

Density and diversity of nocturnal birds in oil palm smallholdings in Peninsular Malaysia

ABSTRACT

Over the past half century, oil palm cultivation has been expanding rapidly throughout many developing countries. Due to its economic importance, large tracts of natural land have been converted into oil palm cultivations and where increasing sightings of nocturnal birds have been made. A survey of nocturnal birds was conducted to assess their density and diversity in the oil palm smallholdings in the Selangor state, Peninsular Malaysia. A total of 90 sampling points were established within three oil palm smallholdings. A total of 1408 individuals of 11 nocturnal bird species were recorded. Based on distance sampling techniques, the density of Spotted Wood-owl (*Strix seloputo*) was estimated at 7 individuals 100 ha⁻¹, followed by 15 individuals for Sunda Scops-owl (*Otus lempiji*), five for Barn Owl (*Tyto javanica*) and 79 for Large-tailed Nightjar (*Caprimulgus macrurus*) per every 100 ha. The presence of a high density of some nocturnal birds in oil palm smallholdings may be associated with the availability of food source and roosting structure that are linked to habitat heterogeneity in the oil palm smallholdings. Our study highlighted the potential of nocturnal bird species, other than the Barn Owl, as biological control agents in the agricultural areas.

Keyword: Nocturnal birds; Oil palm smallholdings; Density; Abundance; Biological control