

## Notes on the birds of Isla Popa, western Bocas del Toro, Panama

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En Febrero y Marzo de 1997, se mostraron aves en la Isla de Popa, una isla selvática a las afueras de la Costa Noroeste de Panamá, la cual alberga tres áreas con aves endémicas y es la unión biogeográfica entre Centro y Sudamérica. De las 173 especies registradas, varias son poco conocidas en Panamá, incluyendo aquellas que han invadido la frontera de Costa Rica y Panamá recientemente, luego del desarrollo agrícola. La presencia de varias especies en los bordes de su rango territorial es de ayuda para definir los límites biogeográficos de la región. Se espera que estas observaciones ayuden a aquellos que estudian la dinámica biogeográfica de la región de Bocas del Toro, y atraigan la atención por asuntos relacionados con la conservación de aves nativas.

### Introduction

During the late 1980s, the Smithsonian Institution sponsored an expedition to a poorly known area of north-west Panama, the Almirante Bay archipelago in western Bocas del Toro province<sup>3</sup>. Until then, the region had received little attention from ornithologists, and it remains a remote and rarely visited corner of the Neotropics. In early 1997, I conducted a bird survey on a large, forested island in the archipelago—Isla Popa—to characterise its bird community and to assess its suitability for ecotourism. The results of the survey provide a snapshot of the current status of species in the region and help define the biogeographical boundaries of this complex region. In addition, these observations should assist in developing a birdlist for Bastimentos National Marine Park, which includes several islands in the archipelago.

Although excluded from a recent major synthesis of global Endemic Bird Areas (EBAs) (see maps in Stattersfield *et al.*<sup>5</sup>), Isla Popa supports at least two bird species endemic to Central America. Its avifauna includes representatives from three EBAs, two identified by Stattersfield *et al.*<sup>5</sup>, the Central American Caribbean slope and the Costa Rica and Panama highlands, and a third, the poorly known western Bocas del Toro endemic area described by Olson<sup>3</sup>. In addition to supporting endemics, the region straddles a biogeographical transition zone between the avifauna of Central America and that of Panama and northern South America, with several species replacements occurring along the shore of Almirante Bay<sup>3</sup>. With the recent construction of a new highway connecting lowland Bocas del Toro province with the Pacific slope, and continued conversion of forest to banana plantations along the Costa Rica–Panama border, these biogeographical boundaries are likely to fluctuate in the future.

### Study area and methods

Isla Popa is a relatively large island on the eastern edge of the Almirante Bay archipelago, less than 200 m from the mainland. Although most of the island is low-lying—below 100 m elevation—the

topography is rugged, with deep ravines and several small, permanent streams. During 1 February–6 March 1997, I conducted near-daily visual and audial surveys within a private 200-ha forest reserve in the south-east of the island, utilising trails that crisscross the property. Although the vegetation is dominated by humid evergreen forest (there is virtually no dry season here), several other distinct vegetation communities are present, including mangrove swamp, grass-covered (*Paspalum* sp.) hills and freshwater sedge marsh. Extensive thickets of *Isertia* (Rubiaceae) cover the forest edge and small banana and plantain gardens tended by local islanders dot the island (all plants were identified using Gentry<sup>2</sup>).

### Significant bird observations

Only one of several distinctive taxa of the western Bocas del Toro endemic area described by Olson<sup>3</sup> was found during this study: Stub-tailed Spadebill *Platyrinchus cancrominus*. A pair was heard and observed along a cleared property boundary in tall *Jacaranda–Inga* forest. Neither the Golden-collared Manakins *Manacus vitellinus* or Green Honeycreepers *Chlorophanes spiza* observed during the study appeared to resemble the distinct western Bocas del Toro forms found by Olson<sup>3</sup> on neighbouring islands in the archipelago. Small flocks of Red-fronted Parrotlet *Touit costaricensis*, a Costa Rica and Panama highlands endemic, were observed on two occasions during the study, as were several Snowy Cotinga *Carpodectes nitidus*, a Central American Caribbean slope endemic.

