Short Communication

The Exploration of the Edible-Nest Swiftlet at Redang Island

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ABSTRACT

Aerodramus fuciphagus is one of the swiftlet species in Apodidae family. Generally, it is found in South East Asia including Brunei, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. In Terengganu, the wild edible-nest swiftlet communities can be found in Redang Island. In 1995, Siti Hawa et al. estimated a total of 655 and 1,035 edible-nest swiftlets and 3,645 to 4,213 black-nest swiftlets by using the capture and recapture method at Gua Kawah, Redang Island. This study was done in May and June 2011 to explore edible-nest swiftlet at Pulau Redang. A total of 40 respondents from the residency and authority of Gua Kawah, and Redang Island were interviewed. Both of land classification and land surface temperature were classified using QuickBird satellite image to evaluate the current environmental conditions in Redang Island. The observation has indicated the first human-made swiftlet house in Redang Island, which is located in Pengkalan Hulu and Berjaya Hotel area. The house was built by a resident of Kampung Baru, Pulau Redang. After the evaluation of environmental condition, it is concluded that Redang Island is a requisite place for human-made swiftlet house development. This industry may become the source of income for the residents of Redang Island and help to conserve the wild edible-nest swiftlet population.

Keywords: Edible-nest swiftlet, Aerodramus fuciphagus, Redang Island

ABSTRAK

Aerodramus fuciphagus adalah salah satu daripada spesies burung walet dalam keluarga Apodidae. Secara umumnya, ia dijumpai di Asia Tenggara termasuk
INTRODUCTION

The swiftlets, *Aerodramus fuciphagus* is one of the bird species that have the highest economic value of their nest in South East Asia. According to Abdul Kadir, 2011, the most expensive nest is white nest, which is produced by *Aerodramus fuciphagus* swiftlet species. Their nest is built at the gap of coastal coral and inside the caves by using their saliva. It consists of 90-95% of edible nest and 5-10% of feathers and purities (Lim *et al.*, 2006; Ibrahim *et al.*, 2009).

The swiftlet industry has existed in Malaysia since the 18th century, when the nests were collected from caves (Medway, 1969; Vaiappuri *et al.*, 2012). Besides the caves, the swiftlet also could be found in some areas that have the elements of micro caves habitat such as houses and buildings. The reliance on special properties of swiftlets’ nest that can cure illness and the difficulties to find it makes the price expensive. The cave ecosystem as the habitat of swiftlets to nestle and shelter should be preserved from any disturbance that could disturb their population. The Redang Island is one of the famous eco-tourism sites in Terengganu, Peninsular Malaysia. The wild edible-nest swiftlet communities could be found in a large cave at Redang Island. In 1995, Siti Hawa *et al.* estimated a total of 655 to 1,035 edible-nest swiftlets and 3,645 to 4,213 black-nest swiftlets by using the capture and recapture method at Redang Island. Thus, this study aims to explore the wild edible-nest swiftlet and to view the population presence and occurrence at Redang Island.
MATERIALS AND METHODS

This study was done in May and June 2011 to explore edible-nest swiftlet at Pulau Redang. A total of 40 questionnaires was done at Redang Island to get the information from the residents about their knowledge of swiftlet ranching industry, the location of swiftlet ranching in natural or human made habitat at Pulau Redang, and the benefits of swiftlets ranching industry to them. Besides that, we used the satellite image of Landsat TM and PCI Geomatica softwares to map the land surface temperature. The classification of land cover mapping was analyzed by using the Quick Bird satellite image. This is important to assess the suitable condition and temperature for the habitat of swiftlets at Pulau Redang.

RESULTS AND DISCUSSION

Respondents

Based on the questionnaires, we found all the respondents knew about the economic value of edible bird nest of swiftlets. A total of 90% of the respondents knew about the location of natural swiftlets habitat and the human made swiftlets house. Eighty per cent of the respondents were interested to be involved in the swiftlets ranching however, they faced some problems such as the expensive cost in order to build the swiftlets’ house.

Based on the respondents’ answers, there were several caves suitable for the habitat of swiftlets such Gua Kawah, Gua Hujan, Gua Sokok, Gua Tok Wok, Gua Luas, Gua Kokang, Gua Peranakan Atong, Gua Atong and Gua Ekor Tebu. However Gua Kawah is the only habitat with the highest population of swiftlets. The human-made swiftlets’ house was built at Kampong Baru, Pulau Redang.

Image Analysis

Based on image analyses, three classes of forest, land and water were used to classify land cover mapping at Redang Island by using Quick Bird satellite image. Accuracy assessment showed 200 stratified sampling points were used to determine the accuracy of each output image of the supervised classification. The overall classification accuracy value was high, at 88.24%. Sixty two percent of the classification was forest cover, 28% water and 10% land use.

The image analyses of land use temperature showed that the range of temperature in Redang Island were between 25-30 °C. The mean temperature of Gua Kawah from the observation was approximately 27 °C.

Observation

The populations of swiftlets were found in most of the caves, including Gua Kawah (Figures 1 and 2) that has the highest natural population of swiftlets.
Fig. 1. Gua Kawah, Redang Island.

Fig. 2. White edible-nest swiftlets in Gua Kawah, Redang Island.
The observation has shown the presence of the first human-made swiftlet house in Redang Island, which is located in Pengkalan Hulu and Berjaya Hotel area. The house was built by a resident of Kampung Baru, Redang Island (Fig. 3).

![Swiftlet's house in Kampung Baru, Pulau Redang.](image)

There was a drastic decline in the total weight of nests collected from Pulau Redang. Further study should be done to see the factors that influenced the population decreased at Redang Island. The best management practices on the swiftlets ranching will conserve the wild edible-nest swiftlets at Redang Island.

**CONCLUSION**

There are several population of swiftlets found on Redang Island. After the exploration and evaluation of environmental condition, it is concluded that Redang Island is a requisite place for human-made swiftlet house development. This industry may become the source of income for the residents of Redang Island and it will also help to conserve the wild edible-nest swiftlet population.

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REFERENCES


