

AVIAN SPECIES COMPOSITION & BIODIVERSITY IN AREAS OF DIFFERING HUMAN DISTURBANCE IN A MID-PACIFIC RESORT OF COSTA RICA

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Habitat and biodiversity loss as a function of human development is a serious issue in tropical environments worldwide, specifically for avifaunal species which occupy very specific biological niches. In this study, avifaunal biodiversity level and species composition were compared between 17 points in 5 five distinct transects of different levels of human development within the property of Hotel/Club Punta Leona, Puntarenas, Costa Rica, during March and April, 2014. A simple 10-min point-count method was utilized for visual identification, and birdcalls were recorded for later laboratory analysis. A total of 4,208 individual birds were identified from 161 species in 36 families. A strong negative relationship occurred as biodiversity decreased with increasing level of environmental disruption, in both visual identification ($P < 0.0001$) and auditory data ($P < 0.0001$). Transects with higher levels of human disruption exhibited steeper species accumulation curves. Five species were only observed in high areas of environmental disruption, and appear to have some adaptations that allow them to coexist with human development: *Quiscalus mexicanus*, *Pitangus sulphuratus*, *Turdus grayi*, *Thraupis palmarum*, *Thraupis episcopus*. They were observed using human waste as a food source, water sprinklers as a water source, and buildings and introduced decorative plants for nesting sites. The observed preference of certain bird species to areas of greater human development than their natural environments can tell us about their methods of adaptation in a changing world. Bird habitat fragmentation and destruction is an increasing problem, and will be a very important area of future study for the conservation and preservation of species, and the environment as a whole.