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An assessment on the status and distribution of endemic and threatened birds of Siquijor Island, Philippines: A progress report

This paper presents the results of an on-going study on the avifauna of Siquijor Island utilizing point counts, transect walks, and MacKinnon Lists with ethnobiological surveys. The study covered the four major forest patches remaining on Siquijor and was visited during October – December 2007. A total of 44 species were recorded. Four of the five endemic subspecies were confirmed, namely: Streak-breasted Bulbul (*Ixos siquijorensis siquijorensis*), Yellow-bellied Whistler (*Pachycephala philippensis siquijorensis*), Orange-bellied Flowerpecker (*Dicaeum trigonostigma besti*) and Everett's White-eye (*Zosterops everetti siquijorensis*). The Philippine Hanging-Parrot (*Loriculus philippensis siquijorensis*) was not sighted at all and is presumed to be extinct. Of all the threatened species known to inhabit the island in the past, only the Streak-breasted Bulbul was sighted; it was found in all sites with relative indices of abundance of 1.0 in Bandilaan, Canghaling, and Liloan; and 0.92 in Salagdoong. Bandilaan Natural Park harbors the highest number of bird species (35) followed by Canghaling (33), Liloan (28) and Salagdoong (20). Habitat destruction due to firewood extraction and slash-and-burn farming as well as hunting were the observed threats to the island's avifauna and its unique biodiversity.

The Philippine archipelago's complex geological history and long periods of isolation from the rest of the world have contributed to its high biodiversity and endemism making it one of the 17 mega-diversity hotspots in the world (Ong, Afuang & Rosell-Ambal, 2002) with biological richness equivalent to that of Galapagos Islands times ten (Heaney & Regalado, 1998). For birds alone, the Philippines has 576 species of which 195 are endemic to the country (Mallari, Tabaranza, & Crosby, 2001).

Birds are important in maintaining the ecological balance of the ecosystem especially in terms of species dispersal of trees. Deforestation coupled with hunting and illegal wildlife trade pose a great threat to wildlife, including birds. If uncontrolled, extinction is highly possible (Albuero, *et. al.*, 2005) especially in severely deforested islands like Siquijor where only about 781 hectares of forest cover is protected.

Siquijor Island (09° 11' N; 123° 35' E) is one of the biologically diverse yet deforested islands in the Visayas. It is home to five endemic subspecies of birds namely: Streak-breasted Bulbul (*Ixos siquijorensis siquijorensis*), Yellow-bellied Whistler (*Pachycephala philippensis siquijorensis*), Orange-bellied Flowerpecker (*Dicaeum trigonostigma besti*), Philippine Hanging Parrot (*Loriculus philippensis siquijorensis*), and Everett's White-eye (*Zosterops everetti siquijorensis*). Aside from the Streak-breasted Bulbul, there are five more threatened species known in the island: Rufous-lored Kingfisher (*Halcyon winchelli*), Japanese Night-Heron (*Gorsachius goisagai*), Philippine Hawk-Eagle (*Spizaetus philippensis pinskeri*), Philippine Cockatoo (*Cacatua haematuropygia*) and Spotted Imperial-pigeon (*Ducula carola*). The result of this study could be used for further conservation efforts and forest management on the remaining patches of forest of Siquijor (Bandilaan, Canghaling, Salagdoong, and Lilo-an). To help the local government units (LGUs) in developing and promoting ecotourism industry, this study serves as an avenue to attract more tourists (especially birdwatchers) to visit biodiversity-rich sites. In effect, local residents may be provided more opportunities to generate income as tourist guides.

This study's aims included the following:

- Identify the bird species found in the above named areas of Siquijor Island;
- Determine the relative index of detectability of both endemic subspecies and threatened species found on each site; and
- Determine the status and distribution of endemic and threatened birds of Siquijor Island.

