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## The Ecology of Yellow Warbler Nest Site Selection at Mono Lake

Predation of bird eggs and nestlings is the primary cause of nest failure for many bird populations. Because nest survival is an important component of avian fitness, nest predation influences the evolution of avian behaviors such as nest-site selection and parental nest attendance.

Collaborators from PRBO and the University of California, Riverside, examined ecological factors affecting nest predation risk and responses to predation by Yellow Warblers (*Dendroica petechia*) nesting along streams tributary to Mono Lake, California. Fifty to 95% of nests were depredated depending upon various factors.

From video recordings and observations made at songbird nests we identified a variety of nest predators, including Brown-headed Cowbirds (*Molothrus ater*), corvids, rodents, and snakes. Species depredating experimental nests were similar to those at natural nests, supporting use of experimental-nest data for studying predation risk.

Birds are expected to place nests in specific locations within their habitat ("microhabitats") where nest survival rates are highest, but we found the opposite. When placing their nests, Yellow Warblers favored willow-dominated microhabitats associated with higher nest predation rates than available alternatives.

Although Yellow Warblers did not favor microhabitats that minimized risk, they did avoid some predation by placing nests in relatively concealed locations. While predation rates for natural nests were unrelated with concealment, experimental nests placed by researchers in poorly concealed sites experienced higher predation rates than those concealed comparably to natural nests.

We also found lower predation rates in areas of high territory density, and early and late in the nesting season. These patterns were not recorded

at experimental nests, however, suggesting that parental behavior contributed to these patterns.

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### Main Points

- 50–95% of Yellow Warbler nests were depredated and 10 nest predator species were identified in our study area.
- Yellow Warblers built nests in microhabitats associated with higher nest predation rates than available alternatives.
- Yellow Warblers avoided some predation by concealing their nests.
- Parental behavior probably contributed to lower predation rates associated with higher territory density and nesting time.

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### Paper citations:

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