

Global COE Program

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Abstract

Maintaining biodiversity requires adequate landscape structures or management procedures. In South-east Asia, large-scale plantations of *Acacia mangium*, oil palm, and rubber already spread over the landscape, and are one of the reasons for habitat loss, as it is usually the case that one tree species is planted. Our objective is to clarify the differences in the diversity of bird species in *Acacia mangium* plantations and conserved secondary forests. We then aim to propose an adequate landscape structure to maintain avifauna that is original to that region. Our study site is located in 260,000 ha of *Acacia* plantation in PT. Musi Hutan Persada, South Sumatra, Indonesia. We conducted a bird survey in the conserved secondary forests, riverside remnant forests and several *Acacia* plantation sites with different distances (0.5km, 1-2km, 6-7km, 10-15km) from the nearest conserved secondary forest. A similar survey was conducted at *Acacia* plantations with different ages (0-1 year, 4-5 year). We recorded species over a period of ten minutes by standing at a point, and counting the number of individuals (Point-count census), together with the recording of bird calls by IC-recorder. Significant differences in avifauna were observed between *Acacia* plantations and conserved secondary forests or remnant forests, and declining number of species were indicated according to the distance from the conserved secondary forest. It has been clarified that the remnant forests spread widely in the region are a good habitat for birds such as Banded Pitta.