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PARENT SESSION

## Oral Session # 29: **Avian Ecology II.**

Presiding: PS Warren

**Tuesday, August 5. 1:30 PM to 5:00 PM, SITCC Meeting Room 103.**

### **Habitat use and movements of native forest birds in southern Costa Rican agricultural countryside.**

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**ABSTRACT-** We used radio telemetry to study the habitat use, activity budgets, and movements of three bird species that are found in native forest and coffee plantations of southern Costa Rica. We obtained 7522 locations from *Turdus assimilis* (n=27), *Tangara icterocephala* (n=53), and *Catharus aurantiirostris* (n=42), the species ranked from most to least forest-dependent. We caught birds in coffee and radio-tracked them to understand their dependence on remnant native vegetation patches. Home range size and frequency of long-distance movement was positively correlated with the species' forest dependence. *T. assimilis* and *T. icterocephala* preferred forest fragments, riparian strips and remnant forest trees, mostly avoided coffee plantations, and moved frequently between suitable habitat patches. Even though remnant forest trees and riparian strips covered 3.7% and 4.8% of the land area, respectively, they made up 9%-49% of *T. assimilis* and *T. icterocephala* home ranges, and were especially important in the dry season (25%-49%). *C. aurantiirostris*, an edge/second growth species, was highly sedentary, opportunistic in its habitat preference in the wet season, and preferred second growth in the dry season. Home range size for *C. aurantiirostris* and *T. icterocephala* decreased significantly in the dry season, concentrating around food resources in secondary growth and fruiting trees, respectively. Native habitat patches were cooler, more humid, had reduced microclimatic fluctuations, and increased in importance during the dry season. Remnant patches of native vegetation in Costa Rican agricultural countryside provide crucial resources for these bird species that evolved in forest, but now have to live in an increasingly deforested landscape. Active management of tropical human-dominated ecosystems can significantly increase their capacity to support native bird species.

**Key words:** Radio telemetry, Neotropical birds, Countryside biogeography, Forest remnants