and reaches the southern limit of its Nicaraguan range in the vicinity of Matagalpa. James Silliman saw four birds there at Santa María de Ostuma on 2 April 1983. Tom Will saw one at the same locality, 11 November, and two others, 22 November 1990; one at Finca La Praga, 5 km E of Matagalpa, 26 January 1991; and eight individuals in pine-oak forest along the Matagalpa-Jinotega road, 11 April 1991.

Ssp.: *vincens*.

***Euphonia gouldi*.** Olive-backed Euphonia.

Permanent resident. CRB: Common in humid forest.

Ssp.: *praetermissa* (Howell 1957).

***Thraupis episcopus*.** Blue-gray Tanager.

Permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

Ssp.: *cana*; *diaconus* Lesson 1842, type locality Realejo [= El Realejo], Depto. de Chinandega, is not recognized.

***Thraupis abbas*.** Yellow-winged Tanager.

Permanent resident. CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Fairly

common in forest edge, low second-growth humid forest.

This species reaches the southern limit of its recorded range in Nicaragua.

Thraupis palmarum. Palm Tanager.

Permanent resident. CRB: Uncommon in forest edge, low second-growth humid forest.

This species is recorded only from the vicinity of the Río San Juan, barely within Nicaraguan territory, and this represents the northern limit of its known range. Tom Will saw one at Papaturo on the south side of Lago de Nicaragua, 5 April 1991, one at San Carlos, 10 June 1991, and one 13 km NNE of El Castillo, 1 September 1990.

Ssp.: *atripennis*.

Chlorothraupis carmioli. Olive Tanager [Carmioli's Tanager].

Permanent resident. CRB: Fairly common in humid forest.

This species is not recorded north of the vicinity of Waspan, Comarca de El Cabo, RAAN, but will undoubtedly be found in eastern Honduras as well.

Ssp.: *carmioli*.

Eucometis penicillata. Gray-headed Tanager.

Permanent resident. PAC: Fairly common in deciduous forest at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: *spodocephala* Bonaparte 1854, type locality "Nicaragua;" probably from the Pacific Region.

Lanio leucothorax. White-throated Shrike-Tanager.

Permanent resident. CRB: Fairly common in humid forest.

Northern Nicaraguan specimens show no approach in color to the black-throated species *aurantius* which replaces *leucothorax* farther north, in Honduras.

Ssp.: *leucothorax*.

Tachyphonus luctuosus. White-shouldered Tanager.

Permanent resident. CRB: Fairly common in humid forest, including forest edge and low second-growth areas.

Ssp.: *axillaris*.

Tachyphonus delatrii. Tawny-crested Tanager.

Permanent resident. CRB: Uncommon in humid forest.

This species reaches the northern limit of its recorded range just north of the Nicaraguan border in Honduras (Marcus 1983). Huber (1929) described the subspecies *longirostris* from Great Falls, "about ten miles northwest of Eden," RAAN, based on slightly larger size, especially bill length. I have elsewhere (Howell 1957) expressed doubt about the validity of this form, and I have since obtained only one additional specimen, a female. These two females are not larger in bill length or in other dimensions than females from farther south (Costa Rica and Colombia). The small series from Nicaragua is not adequate for definite conclusions, but the size differences seem too slight for nomenclatural recognition.

Ssp.: None recognized; see discussion above.

Habia rubica. Red-crowned Ant-Tanager.

Permanent resident. PAC and CNHL: Fairly common in deciduous forest, at moderate elevations, and cloud forest; CRB: Fairly common in humid forest, including forest edge and low second-growth areas.

In the Pacific Region the distinct, pale subspecies *alfaroana* ranges into cloud forest on Volcán Mombacho, reaching its northern limit there. All other Nicaraguan populations are referable to *H. r. rubicoides*.

Ssp.: See discussion above.

Habia fuscicauda. Red-throated Ant-Tanager.

Permanent resident. PAC: Uncommon in deciduous forest, at moderate elevations; CNHL: Uncommon in deciduous forest, at moderate elevations; CRB: Common in humid forest, including forest edge and low second-growth areas.

This species is locally distributed in the Pacific Region but was probably more widespread before extensive deforestation.

Ssp.: *salvini*, except for Río San Juan region where *fuscicauda* reaches its northern limit; *discolor* Ridgway 1901, type locality Río Escondido, RAAS, is not separable from *salvini*.

Piranga flava. Hepatic Tanager.

Permanent resident. PAC and CNHL: Fairly common in highland pine and pine-oak forest; CRB: Common in lowland pine savanna.

This species occurs in Nicaragua as three disjunct populations. In the Pacific Region it is known only from Volcán San Cristóbal and adjacent Volcán Casita. There, and in the Central Highlands, it occurs in and near pine forest. These birds are referable to *P. f. albifacies*. In the Caribbean Region the species is found only in the lowland pine savanna; the subspecies there is *P. f. savannarum* Howell 1965, type locality 6 miles (9.6 km) NW of Puerto Cabezas, RAAN.

Ssp.: See discussion above.

***Piranga rubra*.** Summer Tanager.

Transient, winter resident. PAC: Fairly common in deciduous forest; CNHL: Uncommon in cloud forest; CRB: Common in humid forest.

Extreme dates of recorded occurrence are from 13 October to 20 April. In the Pacific Region, James Silliman noted males changing from green to red plumage between 9 January and 12 February.

Ssp.: *rubra*.

***Piranga olivacea*.** Scarlet Tanager.

Transient. PAC: Probably rare in urban areas, deciduous forest, thorn forest and scrub; CNHL: Rare in cloud forest; CRB: Uncommon in humid forest.

The only records from the Pacific Region are a female obtained by James Silliman from a park in the city of León, October 1982, and birds seen by Tom Will in the Sierras de Managua 13 km SSW of Managua—April 1990, 18 October 1990, and two individuals on 15 April 1991—and at Volcán Masaya National Park, 14 February and 12 April 1990. J. C. Martínez-Sánchez collected one female at Santa María de Ostuma, Depto. de Matagalpa, 28 October 1987. Extreme dates of recorded occurrence are 27 September to 17 April.

