Short Communication

Diurnal Birds (Animalia: Aves) in the Area of Taman Wisata Alam Gunung Meja, Manokwari, West Papua

Burung Diurnal (Animalia: Aves) di Kawasan Taman Wisata Alam Gunung Meja, Manokwari, Papua Barat

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Taman Wisata Alam Gunung Meja (TWGM) located in 134°03'17"−134°04'05" E and 0°51'29"−0°52'59" S, is one of unique protected areas in Papua, categorized as a lowland tropical rainforest represented holotype forest areas in the coastal site of the northern Papua.

Survey was conducted in the area of TWGM from 8 to 22 November 2006 by daily walking along 1,5km constructing transect trail fit to the *topography condition*. In general, all observation sites are grown by woody plants, palms, lianas, ferns, and shrubs species. The plants species around the sites were not observed in details, however, some woody species had been recognized such as *Pometia pinnata, Vitex confassus, Horfieldia irya, Sterculia macrophylla, Pimelodendron amboinicum, Palaquium amboinensis, Horsfieldia silvetris* and *Aglaia* sp. Others like *Bambusa* sp, palms (*Licuala* sp., *Calamus aruensis* Becc and *Caryota rumphiana* Mart); lianas (*Asplenium nidus* L., *Acrosticum aureum* L., *Selaginela australis* and *Dipteris steroides*); ferns (*Dicksonia blumei* Moore, *Lycopodium complanatum* L. and *Asplenidum nidus* L.; shrubs (*Mimosa pudica, Euphorbia geniculata, Bidens spilosa, Imperata cylindrica, Paspalum conjugata, Crotalaria incana* L. *Laucaena glauca* and *Axonopus* compresus); orchids (*Bulbohyllum* sp., *Spathoglotis* sp. And *Dendrobium littorale*) were also encountered during the survey. Topography was the only difference between two transect lines. Line 1 was done along the road built within the areas (the main road is usually used to pass the area from one to the other site). Therefore, this line had a fair and light topography, and it was easy to conduct. Along the line, woody plants were grown with rare canopy cover, so the sun light could easily penetrate the low layer forest land. On the other hand, transect line 2 was established within the forest site, entering deeper, the study site was covered by woody and high trees, so most of the sites were fully covered with canopy. It had heavy topography with constricted relief. The site was more humid, and it was found that the temperature was lower (25°C in average) compared to transect 1 (28°C in average) while the forest floor was sometimes wet. Bird observation was performed twice a day, early in the morning between 05.00−07.00 a.m. and late in the afternoon between 04.00−06.00 p.m. An additional observation was also carried out in two different observation points (1) 15m asl 134°04'359"E and 00°50'753"S and (2) 17m asl 134°04'485"E and 00°50'981"S. These two observation points were differentiated from the situation of the sites; where point 1 was commonly surrounded by plantation areas (corns, cassava and some fruit plants), almost found at flat areas adjacent to local settlements and point 2 was secondary forests with some hilly parts. Birds were observed with the aid of Bushnell binocular 10x50, and identified using the taxonomic description from Rand and Gilliard (1967) and Beehler *et al*., (2001). The number of species observed during the day survey was recorded and a species accumulation curve was constructed from daily totals. Species abundance was classified into five different categories: *Abundant* (recorded regularly, in moderate to large number);

Common (recorded regularly, in small number); *Fairly* (recorded scattered not as usual as common); *Uncommon* (recorded irregularly); and *Rare* (recorded once or twice) and tabulated in the species list (Table 1).

Forty five species belong to twenty two families were recorded during the survey, 32 species along the transect line, 22 species at point 1 and 27 species at point 2. Previous study on avifauna in the similar relative location, indicated that approximately 15 families represented 35 bird species were recorded, 14 were endemic species and 21 species non-endemic (Dwiyanto, 1995) and roughly 20 families composed of 35 species encountered during a series of observation published by the Forest Research Institute of Manokwari (Leppe and Tokede, 2006).

This study also revealed that common and abundant species, such as *C. tristis, D. pinon, G. chloronotus, H. indus, L. lorry, R. plicatus* and *R. rufiventris* were also found in the whole of New Guineas Island and its satellite island, like Raja Ampat (Mayor and Pattiselanno, 2008). While *E. ibis* for the last fifteen years were increased in Papua, a part of its spread out distribution around the world was also found particularly in the warmer latitude sites (Beehler *et al*., 2001). Particular species from certain families were also encountered by Pattiselanno (2005) during the survey carried out around the Mamberamo River Basin. *C. esculanta* was not only found in Papua, but also in whole Indonesia archipelago and Malaya. In contrast, some species were found rare, *S. spilodera, P. nanus, T. megalorynchos* and *R. leucothorax* that were only found in one of three observed sites.

A combined species accumulation curve for transect line and both two observation points (Figure 1) assumes that further observation efforts should be approached so significant results would be obtained. Various results gathered from previous surveys conducted to the relative similar location may be due to different methods and vocal point in observing the bird species. Therefore, using vocal recorded to support the data collection is important, because birds in tropical rainforest are difficult to observe. According to Beehler and Mack (1998), vocal repertoires and local dialects are vital in identifying bird.

