

## The birds of Palembang Punti Kayu Recreation Forest, South Sumatra, Indonesia

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### ABSTRAK

Hutan Rekreasi Punti Kayu adalah hutan pinus buatan yang dirancang sebagai "paru-paru" dan taman di Kota Palembang. Burung-burung yang dicatat pada Punti Kayu dikaji untuk melihat pentingnya hutan untuk habitat alami burung. Sebanyak 44 spesies dari 24 keluarga burung tercatat di sini. Ini penting Ulasan ini merupakan kompilasi pertama dibuat pernah untuk burung Punti Kayu Recreation Forest.

Kata kunci: Checklist, burung, Punti Kayu, hutan pinus, Sumatera Selatan.

### ABSTRACT

The Punti Kayu Recreation Forest is artificial pine forest designated as "lungs" and park in Palembang City. The birds recorded in Punti Kayu were reviewed to looking at the importance of the forest for natural habitat of birds. A total of 44 species from 24 families of bird was recorded here. This critical reviewed is constitutes first compilation made ever for birds Punti Kayu Recreation Forest.

Key words: Checklist, birds, Punti Kayu, pine forest, South Sumatra.

### INTRODUCTION

South Sumatra province is the largest province in Sumatra where located in the southeastern portion of the island (Whitten et al. 2000). The capital city of the province is Palembang (02<sup>o</sup>52'-03<sup>o</sup>05'S, 104<sup>o</sup>37'-104<sup>o</sup>52'E), with a total of 400,61 km<sup>2</sup> (Santana 2012). The natural vegetation of Palembang City is freshwater swamp (Whitten et al. 2000), which the specific habitat type is floodplain lakes or locally called "lebaks" (Giesen and Sukotjo 1991). The city growth very rapidly during 1999-2007 that many lebaks area were reclaimed to some purposes; and it was caused the lebaks to be decreased only 15,30% remaining in 2007 (such as: Febriana 2008).

The study of bird diversity have been reported across the South Sumatra province (eg. Nash and Nash 1985, Verheugt et al. 1993, Iqbal & Setijono 2011). Most of these works

are focussed in conservation areas or known having unique biodiversity characters. On the other hand, it is little known about avifaunistics at urban area, such as in Palembang City.

The Punti Kayu Recreation Forest is artificial pine forest designated as “lungs” and a park in Palembang City (Wijaya 1997). The forest is dominated by Merkus Pines *Pinus merkusii*, with few natural swampy area and secondary forest (Iqbal 1999). Despite occur in Sumatra, Merkus pine is a non native species in Palembang. Merkus pine occurs in mountainous regions and restricted to three subpopulations in Sumatra: Aceh, Tapanuli and Kerinci (Farjon 2013). The bird in Pine vegetation of Punti Kayu Recreation Forest and its adjacent areas are little draw attention. Due to lacking information on avifaunaistic datas of Punti Kayu Recreation Forest, a comprehensive review is required. To facilitate this gap, this paper compile and summarise all available avifaunistic datas in Punti Kayu Recreation Forest.

## **MATERIALS AND METHODS**

Brief information are given of observations are those that are noteworthy record the area. The Punti Kayu Recreation Forest (02°56'S, 104°43'E) located in Sukarami district, Palembang City, South Sumatra Province, Indonesia. This Recreation Forest was established in 1985, with a total area 50 ha, divided into 38,8 ha terrestrial forest and 11,2 ha swampy area (Wijaya 1997). Formerly, there are two small rivers reported occur in Punti Kayu Recreation Forest, Seluang river and Kemang river. Unfortunately, both rivers look like disappear now in this site.