***Piranga ludoviciana*.** Western Tanager.

Transient, winter resident. PAC: Fairly common in deciduous forest, including forest edge and low second growth, at moderate elevations; CNHL: Rare in deciduous forest.

I have elsewhere (Howell 1964a) discussed the status of this species in Nicaragua. Extreme dates of recorded occurrence are from 5 November to 13 April. One seen by Tom Will at Finca La Praga, 5 km E of Matagalpa, 26 January 1991, is the only record of this species in the Central Highlands.

***Piranga bidentata*.** Flame-colored Tanager.

Permanent resident. CNHL: Uncommon in deciduous oak forest.

In Nicaragua this species appears to be largely confined to oak forests at ~1,300 m elevation.

Ssp.: *sanguinolenta*.

***Piranga leucoptera*.** White-winged Tanager.

Permanent resident. CNHL: Fairly common in deciduous forest at moderate elevations, and cloud forest.

This species is not found on any of the Pacific Region volcanic peaks.

Ssp.: *leucoptera*.

***Ramphocelus sanguinolentus*.** Crimson-collared Tanager.

Permanent resident. CNHL: Fairly common in forest edge, low second-growth deciduous forest at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: *apricus*.

***Ramphocelus passerinii*.** Scarlet-rumped Tanager [Passerini's Tanager].

Permanent resident. CRB: Common in grasslands, forest edge, and low second-growth humid forest.

In Nicaragua, this abundant species is found in the tall streamside grasses and forest edge and serves as a good indicator of limits of typical Caribbean Region habitat.

Ssp.: *passerinii*.

{*Rhodinocichla rosea*. Rosy Thrush-Tanager.

There is a hiatus in the range of this species between central Mexico and southwestern Costa Rica. It is not recorded from Nicaragua and undoubtedly does not occur there.}

***Chlorospingus ophthalmicus*.** Common Bush-Tanager.

Permanent resident. CNHL: Common in cloud forest.

This species does not occur in the cloud forest of Volcán Mombacho. Birds from the Central Highlands have the pileum slightly brownish, less gray than in nearby populations of *honduratius*, but not as brownish as the more distant

regionalis of Costa Rica. Despite the lack of any present contact with the latter, the Nicaraguan population appears to be intermediate between these two subspecies.

Ssp.: See discussion above.

SUBFAMILY CARDINALINAE

Saltator coerulescens. Grayish Saltator.

Permanent resident. PAC: Uncommon in forest edge, low second-growth deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Fairly common in forest edge, low second-growth humid forest.

Ssp.: PAC: *hesperis*; CNHL and CRB: *grandis*.

Saltator maximus. Buff-throated Saltator.

Permanent resident. CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

This is primarily a Caribbean Region species that ranges west into the Central Highlands.

Ssp.: *magnoides*.

Saltator atriceps. Black-headed Saltator.

Permanent resident. PAC: Absolutely uncommon but locally fairly common in forest edge, low second-growth deciduous forest; CNHL: Fairly common in deciduous forest, and local in cloud forest; CRB: Absolutely uncommon but locally fairly common in forest edge, and low second-growth humid forest.

The distribution of this species in Nicaragua is decidedly local and it is often absent from seemingly suitable habitat. J. C. Martínez-Sánchez collected a male in breeding condition at Hacienda La Hamonia, elevation 1,200 m, 9.5 km N of Matagalpa, on 30 March 1984; a male and a female at Apalilí, 8 km NW of Matagalpa, elevation 1,000 m, 8 March 1985; and a single bird at Santa María de Ostuma, elevation 1,300 m, 14 April 1985; these were the only records for the Central Highlands until the 1990s, when it appears to have become much more frequently encountered in the region. Tom Will recorded groups of six or more on 11 November, eight on 22 November 1990, six on 10 April 1991, and 10 on 19 May at Santa María de Ostuma, Depto. de Matagalpa; four birds near Jinotega, 7 July 1991; and 10 birds on 22 December 1990, three on 26

January, and six on 21 July 1991 at Finca La Praga, 5 km E of Matagalpa, Depto. de Matagalpa.

Ssp.: *atriceps*.

Pitylus grossus [*Saltator grossus*].

Slate-colored Grosbeak.

Permanent resident. CRB: Uncommon in forest edge, low second-growth humid forest.

This species reaches the northern limit of its recorded range in eastern Honduras just north of the Nicaraguan boundary (Marcus 1983).

Ssp.: *saturatus*.

Caryothraustes poliogaster. Black-faced Grosbeak.

Permanent resident. CRB: Common in humid forest.

Ssp.: *scapularis* Ridgway 1888, type locality Los Sábalos, Depto. de Río San Juan. This subspecies ranges throughout eastern Nicaragua north to southeastern Honduras (Monroe 1968).

Pheucticus ludovicianus. Rose-breasted Grosbeak.

Transient, winter resident. PAC: Uncommon in deciduous forest; CNHL: Rare in deciduous forest at moderate elevations; CRB: Uncommon in humid forest.

The only winter records are three specimens collected by J. C. Martínez-Sánchez, two from Palsila, 10 km NW of Matagalpa, 20 March and 17 April 1985, and one from Río Ulí, 10 km W of Siuna, RAAN, 8 October 1988; and sightings by Tom Will in the Sierras de Managua, 13 km SSW of Managua—five birds on 15 February 1991 and three on 24 February 1992—and at Volcán Masaya National Park on 14 February 1990. Extreme dates of recorded occurrence are from 8 October to 17 April.

Cyanocopsa cyanooides. Blue-black Grosbeak.

Permanent resident. CRB: Common in humid forest, including forest edge, low second growth.

Ssp.: I can see no difference in adult males from Costa Rica and those throughout the Caribbean Region of Nicaragua. I therefore refer all Nicaraguan specimens to *coerulescens*.

Cyanocopsa parellina. Blue Bunting.

Permanent resident. PAC: Uncommon, forest edge, low second-growth deciduous forest;

CNHL: Uncommon and local in undetermined habitat.