Central American birds appeared to outnumber Panamanian forms on Isla Popa, with Scarlet-rumped Tanager *Ramphocelus passerinii* and Pale-billed Woodpecker *Campephilus guatemalensis* seen daily and their southern congeners (*C. melanoleucos* and *R. flammigerus*) present on the mainland immediately to the south and east<sup>4</sup>. Other birds observed on Popa at the southern limit of their ranges (although without southern congeners) included Chestnut-coloured Woodpecker *Celeus castaneus*—one pair, Brown-capped Tyrannulet

*Ornithion brunneicapillum*—up to four daily, Olive-crowned Yellowthroat *Geothlypis semiflava*—at least 10 pairs, and Black-cowled Oriole *Icterus dominicensis*—two individuals.

Just two taxa recorded on Popa during this study are at the northern edge of their ranges in the region, and are not found in Costa Rica<sup>4</sup>. Golden-collared Manakin was abundant in the study area. Specimen evidence is required to confirm that the numerous Plain-coloured Tanagers *Tangara inornata* on Popa resembled Panamanian birds in that they showed a whitish ventral region and undertail-coverts, rather than the buffy coloration found in Costa Rican birds (see Olson<sup>3</sup> for descriptions).

Three open-country species recorded were practically unknown in Panama a decade ago<sup>4</sup>, and may have invaded from the west as forest on the Costa Rican border has been converted to extensive banana plantations. Multiple Olive-throated Parakeet *Aratinga nana* and Yellow-bellied Elaenia *Elaenia flavogaster* sightings were made on Popa, and a single White-tailed Kite *Elanus leucurus* was seen. It is likely that this trend of open-country species invasions will continue in western Bocas del Toro, particularly with the recent completion of a highway connecting the Almirante Bay town of Chiriquí Grande with the city of David on the Pacific coast.

Several poorly known species observed during this study deserve mention due to their rarity in southern Central America. Grey-breasted Crake *Laterallus exilis* and Ruby-throated Hummingbird *Archilocus colubris* may represent first records for Bocas del Toro province. Several crakes were seen and heard in the freshwater sedge marsh and adjacent grassy slopes, and the hummingbird was represented by an adult male feeding at a small *Inga* at the edge of the marsh. A pair of Semiplumbeous Hawk *Leucopternis semiplumbea* was found on the property; this species is considered globally near-threatened<sup>1</sup>. Other regionally uncommon species observed on Popa include Uniform Crake *Amaurolimnas concolor*, Parasitic Jaeger *Stercorarius parasiticus*—immature off Crawl Key following a storm, a mango *Anthracothorax* sp., Hooded Warbler *Wilsonia citrina*, Magnolia Warbler *Dendroica magnolia* and small groups of Lesser Nighthawk *Chordeiles acutipennis*, Purple Martin *Progne subis* and Tree Swallow *Tachycineta bicolor* which are assumed to have been migrating.

Isla Popa's size and proximity to the mainland may account for both its high species diversity (see Appendix) and the persistence of terrestrial taxa such as two tinamous (Tinamidae), Crested Guan *Penelope purpurascens* and several antbirds (Formicariidae). However, this does not explain the paucity of western Bocas del Toro endemics on Popa, as several are known from the mainland as well as from other offshore islands in the region<sup>3</sup>. Additional

collecting may demonstrate that Popa actually supports more western Bocas del Toro endemics than just the spadebill, as well as additional endemics from the other two EBAs.

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**Appendix.** Annotated list of the birds of Traversi-Doggett Property, south-east Isla Popa, Bocas del Toro, Panama.

Frequency of observation:

C = common; recorded daily

U = uncommon; seen more than once but not recorded daily

R = recorded once

Total estimate for property or daily high counts, where applicable, are given in parentheses after the frequency code. Dates are given for migratory species if they were not detected throughout the period. Total species list = 173.