The bird listed here is first review of birds in Punti Kayu Recreation Forest. Most of works reviewed are based of documented and undocumented field observations by the authors in Punti Kayu Recreation Forest, as follows:

1. Bird observation in 24-31 July 1999 (Iqbal 1999).
2. Bird observation in 24 February 2002 (Muhammad Iqbal pers. obs.)
3. Bird observation in 2004 (undated, Muhammad Iqbal pers. obs.)
4. Bird observation in 25 December 2010 (Muhammad Iqbal pers. obs.)
5. Bird observation in 27 March 2012 (Muhammad Iqbal pers. obs.)
6. Bird observation in 28 May 2012 (Muhammad Iqbal pers. obs.)
7. Bird observation in June 2014 (Prasetyo 2014)
8. Bird observation in 29 October 2014 (Doni Setiawan and Muhammad Iqbal pers. obs.)
9. Bird observation in 18 July 2015 (Doni Setiawan 2015)
10. Bird observation in 8 August 2015 (Muhammad Iqbal pers. obs.)
11. Bird observation in 12 October 2015 (Muhammad Iqbal pers. obs.).

The authors critically reviewed all records, particularly those of unusual species occur in lowland habitats or species rarely seen in Sumatra. Scientific and English names follow Sukmantoro et al. (2007), with modification based recent taxonomy works for Hawk Eagle (genus name replace from *Spizaetus* to *Nisaetus*) and Malay Blue-banded Kingfisher *Alcedo peninsulae* follow del Hoyo & Collar (2014).

## RESULTS AND DISCUSSION

The birds of Punti Kayu Recreation Forest are tabulated in table 1. A total of 44 species from 23 families are recorded here. Few groups or families such as Accipitridae and Alcedinidae are protected by *Act of the Republic of Indonesia No.5 of 1990 concerning Conservation of Living Resources and their Ecosystems* (UU No. 5 Tahun 1990 Tentang Konservasi Sumber Daya Alam Hayati). So, all species from these families have conservation value in the park. There are three species are listed as Near Threatened by International Union for Conservation of Nature (IUCN) Redlist: Lesser Fish-eagle *Ichthyophaga humilis*, Greater Fish-eagle *I. Ichthyaetus* and Malay Blue-banded Kingfisher *A. peninsulae* (Birdlife International 2016).

Table 1. Birds recorded in Punti Kayu Recreation Forest, Palembang City, South Sumatra Province, Indonesia.

No.	Species	1	2	3	4	5	6	7	8	9	10	11
	<b>Accipitridae (Eagle, Kite &amp; Buzzard)</b>											
1	Lesser Fish-eagle <i>Ichthyophaga humilis</i>							+	+			
2	Greater Fish-eagle <i>I. Ichthyaetus</i>						+					
3	Crested Hawk Eagle <i>Nisaetus cirrhatus</i>	+	+	+	+			+	+	+		
4	Brahminy Kite <i>Haliastur indus</i>	+	+	+	+	+	+		+		+	+
5	Crested Honey Buzzard <i>Pernis ptilorhynchus</i>					+	+					
	<b>Falconidae (Hobby)</b>											
6	Oriental Hobby <i>Falco severus</i>		+									
	<b>Rallidae (Waterhen &amp; Crane)</b>											
7	White-breasted Waterhen <i>Amaurornis phoenicurus</i>	+	+	+	+	+	+	+	+	+	+	+
8	White-browed Crane <i>Poliolimnas cinerea</i>					+						
	<b>Columbidae (Dove)</b>											
9	Spotted dove <i>Streptopelia chinensis</i>	+	+	+	+	+	+	+	+	+	+	+
	<b>Cuculidae (Coucal &amp; Cuckoo)</b>											
10	Lesser Coucal <i>Centropus bengalensis</i>	+	+	+	+	+	+	+	+	+	+	+
11	Plaintive Cuckoo <i>Cacomantis merulinus</i>		+								+	+
	<b>Apodidae (Swiftlet)</b>											
12	Glossy Swiftlet <i>Collocalia esculenta</i>	+	+	+	+	+	+	+	+	+	+	+
13	Edible-nest Swiftlet <i>C. fuciphagus</i>	+	+	+	+	+	+	+	+		+	+
14	Black-nest Swiftlet <i>C. maximus</i>	+	+	+	+	+	+	+	+	+	+	+
	<b>Hemiprocnidae (Treeswift)</b>											
15	Whiskered Treeswift <i>Hemiprocne comata</i>	+										
	<b>Alcedinidae (Kingfisher)</b>											
16	Cerulean Kingfisher <i>Alcedo coerulescens</i>		+	+		+	+				+	+
17	Malay Blue-banded Kingfisher <i>A. peninsulae</i>	+										
18	Collared Kingfisher <i>Halcyon chloris</i>	+	+	+	+	+	+	+	+		+	+
19	White-throated Kingfisher <i>H. smyrnensis</i>	+	+	+	+	+	+	+	+	+	+	+
20	Sacred Kingfisher <i>H. sancta</i>	+										
	<b>Meropidae (Bee-eater)</b>											
21	Blue-tailed Bee-eater <i>Merops philippinus</i>		+	+	+	+	+		+	+	+	+
	<b>Coraciidae (Dollar bird)</b>											
22	Dollar Bird <i>Eurystomus orientalis</i>			+								
	<b>Hirundinidae (Swallow)</b>											