Ornithological accounts on Siquijor

Steere in 1888 was the first to visit the island followed by the Menage Expedition in 1891. These were followed by visits such as those of the Philippine National Museum in 1907 and 1908. Rand and Rabor (1960) summarized Rabor's collection in 1949, 1952, 1953 and 1954. Both the Cambridge-Philippines Expedition and Silliman University-Center for Tropical Conservation Studies (CENTROP) conducted a thorough vertebrate sampling in the area in the early 1990s (Jakosalem *et al.* 2002).

Rand and Rabor (1960) presumed that Philippine Hawk-Eagle (*Spizaetus philippensis*) and the Japanese Night-Heron (*Gorsachius goisagai*) as extinct because these were no longer recorded since 1896. The Philippine Cockatoo (*Cacatua haematuropygia*) and Spotted Imperial Pigeon (*Ducula carola*) were recorded in

1959 (Rand & Rabor, 1960) but were no longer observed by Jakosalem *et al.* (2002).

Meanwhile, Evans, Magsalay, Dutson, and Brooks (1993) recorded that the Siquijor endemic subspecies Streak-breasted Bulbul were sighted in three study sites: Lilo-an, Bandilaan and Canghaling. In the study by Paalan (1994), a pair of juvenile Rufous-ored Kingfisher was observed Lilo-an.

The most recent survey was that of Jakosalem *et al.* (2002) on three of the four major forest patches of Siquijor Island, recording 53 species of birds including four of the five Siquijor endemic subspecies: Streak-breasted Bulbul (*Ixos siquijorensis siquijorensis*), Yellow-bellied Whistler (*Pachycephala philippensis siquijorensis*), Orange-bellied Flowerpecker (*Dicaeum trigonostigma besti*), and Everett's White-eye (*Zosterops everetti siquijorensis*). The Streak-breasted Bulbul was the only one of the six threatened species known in Siquijor. A study on the biology of the Streak-breasted Bulbul *I. s. siquijorensis* was conducted by Bucol in 2006.

Methodology

Description of the Study Sites

Mt. Malabahoc in Bandilaan Natural Park is the highest point of Siquijor Island at 557m above sea level. It is surrounded by farm lots and abandoned cropland. The area is dominated mainly by *Ficus sp.*, molave (*Vitex parviflora*), dap-dap (*Erythrina sp.*) and tangile (*Shorea polysperma*) along with several exotic species such as mahogany (*Sweetenia macrophylla*), gmelina (*Gmelina arborea*), and teak (*Tectona grandis*). The undergrowth is thick with saplings of large trees, shrubs, and grasses. It was observed that some of the trees, especially the pine tree (*Pinus sp.*), were ringed and burned, despite the fact that the area is considered protected.

The forest of Canghaling is characterized by a more plain topography at an elevation of 250m a.s.l. The vegetation is composed of natural forest species like ilang-ilang (*Cananga odorata*) and various *Ficus* species such as bahi, taloot and labnog. A small patch of less than 10ha still retains mature secondary limestone forest with canopy trees at 20m or higher. The understory is dominated by the "ubod" palm (*Heterospatha spp.*).

Salagdoong forest is located on the eastern side of the island in the town of Maria, and is among the local tourist spots. Leading to the cliff of Salagdoong is an asphalted road that bisects the man-made forest. The remaining large trees in the area are composed of planted species such as lumbang (*Aleurites moluccana*) and molave (*Vitex parviflora*). Agricultural fields are also visible.

Liloan forest reserve is also located in the municipality of Maria. The vegetation of this forest is dominated with mahogany (*Sweetenia macrophylla*) with dbh of 15-20cm; total height 15-20m, "bungalod" [dbh 60-90cm; total height 20-30m], and "magtalisay" (*Terminalia sp*) with dbh ranging from 15 to 20cm and total height 10-15m. Some other species includes lumbang (*Aleurites*

mollucana), neem tree (*Azadirachta indica*), eucalyptus (*Eucalyptus* sp.), Brazilian Fire-tree (*Schizolobium excelsum*), "talasai" (*Terminalia cattapa*), and "linog" (*Alstonia macrophylla*). The undergrowth is relatively thick with shrubs, herbs and fallen leaves. Domesticated animals (e.g., cow and goats) were also visible in the area.

