

Notes on the birds of the Río Plátano Biosphere Reserve, including four new species for Honduras

by Andrew C. Vallely, Robert J. Gallardo & John S. Ascher

Received 7 July 2009

SUMMARY.—We detail records of 27 rare or poorly known species from the Río Plátano Biosphere Reserve (RPBR) in eastern Honduras. Four of these, Fasciated Tiger Heron *Tigrisoma fasciatum*, Grey-rumped Swift *Chaetura cinereiventris*, Striped Woodhaunter *Hyloctistes subulatus* and Wing-banded Antbird *Myrmornis torquata* have not previously been reported from Honduras.

The Caribbean slope lowlands and lower foothills of Central America form an area of endemism for birds (Peterson *et al.* 1998) and have been subject to ornithological investigation for over a century (Salvin & Godman 1879–1904). Despite this, most ornithological work has focused on easily accessible sites in southern Central America such as Barro Colorado Island in Panama (Karr 1990) and La Selva in Costa Rica (Slud 1960). Although humid lowland rainforest extends from eastern Honduras south and east to Panama, the true extent of many Caribbean slope bird species' ranges are poorly documented due to the difficulty of access to this region. Eastern Honduras hosts an extensive area of Caribbean slope humid forest, but is incompletely known to ornithologists (Marcus 1983, Anderson *et al.* 2004). Within this region, the Río Plátano Biosphere Reserve (RPBR) encompasses 5,250 km² in dptos. Gracias a Dios, Colón and Olancho, and spans the elevational range from sea level to 1,500 m. The RPBR, together with adjacent protected areas including Tawahka-Asangni Biosphere Reserve, Sierra de Agalta National Park, the proposed Patuca National Park, Rus Rus Biosphere Reserve, and Bosawás Biosphere Reserve in adjacent Nicaragua, form the largest remaining wilderness in Central America. This region is sparsely populated, with an estimated 3–5 human inhabitants / km², and includes extensive uninhabited areas. Because past anthropogenic alterations have been limited in extent, the area offers valuable opportunities to both researchers and conservationists. Previous investigations of the RPBR have concentrated on areas near the village of Las Marías (Marcus 1983, Anderson *et al.* 1998, 2004). To date, 496 bird species have been reported from the reserve (RJG pers. obs.). Below, we detail observations of 27 species, mostly from the upper drainage of the río Plátano, within the forested core of the RPBR, including two genera and four species not previously reported from Honduras.

Methods

We visited the upper drainage of the río Plátano during 28 March–4 April 2002 (RJG), 11–21 April 2003 (RJG), 30 July–11 August 2006 (ACV and RJG), 8–27 June 2008 (ACV and JSA), 3–14 February 2009 (RJG) and 22 April–2 May 2009 (ACV and RJG). During each visit, we searched for birds, primarily in humid lowland rainforest adjacent to the río Plátano. We estimated canopy height of the upper río Plátano forest at c.20–25 m and noted numerous large emergents over 35 m. The understorey was typically dense along the floodplain of the río Plátano and its tributaries, often with stands of palms, large-leaved herbs and lianas. Adjacent steep slopes and uplands hosted a more open understorey, in many areas with abundant rock outcrops. Most observations were made opportunistically along a network of existing trails and passable watercourses. During 8–27 June 2008, we supplemented