This species is known from Nicaragua from nine specimens and might best be considered rare. Miller and Griscom (unpubl. ms.) did not specify the habitats at Matagalpa and San Rafael del Norte from which their specimens came. J. C. Martínez-Sánchez collected two males at Volcán Cosigüina, Depto. de Chinandega, 17 and 18 April 1986, in an area of second-growth forest surrounded by shrubs and clearings. The species reaches the southern limit of its range in Nicaragua.

Ssp.: *parellina*; *dearborni* Miller and Griscom 1925c, type locality San Rafael del Norte, Depto. de Jinotega, is not separable from *parellina*.

***Guiraca caerulea* [*Passerina caerulea*].**

Blue Grosbeak.

Transient, permanent resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CNHL: Probably rare in forest edge, low second-growth deciduous forest; CRB: Fairly common in forest edge, low second-growth humid forest.

The subspecies *lazula* is a permanent resident and confined to the Pacific Region. Transients occur on both slopes, but specimens are available only from the Caribbean Region; two taken there in mid-March are referable to *G. c. caerulea*. Sightings of this species by Tom Will along the Terrabona Road, Depto. de Matagalpa, 8 July and 21 August 1990, are the only records from the Central Highlands.

Ssp.: See discussion above.

***Passerina cyanea*.** Indigo Bunting.

Transient, winter resident. PAC: Common in forest edge, low second-growth deciduous forest; CNHL: Common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest.

Extreme dates of recorded occurrence are from 30 September to 3 April.

***Passerina ciris*.** Painted Bunting.

Transient, winter resident. PAC: Fairly common in forest edge, low second-growth deciduous forest.

There are no definite records from the Caribbean Region, although the species almost certainly

occurs there. Extreme dates of recorded occurrence are from 15 September to 29 March (James Silliman sighting).

Ssp.: Not all specimens have been subspecifically identified, but both *P. c. ciris* and *pallidior* are recorded from Mexico to Panama, and both forms presumably range into Nicaragua.

***Spiza americana*.** Dickcissel.

Transient, winter resident. PAC: Common in grasslands, forest edge, low second-growth deciduous forest; CNHL: Common in forest edge, low second-growth deciduous forest; CRB: Locally common in grasslands.

This species is present at least from late October to mid-April. In the Caribbean Region it appears to be a transient only, but some may winter around clearings with grain crops.

SUBFAMILY EMBERIZINAE

***Atlapetes brunneinucha*.** Chestnut-capped Brush-Finch.

Permanent resident. PAC: Common in deciduous forest at moderate elevations and cloud forest; CNHL: Common in cloud forest; CRB: Uncommon in humid forest at moderate elevations.

This is typically a cloud-forest species, but it evidently wanders to elevations below 1,000 m to the western edge of the Caribbean Region. There are several Richardson specimens from Muy Muy, Matagalpa, and from Chontales, east and south of the highlands. Specimens of another typically Central Highlands species, *Melospiza leucotis*, were collected at Muy Muy at the same time (24–31 July 1908). An unusual record is a Richardson specimen of *brunneinucha* in the BMNH taken at Santo Domingo, Depto. de Chontales, 25 January 1892 (original label, clearly written). This locality is <900 m in elevation and ~100 km SE of the closest known breeding locality. In the Pacific Region, the only population is found on Volcán Mombacho.

Ssp.: Parkes (1954) revised this species and described two new subspecies—*alleni*, San Juancito, Honduras, and *elsae*, Volcán Irazú, Costa Rica. He gave the range of *alleni* as extending south to “western Nicaragua” (= Central Highlands; the species is not found on the NW Volcanic peaks); specimens from Volcán Mombacho were tentatively assigned to *elsae*,

perhaps approaching *alleni*. The principal distinguishing character of *alleni*, as described, was the absence of a yellow margin below the dark lateral margins of the crown, as found in all other subspecies (including *elsae*). "Yellow" here refers not to a bright, carotenoid pigment (as in the throat of *A. gutturalis*) but to a yellowish or tawny color that merges into the brown color on the sides of the head. *Atlapetes b. elsae* is principally characterized by having the black of the forehead extending posteriorly past the center of the eye. Monroe (1968) recognized *alleni* as the form found in Honduras. I have examined all the Nicaraguan specimens in the AMNH (ssp. identified by Parkes) and also four from Santa María de Ostuma, Nicaragua, four from El Salvador, and seven from Costa Rica (UCLA). Three from El Salvador essentially lack the yellowish margin; one has it slightly. The Nicaraguan birds are highly variable. Six from San Rafael del Norte, Depto. de Jinotega, all have distinct yellowish margins, as much as in many of the more northern subspecies. One from Ocotol, Depto. de Nueva Segovia, has traces of yellowish; it is marked "*elsae*?" The four from Santa María de Ostuma lack the yellowish margins, and the extent of the black forehead is variable with respect to the eye. In the AMNH there are three birds from probable mid-elevation Central Highlands or Caribbean Region localities in the Depto. de Matagalpa—Savala, Río Tuma, and Muy Muy—and one from the Caribbean lowlands ("Chontales," no specific locality given). The first has no yellowish margins, the second and last have distinct yellowish margins, the third, slight. The six from Volcán Mombacho at UCLA all lack yellowish margins; three in the AMNH from the same locality have slight margins. In the UCLA series of seven birds from Volcán Irazú, Costa Rica, most have no yellowish margins and two have very slight margins; extent of black on the anterior crown extends back to the center of the eye in two, anterior to it in three, equivocal in the other two. In summary, Nicaraguan specimens show a geographically irregular mixture of the characters ascribed to *alleni* and *elsae*. This species is known to breed only in cloud forest in Nicaragua (Central Highlands and Volcán Mombacho in the Pacific Region), but specimens taken in lowlands between these two regions show that there could be mixing of the two breeding populations. It seems best to

consider the Nicaraguan populations subspecifically indeterminate.

Atlapetes gutturalis. Yellow-throated Brush-Finch. [*Atlapetes albinucha*. White-naped Brush-Finch.]

