

Western Ecological Research Center

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Postfledging Forster's Tern Colony Attendance and Habitat Selection in San Francisco Bay

Relatively little is known about birds during the post-fledging period when flighted chicks have left the nest and must learn to forage independently. In a recent issue of *Condor*, USGS scientists Dr. Josh Ackerman, Jill Bluso, and Dr. John Takekawa examined postfledging movements, habitat selection, and colony attendance of Forster's terns radio-marked just before they fledged in San Francisco Bay, California.

The proportion of the day Forster's terns spent at their natal colony declined as juveniles aged, from 65% at the time of fledging to <5% within two weeks of fledging. Accordingly, the distance postfledging terns were located from their colony increased as they aged, from <500 m within the first week of fledging to >5,000 m by their fifth week. Time of day also influenced colony attendance, with older terns spending more time at the colony during nighttime hours (20:00 to 05:00) than during the day (06:00 to 19:00), when they were presumably foraging. Home range and core-use area sizes averaged 12.14 km² and 2.23 km², respectively.

At each of four spatial scales of analysis, postfledging terns strongly selected salt pond habitats. No other habitat types were selected at any scale, but terns consistently avoided tidal flats and uplands. Terns also avoided open bay habitats at the two largest spatial scales, tidal marsh habitats at the two smallest scales, and sloughs and managed marshes at several scales. Within salt ponds, terns were located closer to salt pond levees (58 m) than was expected (107 m). These results indicate that tern chicks disperse from their natal colony within a few weeks of fledging, with older

Management Implications:

- Currently, large-scale restoration plans are being implemented in San Francisco Bay to convert 50–90% of the former salt evaporation ponds into tidal marsh to offset the loss of over 80% of tidal marsh habitat within the estuary.
- This study's results demonstrate the importance of salt pond habitats for postfledging Forster's terns and concur with several other studies assessing the value of salt pond habitat to wintering, migrating, and breeding waterbirds.
- Not only are salt pond habitats used extensively by Forster's terns for foraging and roosting, but salt ponds currently provide nesting habitat for the vast majority of terns breeding in San Francisco Bay.
- It is unknown what effect the loss of salt pond habitat will have on waterbirds in the estuary, therefore implementation of the habitat restoration plan should proceed with caution, and continued monitoring of waterbirds, especially locally breeding birds, is warranted.

chicks using their natal colony primarily for roosting during the night, and that postfledging terns are highly dependent on salt pond habitats.

Ackerman, J.T., J.D. Bluso, and J.Y. Takekawa. 2009. Post-fledging Forster's tern movements, habitat selection, and colony attendance in San Francisco Bay. Condor 111:100–110.