- Great Tinamou *Tinamus major* C (three)  
 Little Tinamou *Crypturellus soui* C (two)  
 Brown Pelican *Pelecanus occidentalis* C (five)  
 Anhinga *Anhinga anhinga* R (one)  
 Magnificent Frigatebird *Fregata magnificens* C (five)  
 Great Egret *Ardea alba* U (one)  
 Little Blue Heron *Egretta caerulea* C (two)  
 Cattle Egret *Bubulcus ibis* C (three)  
 Green Ibis *Mesembrinibis cayennensis* C (at least two roosted on property)  
 Black Vulture *Coragyps atratus* C (40)  
 Turkey Vulture *Cathartes aura* C (generally five, but 1,750 in two kettles 5 March)  
 Osprey *Pandion haliaetus* C (two)  
 Grey-headed Kite *Leptodon cayannensis* U (one)  
 Swallow-tailed Kite *Elanoides forficatus* R (single 1 March)  
 White-tailed Kite *Elanus leucurus* U (single immature from 22 February)  
 Double-toothed Kite *Harpagus bidentatus* U (adult and immature)  
 Semiplumbeous Hawk *Leucopternis semiplumbea* U (one pair)  
 White Hawk *L. albicollis* U (one)  
 Common Black-hawk *Buteogallus anthracinus* C (one pair)  
 Roadside Hawk *Buteo magnirostris* C (four)  
 Broad-winged Hawk *B. platypterus* R (single 27 February)  
 Swainson's Hawk *B. swainsoni* U (84 in kettle 5 March)  
 Zone-tailed Hawk *B. albonotatus* U (1–2 birds)  
 Black Hawk-eagle *Spizaetus tyrannus* R (one)  
 Laughing Falcon *Herpethotes cachinnans* C (one pair)  
 Merlin *Falco columbarius* R (single 22 February)  
 Bat Falcon *F. rufigularis* U (one)  
 Grey-headed Chachalaca *Ortalis cinereiceps* R (five)  
 Crested Guan *Penelope purpurascens* U (2–3 pairs)  
 White-throated Crake *Laterallus albigularis* C (10)  
 Grey-breasted Crake *L. exilis* C (10)  
 Grey-necked Wood-rail *Aramides cajanea* C (two)  
 Uniform Crake *Amaurilmnas concolor* C (12)  
 Purple Gallinule *Porphyryla martinica* C (five)  
 Northern Jacana *Jacana spinosa* U (one pair)  
 Spotted Sandpiper *Actitis macularia* U (one)  
 Whimbrel *Numenius phaeopus* R (two)  
 Pale-vented Pigeon *Columba cayennensis* C (40)  
 Scaled Pigeon *C. speciosa* U (two)  
 Short-billed Pigeon *C. nigrirostris* C (20)  
 Blue Ground-dove *Claravis pretiosa* C (two)  
 Grey-chested Dove *Leptotilia cassinii* C (five)  
 Crimson-fronted Parakeet *Aratinga finschi* C (80)  
 Olive-throated Parakeet *A. nana* U (30)  
 Red-fronted Parrotlet *Touit costaricensis* U (30)  
 Brown-hooded Parrot *Pionopsitta haematotis* R (one)  
 Blue-headed Parrot *Pionus menstruus* C (50)  
 Red-lored Parrot *Amazona autumnalis* C (50)  
 Mealy Parrot *Amazona farinosa* R (pair)  
 Squirrel Cuckoo *Piaya cayana* U (one)  
 Groove-billed Ani *Crotophaga sulcirostris* C (20)  
 Black-and-white Owl *Ciccaba nigrolineata* C (one pair)