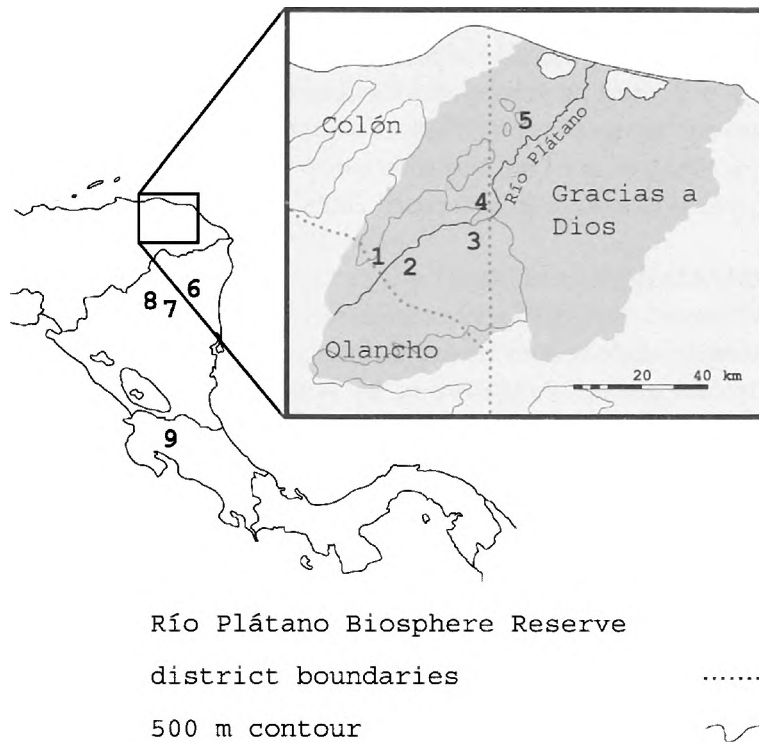


Figure 1. Map showing the location of the RPBR in Central America and the localities mentioned in the text: (1) La Carrizalosa camp, (2) La Cueva Camp, (3) El Subterráneo camp, (4) Pomokir camp, (5) Las Marias, (6) Eden, Nicaragua (7) Siuna, Nicaragua, (8) Peña Blanca, Nicaragua, (9) Cordillera de Guanacaste, Costa Rica.

this with a small number of mist-net captures. Coordinates for individual sites within the RPBR follow: La Carrizalosa Camp, Colón 15°19'56.13"N, 85°16'37.58"W; La Cueva camp, Colón 15°20'52.53"N, 85°14'51.50"W; El Subterráneo camp, Colón 15°26'06.48"N, 85°03'56.28"W; Pomokir camp, Colón 15°28'33.68"N, 84°59'53.82"W; Las Marias, Gracias a Dios 15°40'01.06"N, 84°53'51.92"W. The locations of these and most other localities mentioned in the text are presented in Fig. 1.

Species accounts

FASCIATED TIGER HERON *Tigrisoma fasciatum*

A scarce and local species mostly considered to range no further north than the Caribbean slope of Costa Rica (e.g. AOU 1998, Martínez-Vilalta & Motis 1992) where it was not documented until 1952 (Slud 1964). Whilst Hancock & Kushlan (1984) and Hancock (1999) mapped it in north-east Honduras, the source of this is unclear. ACV & RJG encountered an adult *T. fasciatum* on 1 August 2006 in the upper drainage of the río Plátano. ACV & JSA closely observed and photographed an adult at La Cueva camp on 16 June 2008, and an adult was seen briefly just below El Subterráneo camp on 19 June 2008. During 22 April–3 May 2009 ACV & RJG encountered at least three in the upper watershed and obtained several photographs (Fig. 1; images will also be archived at the Visual Resources for Ornithology [VIREO] collection, Philadelphia) below El Subterráneo camp, a range extension of >400 km from the nearest locality, the Cordillera de Guanacaste, Costa Rica (Stiles & Skutch 1989).

BLACK-AND-WHITE HAWK-EAGLE *Spizaetus melanoleucus*

Monroe (1968) listed just three records of this poorly known hawk from Honduras, and the species is generally regarded as scarce and local over its extensive range. Anderson *et al.* (1998) reported two encounters in the RPBR. We have three additional records. ACV & JSA observed an adult soaring over El Subterráneo camp on 17 June 2008. ACV & RJG observed two, also in the upper watershed, in late April 2009.

GREAT GREEN MACAW *Ara ambiguus*

Rare and local in Central America, and considered hypothetical in Honduras by Monroe (1968), who mentioned a sight record from Olancho. *A. ambiguus* was subsequently reported from Honduras by Marcus (1983, 1984) and by Anderson *et al.* (2004), who encountered the species regularly along the lower río Plátano. *A. ambiguus* is considered Endangered by BirdLife International (2009), who note that it is 'now rare in the río Plátano'. We encountered *A. ambiguus*, including groups of up to six, during each of our visits to the upper río Plátano. Systematic surveys to determine the size and extent of the río Plátano population are lacking, but the RPBR might represent an important global stronghold for this species given the pace and extent of forest loss elsewhere on the Caribbean slope of Central America.

CRESTED OWL *Lophotrix cristata*

This widespread species was first reported from Honduras by Monroe (1968) and was subsequently considered rare in the country (Bonta & Anderson 2002). On 6 July 2007 and 13–15 January 2008, RJG recorded *L. cristata* by voice near Las Marías in the RPBR.