Permanent resident. CNHL: Fairly common in moderate elevation, forest edge, low second-growth deciduous forest, and fairly common in forest edge, low second-growth cloud forest.

Unlike the preceding species, this one does not occur on Volcán Mombacho.

Ssp.: *fuscipygius* Dwight and Griscom 1921, type locality San Rafael del Norte, Depto. de Jinotega.

Arremon aurantirostris. Orange-billed Sparrow.

Permanent resident. CRB: Common in humid forest, including forest edge and low second growth.

Ssp.: *rufidorsalis*.

Arremonops rufivirgatus. Olive Sparrow.

Probably a permanent resident. PAC: Rare in deciduous forest.

Hellmayr and Conover (1938) stated that the range of the isolated population in northwest Costa Rica extended "to the Nicaraguan border," and this was presumably the basis for the inclusion of southwest Nicaragua in the range by Eisenmann (1955). However, the only specific records from Nicaraguan territory that I am aware of are sightings of groups of two or three birds in April and June 1990 by Tom Will in scrubby vegetation in an abandoned coffee plantation in the Sierras de Managua 13 km SSW of Managua. The birds were not easy to relocate dependably, so it was not clear to what extent they were resident or whether a population was established.

Arremonops conirostris. Black-striped Sparrow.

Permanent resident. CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest, at moderate elevations.

Miller and Griscom (unpubl. ms.) stated that this species is found in the Central Highlands "between 2000 and 4000 ft" (610 and 1,220 m), but the highest elevation given on a specimen label is 3,000 feet (980 m), at Jinotega. Records from the Central Highlands represent incursions from the Caribbean lowlands.

[*Melozone biarcuatum* [*Melozone biarcuata*]. Prevost's Ground-Sparrow.

This highland species has not been recorded from Nicaragua and is presumably absent because of insufficient suitable habitat.}

***Melozone leucotis*.** White-eared Ground-Sparrow.

Permanent resident. CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; uncommon in forest edge, low second-growth cloud forest; CRB: Probably uncommon in forest edge, low second-growth humid forest.

This species was recorded by Richardson in areas near the western edge of the Caribbean lowlands south and east of the Central Highlands (see *Atlapetes brunneinucha*), where it probably occurs only in the nonbreeding season.

Ssp.: *nigrrior* Miller and Griscom 1925c, type locality Matagalpa.

***Volatina jacarina*.** Blue-black Grassquit.

Permanent resident. PAC: Absolutely fairly common but locally common in grasslands; CRB: Common in grasslands.

This species is locally distributed in accordance with the grassland habitat. It does not range out into the rather sterile grasslands of the lowland pine savanna but is common in grassy clearings around the humid forest habitat. James Silliman found a nest with two eggs at León on 8 October 1982.

Ssp.: *splendens*.

***Sporophila schistacea*.** Slate-colored Seedeater.

Probably a permanent resident. CRB: Locally fairly common in grasslands, forest edge, and low second-growth humid forest.

Marcus (1983) recorded this species as well established in eastern Honduras, probably since 1968. As it also occurs in Costa Rica and farther south, it was only a matter of time before it was found in Nicaragua. Tom Will provided the first records for the country when he discovered small populations of these birds singing from bamboo thickets along the Río Kama and from second-growth trees in an area of patchy forest clearings 40 km NW of Bluefields, RAAS, 15–16 March 1990; and from forest edge (4 birds, 27 February 1991) and pasture (10 birds, 29 February 1992) 45 km NW of Bluefields. He estimated 100+ individuals in

bamboo along the Río Kama, RAAS, 29 February 1992, and recorded vocalizations from all habitats in 1990–1992. The species is apparently irruptive, possibly nomadic, and has expanded its range rapidly northward along the Caribbean lowlands of Costa Rica, where it first appeared about 1975 (Stiles and Skutch 1989). Thus, it is likely that the species arrived in Nicaragua from the south.

***Sporophila aurita* [*Sporophila americana*].** Variable Seedeater.

Permanent resident. CNHL: Fairly common in grasslands, forest edge, low second-growth humid forest, at moderate elevations; CRB: Common in grasslands, forest edge, and low second-growth humid forest.

This species is less locally distributed than the Blue-black Grassquit, as it readily colonizes open areas along rivers.

Ssp.: *corvina*.

***Sporophila torqueola*.** White-collared Seedeater.

Permanent resident. PAC: Absolutely uncommon but locally common in grasslands; CNHL: Rare in grasslands, at moderate elevations; CRB: Uncommon and local in grasslands.

James Silliman found that this species was common around León, and there is one specimen from San Jerónimo, Depto. de Chinandega. J. C. Martínez-Sánchez collected a male in Tipitapa, Depto. de Managua, in a flooded pasture bordering Lake Managua, 6 November 1986. In Nicaragua it never approaches the abundance of *S. aurita*, with which it occurs sympatrically in the Caribbean Region.

Ssp.: *moreletti*.

***Sporophila minuta*.** Ruddy-breasted Seedeater.

Permanent resident. PAC: Absolutely uncommon but locally common in grasslands; CRB: Rare and local in grasslands.

This species is even more locally distributed than *S. torqueola*, but it is gregarious and usually present in large numbers where it does occur. The only Caribbean record is from San Francisco, 12 km E of San Carlos, Depto. de Río San Juan, close to the transition from Pacific to Caribbean habitat. J. C. Martínez-Sánchez secured four specimens in Tipitapa, in the same habitat where he found a population of *S. torqueola*, 20 October and 6 November 1986.

Ssp.: *parva*.

Oryzoborus nuttingi. Nicaraguan Seed-Finch.

Permanent resident. CRB: Uncommon and local in grasslands, forest edge, low second-growth humid forest.

This species is found locally in grassy clearings at the humid forest edge and in similar habitat along rivers. It reaches the northern limit of its range in Nicaragua, and in recent years has been found to occur discontinuously in Costa Rica and Panama. I have elsewhere (Howell 1957) provided brief notes on this little-known form. Stiles (1988) gave evidence for considering *nuttingi* Ridgway 1884, type locality Los Sábalo, Depto. de Río San Juan, a distinct species and not a subspecies of *O. maximiliani* (American Ornithologists' Union 1983).