23	Barn Swallow <i>Hirundo rustica</i>			+	+							
24	Pacific Swallow <i>H. tahitica</i>		+	+	+	+				+		
	<b>Pycnonotidae (Bulbul)</b>											
25	Sooty-headed Bulbul <i>Pycnonotus aurigaster</i>	+	+	+	+	+	+	+	+	+	+	+
26	Yellow-vented Bulbul <i>P. goiavier</i>	+	+	+	+	+	+	+	+	+	+	+
	<b>Turdidae (Magpie Robin)</b>											
27	Oriental Magpie Robin <i>Copsychus saularis</i>	+	+	+								
	<b>Sylviidae (Prinia &amp; Tailorbird)</b>											
28	Bar-winged Prinia <i>Prinia familiaris</i>	+	+	+	+	+	+	+	+	+	+	+
29	Yellow-bellied Prinia <i>P. flaviventris</i>	+	+	+	+	+	+	+	+	+	+	+
30	Ashy Tailorbird <i>Orthotomus ruficeps</i>	+	+	+	+	+	+	+	+	+	+	+
31	Rufous-tailed Tailorbird <i>O. sericeus</i>	+										
	<b>Muscicapidae (Flycatcher)</b>											
32	Ferruginous Flycatcher <i>Muscicapa ferruginea</i>		+		+							
	<b>Acanthizidae (Gerygone)</b>											
33	Golden-bellied Gerygone <i>Gerygone sulphurea</i>	+	+				+				+	+
	<b>Rhipiduridae (Fantail)</b>											
34	Pied Fantail <i>Rhipidura javanica</i>	+	+	+	+	+	+	+	+		+	+
	<b>Paridae (Tit)</b>											
35	Great Tit <i>Parus major</i>				+							
	<b>Sittidae (Nuthatch)</b>			+				+				
36	Velvet-fronted Nuthatch <i>Sitta frontalis</i>											
	<b>Dicaeidae (Flowerpecker)</b>											
37	Scarlet-backed Flowerpecker <i>Dicaeum cruentatum</i>	+	+	+	+	+	+	+	+	+	+	+
38	Orange-bellied Flowerpecker <i>D. trigonostigma</i>	+	+	+	+							
	<b>Nectariniidae (Sunbird)</b>											
39	Olive-backed Sunbird <i>Cinnyris jugularis</i>	+	+	+	+	+	+	+	+		+	+
	<b>Zosteropidae (White-eye)</b>											
40	Oriental White-eye <i>Zosterops palpebrosus</i>										+	+
	<b>Estrildidae (Munia)</b>											
41	White-rumped Munia <i>Lonchura striata</i>					+						
42	Scaly-breasted Munia <i>Lonchura punctulata</i>	+	+	+	+	+	+	+	+	+	+	+
43	Javan Munia <i>Lonchura leucogastroides</i>	+										
	<b>Ploceidae (Sparrow)</b>											
44	Eurasian Tree Sparrow <i>Passer montanus</i>	+	+	+	+	+	+	+	+	+	+	+