SHORT-TAILED NIGHTHAWK *Lurocalis semitorquatus*

This widespread species was first recorded in Honduras in 1988 (Howell & Webb 1992) and has been considered rare in the country (Bonta & Anderson 2002). On 9 February 2009, RJG observed one at dusk in the upper drainage of the río Plátano at Pomokir camp. Next day, RJG observed two at dusk downriver of Pomokir camp.

GREY-RUMPED SWIFT *Chaetura cinereiventris*

This widespread species was thought likely to occur in eastern Honduras by both Marcus (1983) and Anderson *et al.* (2004), but has not previously been reported north of Nicaragua (AOU 1998, Chantler 1999). The northernmost previous record was a specimen taken by T. R. Howell 18 km north-east of Siuna, in the Región Autónoma del Atlántico Norte, Nicaragua, on 26 June 1954 (University of California Los Angeles, Dickey Collection 35031). We found *C. cinereiventris* common and conspicuous in the upper drainage of the Río Plátano, with flocks of 10–25 observed on most days during most visits to the area. We distinguished *C. cinereiventris* from the locally less common Vaux's Swift *C. vauxi* by the cool grey rump contrasting strongly with the darker mantle. This is the first record of *C. cinereiventris* for Honduras, and represents a northward range extension of >200 km.

SNOWCAP *Microchera albocoronata*

Scarce and local, Snowcap is endemic to Central America and was first reported from Honduras by Monroe (1968), who detailed sight records from dpto. El Paraíso. Anderson *et al.* (2004) considered it 'likely to occur' in the Honduran Moskitia region. RJG first encountered a single in the RPBR on 14 April 2003. On subsequent visits, we have found it to be fairly common in the upper watershed and, during 9–20 June 2008, we recorded 3–5 daily near El Subterráneo and La Carrizalosa camps. The presence of several moulting

immature males during the latter period suggests that mid June might represent the end of the local breeding season. *M. albocoronata* is thought to undertake local or elevational seasonal movements elsewhere in its range (Stiles & Skutch 1989). We did not encounter it in the RPBR during late July / early August 2006. We photographed an immature male near La Cueva camp in June 2008 (Fig. 3).

KEEL-BILLED MOTMOT *Electron carinatum*

This scarce and local species is endemic to the Caribbean slope of Central America, and is considered Vulnerable by BirdLife International (2009). Anderson *et al.* (2004) drew attention to the importance of the Honduran Moskitia as a probable population stronghold for the species. We detected several by voice in the upper drainage of the río Plátano, and photographed one at La Cueva camp on 15 June 2008, which image will be archived at VIREO.

GREAT JACAMAR *Jacamerops aureus*

Long thought to range no further north than Costa Rica (AOU 1998), this widespread but scarce species was first reported from Honduras in 2004 (Jones 2004) when RJG videotaped one in the Tawahka-Asangni Reserve, dpto. Gracias a Dios. The first records for Nicaragua were summarised by Múnica-Roldán *et al.* (2006). Following decades of habitat destruction, *J. aureus* is thought to be declining in Central America (e.g. in Costa Rica: Sigel *et al.* 2005). ACV & JSA detected one by voice at La Cueva camp in the upper drainage of the río Plátano on 14 June 2008.

WHITE-FRONTED NUNBIRD *Monasa morphoeus*

This widespread species reaches its northernmost limit in eastern Honduras (AOU 1998, Rasmussen & Collar 2002). It remains poorly known in Central America and is thought to have declined at several well-studied Caribbean slope sites (e.g. La Selva, Costa Rica: Sigel *et al.* 2005). The persistence of this species in Central America may depend on the survival of large, continuous blocks of lowland forest such as those protected by the RPBR. We have encountered small numbers of *M. morphoeus* in the upper drainage of the río Plátano during each of our visits, including groups of 3–8 individuals.

