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Bird Transect Survey at Kampung Baung Bayam: A Potential Ecotourism Attraction at Homestays in Kelantan, Malaysia

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Abstract

A direct observation survey of birds on a 2 km transect carried out in Kampung Baung Bayam, Kelantan revealed at least 20 species of birds. Yellow-vented Bulbul (*Pycnonotus goiavier*), Zebra Dove (*Geopelia striata*), Jungle Myna (*Acridotheres fuscus*), Common Myna (*Acridotheres tristis*) and White-throat Kingfisher (*Halcyon smyrnensis*) were commonly spotted during this study. A check on the conservation status in the IUCN Red List of Threatened Species indicates that there is a need to add more data on avifauna in this area for conservation planning and management.

1. Introduction

Birds are fascinating organisms and the diversity of birds in South East Asia is quite remarkable with approximately 1327 species of birds (Robson, 2008). Their habitat varies from areas with zero to minimal human activities, rural settlements up to modified urban landscapes. Distributions and composition of avifauna generally depends on habitat types, climate, geographical differences and altitudes (Davison & Yeap, 2010; Robson, 2008; Strange, 2002). The fascinating appearances of birds have attracted people to keep and observe them in the wild. In recent decades, bird watching became popular around the world including Malaysia (MNS, 2008; Babjee, 2007; Strange, 2002; La Rouche, 2003) and it is one of the ecotourism potential that has been highlighted in the National Ecotourism Plan Malaysia as a sustainable form of tourism activity (MNS, 2008; Louis et al., 1998).

Bird watching or birding is an activity where participants or tourists observe birds directly or using binoculars. It is a recreational and social activity that can be participated by all levels of people and as a result, many bird guides have been published on Malaysian birds. Bird watching has been successful in many protected areas and this activity is generally included as a means to attract tourists. Malaysia was ranked fourth after India, Thailand and China in terms of birding destinations in Asia (MNS, 2008).

Currently, there are more than 20 overseas birding tour companies that organized birding trips to at least 55 Important Bird Areas in Malaysia (MNS, 2008). However, there is a lack of local tour companies that provide such service as well as tour trips in their programs (MNS, 2008). The potential of such activity in homestay programs in Malaysia especially in Kelantan has yet to be explored, as most homestay programs generally offer cultural aspects of Malaysian rural folks. Thus, in this short communication, the potentials of such activity were explored in a rural area in the state of Kelantan, Malaysia using direct and indirect observation. The recent assessments on the conservation status of birds recorded in this study were also provided.

2. Materials and Methods

2.1. Study Site

Kampung Baung Bayam (N06°07.116' E102°16.748') was chosen for this study due to its strategic positioning as it is situated in the rural areas of Kota Bharu, Kelantan. This village is 3.5 km from Kota Bharu and approximately 10 km from the Sultan Ismail Petra Airport. A 20 minutes' drive to the north of this village is Pantai Cahaya Bulan locally abbreviated as PCB, a beach that attracts many local people during the weekends. Demographically this area is dominated by Malays (95%) followed by Chinese and other races. The houses are scatted around with little urban planning, thus there are small patches of forested areas, while some private lands are developed for some agriculture activities. Cows, lambs, sheep are allowed to roam in the village typical of traditional practice of livestock rearing by 'kampung' folk in this country. There is a stream in the village which was periodically deepened and the bushes cleared off to avoid flood during the monsoon season (November – March).

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2.2. Survey Method

For the purpose of knowing the diversity of bird in the area, a 200 m line transect survey was conducted along both sides of the stream. This was carried out periodically every Thursday and Friday from 7th of April until 29th April 2011. Observation of birds started from 0730 hours to 1200 hours as well as 1700 hours to 1900 hours in the evening. Birds were sampled using both binoculars and bird calls and identified using Strange (2002), Robson (2008) and Khong (2011). Figure 1 depicts the location of the trail in Kampung Baung Bayam at coordinates N06°07'10.0128", E102°16'45.7968".

