Seasonal variation in diversity and abundance of understorey birds in Bunduki Forest Reserve, Tanzania: evaluating the conservation value of a plantation forest

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Abstract

Plantation forests generally support lower bird diversity than natural forests. However, in some instances the plantations have been found to provide suitable habitat for a number of bird species. In the Eastern Arc Mountains, there is limited knowledge how understorey birds, some of which make seasonal altitudinal movements, use plantations. Using mist netting we assessed seasonal use of the plantation forest by the understorey bird community in Bunduki Forest Reserve in the Uluguru Mountains. Species diversity and capture rates were significantly higher during the cold season than during the hot season possibly due to seasonal altitudinal migration by some species. The use of plantations by those species that make seasonal altitudinal movements shows that plantation forests can enhance indigenous biodiversity by enabling connectivity between two or more natural forest patches. Our findings suggest that in a situation where there is no natural forest, an exotic plantation with suitable indigenous understorey cover can help in protection of birds, including endemic and near-endemic species.

Keywords

birds,
conservation,
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plantation,
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seasons,
species diversity