Data Gathering Techniques

The avifaunal survey was done using point counts, transect walks, and MacKinnon list method (MacKinnon & Phillips, 1993). A list was made by recording each new species until a predetermined number of species was reached. A species can only be recorded once in each list but may be recorded in a subsequent list. Surveys were repeated until a minimum of ten lists were completed on each site (as adapted by Turner, Tamblyn, Dray, Ledesma, Maunder, & Raines, 2003). Data were gathered using MacKinnon lists that were analyzed to give an index of relative detectability (IRD) for each species. The relative detectability of each species in each site is equivalent to the fraction of the list on which a species occurs. This index can vary between 0 (species not recorded) and 1 (species recorded on every list) (Bibby, Jones & Marsden, 1998).

Mist nets were unavailable and were not included in the study. Binoculars were used to closely observe birds for identification. Birds were identified to species level and trinomial classification was provided to the endemic subspecies based on the field guide on birds of the Philippines by Kennedy, Gonzales, Miranda, & Fisher (2000).

Anthropogenic activities (e.g., slash and burn farming, clearings, forest extraction) near or within the forest were also noted and documented by means of photos. Ethnobiological surveys were also conducted to solicit additional information on species found on each forest block. Data were obtained using informal oral interview with local residents, particularly bird hunters.

The survey was conducted in 2007 on the following dates: October 18 and 26 and November 27 (Canghaling); November 2 and 29 (Liloan and Salagdoong) and December 16 and 29 (Bandilaan Natural Park).

Results

Of the subspecies endemic to the Island, four were sighted during the survey namely: Streak-breasted Bulbul (*Ixos siquijorensis siquijorensis*), Yellow-bellied Whistler (*Pachycephala philippensis siquijorensis*), Orange-bellied Flowerpecker (*Dicaeum trigonostigma besti*), and the Everett's White-eye (*Zosterops everetti siquijorensis*). The Streak-breasted Bulbul was sighted in all four sites. Orange-bellied Flowerpecker was sighted in two sites (Bandilaan and Canghaling). Both the Yellow-bellied Whistler and the Everett's White-eye were sighted in Bandilaan Natural Park only. However, the Philippine Hanging

Parrot was not sighted at all and is presumed to be extinct. This observation supports a similar claim by Dickinson *et al.* (1991).

Table 1. Number of endemic taxa in Bandilaan, Canghaling, Salagdoong, and Liloan in Siquijor Island.

Common Name	Scientific Name	2002 survey			2007 survey			
		Bandi - laan	Cang - haling	Salag - doong	Bandi - laan	Cang - haling	Salag - doong	Liloan
1. Philippine Hanging-Parrot	<i>Loriculus philippensis siquijorensis</i>	-	-	-	-	-	-	-
2. Streak-breasted Bulbul	<i>Ixos siquijorensis siquijorensis</i>	X	X	X	92	69	38	59
3. Yellow-bellied Whistler	<i>Pachycephala philippensis Siquijorensis</i>	X	X	-	14	-	-	-
4. Orange-bellied Flowerpecker	<i>Dicaeum trigonostigma besti</i>	X	X	X	30	27	-	-
5. Everett's White-Eye	<i>Zosterops everetti Siquijorensis</i>	X	-	-	9	-	-	-

(X) sighted; (-) not sighted; (numbers) represent the number of individuals encountered (Adapted with modification from Bibby *et al.* 1998); 2002 survey was that of Jakosalem *et al.* (2002).