STRIPED WOODHAUNTER *Hyloctistes subulatus*

Known in north-east Nicaragua from a handful of specimens taken by W. B. Richardson in 1908–09, including the type of *H. s. nicaraguae* (Miller & Griscom 1925), one of two birds obtained at Río Grande, a locality believed to be in dpto. Matagalpa (Lecroy & Sloss 2000). A third specimen of *H. subulatus* was taken by Richardson at 'Peña Blanca', which locality is thought to be in east-central dpto. Jinotega (J. C. Martínez Sánchez pers. comm., but see Anderson 2000). *H. subulatus* has not previously been reported from Honduras, but was regarded as 'likely to occur' in the Honduran Moskitia by Anderson *et al.* (2004) and was also expected by Marcus (1983). ACV & JSA observed one near La Cueva camp on 15 June 2008 as it foraged within an forest interior mixed-species flock. It was seen for c.15–20 seconds as it probed in suspended litter and vine tangles in the midstorey. On 23 April 2009, ACV & RJG encountered a single *H. subulatus*, and obtained a sound-recording (deposited at the Macaulay Library of Natural Sounds, Cornell University, Ithaca). The precise locations of W. B. Richardson's localities have proven difficult to determine (Lecroy & Sloss 2000; J. C. Martínez Sánchez pers. comm.). Assuming that 'Peña Blanca' is correctly traced to dpto. Jinotega, our records represent a >200 km northerly range extension. This is the first report of this genus and species from Honduras.



Figure 2. Fasciated Tiger Heron *Tigrisoma fasciatum*, Río Plátano Biosphere Reserve, Honduras, April 2009 (James Adams)

Figure 3. Immature male Snowcap *Microchera albocoronata*, Río Plátano Biosphere Reserve, Honduras, June 2008 (John S. Ascher)

Figure 4. Male Tawny-crested Tanager *Tachyphonus delatrii*, Río Plátano Biosphere Reserve, Honduras, June 2008 (John S. Ascher)

Figure 5. Carmiol's Tanager *Chlorothraupis carmioli*, Río Plátano Biosphere Reserve, Honduras, June 2008 (John S. Ascher)

FASCIATED ANTSHRIKE *Cymbilaimus lineatus*

This species reaches its northernmost limit in eastern Honduras, where specimens are available from Arenal, Olancho (Monroe 1968). *C. lineatus* was considered rare in the Honduran Moskitia by Anderson *et al.* (2004). We saw one on 10 June 2008 at La Carrizalosa camp, and detected another by voice on 15 June 2008 at La Cueva camp.

WING-BANDED ANT BIRD *Myrmornis torquata*

Rare and local in Central America, where it is very infrequently reported away from eastern Panama. *M. torquata* is known in Nicaragua from specimens collected by W. B. Richardson, including several from 'Peña Blanca' (dpto. Jinotega, see above). An additional specimen was collected in Nicaragua in 1922 at Edén, in the Región Autónoma del Atlántico Norte (Huber 1932). Recent sight records from southern Nicaragua were presented by Cody (2000) and Múnera-Roldán *et al.* (2007). In Honduras, *M. torquata* was considered 'likely to occur' in the Moskitia by Marcus (1983) and Anderson *et al.* (2004). JSA observed one in the upper drainage of the río Plátano above La Cueva camp on 14 June 2008. On 25 April 2009, ACV & RJG returned to the same site and photographed a male *M. torquata* (photograph deposited

at VIREO) in tall humid forest surrounded by steep slopes and extensive limestone outcrops. These are the first records of the genus and species for Honduras and represent a northward range extension of *c.*200 km from the nearest known locality, Edén, Nicaragua.

GOLDEN-CROWNED SPADEBILL *Platyrrinchus coronatus*

Thought to be rare in the Honduran Moskitia by Anderson *et al.* (2004), who listed two specimens from Las Mariás. We found *P. coronatus* to be fairly common in the upper drainage of the río Plátano with multiple individuals encountered on most visits to the area.

SPECKLED MOURNER *Laniocera rufescens*

Scarce and local in Central America, and regarded as rare in the Honduran Moskitia by Anderson *et al.* (2004). Monroe (1968) considered it 'exceedingly rare' in Honduras, noting just four specimens from the country. We found *L. rufescens* to be locally fairly common in the upper drainage of the río Plátano near La Carrizalosa, La Cueva and Pomokir camps, with multiple individuals encountered during most visits to the area.

LOVELY COTINGA *Cotinga amabilis*

This Central American Caribbean slope endemic was described as uncommon to locally common in Honduras by Monroe (1968). Following decades of habitat destruction, *C. amabilis* is thought to be declining in Central America (e.g. in Costa Rica: Sigel *et al.* 2005) and is now uncommon to rare and local (Snow 2004). RJG observed an adult male in the upper drainage on 3 April 2003 and ACV observed an adult male at La Cueva camp on 13 June 2008.