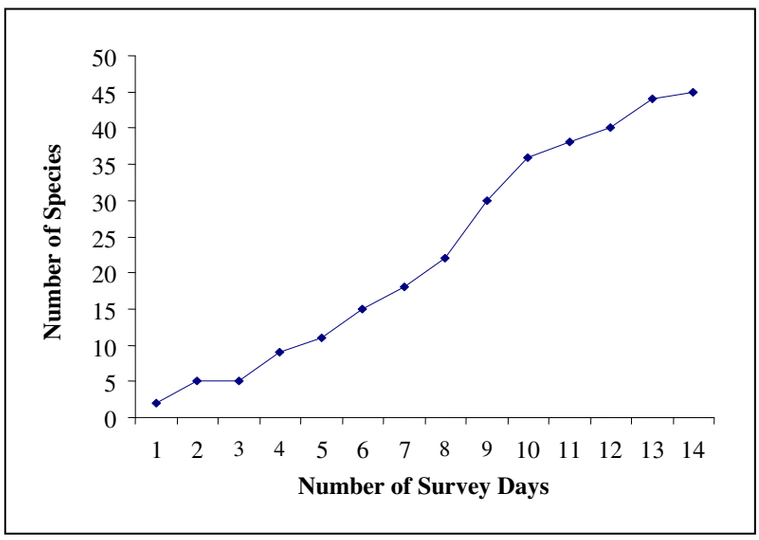

Figure 1. Species accumulation curve for birds at sites around Taman Wisata Gunung Meja, Manokwari.

Table 1. Number of bird species observed along the transect and observation point.

No.	Species (1)	Transect Line (2)	Point 1 (3)	Point 2 (4)	Species Abundance (5)	Remarks (6)
1.	**Accipitridae**					
	Accipiter fasciatus	√	√		Uncommon	
	A. novaehollandiae	√	√	√	Common	
	Circus spilonotus			√	Fairly	
	Haliastur indus	√	√		Common	
2.	**Achantizidae**					
	Gerygone chloronotus	√	√	√	Abundant	P
	G. cinerea		√		Abundant	
	Crateroscelis nigrofura	√		√	Uncommon	
	Sericornis spilodera			√	Rare	P
3.	**Alcedinidae**					
	Dacelo gaudichaud	√	√	√	Abundant	E-NG; P
	Halycon nigrocyaenea	√		√	Common	
	H. macleayii	√		√	Abundant	P
	H. sancta	√	√	√	Abundant	
4.	**Apodidae**					
	Collocalia esculanta	√		√	Abundant	
5.	**Ardeidae**					
	Egretta ibis	√		√	Common	
6.	**Bucerotidae**					
	Rhyticerros plicatus	√	√	√	Abundant	
7.	**Campephagidae**					
	Coracina melaena			√	Uncommon	
8.	**Columbidae**					
	Ducula pinon	√	√		Common	E-NG
	Ptilionopus nanus			√	Rare	E-NG
	P. solomonensis	√			Uncommon	
9.	**Corvidae**					
	Corvus tristis	√		√	Common	E-NG
10.	**Cracticidae**					
	Cracticus quoyi	√	√	√	Abundant	
11.	**Dicruridae**					
	Dicrurus huttentottus	√			Fairly	
12.	**Estrildidae**					
	Lonchura tristissima	√	√		Abundant	E-NG
13.	**Falconidae**					
	Falco severus			√	Uncommon	
14.	**Maluridae**					
	Malurus alboscapulatus	√	√		Abundant	E-NG
15.	**Meliphagidae**					
	Meliphaga montana		√	√	Abundant	E-NG
	Oedistoma pygmaeum	√	√	√	Abundant	
	Philemon buceroides	√			Uncommon	
	Xanthotis flaviventer			√	Fairly	
16.	**Myagridae**					
	Monarcha guttula	√		√	Common	E-NG
	M. manadensis		√	√	Common	E-NG
17.	**Oriolidae**					
	Oriolus szalayii	√	√		Common	E-NG
18.	**Podargidae**					
	Podargus papuensis	√	√	√	Common	

Table 1. Continue

No.	Species (1)	Transect Line (2)	Point 1 (3)	Point 2 (4)	Species Abundance (5)	Remarks (6)
19.	**Psittacidae**					
	Charmosyna placentis	√			Uncommon	
	Eclectus roratus	√	√		Common	P
	Lorius lory	√		√	Abundant	E-NG
	Geoffroyus geoffroyi		√	√	Abundant	
	Probosciger aterrimus	√			Uncommon	
	Psittaculirostris desmarestii		√		Fairly	
	Tanygnathus megalorynchos	√			Rare	
20.	**Rhipiduridae**					
	Rhipidura leucothorax	√			Rare	E-NG
	R. rufiventris		√	√	Common	
21.	**Sturnidae**					
	Mino dumontii	√		√	Uncommon	
22.	**Zosteropidae**					
	Zosterops fuscicapillus		√		Fairly	
	Z. novaeguineae	√			Common	

Note: √= present, E-NG= Endemic New Guinea, P= Protected

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