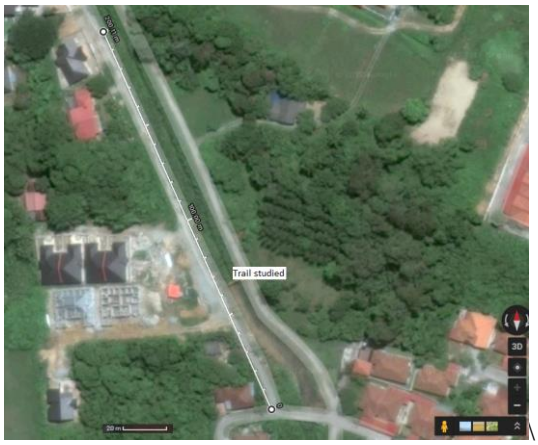

Figure 1: Trail/transect location of this study

3. Results and Discussion

Twenty species of birds from 15 families were recorded in this survey while one species was identified according to its call (Table 1). However, the number of diurnal birds' species composition in Kampung Baung Bayam might be more than what was reported here because there are some shy and secretive birds that may be hiding in the undergrowth and dense bushes out of sight of the observer. Besides that, swiftlets could not be identified up to species level as most are very similar and hard to identify from distance. These swiftlets are also more active between late evening and dusk compared to morning and afternoon. Mist netting of birds around the area may reveal more species not recorded using direct observations. Thus it is imperative that an intensive bird survey using various methods should be carried out to document the diversity and abundance of the avifauna in this area.

Among the identified birds' species in Kampung Baung Bayam, Yellow-vented Bulbul (*Pycnonotus goiavier*), Zebra Dove (*Geopelia striata*), Jungle Myna (*Acridotheres fuscus*), Common Myna (*Acridotheres tristis*) and White-throat Kingfisher (*Halcyon smyrnensis*) were commonly observed throughout the survey. Thes species are very resilient and have been found to be abundant in anthropogenic landscapes.

Breeding adults of Chinese Pond Herron (*Ardeola bacchus*) as well as Little Egret (*Egretta garzetta*) were also sighted in this study. According to Robson (2008), the breeding season of the Chinese Pond Herron is from March to May and Little Egret is from June to April which coincides with the sampling period of this study.

A check on the conservation status of species recorded in this study in IUCN Red List of Threatened Species revealed that two species, Spotted Dove and Black-bellied Malkoha have yet to be assessed while Olive-backed Woodpecker was Near Threatened, with decreasing population trend (IUCN, 2011). This highlights the importance of research on Spotted Dove and Black-bellied Malkoha, as information is needed to assess their conservation status and planning for suitable conservation activities in Kelantan as well as in Malaysia. As Olive-backed Woodpecker is Near Threatened, there should be a review on the occurrence of this species within and outside of protected areas in order to protect and conserve this species in Malaysia.

On the other hand, nocturnal birds in this study which were nightjars and owls' calls heard during night time indicate that there are still additional species to be included in the list, reinforcing the idea that using mist nets and other methods would be effective. Occasionally during the full moon nights, owls were spotted flying along and across the stream.

During field survey, several small mammals were spotted including squirrels and the Common Trees Shrew *Tupaia glis*. Among the squirrel species, several Grey-bellied Squirrels (*Callosciurus caniceps*) were observed foraging and playing on tree trunks. There was also a Cream-coloured Giant Squirrel (*Ratufa affinis*) sighted on top of a tree crown. Feces of civets were also observed on the muddy road nearby. These feces had papaya seeds and were found to be very fresh, indicating that area is used by civets to encroach the village during the night. Occasionally, civets were also sighted climbing on the roof of houses during the night time. Other non-avian sightings include Molossid and Emballonurid bats foraging in the area.