Oryzoborus funereus. Thick-billed Seed-Finch.

Permanent resident. CRB: Common in grasslands, forest edge and low second-growth humid forest.

Unlike *O. nuttingi*, this species is widespread and abundant around the edges of clearings and roadsides.

Arnaurospiza concolor. Blue Seedeater.

Permanent resident. CRB: Uncommon and local in humid forest.

I encountered this species around bamboo thickets in humid forest at Cum, RAAN, in April 1962. Two males collected on 20 and 21 April were in breeding condition. Unlike other Nicaraguan seedeaters, this one is primarily a forest-dweller.

Ssp.: *concolor*; *grandior* Griscom 1934, type locality Pena Blanca [= Peñas Blancas], Depto. de Jinotega, is not recognized.

***Tiaris olivacea* [*Tiaris olivaceus*]**. Yellow-faced Grassquit.

Permanent resident. PAC: Absolutely uncommon but locally common in grasslands; CNHL: Uncommon in grasslands at moderate elevation; CRB: Common in grasslands.

I have elsewhere (Howell 1957) discussed the odd scarcity of earlier records from Nicaragua. This is another species that ranges into the Central Highlands at mid-elevations from the Caribbean lowlands. The only record from the Pacific Region is of a small population of birds recorded by Tom Will in April 1990 at El Crucero, on the Managua-Masaya border, in a bizarre area of

grass and shrub where most of the vegetation along the ridge line has been destroyed by fumes from Volcán Masaya some 12 km to the east.

Ssp.: *pusilla*.

Haplospiza rustica. Slaty Finch.

Probably a permanent resident. CNHL: Rare in cloud forest.

Martínez-Sánchez (1989) reported collecting a female in the cloud-forest border at 1,400 m at Santa María de Ostuma, Depto. de Matagalpa, on 14 November 1983. No others were found. This is the first record from Nicaragua of this scarce species, which has recently been recorded in El Salvador as well (Thurber et al. 1987).

Ssp.: Presumably *barrilensis*, but not yet critically compared.

Diglossa baritula. Cinnamon-bellied Flowerpiercer.

Probably a permanent resident. CNHL: Rare in cloud forest.

Martínez-Sánchez (1989) reported a male specimen collected at Santa María de Ostuma, elevation 1,400 m, Depto. de Matagalpa, on 22 April 1983. The testes were in nonbreeding condition. This is the first record for Nicaragua and the southernmost for the species.

Ssp.: Presumably *parva*, but not yet critically compared.

Sicalis luteola. Grassland Yellow-Finch.

Permanent resident. CRB: Absolutely rare but locally common in grasslands.

I have elsewhere (Howell 1972) discussed the very local distribution of this species, which is perhaps nomadic. There are only two locality records, one within the pine savanna and the other in the grassy edge of the airfield at Bluefields, RAAS, but in both cases a flock was present.

Ssp.: *chrysops*.

Aimophila ruficauda. Stripe-headed Sparrow.

Permanent resident. PAC: Common in thorn forest and scrub; CNHL: Fairly common in thorn forest and scrub at moderate elevations.

This species is primarily a bird of the thorn forest and scrub but may range into adjacent grass and deciduous forest edge habitats.

Ssp.: *ruficauda* Bonaparte 1853, type locality "Nicaragua."

Aimophila botterii. Botteri's Sparrow.

Permanent resident. PAC: Fairly common in grasslands, highland pine and pine-oak forest; CRB: Fairly common in grasslands, and lowland pine savanna.

The two disjunct populations belong to quite distinct subspecies, as I have elsewhere discussed (Howell 1965, 1972). Both are birds of the grasslands among pines, but unrecorded from the Central Highlands. The Pacific Region population (*A. b. vulcanica*) is known only from Volcán San Cristóbal, where Miller and Griscom reported that it was "fairly common in the open pine woods" between 3,800 feet (1,160 m) and the summit, with males in song in June. Miller wrote that the song "strongly suggested that of our goldfinch" [= *Carduelis tristis*] (Miller and Griscom unpubl. ms.). The continued existence of this population is in doubt because the habitat was largely destroyed by fire in 1970. In the lowland Mosquitia pine savanna, birds of the smaller and darker subspecies (*spadiconigrescens*) are most likely to be found in grasses near the edge of palmetto thickets, where they take cover when disturbed.

Ssp.: See discussion above, and description of *spadiconigrescens* (Howell 1965), type locality 15 km SSW of Waspan, Comarca de El Cabo, RAAN.

Aimophila rufescens. Rusty Sparrow.

Permanent resident. CNHL: Common in highland pine and pine-oak forest, including forest edge, low second growth; CRB: Common in lowland pine savanna, including forest edge and low second-growth areas.

I have elsewhere (Howell 1971, 1972) discussed the status and taxonomy of this species in the Mosquitia. In both highland pine forest and pine savanna, it is usually found in thickets, shrubs, or sedge clumps within the pines or at the edge of that habitat, but never far from it.

Ssp.: *discolor* Ridgway 1888, type locality "Segovia River [= Río Coco], Honduras"; tentatively considered distinct from *pyrgitoides* (Howell 1972).

Spizella passerina. Chipping Sparrow.

Permanent resident. CNHL: Absolutely fairly common, but locally common in highland pine forest; CRB: Absolutely uncommon but locally common in lowland pine savanna.

This species is absent from the Pacific Region highland pine forest on the volcanic peaks near Chinandega. In other pine forests it is patchily distributed, but it is not found in any other habitat. Nicaragua is apparently the southern limit of the range; a single record from Costa Rica (Stiles and Skutch 1989) was presumed to be a stray migrant.

