

**Nest Niche Overlap Among Large Cavity-Nesting Birds at Subic Watershed Forest Reserve, Zambales, Luzon, Philippines: Implications for Forest Management and Conservation**

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**ABSTRACT**

Deforestation and habitat degradation are primary factors in the endangerment of avian species worldwide, particularly those species that require tree cavities for nesting or roosting. Cavity-nesting communities are hierarchically structured within a nest web and can be classified into two guilds—primary cavity nesters (PCN) or species that excavate their own nest holes (e.g. woodpeckers) and the secondary cavity nesters (SCN) or those species that depend on woodpecker-excavated cavities and nest holes produced through natural decay processes (e.g. hornbills, parrots, trogons, owls, cockatoos and starlings). The abundance and availability of suitable nest cavities is a key element in the proliferation of cavity-nesting birds. Scarcity in this critical habitat resource induces competition, especially if users have similar nest preferences. Correspondingly, competition often results to delayed reproduction, unpredictable breeding patterns, nest-hole disputes and aggression, population declines and even range contractions. Most studies on the nesting ecology of cavity-nesting birds are clustered in the temperate forests of the Nearctic, Palearctic and Australasia. None much has been done in Asia where almost 13% of its cavity-nesting species are designated as threatened. This study seeks to fill in the knowledge gaps on the basic nesting ecology of large cavity-nesting birds in the Subic Watershed Forest Reserve (SWFR), Luzon, Philippines, by characterizing nest-hole preferences (e.g., cavity entrance dimensions) and the initial microclimate conditions (e.g., relative humidity and temperature). On the basis of these variables, overlapping niches and possible competition will be determined. The 6261-hectare SWFR is especially important to eight cavity nesting birds including two critically endangered endemics: Blue-naped parrot (*Tanygnathus lucionensis*) and the Green Racquet-Tail (*Prioniturus luconensis*). Given the diversity of cavity nesting birds and the small area of SWFR, it is highly probable that there is interspecific competition for nest holes that could limit the productivity of our endemic parrots. Information generated from this study can be used to guide forest management policies (i.e., silvicultural practices) and develop conservation tools that will relax the pressures of overlapping nest niches and minimize nest site competition among breeding birds.

