

FEATURE ARTICLES

CAVITY-NEST WEBS IN A LONGLEAF PINE ECOSYSTEM

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*Abstract.* Cavity-nesting communities can be viewed as interconnected webs that interact through the creation of and competition for cavities as nest sites. Using a web approach, we depicted the flow of cavity creation and use in the cavity-nesting bird community of a Florida longleaf pine (*Pinus palustris*) ecosystem to examine the relationship between cavity-nesting bird abundance and cavity resources, and to identify species with potential to respond to cavity management for the endangered Red-cockaded Woodpecker (*Picoides borealis*). We identified two groups into which most cavity-nesting species could be placed: 1) six species associated with pine snags and Red-cockaded Woodpecker cavities, and 2) five species associated with hardwood snags. We found the majority of nests (60%) in large pine snags. Red-cockaded Woodpeckers and Northern Flickers (*Colaptes auratus*) excavated most cavities used by other cavity nesting birds. The Northern Flicker was the primary creator of large nest cavities, through its excavation in snags and enlargement of cavities originally excavated by the Red-cockaded Woodpecker in live pine. Large secondary cavity nesting birds were the primary users of Red-cockaded Woodpecker cavities, and we identified three cavity-nesting species with potential to respond to Red-cockaded Woodpecker cavity management. The cavity-nesting web dynamics documented in this study, including the role of large pine snags, Red-cockaded Woodpecker cavities in live pine, and excavating species within the community, can serve as a baseline for comparison to other southern pine forests.

*Key words:* abundance web, cavity-nesting birds, community structure, nest web, Northern Flicker, Red-cockaded Woodpecker, snag.