Point Blue Publication Brief

When birds of a feather don't flock together: Hermit Thrushes across the San Francisco Bay region migrate to different breeding locations

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To successfully conserve migratory birds it is necessary to consider their entire annual cycle (breeding, migration, and winter). Although the breeding and wintering ranges of most North American songbird species are known generally, until recently it has not been possible to track specific populations or individuals throughout the year. Recent technological developments have allowed us to track larger species with light-level geolocator tags (geolocators) that, when recovered, reveal the approximate destinations of individual migratory birds.

To determine breeding locations and migratory timing of the Bay Area's wintering Hermit Thrushes, we deployed geolocators on birds at sites to the north and south of San Francisco Bay as part of a collaborative study by biologists at Point Blue's Palomarin Field Station, San Francisco Bay Bird Observatory, and San Francisco State University.

Hermit Thrushes that wintered in the North Bay had a geographically broader and more southerly breeding distribution, from the British Columbia coast to northwestern Washington, whereas South Bay thrushes migrated to southeastern Alaska and the British Columbia coast. The North Bay birds also migrated slightly earlier than those from the South Bay.

These differences in migration patterns suggest that Hermit Thrushes that winter north and south of San Francisco Bay originate from predominantly different breeding populations. This was further supported by our observation of morphological differences between North and South Bay birds (bills were longer in North Bay birds).

Our results demonstrate that even across relatively short distances (from one side of San Francisco Bay to the other), wintering birds of the same species may migrate to distinct breeding areas. These patterns will need to be considered in full life-cycle conservation of migratory species.

Main Points

We used light-level geolocators to track Hermit Thrushes from their San Francisco Bay Area wintering grounds to their northern breeding grounds.

Six birds from the north of San Francisco Bay (Marin County) migrated to the British Columbia coast and northwestern Washington.

Four birds from the south of San Francisco Bay (Alameda County) migrated to southeastern Alaska and the British Columbia coast.

Hermit Thrushes from the North and South of San Francisco Bay likely originate from different breeding populations and may therefore face different conservation challenges.

Nelson, A. R., R. L. Cormier, D. L. Humple, J. C Scullen, R. Sehgal, N. E. Seavy. 2016. Migration patterns of San Francisco Bay Area Hermit Thrushes differ across a fine spatial scale. Animal Migration 3: 1-13. http://www.prbo.org/refs/files/12393_Nelson_etal2016.pdf