### Notes

Abbreviations: + = recorded, 1 = Iqbal 1999, 2 = Bird observation 24 February 2002 (Muhammad Iqbal *pers. obs.*); 3 = Bird observation in 2004 (undated, Muhammad Iqbal *pers. obs.*); 4 = Bird observation in 25 December 2010 (Muhammad Iqbal *pers. obs.*); 5 = Bird observation in 27 March 2012 (Muhammad Iqbal *pers. obs.*); 5 = Bird observation in 28 May 2012 (Muhammad Iqbal *pers. obs.*), 7 = Bird observation in June 2014 (Prasetyo), 8 = Bird observation in 29 October 2014 (Doni Setiawan and Muhammad Iqbal *pers. obs.*); 9 = Bird observation in 18 July 2015 (Doni Setiawan), 10 = Bird observation in 8 August 2015 (Muhammad Iqbal *pers. obs.*), 11 = Bird observation in 12 October 2015 (Muhammad Iqbal *pers. obs.*).

### Species Accounts

This section discusses details on specific species that occur in Punti Kayu Recreation Forest. The Status of birds divided into four categories here: Rare, if only recorded once; Scarce, if recorded two or three occasions; Uncommon, if often recorded but irregularly or in small number; Common, if regularly recorded or seasonally for migrants.

Lesser Fish-eagle *Ichthyophaga humilis*

Scarce. Two records: one bird seen in June 2014 and 29 October 2014 (Figure 4).

Greater Fish-eagle *I. ichthyaetus*

Rare. Only recorded once on 28 May 2012.

Crested Hawk Eagle *Nisaetus cirrhatus*

Uncommon. Sometime usually seen in single or two birds.

Brahminy Kite *Haliastur indus*

Uncommon. Sometime usually seen in single or two birds. A bird seen on the nest of pine tree in 2004 at the area where not allocated for public.

Crested Honey Buzzard *Pernis ptilorhynchus*

Recorded twice, one in 27 March 2012 and another one in 28 May 2012. A bird seen on the nest of pine tree in 27 March 2012 at the area where not allocated for public (Iqbal 2014).

Oriental Hobby *Falco severus*

Rare. Only recorded once in 24 February 2002. There are few records of Oriental Hobby in Sumatra, but no specimens or photographs available (Marle & Voous 1988, Holmes 1996, Sukmantoro *et al.* 2007).

White-breasted Waterhen *Amaurornis phoenicurus*

Common. Not easy to find, but their sound always heard during visits.

White-browed Crake *Poliolimnas cinerea*

Recorded once in 27 March 2012, but possible overlooked in wetlands area.

Spotted dove *Streptopelia chinensis*

Common. Always seen in every visits.

Lesser Coucal *Centropus bengalensis*

Common. Not easy to seen, but their sound usually heard, hiding among the bushes.

Plaintive Cuckoo *Cacomantis merulinus*

Scarce. The bird possibly overlooked in the field. Easily detected by its sound.

Swiftlets *Collocalia* spp

Three species of Swiftlets are occur here: Glossy Swiftlet *Collocalia esculenta*, Edible-nest Swiftlet *C. fuciphagus* and Black-nest Swiftlet *C. maximus*. The presence of these groups are related to swiflet houses (swiflet farmings) around Palembang City.

Whiskered Treeswift *Hemiprocne comata*  
Rare. Only recorded once in July 1999.

Cerulean Kingfisher *Alcedo coerulescens*  
Uncommon. Usually seen in pond in the backside of the forest which is bordering with swampy area. This area is not a public area.

Malay Blue-banded Kingfisher *A. peninsulæ*  
Rare. Only recorded once on 30 July 1999. Previously considered as one species with Javan Blue-banded Kingfisher *Alcedo euryzona* (MacKinnon & Phillipps 1993).

Collared Kingfisher *Halcyon chloris*  
Common. Always seen in every visits.

White-throated Kingfisher *H. smyrnensis*  
Common. Always seen in every visits.

Sacred Kingfisher *H. sancta*  
Rare. Only one record in July 2009. This is a migratory bird from Australia.  
Blue-tailed Bee-eater *Merops philippinus*

Dollar Bird *Eurystomus orientalis*  
Rare. Only one record in May 2004. The occurrence of this species in Punti Kayu presumably caused by forest fire effects in the forest near Palembang City.