Ssp.: CNHL: *mexicana*; CRB: *pinetorum*. In 1977, I examined and measured the type of *pinetorum* Salvin (type locality Poctum, Petén, Guatemala) at the BMNH at Tring. It is a male, "Pine ridge of Poctum/March 1862," and appears to be adult. The crown is chestnut, the upper mandible is black, and the lower mandible is light horn color. My notes read: right wing, 66.5 mm; left wing, 68.0 mm. The tips of the 5th primary on the right wing and the 5th and 6th on the left wing are broken off, but the 7th primaries (the longest) are unbroken although there is slight wear. I cannot account for the 1.5-mm difference; the carpal joints are free and not tucked into the skin. The tail is slightly worn and measures 56.8 mm. These measurements are smaller than those of the type given by Ridgway (1901) and within the range of Nicaraguan pine savanna birds. The figures are slightly larger than the means for males of the latter (wing 66.1 mm, tail 55.0 mm) but smaller than the means for males from montane Central America (wing 70.1 mm, tail 58.2 mm; Howell 1972:332). Pine savanna birds may therefore be referred to *pinetorum*. Populations from the Central Highlands are referable to *mexicana*, of which *cicada* is a synonym (Howell 1972).

Ammodramus savannarum. Grasshopper Sparrow.

Winter resident, permanent resident. PAC: Uncommon in grasslands; CRB: Absolutely uncommon but locally fairly common in grasslands and lowland pine savanna.

This species is represented in Nicaragua by at least two different subspecies. *Ammodramus s. cracens* is a permanent resident in open grasslands in the pine savanna and locally distributed (Howell 1972). In the grasslands of the arid Pacific Region lowlands (including western Depto. de Chontales), a few birds have been taken from 18 January to 24 March, but in nonbreeding condition. They are pale-colored and resemble examples of *perpallidus* from western North America. Two specimens from San Jerónimo, Depto. de

Chinandega, listed by Hellmayr and Conover (1938) as *bimaculatus*, are much too pale for that dark form and are closest to *perpallidus*. *Ammodramus s. bimaculatus* almost certainly does range through Nicaragua, however, as it is found in northwestern Costa Rica, but as yet there are no certain records.

Ssp.: See discussion above.

{*Melospiza lincolni*. Lincoln's Sparrow.

This species ranges regularly to Honduras in winter and is recorded casually from Costa Rica and Panama. It is unrecorded from Nicaragua but presumably occurs there rarely as a transient or winter resident.}

{*Zonotrichia capensis*. Rufous-collared Sparrow.

This species is conspicuously absent from Nicaragua, although it occurs at elevations down to 1,000 m in Middle American localities to the north and south. This is the most striking example of a highland species that "skips" Nicaragua presumably because of insufficient suitable montane habitat.}

SUBFAMILY ICTERINAE

***Dolichonyx oryzivorus*. Bobolink.**

Probably a transient. CRB: Rare in undetermined habitat.

The only records are by Richmond (1893): "observed flying over, October 10, on the Escondido. Heard several times late in August and September." In Middle America north of Costa Rica, the Bobolink appears to be only of casual occurrence as a transient. James Silliman listed an uncertain sight record of two birds at León on 26 September 1982.

***Agelaius phoeniceus*. Red-winged Blackbird.**

Permanent resident. PAC: Absolutely uncommon but locally common in aquatic habitats; CRB: Absolutely uncommon but locally common in aquatic habitats.

I have elsewhere (Howell 1964a, 1972) discussed the status of this species in Nicaragua. There are distinct, disjunct Pacific Region and Caribbean Region populations, both locally distributed. The larger *A. p. grinnelli* is found only around Lago de Managua and the west side of Lago de Nicaragua, south at least to Granada, Depto. de Granada.

The smaller *A. p. brevirostris* (distinguished from *richmondi* only by the shorter bill) occurs in Nicaragua primarily along the western part of the Río San Juan and the south shore of Lago de Nicaragua west to San Emilio. There is no evidence that the Pacific and Caribbean populations are in contact. There is also a single record of *brevirostris* from the Río Coco (Howell 1972) but no evidence of a breeding population there.

Ssp.: See discussion above.

***Sturnella magna*. Eastern Meadowlark.**

Permanent resident. PAC: Absolutely uncommon but locally fairly common in grasslands; CNHL: Fairly common in grasslands; CRB: Fairly common in grasslands, and lowland pine savanna.

There are two distinct, disjunct subspecies in Nicaragua. From the grasslands associated with highland pine and pine-oak forest in the Central Highlands, the large form *alticola* ranges south, locally, into the grasslands of the arid Pacific lowlands, most abundantly east of the Great Lakes. The very small form *inexpectata*, Ridgway 1888, type locality "Segovia River, Honduras" [= Río Coco], which I have elsewhere discussed (Howell 1971, 1972), is confined to the grasslands associated with the pine savanna of the Mosquitia. The ranges of the two subspecies are not known to be in contact.

{*Xanthocephalus xanthocephalus*. Yellow-headed Blackbird.

This species is recorded from northwestern Costa Rica as a casual visitor and thus probably occurs as a transient in Nicaragua, but as yet there are no records.}

***Dives dives*. Melodious Blackbird.**

Permanent resident. PAC: Fairly common but local in forest edge, low second-growth deciduous forest, and urban areas; CNHL: Uncommon in forest edge and low second-growth areas.

This species formerly reached the southern limit of its range in Nicaragua and was known only from local populations in the Central Highlands, but in the 1980s it began to expand its range west and south to the Pacific Region. James Silliman found it to be fairly common in the vicinity of León and Chinandega in 1982 and 1983, an area from which there were no previous records. It has

subsequently spread south through the Pacific lowlands, and there is a 1987 record from north-western Costa Rica (Stiles 1988). The reasons for this relatively sudden expansion are as yet unknown (see *Passer domesticus*).

Ssp.: *dives*.

***Quiscalus nicaraguensis*.** Nicaraguan Grackle.

Permanent resident. PAC: Common but local in aquatic habitats, grasslands, thorn forest and scrub; CRB: Locally common in grasslands.