SNOWY COTINGA *Carpodectes nitidus*

This scarce cotinga is endemic to the Caribbean slope of Central America. It was first reported from Honduras by Bangs (1903), who collected several near La Ceiba, an area that has since undergone extensive habitat degradation and from where there are no recent reports. *C. nitidus* has declined at several well-studied sites (Sigel *et al.* 2005). We encountered several during each of our visits to the upper río Plátano watershed.

THREE-WATTLED BELLBIRD *Procnias tricarunculatus*

A Central American endemic first reported from the Honduran Moskitia by Anderson *et al.* (2004), who detailed observations made during February–March 1999 along the río Patuca, dpto. Gracias a Dios. *P. tricarunculatus* is considered Vulnerable by BirdLife International (2009) and undertakes complex migrations (Powell & Bjork 2004). These movements, particularly those undertaken by northern populations, remain incompletely understood. RJG heard singing *P. tricarunculatus* on 13 April 2003 in the Waraska Valley (near La Carrizalosa camp). ACV & RJG encountered several singing male bellbirds during late July 2006 in the upper drainage of the río Plátano (in the vicinity of La Cueva camp). We did not detect the species on 8–27 June 2008 or 22 April–2 May 2009, and we tentatively conclude that this highland breeder reaches the RPBR as a seasonal transient, though the precise pattern of its occurrence remains to be fully documented.

SONG WREN *Cyphorhinus phaeocephalus*

First documented in Honduras by a single specimen taken in 1887 along the Segovia River in Gracias a Dios (Monroe 1968), but poorly known in the region. The few recent reports from Honduras include those of Marcus (1983), who encountered it along the río Plátano at

Mairin Tighni camp, and Anderson *et al.* (2004), who regarded the species as fairly common in the Honduran Moskitia. RJG obtained sound-recordings at the Sutawala Valley within the Tawahka-Asangni Biosphere Reserve on 21–22 March 2004 (Gallardo 2008). ACV & JSA identified one by voice above La Carrizalosa camp in the RPBR on 9 June 2008.

STRIPE-BREASTED WREN *Thryothorus thoracicus*

This Central American Caribbean slope endemic reaches its northern limit in eastern Honduras, where it is poorly known. The only previous record in Honduras is from Tawahka-Asangni Biosphere Reserve in 2004 (Jones 2004, Gallardo 2008). One was identified by voice downriver of Las Marías by RJG on 10 July 2007. Another was observed foraging in the lower midstorey with a mixed-species flock at La Cueva camp on 15 June 2008 (ACV & JSA). These records are the northernmost reports of the species.

BLACK-THROATED WREN *Thryothorus atrogularis*

Endemic to the Caribbean slope of Central America and poorly known in Honduras, where first reported by RJG, who obtained a sound-recording in the Tawahka-Asangni Biosphere Reserve, dpto. Gracias a Dios (deposited at the Macaulay Library of Natural Sounds, Cornell University, Ithaca; see Jones 2004). RJG detected one by voice in the upper watershed of the río Plátano above Las Marías on 8 August 2006. This is the second record for Honduras, and the northernmost for the species.

WHITE-THROATED SHRIKE-TANAGER *Lanio leucothorax*

This Central American endemic reaches its northernmost limit in eastern Honduras (AOU 1998), where it was considered rare by Anderson *et al.* (2004). We found *L. leucothorax* to be an uncommon member of mixed-species flocks at forested sites in the upper watershed of the río Plátano drainage, recording small numbers on each of our visits.

TAWNY-CRESTED TANAGER *Tachyphonus delatrii*

First reported from Honduras by Marcus (1983), who encountered it on the Tuskruhuas River in the eastern RPBR. *T. delatrii* was considered rare in the Honduran Moskitia by Anderson *et al.* (2004). We found it common in the forest interior within the upper watershed of the río Plátano drainage. We encountered flocks of 5–10 on most days during each of our visits, and photographed a mist-netted individual in June 2008 (Fig. 4).

CARMIOL'S TANAGER *Chlorothraupis carmioli*

This widespread species was considered rare in the Honduran Moskitia by Anderson *et al.* (2004) who detailed the first records from near Las Marías. We found *C. carmioli* to be a common and conspicuous species at forest interior sites in the upper watershed of the río Plátano drainage. We recorded flocks of 5–10 on most days during each of our visits, and a mist-netted individual was photographed in June 2008 (Fig. 5).