Swallow *Hirundo* spp  
There are two Swallows in Punti Kayu Recreation Forest: Barn Swallow *Hirundo rustica* and Pacific Swallow *H. tahitica*. Pacific Swallow is resident, and Barn Swallow is migratory. These birds sometimes flying around in Punti Kayu recreation with Swiflets.

Bulbul *Pycnonotus* spp  
There are two Bulbuls here: Sooty-headed Bulbul *Pycnonotus aurigaster* and Yellow-vented Bulbul *P. goiavier*. Both species area common in Punti Kayu Recreation Forest.

Oriental Magpie Robin *Copsychus saularis*  
Scarce. The bird easily seen during 1999-2004, usually around gate and Sumatera Express office. The bird not seen again during 2010 and 2015.

Prinia *Prinia* spp  
Two species recorded in Punti Kayu Recreation Forest: Bar-winged Prinia *Prinia familiaris* and Yellow-bellied Prinia *P. flaviventris*. Both of these species relatively common here.

Ashy Tailorbird *Orthotomus ruficeps*  
Common. Fresh fledging young bird seen on 28 May 2012.

Rufous-tailed Tailorbird *O. sericeus*  
Rare. Only one sight record in July 1999.

Ferruginous Flycatcher *Muscicapa ferruginea*

Scarce. Two sight records: one bird in 2004 and one on 25 December 2015 (Figure 6). This is a migratory passerine bird visit Pundi Kayu Recreation Forest.

Golden-bellied Gerygone *Gerygone sulphurea*

Uncommon. Possible overlooked because by its small size, but can easily detected by its sound.

Pied Fantail *Rhipidura javanica*

Common. The bird sometime easier detected by its sound than seen.

Great Tit *Parus major*

Rare. Only recorded once on 30 December 2010 (Figure 5).

Velvet-fronted Nuthatch *Sitta frontalis*

Scarce. Recorded in 2004 and in June 2014. The bird reported i by Prasetyo (2014) as Coppersmith Barbet *Megalaima haemacephala* is misidentification with Velvet-fronted Nuthatch.

Flowerpecker *Dicaeum* spp

There are two species of Flowerpeckers: Scarlet-backed Flowerpecker *Dicaeum cruentatum* and Orange-bellied Flowerpecker *D. trigonostigma*. Scarlet-backed Flowerpecker look more common than Orange-bellied Flowerpecker. The occurrence of Plain Flowerpecker reported in July 1999 (Iqbal 1999) need further clarification.

Olive-backed Sunbird *Cinnyris jugularis*

Common. Always seen during every visit.

Oriental White-eye *Zosterops palpebrosus*

Scarce. Only recorded recently in 2015 (Figure 7). Possible overlooked in the past by its smaller size and usually often seen in canopy.

White-rumped Munia *Lonchura striata*

One bird seen collecting nest material in Rambutan tree *Nephelium lappaceum* in 27 March 2012 at the area where not allocated for public (Iqbal 2014).

Scaly-breasted Munia *Lonchura punctulata*

Common. Always seen in the border of Pine vegetation and swampy area.

Javan Munia *Lonchura leucogastroides*

Rare. Only recorded once in July 1999. In Sumatra, this bird only previously recorded in Lampung province. However, It was recorded to South Sumatra (see Iqbal *et al.* 2015).

Eurasian Tree Sparrow *Passer montanus*

Common in building within Pundi Kayu Recreation Forest.

### **The importance of Pundi Kayu Recreation Forest as habitat**

Located in heart of Palembang City (only 7 km from centre of Palembang City), Pundi Kayu Recreation Forest is largest remaining green area in the city. The area has 50 ha in totals (Wijaya 1997), dominated by Merkus Pines *Pinus merkusii* with some gazebos

