

FEATURE ARTICLES

DOES THE PRESENCE OF BARRED OWLS SUPPRESS THE CALLING BEHAVIOR OF SPOTTED OWLS?

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Abstract. Barred Owls (*Strix varia*) have expanded their range throughout the ranges of Northern (*Strix occidentalis caurina*) and California Spotted Owls (*S. o. occidentalis*). Field observations have suggested that Barred Owls may be behaviorally dominant to Spotted Owls. Therefore, we conducted a test of behavioral dominance by assessing responsiveness of Spotted Owls to conspecific calls when they were in the simulated presence (i.e., imitation of Barred Owl vocalizations) of a Barred Owl. We hypothesized that Spotted Owls would be less likely to respond to conspecific calls in areas where Barred Owls were common. We used a binary 2 × 2 crossover experimental design to examine male Spotted Owl responses at 10 territories randomly selected within two study areas that differed in abundance of Barred Owls. We also conducted a quasi experiment at four study areas using response data from any Spotted Owl (male or female) detected following exposure to Barred Owl calls. We inferred from the crossover experiment that the simulated presence of a Barred Owl might negatively affect Spotted Owl responsiveness. Both subspecies of Spotted Owl responded less to Spotted Owl calls after exposure to Barred Owl calls, Northern Spotted Owls responded less frequently in areas having higher numbers of Barred Owls, and California Spotted Owls responded less frequently than Northern Spotted Owls overall.

Key words: Barred Owl, behavior, crossover experiment, interspecific competition, Spotted Owl, vocalization.