Among the Siquijor endemic subspecies (Table 2), only the Streak-breasted Bulbul was common in all study sites with index of abundance ranging from 0.92-1.0. The other species, on the other hand, have limited distribution. The Yellow-bellied Whistler was found only in Bandilaan (0.38), although it can be found also in Canghaling (Jakosalem *et al.* 2002) and its absence during the study might be due to poor weather conditions. The Orange-bellied Flowerpecker was also common but only in two sites, Bandilaan and Canghaling with abundance of 1.0 in both areas. The Everett's White-eye was found to be restricted in Bandilaan with abundance index of only 0.54. It should also be noted that the threatened Rufous-lored Kingfisher (*Halcyon winchelli*) found on the island in the 1990s was not recorded by the surveys in 2002 and 2007. The other taxa are resident elsewhere in the country (their indices of relative detectability are also in Table 2). Appendix A lists in detail birds encountered during this survey, including species not directly encountered at the time of the study but confirmed by the locals.

Table 2. Index of relative detectability of birds observed during the surveys in Bandilaan, Canghaling, Salagdoong, and Liloan, Siquijor Island.

Common Name	Scientific Name	Index of Relative Detectability			
		Bandilaan	Canghaling	Salagdoong	Liloan
Streak – breasted Bulbul	<i>Ixos siquijorensis siquijorensis</i>	1.0	1.0	0.92	1.0
Yellow – bellied Whistler	<i>Pachycephala philippensis siquijorensis</i>	0.38	---	---	---
Orange – bellied Flowerpecker	<i>Dicaeum trigonostigma besti</i>	1.0	1.0	---	---
Everett's White – eye	<i>Zosterops everetti siquijorensis</i>	0.54	---	---	---
Brahminy Kite	<i>Haliastur indus</i>	0.08	---	---	---
Red Jungle Fowl	<i>Gallus gallus</i>	0.31	---	---	---
Barred Rail	<i>Gallirallus torquatus</i>	---	---	0.08	---
Black – Chinned Fruit Dove	<i>Ptilinopus lechancheri</i>	0.08	---	---	---
White –eared Brown Dove	<i>Phapitreron leucotis</i>	0.92	0.69	0.5	0.54
Reddish Cuckoo Dove	<i>Macropygia phasianella</i>	0.08	---	---	---
Emerald Dove	<i>Chalcophaps indica</i>	0.46	0.23	0.42	0.15
Island Collared Dove	<i>Sreptopelia bitorquata</i>	---	0.08	---	---
Spotted Dove	<i>Sreptopelia chinensis</i>	0.38	0.38	1.0	0.69
Zebra Dove	<i>Geopelia striata</i>	---	0.08	1.0	0.92
Philippine Coucal	<i>Centropus viridis</i>	0.77	0.85	0.58	0.46
White Collared Kingfisher	<i>Halcyon chloris</i>	---	0.08	0.75	0.69
Black Hooded Pitta	<i>Pitta sordida</i>	0.31	0.61	---	0.31
Pied Triller	<i>Lalage nigra</i>	---	0.38	0.75	0.85
Black – naped Oriole	<i>Oriolus chinensis</i>	---	0.08	0.58	0.38
Oriental Magpie Robin	<i>Copsychus saularis</i>	0.08	0.77	0.25	0.57
Arctic Warbler	<i>Phylloscopus borealis</i>	---	---	---	0.31
Grey Streak Flycatcher	<i>Muscicapa griseisticta</i>	0.08	---	---	---
Mangrove Blue Flycatcher	<i>Cyornis ruficastra</i>	0.54	---	---	---
Pied Fantail	<i>Rhipidura javanica</i>	---	0.23	0.83	0.69
Black – naped Monarch	<i>Hypothymis azurea</i>	0.54	0.54	---	---
Brown Shrike	<i>Lanius cristatus</i>	0.23	0.92	0.5	0.85
Asian Glossy Starling	<i>Aplonis panayensis</i>	0.46	0.92	1.0	0.85
Coledo	<i>Sarcops calvus</i>	0.31	0.08	---	---
Olive – backed Sunbird	<i>Nectarinia jugularis</i>	0.92	1.0	0.83	0.69
Purple-throated Sunbird	<i>Nectarinia sperata</i>	0.31	---	---	---
Red-rumped Swallow	<i>Cecropis daurica</i>	---	---	---	0.08
House Martin	<i>Delichon urbicum</i>	0.08	---	---	---
Number of Mactinnon lists		13	13	12	12