- Lesser Nighthawk *Chordeiles acutipennis* U (20) First recorded 19 February, then nightly  
 Parauque *Nyctidromus albicollis* C (eight)  
 White-collared Swift *Steptoprocne zonaris* U (90 on 4 and 6 March)  
 Grey-rumped Swift *Chaetura cinereiventris* U (30) 19 February onwards  
 Lesser Swallow-tailed Swift *Panyptila cayennensis* R (one pair 2 March)  
 Bronzy Hermit *Glaucis aenea* R (one territory)  
 Band-tailed Barbthroat *Threnetes ruckeri* U (four territories)  
 Long-tailed Hermit *Phaethornis superciliosus* U (4–5 territories)  
 Little Hermit *P. longuemareus* C (15 in lek)  
 White-necked Jacobin *Florisuga mellivora* C (three)  
 Green-breasted? Mango *Anthracothorax* sp.—*prevostii*? U (1–2 females)  
 Crowned Woodnymph *Thalurania colombica* C (five)  
 Blue-chested Hummingbird *Amazilia amabilis* U (10)  
 Rufous-tailed Hummingbird *A. tzacatl* C (10)  
 Purple-crowned Fairy *Heliodytes barroti* R (one)  
 Ruby-throated Hummingbird *Archilocus colubris* U (1–2)  
 Black-throated Trogon *Trogon rufus* U (three pairs)  
 Slaty-tailed Trogon *T. massena* R (a family group)  
 Rufous Motmot *Baryphthengus martii* U (two pairs)  
 Ringed Kingfisher *Ceryle torquata* R (one)  
 Green Kingfisher *Chloroceryle americana* R (one)  
 Collared Aracari *Pteroglossus torquatus* R (2–3)  
 Keel-billed Toucan *Ramphastos sulfuratus* C (10)  
 Chestnut-mandibled Toucan *R. swainsonii* C (10)  
 Black-cheeked Woodpecker *Melanerpes pucherani* C (three)  
 Chestnut-coloured Woodpecker *Celeus castaneus* R (one pair)  
 Lineated Woodpecker *Dryocopus lineatus* C (two)  
 Pale-billed Woodpecker *Campephilus guatemalensis* (two)  
 Plain Xenops *Xenops minutus* U (two)  
 Plain-brown Woodcreeper *Dendrocincla fuliginosa* C (two)  
 Wedge-billed Woodcreeper *Glyphorhynchus spirurus* C (two)  
 Buff-throated Woodcreeper *Xiphorhynchus guttatus* C (five)  
 Streak-headed Woodcreeper *Lepidocolaptes souleyetii* R (one)  
 Slaty Antshrike *Thamnophilus punctatus* C (10 pairs)  
 Checker-throated Antwren *Myrmotherula fulviventris* C (five pairs)  
 White-flanked Antwren *M. axillaris* U (one pair)  
 Dot-winged Antwren *Microrhopias quixensis* U (one pair)  
 Chestnut-backed Antbird *Myrmeciza exsul* C (two pairs)  
 Brown-capped Tyrannulet *Ornithion brunneicapillum* C (four)  
 Yellow-bellied Elaenia *Elaenia flavogaster* C (three)  
 Ochre-bellied Flycatcher *Mionectes oleaginea* C (three territories)  
 Common Tody-flycatcher *Todirostrum cinereum* U (one pair)  
 Stub-tailed Spadebill *Platyrinchus cancrominus* R (one pair)  
 Ruddy-tailed Flycatcher *Terentriccus erythrurus* U (two)  
 Eastern Wood-pewee *Contopus virens* C (one)  
 Tropical Pewee *C. cinereus* U First noted 19 February; three per day after 27 February