SLATE-COLOURED SEEDEATER *Sporophila schistacea*

This widespread species is rare and irregular in the Central American portion of its range (Ridgely & Gwynne 1989, Stiles & Skutch 1989, Howell & Webb 1995), and was not recorded in Honduras prior to 1979 (Marcus 1983). RJG noted a single on 3 April 2002 near Las Marías. On and around 17 April 2003, RJG found *S. schistacea* to be common in riparian growth along the río Plátano, but we have not encountered the species subsequently.

SLATE-COLOURED GROSBEAK *Saltator grossus*

This species reaches its northern distributional limit in eastern Honduras, and was first reported in the country by Marcus (1983) who encountered it along the Tuskruhuas River in dpto. Gracias a Dios. Regarded as uncommon in the Honduran Moskitia by Bonta & Anderson (2002), we found *S. grossus* fairly common in the upper drainage of the Río Plátano, with several encountered during each of our visits.

YELLOW-CROWNED EUPHONIA *Euphonia luteicapilla*

Endemic to Central America and regarded as hypothetical in Honduras by Monroe (1968), who mentioned sight records from dpto. Olancho. The species is still poorly known in the country, being described as uncommon in eastern Honduras by Bonta & Anderson (2002), following observations of *E. luteicapilla* by RJG east of the RPBR around Wampusirpe, dpto. Gracias a Dios in 2002. RJG closely studied a pair of *E. luteicapilla* along the río Plátano above Las Marías on 9 August 2006.

Acknowledgements

We thank the following people, each of whom provided valuable assistance during our visits to the río Plátano drainage: Arnulfo Fitoria, David Medina, Cara Stiles, Mark Willuhn and Patty Zishka. We are grateful to the Corporación Hondureña de Desarrollo Forestal (COHDEFOR), and the Secretaría de Recursos Naturales y Ambiente (SERNA) for granting research permits for the June 2008 expedition, and also to the organisation Mosquitia Pawisa Apiska (MOPAWI), who lent their support to that endeavour in innumerable ways. James Adams kindly shared the photograph of *T. fasciatum*. Paul Sweet and David L. Anderson made useful comments on an earlier draft. Comments from the referees, David L. Anderson and Oliver Komar, and the editor, also improved the final manuscript. Mary Lecroy and Juan Carlos Martínez-Sánchez graciously assisted us in tracing several localities in Nicaragua, and Martínez-Sánchez also patiently answered several queries concerning avian distributions in that country. Assistance from Terence Clarke greatly improved the map. We owe a debt of gratitude to Jorge & Hermino Salaverri, and the staff of La Moskitia Ecoaventuras for providing expert logistical support on each of our visits to the río Plátano watershed.

References:

- American Ornithologists' Union (AOU). 1998. *Check-list of North American birds*. Seventh edn. American Ornithologists' Union, Washington DC.
- Anderson, D. L. 2000. Notes on the breeding, distribution, and taxonomy of the Ocellated Poorwill (*Nyctiphrynus ocellatus*) in Honduras. *Orn. Neotrop.* 11: 233–238.
- Anderson, D. L., Bonta, M. & Thorn, P. 1998. New and noteworthy bird records from Honduras. *Bull. Brit. Orn. Cl.* 118: 178–183.
- Anderson, D. L., Wiedenfield, D. A., Bechard, M. J. & Novak, S. J. 2004. Avian diversity in the Moskitia region of Honduras. *Orn. Neotrop.* 15: 447–482.
- Bangs, O. 1903. Birds and mammals from Honduras. *Bull. Mus. Comp. Zool.* 6.
- BirdLife International. 2009. Species factsheet: *Ara ambiguus*. www.birdlife.org (accessed 18 May 2009).
- Bonta, M. & Anderson, D. L. 2002. *Birding Honduras: a checklist and guide*. Ecoarte, Tegucigalpa.
- Chantler, P. 1999. Grey-rumped Swift *Chaetura cinereiventris*. P. 443 in del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, vol. 5. Lynx Edicions, Barcelona.
- Cody, M. L. 2000. Antbird guilds in the lowland rainforests of southeast Nicaragua. *Condor* 102: 784–794.
- Gallardo, R. J. 2008. *Bird sounds of Honduras*. Audio CD. Privately published by the author.
- Hancock, J. 1999. *Herons and egrets of the world; a photographic journey*. Academic Press, San Diego.
- Hancock, J., & Kushlan, J. 1984. *The herons handbook*. Harper & Row, New York.
- Howell, S. N. G. & Webb, S. 1992. New and noteworthy bird records from Guatemala and Honduras. *Bull. Brit. Orn. Cl.* 112: 42–49.
- Howell, S. N. G. & Webb, S. 1995. *A guide to the birds of Mexico and northern Central America*. Oxford Univ. Press, New York.
- Huber, W. 1932. Birds collected in northeastern Nicaragua in 1922. *Proc. Acad. Nat. Sci. Philadelphia* 84: 205–249.
- Jones, H. L. 2004. The winter season, December 2003 through February 2004: Central America. *North Amer. Birds* 58: 290–292.
- Karr, J. K. 1990. The avifauna of Barro Colorado Island and the Pipeline Road, Panama. Pp 183–198 in Gentry, A. H. (ed.) *Four Neotropical forests*. Yale Univ. Press, New Haven.