Note: Siquijor endemic subspecies in bold letters

Discussion

Forty-four species were identified in the four forests in Siquijor island. This number may increase as the number of sites surveyed also increases and as the duration of the survey is extended. To date, among all of the six threatened species known to occur in Siquijor, only the Streak-breasted Bulbul was sighted. Although the data presented here are preliminary, these are suggestive of declining avifaunal composition in each study site. In spite of being government-owned, the forest reserves have continually been subjected to the encroachment of agriculture and hunting. Hunting with the use of air-guns was found to be rampant in Lilo-an but recently regulated in Canghaling. While hunting of this kind was not observed in Bandilaan, slash-and-burn farms are visible near the perimeter of the park.

Certain localities in Siquijor still hold stunted secondary growth such as the steep slopes in Cang-isad. However, these are privately owned and have yet to be surveyed intensively. In addition, the scrubs in foothills of severely deforested sites may also support other tolerant species.

The fact that the majority of the hunters in Siquijor are out-of-school youth means that there is a need to educate the general public in order to increase awareness of Siquijor's unique biodiversity. In addition, protection of the above-mentioned forest reserves is of immense importance and requires immediate action. With only one forest guard assigned to these reserves, encroachment is a recurring problem.

Acknowledgment

This study was made possible through the efforts of the following individuals and institutions: Dr. Edward Maningo of the College of Agriculture and Forestry; volunteers and staff of Environmental Conservation Studies and Philippine Economic Resources Research Incorporated (ECOSPHERE) in Dumaguete City; Olivier DeClerck, Frederik Leliart and Dioli Ann Payo of Ghent University, Ghent, Belgium for sponsoring and joining one of the trips to Bandilaan and Canghaling; Jon Hornbuckle for the suggestions made on an earlier draft; Desmond Allen for suggestions especially on some threatened species; Allan Faburada for allowing us to use the digital camera of the Future Farmers of the Philippines Collegiate Chapter (FFPCC); and James Bucol, and Marcelo Pactol Jr. for assistance in the field.

Appendix A.
 Avifaunal species recorded in Bandilaan, Canghaling, Salagdoong, and Liloan, Siquijor Island.

Species	Common Name	Site			
		Bandi - laan	Canghaling	Salagdoong	Lilo - an
<i>Gorsachius goisagi</i> ***	Japanese Night Heron	---	---	---	---
<i>Spizaetus philippensis</i> ***	Philippine Hawk Eagle	---	---	---	---
<i>Ducula carola</i> ***	Spotted Imperial Pigeon	---	---	---	---
<i>Cacatua haematuropygia</i> ***	Philippine Cockatoo	---	---	---	---
<i>Halcyon winchellii</i> ***	Rufous - lored Kingfisher	---	---	---	---
<i>Ixos siquijorensis</i> <i>siquijorensis</i> ***	Streak - breasted Bulbul	92	69	38	59
<i>Loriculus philippensis</i> <i>siquijorensis</i>	Philippine Hanging Parakeet	---	---	---	---
<i>Pachycephala philippensis</i> <i>siquijorensis</i>	Yellow - bellied Whistler	14	---	---	---
<i>Dicaeum trigonostigma besti</i>	Orange - bellied Flowerpecker	30	27	---	---
<i>Zosterops everetti</i> <i>siquijorensis</i>	Everett's White - eye	9	---	---	---
<i>Halastur indus</i>	Brahminy Kite	1	R	---	---
<i>Accipiter virgatus</i>	Besra	---	---	---	---
<i>Accipiter golaris</i>	Philippine Sparrow Hawk	---	---	---	---
<i>Falco severus</i>	Oriental Hobby	---	---	---	---
<i>Falco peregrinus</i>	Peregrine Falcon	---	---	---	---
<i>Gallus gallus</i>	Red Jungle Fowl	5	R	---	---
<i>Coturnix chinensis</i>	Blue - breasted Quail	R	R	---	---
<i>Gallinallus toquatus</i>	Barred Rail	R	R	I	R
<i>Porzana eurizonoides</i>	Slaty - legged Crane	---	---	---	---
<i>Treron pompadora</i>	Pompadour Pigeon	---	---	---	---
<i>Treron vermans</i>	Pink - necked Green Pigeon	---	---	---	---
<i>Ptilinopus lechancheri</i>	Black - chinned Fruit Dove	1	---	---	---
<i>Ducula bicolor</i>	Metallic Wood Pigeon	---	---	---	---
<i>Phapitreron leucotis</i>	White - eared Brown Dove	29	15	10	15
<i>Macropygia phasianella</i>	Reddish Cuckoo Dove	1	R	---	---