- Acadian Flycatcher *Empidonax virescens* U (two birds 6 February and 4 March)
- Long-tailed Tyrant *Colonia colonus* R (one 2 March)
- Bright-rumped Attila *Attila spadiceus* U (single 17 February onward)
- Dusky-capped Flycatcher *Myiarchus tuberculifer* U (two)
- Great-crested Flycatcher *M. crinitus* R (single 5 March)
- Great Kiskadee *Pitangus sulphuratus* C (three)
- Boat-billed Flycatcher *Megarynchus pitangua* C (10)
- Social Flycatcher *Myiozetetes similis* C (10)
- Grey-capped Flycatcher *M. granadensis* C (three)
- Streaked Flycatcher *Myiodynastes maculatus* R (single 27 February)
- Tropical Kingbird *Tyrannus melancholicus* C (12)
- Eastern Kingbird *T. tyrannus* R (one 2 March)
- White-winged Becard *Pachyrhamphus polychopterus* R (single 21 February)
- Masked Tityra *Tityra semifasciata* U (one pair)
- Snowy Cotinga *Carpodectes nitidus* U (two)
- Purple-throated Fruitcrow *Querula purpurata* U (eight in flock)
- Golden-collared Manakin *Manacus vitellinus* C (15)
- Red-capped Manakin *Pipra mentalis* C (3–4 leks)
- Purple Martin *Progne subis* U (30 1 March onward and 10–20 *Progne* sp. 20 February)
- Tree Swallow *Tachycineta bicolor* R (seven 3 March)
- Mangrove Swallow *T. albilinea* R (one 21 February)
- Bank Swallow *Riparia riparia* R (three 3 March)
- Cliff Swallow *Hirundo pyrrhonota* U (20 20 February and 1 March)
- Barn Swallow *H. rustica* (50 27 February onward)
- Bay Wren *Thryothorus nigricapillus* C (four pairs)
- House Wren *Troglodytes aedon* C (one pair by wooden shed)
- Long-billed Gnatwren *Ramphocaenus melanurus* C (eight)
- Tropical Gnatcatcher *Polioptila plumbea* C (2–3 pairs)
- Wood Thrush *Hylocichla mustelina* R (two birds 5 March)
- Clay-coloured Thrush *Turdus grayi* C (20)
- Grey Catbird *Dumetella carolinensis* U (15)
- Yellow-throated Vireo *Vireo flavifrons* U (one)
- Lesser Greenlet *Hylophilus decurtatus* C (four)
- Golden-winged Warbler *Vermivora chrysoptera* R (single 1 March)
- Tennessee Warbler *V. peregrina* C (four)
- Yellow Warbler *Dendroica petechia aestiva* U (two 27 February onward)
- Mangrove Warbler *D. petechia erithachorides* U (two singing)
- Chestnut-sided Warbler *D. pensylvanica* C (five)
- Magnolia Warbler *D. magnolia* U (two different birds 1 and 4 March)
- Bay-breasted Warbler *D. castanea* C (one)
- Black-and-white Warbler *Mniotilta varia* U (two)
- Northern Waterthrush *Seiurus noveboracensis* C (five territories)
- Kentucky Warbler *Oporornis formosus* R (single 28 February)
- Mourning Warbler *O. philadelphia* R (single 1 March)
- Olive-crowned Yellowthroat *Geothlypis semiflava* C (12 pairs)
- Hooded Warbler *Wilsonia citrina* U (single female throughout period)
- Bananaquit *Coereba flaveola* C (10)
- Plain-coloured Tanager *Tangara inornata* C (four)
- Golden-hooded Tanager *T. larvata* C (five)
- Blue Dacnis *Dacnis cayana* U (two)
- Green Honeycreeper *Chlorophanes spiza* U (two)
- Shining Honeycreeper *Cyanerpes lucidus* U (eight)
- Yellow-crowned Euphonia *Euphonia luteicapilla* C (four)
- Olive-backed Euphonia *E. gouldi* C (10)
- Blue-grey Tanager *Thraupis episcopus* C (10)
- Palm Tanager *T. palmarum* C (four)
- Tawny-crested Tanager *Tachyphonus delatrii* C (20)
- White-lined Tanager *T. rufus* C (three pairs)
- Red-throated Ant-tanager *Habia fuscicauda* C (10)
- Summer Tanager *Piranga rubra* C (one)
- Scarlet-rumped Tanager *Ramphocelus passerinii* C (50 pairs)
- Buff-throated Saltator *Saltator maximus* C (10)
- Slate-coloured Grosbeak *S. grossus* U (2–3 pairs)
- Blue-black Grosbeak *Cyanocompsa cyanooides* C (four)
- Indigo Bunting *Passerina cyanea* First recorded 6 February (one); six per day after 27 February
- Black-striped Sparrow *Arremonops conirostris* C (four)
- Blue-black Grassquit *Volatinia jacarina* C (70 birds)
- Variable Seedeater *Sporophila americana* C (100 birds)
- White-collared Seedeater *S. torqueola* C (40 birds)
- Thick-billed Seedfinch *Oryzoborus angolensis* C (three pairs)
- Giant Cowbird *Scaphidura oryzivora* U (eight)
- Black-cowled Oriole *Icterus dominicensis* R (two)
- Orchard Oriole *I. spurius* First recorded 6 February (pair); 10 per day after 27 February
- Baltimore Oriole *I. galbula* R (single 2 March)
- Scarlet-rumped Cacique *Cacicus uropygialis* U (five)
- Montezuma Oropendola *Psarocolius montezuma* C (10)