- Lecroy, M. & Sloss, R. 2000. Type specimens of birds in the American Museum of Natural History. Part 3. Passeriformes: Eurylaimidae, Dendrocolaptidae, Furnariidae, Formicariidae, Conopophagidae, and Rhinocryptidae. *Bull. Amer. Mus. Nat. Hist.* 257.
- Martínez-Vilalta, A. & Motis, A. 1991. Fasciated Tiger-Heron *Tigrisoma fasciatum*. P. 422 in del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, vol. 1. Lynx Edicions, Barcelona.
- Marcus, M. J. 1983. Additions to the avifauna of Honduras. *Auk* 100: 621–629.
- Marcus, M. J. 1984. Notes on the Great Green Macaw in Honduras. *Ceiba* 25: 151–155.
- Müller, W. de W. & Griscom, L. 1925. Descriptions of new birds from Nicaragua. *Amer. Mus. Novit.* 159.
- Monroe, B. L. 1968. A distributional survey of the birds of Honduras. *Orn. Monogr.* 7. American Ornithologists' Union, New York.
- Múnera-Roldán, C., Cody, M. L., Schiele-Zavala, R. H., Sigel, B., Woltmann, J. S. & Kjeldsen, J. P. 2007. New and noteworthy records of birds from south-eastern Nicaragua. *Bull. Brit. Orn. Cl.* 127: 152–161.
- Peterson, A. T., Escalona-Segura, G. & Griffith, J. A. 1998. Distribution and conservation of birds of northern Central America. *Wilson Bull.* 110: 534–543.
- Powell, G. & Bjork, R. 2004. Habitat linkages and the conservation of tropical biodiversity as indicated by seasonal migrations of Three-wattled Bellbirds. *Conserv. Biol.* 18: 500–509.
- Rasmussen, P. C. & Collar, N. 2002. White-fronted Nunbird *Monasa morphoeus*. P. 137 in del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, vol. 7. Lynx Edicions, Barcelona.
- Ridgely, R. S. & Gwynne, J. A. 1989. *A guide to the birds of Panama, with Costa Rica, Nicaragua, and Honduras*. Second edn. Princeton Univ. Press.
- Salvin, O. & Godman, F. D. 1897–1904. *Biologia Centrali-Americana. Aves*, vol. 3. Taylor & Francis, London.
- Sigel, B. J., Sherry, T. W. & Young, B. E. 2005. Avian community response to lowland tropical rainforest isolation: 40 years of change at La Selva Biological Station, Costa Rica. *Conserv. Biol.* 20: 111–121.
- Slud, P. 1960. The birds of Finca "La Selva" Costa Rica: a tropical wet forest locality. *Bull. Amer. Mus. Nat. Hist.* 121.
- Slud, P. 1964. The birds of Costa Rica distribution and ecology. *Bull. Amer. Mus. Nat. Hist.* 128.
- Snow, D. W. 2004. Lovely Cotinga *Cotinga amabilis*. P. 93 in del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, vol. 9. Lynx Edicions, Barcelona.
- Stiles, F. G. & Skutch, A. 1989. *A guide to the birds of Costa Rica*. Cornell Univ. Press, Ithaca, NY.
- Addresses:* Andrew C. Vallely, 52 West 82nd Street, Apt. 4D, New York, NY 10024, USA, e-mail: andrewcvallely@gmail.com. Robert J. Gallardo, Mariposario Alas Encantadas, Copan Ruinas, Honduras, e-mail: rgallard032@gmail.com. John S. Ascher, Division of Invertebrate Zoology, American Museum of Natural History, New York, NY 10024–5192 USA, e-mail: ascher@amnh.org