I have elsewhere (Howell 1964a) discussed some aspects of the biology of this distinct species, which is completely sympatric within the range of the much larger *Q. mexicanus*. The Nicaraguan Grackle is still largely confined to its original range, which is the arid lowlands and marshes around the Great Lakes. It nests either in bulrush marshes or in shrubs growing in the flooded edges of the lakes (Miller and Griscom unpubl. ms.). Cattle-raising within the past 100 years has probably increased the grackle's population size and certainly its range. As forest has been cleared for pasturage along the Río San Juan and Río Frio, the species has colonized these areas and has reached Costa Rican territory along the latter river, and further range expansion is likely. The Caribbean records are all from this region. The grackles are now so closely associated with cattle that they are seldom found away from the animals in pastures except when roosting or nesting. The birds feed on insects stirred up by grazing and also glean ticks from the bodies of the cattle, which are tolerant of foraging around their heads as well as other parts. Nesting is recorded during April. The type locality of the species (Salvin and Godman 1891) is the village of Momotombo, Depto. de León, on the northwestern shore of Lago de Managua.

***Quiscalus mexicanus*.** Great-tailed Grackle.

Permanent resident. PAC: Common in aquatic habitats, grasslands, urban areas; CNHL: Fairly common in grasslands, urban areas at moderate elevations; CRB: Locally common in aquatic habitats, grasslands, and urban areas; common in the Corn Islands.

This species is found throughout the country but is most abundant where human activity has produced favorable habitats such as well-watered parks and gardens, farms, and ranches. In the Central Highlands it ranges to an altitude of 1,300 m.

In the Caribbean Region the species is found mostly along the coast and along major rivers into the interior. James Silliman found this species to be "common everywhere" on Great Corn Island on 31 December 1981. This represents a colonization since 1927–1928, as it was not found there by Peters (1929).

Ssp.: Birds from the Caribbean Region and Central Highlands are referable to the large form *mexicanus*. Those from the Pacific Region are smaller in all dimensions except bill length and are referable to *peruvianus*, which ranges north on the coast to Corinto and inland at least to Granada.

***Molothrus aeneus*.** Bronzed Cowbird.

Permanent resident. PAC: locally common in grasslands; CNHL: Fairly common in grasslands, at moderate elevations.

This well-named species is seldom found away from the vicinity of livestock pastures and barns. It is present at San Carlos at the SE corner of Lago de Nicaragua where there is a meeting of Pacific and Caribbean habitats, and it may colonize the latter region as cattle ranching expands along the Río San Juan.

Ssp.: *aeneus*.

***Scaphidura oryzivora* [*Molothrus oryzivorus*].** Giant Cowbird.

Permanent resident. PAC: Local and rare in grasslands; CRB: Local and uncommon in forest edge, low second-growth humid forest.

In Nicaragua this species is a nest parasite (apparently exclusively) on oropendolas (*Psarocolius*, now including *Zarhynchus* and *Gymnostinops*). There is only one record from the Pacific Region, 12 km E of Managua, where *P. montezuma* is the only host species present. In the Caribbean Region *P. wagleri* also occurs, and the Giant Cowbirds are more numerous but not common.

Ssp.: *impacifica*.

***Icterus dominicensis*.** Black-cowled Oriole [Greater Antillean Oriole].

Permanent resident. CRB: Common in forest edge and low second-growth humid forest.

This species and *I. mesomelas* are the only permanent resident orioles of the Caribbean humid forest habitat.

Ssp.: *prothemelas*.

Icterus wagleri. Black-vented Oriole.

Permanent resident. CNHL: Probably rare in highland oak forest.

This species reaches the southern limit of its range in the Central Highlands of Nicaragua, where it is known from six specimens from three different localities. Miller and Griscom (unpubl. ms.) stated that "the only ones we encountered were in the woods along a little river in the high plateau between Jinotega and San Rafael del Norte, Depto. de Jinotega." The elevation there is ~1,200 m, and the habitat is primarily oak.

Ssp.: *wagleri*.

Icterus spurius. Orchard Oriole.

Transient, winter resident. PAC: Fairly common in forest edge, low second-growth deciduous forest; CNHL: Uncommon in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge and low second-growth humid forest.

Extreme dates of recorded occurrence are from 20 August to 5 April.

Ssp.: *spurius*.

Icterus chrysater. Yellow-backed Oriole.

Permanent resident. PAC: Uncommon and local in deciduous forest at moderate elevations; CNHL: Fairly common in highland pine and pine-oak forest; CRB: Fairly common in lowland pine savanna.

The only Pacific Region records are from the volcanic peaks San Cristóbal and Casita. I have elsewhere (Howell 1964a, 1971, 1972) discussed the status of this species in Nicaragua. The Pacific Region, Central Highlands, and Caribbean Region populations are not subspecifically distinguishable despite their discontinuity. Salvin's (1873) record from "Chontales" is based on a Thomas Belt specimen without an original label; the bird probably came from the vicinity of Matagalpa. The species is absent from the entire southern half of Nicaragua as well as from all of Costa Rica but recurs in Panama.

Ssp.: *chrysater*.

Icterus mesomelas. Yellow-tailed Oriole.

Permanent resident. CRB: Formerly common and now uncommon in forest edge and low second-growth humid forest.

This species seems to be especially well adapted to the open conditions and unlimited nest sites that were provided by banana plantations in the Caribbean Region, such as the one where Richmond stayed in 1892 along the Río Escondido. Those disappeared from Nicaragua after being ruined by the banana blight, and the Yellow-tailed Oriole is now found primarily around open areas along large rivers. In Nicaragua, the only records north of the Río Escondido were sightings of six individuals (only a few kilometers north of the Río Escondido) along the Río Kama by Tom Will, 29 February 1992. Huber (1932) did not find the species in apparently suitable habitat around Edén. In Honduras, where there are still thriving banana plantations, the bird is again common.

Ssp.: *salvini*.

Icterus pustulatus. Streak-backed Oriole.

Permanent resident. PAC: Common in thorn forest and scrub, forest edge, low second-growth deciduous forest; CNHL: Rare in oak forest.