<i>Macropygia phasianella</i>	Reddish Cuckoo Dove	1	R	---	---
<i>Chalcophaps indica</i>	Emerald Dove	6	3	5	2
<i>Streptopelia chinensis</i>	Spotted Dove	6	5	22	14
<i>S. bitorquata</i>	Island Collared Dove	---	1	---	R
<i>Geopelia striata</i>	Zebra Dove	R	1	38	34
<i>Cateonix nicobarica</i>	Nicobar Pigeon	---	---	---	---
<i>Tanygnathus lincionensis</i>	Blue-naped Parrot	---	---	---	---
<i>Ninox philippensis centralis</i>	Philippine Hawk Owl	1	R	R	R
<i>Centropus viridis</i>	Philippine Coucal	20	14	10	15
<i>Centropus bengalensis</i>	Lesser Coucal	---	---	---	---
<i>Cacomantis sepulcralis</i>	Rusty-breasted Cuckoo	---	---	---	---
<i>Eudynamis scolopacea</i>	Koel	---	---	---	---
<i>Caprimulgus affinis</i>	Savanna Nightjar	---	---	R	R
<i>Collocalia exulenta</i>	Glossy Swiftlet	*	*	*	*
<i>Collocalia troglodytes</i>	Pygmy Swiftlet	*	*	*	*
<i>Collocalia vanikorensis</i>	Island Swiftlet	---	---	---	---
<i>Cypsiurus balasensis</i>	Asian Palm Swiftlet	---	---	---	---
<i>Hirundapus celebensis</i>	Purple Needletail	R	---	---	---
<i>Hirundo rustica</i>	Barn Swallow	---	---	---	---
<i>Hirundo tahitica</i>	Pacific Swallow	---	---	---	---
<i>Cecropis daurica</i>	Red-rumped Swallow	---	---	---	1
<i>Ariamus leucorhynchus</i>	White-breasted Wood Swallow	---	R	---	R
<i>Megalaima haemacephala</i>	Crimson Barbet	---	---	---	---
<i>Pitta sordida</i>	Black Hooded Pitta	4	11	---	4
<i>Pitta erythrogaster</i>	Red-bellied Pitta	---	---	---	---
<i>Merops philippinus</i>	Blue-tailed Bee-eater	---	---	---	---
<i>Eurystomus orientalis</i>	Dollarbird	---	---	---	---
<i>Lalage nigra</i>	Pied Triller	---	8	19	25
<i>Pycnonotus goaivier</i>	Yellow-vented Bulbul	---	---	---	---
<i>Corvus macrorhynchus</i>	Large-bellied Crow	---	R	---	---
<i>Oriolus chinensis</i>	Black-naped Oriole	R	3	7	7
<i>Copsychus saularis</i>	Oriental Magpie Robin	1	18	3	13
<i>Saxicola caprata</i>	Pied Buschat	---	R	---	R
<i>Phylloscopus borealis</i>	Arctic Warbler	---	---	---	4

(X)-sighted; (-) - not sighted; (*) - too numerous to quantify; (R) - reported by locals but not encountered during the survey. Letters marked with *** refer to threatened species and letters in bold refer to subspecies endemic to Siquijor Island.