nearby (Figure 2) and remaining natural small forest and wetland habitats (Figure 3). This area has relatively give significance habitat for remaining birds in Palembang. The occurrence of 44 species from 24 families in Punt Kayu Recreation Forest look like support this assumption. Another bird diversity at urban area in Palembang City has been reported by Zulkifli *et al.* (2013), recorded 49 species in Pulokerto wetlands. However, Pulokerto wetlands has not conservation status, so the birds in area will having serious threat from habitat loss. The legal status of Punt Kayu Recreation Forest is important key to ensure survival of remaining birds population in Palembang City. Following Noerdjito & Maryanto (2001) regarding protected birds by Indonesian law, there are 13 protected species occur in Punt Kayu Recreation Forest. The birds are Lesser Fish-eagle, Greater Fish-eagle, Crested Hawk Eagle, Brahminy Kite, Crested Honey Buzzard, Oriental Hobby, Cerulean Kingfisher, Malay Blue-banded Kingfisher, Collared Kingfisher, White-throated Kingfisher, Sacred Kingfisher, Pied Fantail and Olive-backed Sunbird.

Few species recorded in 1999 are not appear during observation in 2010-2015. The Oriental Hobby, Whiskered Treeswift, Malay Blue-banded Kingfisher, Sacred Kingfisher, Dollar bird, Oriental Magpie Robin, Rufous-tailed Tailorbird and Javan Munia. It is presumed that there is degradation of habitats within or around the area. In recent years, Palembang City was rapidly developed. Satellite imagery from google maps (visited in 25 February 2016) shows the area recently surrounded by crowded human settlements (Figure 1). The city growth very rapid during 1999-2007 that many areas were reclaimed to be any purposes (Febriana 2008). Punt Kayu threatened by settlements (see map). h.



**Figure 1.** Map of Punt Kayu Recreation Forest, Palembang, South Sumatra. Satellite imagery shows the area surrounded by human settlements.





**Figure 2.** The Puntı Kayu Recreation Forest is dominated by Pines *Pinus merkusii* with some gazebos nearby.



**Figure 3.** Remaining natural small forest and wetland habitats in Puntı Kayu Recreation Forest.



**Figure 4.** Lesser Fish-eagle at Punti Kayu Recreation Forest, 29 October 2014.



**Figure 5.** Great Tit Punti Kayu Recreation Forest, 30 December 2010.





**Figure 6.** Ferruginous Flycatcher at Puntı Kayu Recreation Forest, 25 December 2010.



**Figure 7.** Oriental White-eye at Puntı Kayu Recreation Forest, 12 October 2015.

### Breeding

No information is about breeding season on birds in Punti Kayu Recreation Forest. Four records of breeding bird observed in Punti Kayu Recreation Forest: Crested Honey Buzzard, Brahminy Kite, Ashy Tailorbird and White-rumped Munia. All birds breed in limited area for public. On 27 March 2012, Crested Honey Buzzard seen sitting in the nest and White-rumped Munia seen preparing nest. Fresh fledging young Ashy Tailorbird seen on 28 May 2012. Although need further study, but It can presumed breeding period of birds in Punti Kayu Recreation Forest during March to May. Most previous breeding records of Sumatran birds are from January to June (Marle & Voous 1988), and breeding birds found in Punti Kayu Recreation Forest meet this season. Further study is needed to clarify breeding records of common resident birds in Punti Kayu Recreation Forest, such as: White-breasted Waterhen, Spotted Dove, Lesser Coucal, Collared Kingfisher, White-throated Kingfisher, Sooty-headed Bulbul, Yellow-vented Bulbul, Bar-winged Prinia, Yellow-bellied Prinia, Scarlet-backed Flowerpecker, Olive-backed Sunbird, Scaly-breasted Munia and Eurasian Tree Sparrow.

### CONCLUSION

A total of 44 species from 24 families of bird was recorded in Punti Kayu recreation fores. Few species recorded in 1999 are not appeared during observation in 2010-2015, presumed it is caused by degradation of habitats within or around the area. The legal status of Punti Kayu Recreation Forest is important key to ensure survival of remaining birds population in Palembang. Little is known about breeding information on birds in Punti Kayu Recreation Forest, and further study is needed to clarify breeding records of common resident birds.