Miller and Griscom (unpubl. ms.) recorded one specimen taken in oak forest at 3,000 feet (915 m), between Matagalpa and Jinotega. This is the only Nicaragua record outside of lowland habitats. James Silliman recorded a pair feeding young at León on 27 June 1982.

Ssp.: *sclateri*.

Icterus pectoralis. Spot-breasted Oriole.

Permanent resident. PAC: Uncommon in thorn forest and scrub; CNHL: Fairly common in thorn forest and scrub, forest edge and low second-growth deciduous forest at moderate elevations.

This species is less abundant in the Pacific lowlands than the similar-sized *I. pustulatus*.

Ssp.: Dickerman (1981) maintained that *guttulatus* Lafresnaye is distinct from nominate *pectoralis* (to which Nicaraguan specimens are usually referred) and assigned all Nicaraguan specimens to *guttulatus*. Specimens from northern Nicaragua are like *guttulatus* in size and color. As yet, there are no specimens of the smaller form *espinachi* from Nicaragua, but it probably occurs in the southern part of the Pacific Region.

Icterus gularis. Altamira Oriole.

Permanent resident. PAC: Uncommon in thorn forest and scrub.

This species, the largest of the genus in Nicaragua, reaches the southern limit of its range there. The southernmost record is 6 miles (9.6 km) W of Ciudad Darío, Depto. de Matagalpa.

Ssp.: There is great variation in size and color in this species, especially in the southern part of its range (Monroe 1968). It is known in Nicaragua from only four specimens (two at AMNH, one at UCLA, one at Museo de Zoología, Nicaragua). I tentatively refer these to *I. g. gularis* pending further study of the complex variation in the species.

Icterus galbula. Northern Oriole [Baltimore Oriole].

Transient, winter resident. PAC: Fairly common in thorn forest and scrub, forest edge, and low second-growth deciduous forest; CNHL: Fairly common in forest edge, low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge, low second-growth humid forest and lowland pine savanna.

Extreme dates of recorded occurrence are 7 September and 15 April.

Ssp.: Only *galbula* is recorded, but *bullocki* is recorded from NW Costa Rica and is presumably a transient.

Amblycercus holosericeus. Yellow-billed Cacique.

Permanent resident. PAC: Fairly common in forest edge and low second-growth deciduous forest; CNHL: Fairly common in forest edge and low second-growth deciduous forest, at moderate elevations; CRB: Fairly common in forest edge and low second-growth humid forest.

Ssp.: *holosericeus*.

Cacicus uropygialis. Scarlet-rumped Cacique.

Permanent resident. CRB: Fairly common in humid forest, including forest edge and low second-growth areas.

This species reaches the northern limit of its range in eastern Honduras just north of the Nicaraguan border.

Ssp.: *microrhynchus*.

Psarocolius wagleri. Chestnut-headed Oropendola.

Permanent resident. CRB: Absolutely fairly common, locally common in humid forest,

including forest edge and low second-growth areas.

Ssp.: *ridgwayi*.

Psarocolius montezuma. Montezuma Oropendola.

Permanent resident. PAC: Common in forest edge, low second-growth deciduous forest; CNHL: Fairly common in forest edge and low second-growth deciduous forest, at moderate elevations; CRB: Common in forest edge and low second-growth humid forest.

FAMILY FRINGILLIDAE
SUBFAMILY CARDUELINAE

Loxia curvirostra. Red Crossbill.

Visitor, permanent resident. PAC: Rare in highland pine forest; CNHL: Uncommon and local in highland pine forest; CRB: Uncommon and local in lowland pine savanna.

The species reaches the southern limit of its range in Nicaragua. The only Pacific Region record consists of two birds in streaked immature plumage taken on 28 April 1891 at Volcán San Cristóbal by Richardson. The altitude of "6500 ft" (1,980 m) given on the label is an overestimate but doubtless indicates the summit. Miller and Richardson did not find crossbills at that locality in June 1917, and the two birds taken in 1891 were probably wanderers from the Central Highlands and not part of a resident population. There are no records from the Central Highlands south of San Rafael del Norte, where Miller and Griscom obtained a male in breeding condition on 23 March 1917 (Miller and Griscom unpubl. ms.). I have elsewhere (Howell 1972) discussed the status of the isolated lowland pine savanna population which may represent an undescribed subspecies. Pending acquisition of an adequate series of specimens from the pine savanna, I refer all Nicaraguan specimens to the subspecies *mesamericana*.

Ssp.: See discussion above.

Carduelis notata [*Spinus notatus*]. Black-headed Siskin.

Permanent resident. CNHL: Fairly common in highland pine forest; CRB: Common and local in lowland pine savanna.

This species reaches the southern limit of its range in Nicaragua. It is not recorded from the pine forest on the volcanic peaks San Cristóbal and Casita.

I have elsewhere (Howell 1971, 1972) discussed the status of the lowland pine savanna population, which is best assigned to the subspecies *oleacea*.

Ssp.: *oleacea*.

Carduelis psaltria [*Spinus psaltria*]. Lesser Goldfinch.

Permanent resident. PAC: Rare in forest edge and low second-growth highland pine forest; CNHL: Rare in highland pine forest.

This species is known in Nicaragua only from the vicinity of Volcán San Cristóbal and San Rafael del Norte, with a total of three specimens. I saw it only once, at Volcán Casita in November 1961—two or three birds that were too wary for a close approach.

Ssp.: *columbiana*.

FAMILY PASSERIDAE

Passer domesticus. House Sparrow.

Permanent resident. PAC and CNHL: Common and local in urban areas.

This species was first recorded in León by James Silliman on 2 November 1981. He wrote: "Not particularly common, but found in colonies regularly. One colony in park next to university church (La Merced). More regularly seen in outskirts where houses have yards." He stated that a knowledgeable student told him that this species had appeared in Chichigalpa, Depto. de Chinandega, in 1978. J. C. Martínez-Sánchez (unpubl. data 1988) reported finding this species established and breeding by February 1983 in numerous towns and cities in the Pacific Region and Central Highlands. There are no certain records from Nicaragua earlier than 1981, and the colonization must be relatively recent (see *Dives dives*).

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