References

- Alburo, H.M., Lillo, E.P., Malaki, A.B., Alcazar, S.M., Agbay, E.A., Manalastas, R.D., Obiso, L.S., Hohoyoy, G.B., & Opiano, R.P. (2005). Avifaunal Species on Selected sites of Argao Watershed Forest Reserve, Cebu Philippines. Paper presented during the 18th CV-CIRRD R & D In-House Review, Negros Oriental State University, Dumaguete City. August 16-17, 2005.
- Bibby, C., Jones, M., & Marsden, S. (1998). Birds Surveys Expedition Field Techniques. Expedition Advisory Centre, Royal Geographical Society with the Institute of British Geographers, 1 Kensington Gore, London.
- BirdLife International (2007) Streak-breasted Bulbul *Ixos siquijorensis*: Species factsheet Retrieved 3 February 2008 from <http://www.birdlife.org/datazone/species/index.html?action=SpcHTMLDetails.asp&sid=7292&m=0>
- Bucol, A.A. (2006). Notes on the biology of the Streak-breasted Bulbul *Ixos siquijorensis* (Steere 1890). *Silliman Journal*, 47, 1, 95-104.
- Dickinson, E.C., Kennedy, R.S., & Parkes, K.C. (1991). The birds of the Philippines: An annotated check-list. Tring, UK: British Ornithologists' Union (Check-list 12).
- Evans, T. D., Magsalay, P., Dutton, G.C.L., & Brooks, T.M. (1993). The conservation status of the forest birds in Siquijor, Philippines. *Forktail*, 8, 89 – 96.
- Heaney, L.R. & Regalado, J. (1998). *Vanishing treasure of the Philippine rainforest*. Chicago, IL: The Field Museum, University of Chicago Press.
- Jakosalem, P.G.C., Paguntalan, L.M.J., Pedregosa, M.D., Gadiana, M.J.C., & Bueno, R.G. (2002) The status of threatened and endemic birds of Siquijor Island, Philippines. *Silliman Journal*, 43, 1, 137 – 151.
- Kennedy, R. S., Gonzales, P.C., Miranda, H.C. Jr., & Fisher, T.H. (2000) *A guide to the birds of the Philippines*. Oxford: Oxford University Press.
- MacKinnon, J. & Phillips, K. (1993). A field guide to the birds of Sumatra, Java and Bali. Oxford: Oxford University Press.
- Mallari, N.A., Tabaranza, B. & Crosby, M. (2001). *Key conservation sites in the Philippines: A Haribon Foundation and BirdLife International Directory of Important Bird Areas*. With contributions from Lepiten-Tabao, M. & Gec, G.A. In collaboration with the Department of Environment and Natural Resources (DENR). Makati City: Bookmark.
- Ong, P. S., Afuang, L.E. & Rosell-Ambal, R.G., Eds. (2002) Philippine Biodiversity Conservation Priorities: A Second Iteration of the National Biodiversity Strategy and Action Plan. DENR-PAWB, Conservation International Philippines, Biodiversity Conservation Program UP Center for Integrative and Development Studies and Foundation for the Philippine Environment, Quezon City.
- Paalan, R. B (1994) An avifaunal survey of Siquijor Island. *Convergence*, 76-86.
- Rand, A.L., & Rabor, D.S. (1960). Birds of the Philippine Islands: Siquijor, Mount Malindang, Bohol and Samar. *Fieldiana Zoology*, 899. Field Museum of Natural History.
- Turner, C., Tamblin, A., Dray, R., Ledesma, J.M., Maunder, L. & Raines, P. (2002) The Negros Rainforest Conservation Project: Past, present and future. *Silliman Journal*, 44, 2, 136-157.