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### REFERENCES

- Anon. 1998. *Informasi kawasan konservasi propinsi Sumatera Selatan*. BKSDA Sumatera Selatan, Palembang.
- del Hoyo, J. & Collar, N.J. 2014. *HBW and Birdlife International checklist of the birds of the world. Volume 1: non-passerines*. Lynx Edicions, Barcelona
- Farjon, A. 2013. *Pinus merkusii*. The IUCN Red List of Threatened Species 2013: e.T32624A2822050. <http://www.iucnredlist.org/details/32624/0>. Downloaded on 07 March 2016.
- Febriana, E. 2008. *Kinerja pengendalian pemanfaatan lahan rawa di kota Palembang*. Fakultas Teknik Universitas Diponegoro, Semarang.
- Giesen, W. & Sukotjo. 1991. *Conservation and management of the Ogan-Komering Lebaks, South Sumatra*. PHPA/AWB Sumatra Wetland Project Report No 8, Bogor.

- Holmes, D.A. 1996. Sumatra bird report. *Kukila* 8: 9-56.
- Iqbal, M. 1999. Inventarisasi burung di hutan wisata Punti Kayu Palembang. *Laporan Kerja Praktek*. Jurusan Biologi FMIPA Universitas Sriwijaya, Indralaya.
- Iqbal, M. 2014. Sumatera. Pp 83-86 in Around the archipelago. *Kukila* 17(2): 74-97.
- Iqbal, M., Setiawan, D. & Setiawan, A. 2015. First breeding record of Javan Munia (*Lonchura leucogastroides*) in Sumatra, Indonesia. *Biovalentia* 1(1): 17-22.
- Iqbal, M. & Setijono, D. 2011. *Burung-burung di hutan rawa gambut Merang-Kepayang dan sekitarnya*. Merang REDD Pilot Project, Palembang.
- MacKinnon, J. and Phillipps, K. 1993. *A field guide to the birds of Borneo, Sumatra, Java and Bali*. Oxford University Press, Oxford.
- Marle, J.G. and Voous, K.H. 1988. *The birds of Sumatra: an annotated check-list*. British Ornithologists' Union (Check-list 10), Tring, UK.
- Nash, S.V. & Nash, A.D. 1985. A checklist of the forest and forest edge birds of the Padang Sugihan wildlife reserve, South Sumatra. *Kukila* 2(3): 51-58.
- Noerdjito M. & Maryanto I. 2001. *Jenis-jenis Hayati Yang Dilindungi Perundang-undangan Indonesia*. Museum Zoologicum Bogoriense, LIPI, The Nature Conservancy and USAID, Cibinong, Indonesia.
- Prasetyo, C.Y. 2014. Burung-burung di TWA Punti Kayu. *Laporan Kerja Praktek*. Jurusan Biologi FMIPA Universitas Sriwijaya, Indralaya.
- Santana, E.P. 2012. *Laporan akuntabilitas kinerja instansi pemerintah (LAKIP) Pemerintah Kota Palembang Tahun 2011*. Pemerintah Kota Palembang, Palembang.
- Sukmantoro, W., Irham, W., Novarino, W., Hasudungan, F., Kemp, N. & Muchtar, M. 2007. *Daftar Burung Indonesia No. 2*. The Indonesian Ornithologist's Union/LIPI/OBC Smythies Fund/Gibbon Foundation, Bogor.
- Verheugt, W.J.M., Skov, H. & Danielsen, F. 1993. Notes on the birds of the Tidal Lowlands and Floodplains of South Sumatra Province Indonesia. *Kukila* 6(2): 53-84.
- Whitten, T., Damanik, S.J., Anwar, J., & Hisyam, N. 2000. *The Ecology of Sumatra*. Periplus, Singapore.
- Wijaya, F. 1997. *Perencanaan lansekap di Hutan Wisata Punti Kayu Palembang*. Skripsi Jurusan Budi Daya Pertanian Fakultas Pertanian, Institut Pertanian Bogor, Bogor.
- Zulkifli, H., Iqbal, M., Yustian, I. & Setiyawan, D. 2013. Birds of Pulokerto Wetlands, a miniature of biological importance of bird diversity in Palembang City (South Sumatra, Indonesia). *Pre-proceedings* of the 1st International Conference on Sustainable Agriculture and Environment. Sebelas Maret University, 27th-29th June, 2013. Solo, Indonesia.