This simple exercise shows that many similar areas in Kelantan have potential to enhance the holiday experience of tourists in this state via bird watching programs. All 20 species of birds recorded are easily spotted or identified by calls making it suitable for amateur bird watchers or inexperienced tourist. What is needed now is a comprehensive plan to train guides or homestay personnel in managing this activity for tourist.

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Table 1: Species of avifauna that sighted and recorded in Kampung Baung Bayam, Kelantan, Malaysia

Family/ Species	Sighted Spot(s)	Conservation Status
Ardeidae		
*Chinese Pond Heron (*Ardeola bacchus*)	Spotted foraging on the sides of the stream and at the shallow part of the stream.	Least Concern
*Little Egret (*Egretta garzetta*)	Spotted foraging on the sides of the steam and at the shallow part of the stream.	Least Concern
Rallidae		
White-breasted Waterhen (*Amaurornis phoenicurus*)	Spotted foraging on the mud patches beside the stream, flees when notices any passer-by.	Least Concern
Scolopacidae		
Common Sandpiper (*Actitis hypoleucos*)	Spotted foraging on the sides of the steam and at the shallow part of the stream.	Least Concern
Columbidae		
Rock Pigeon (*Columba livia*)	Spotted foraging roosting on roof of houses.	Least Concern
Spotted Dove (*Streptopelia chinensis*)	Spotted foraging on a tall tree; also seen sometimes perching on a tall coconut tree that near houses.	Not yet been assessed
Zebra Dove (*Geopelia striata*)	Spotted foraging on muddy patches, roads near houses besides the stream and on electric cables.	Least Concern
Cuculinea		
Asian Koel (*Eudynamys scolopaceus*)	Spotted singing on a tree.	Least Concern
Phaenicophaeinae		
Black-bellied Malkoha (*Rhopodytes diardi*)	Spotted foraging on a tree, sometime flew across back and forth to each side of the stream.	Not yet been assessed
Apodidae		
Swiftlet (unidentified)	Spotted flying along and across the stream.	-
Alcedinidae		
White-throat Kingfisher (*Halcyon smyrnensis*)	Spotted perching on a tree, electric cables and on bamboo pole in the middle of the stream.	Least Concern
Meropidae		
Blue-tailed Bee-eater (*Merops philippinus*)	Spotted perching on electric cables.	Least Concern
Picidae		
Olive-backed Woodpecker (*Dinopium rafflesii*)	Spotted clinging on a dead coconut tree.	Near Threatened
Oriolidae		
Black-naped Orile (*Oriolus chinensis*)	Spotted perching and foraging on a tree.	Least Concern
Estrildidae		
Chestnut Munia (*Lonchura atricapilla*)	Sighted on tall grasses.	Least Concern
Passeridae		
EurasianTree-sparrow (*Passer montanus*)	Sighted in house's garden and perched on fences of the house.	Least Concern
Sturnidae		
Jungle Myna (*Acridotheres fuscus*)	Spotted roosting on trees, standing on the back of cows and foraged on the ground.	Least Concern
Common Myna (*Acridotheres tristis*)	Spotted foraging on the ground, roosting on trees and electric cables.	Least Concern
Pycnonotidae		
Yellow-vented Bulbul (*Pycnonotus goiavier*)	Perched and foraged on a tree, electric cables and fences.	Least Concern
Timaliidae		
Abbott's Babbler (*Malacocincla abbotti*)	Not sighted but call was recorded during the survey.	Least Concern

*Breeding adult; unidentified as most species of swiftlets were very similar in appearance -: not available.

4. Conclusion

Kampung Baung Bayam may hold good potential in enhancing the homestay programs in this area by introducing bird watching as an ecotourism activity. This may be a simple yet enjoyable activity for amateur bird watchers but may interest more experienced bird watchers given the potential of adding more species to this presented list. It is recommended that bird watching activities to be included in homestay programs in the country particularly in Kelantan to revive this stagnant industry. Bird species that have yet to be assessed by IUCN should be given

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priority in terms of data collection and Near Threatened species should have suitable management plan in protected and non-protected areas.

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