

Migratory geography of Golden-crowned Sparrows from two wintering regions

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To successfully conserve migratory bird species we must understand where they go throughout their annual cycle (breeding, migration, and winter). For most species of songbirds, that information is lacking. However, recently developed geolocator (tags) technology is now helping us gather this information.

Golden-crowned Sparrows breed from Alaska, USA to southwestern Canada, and winter from British Columbia to northern Mexico. Within that range, very little is known about where these sparrows migrate. In an [earlier study](#), we showed that 4 Golden-crowned Sparrows wintering on the central coast of California went to breeding sites along the coast of the Gulf of Alaska. To investigate the migratory geography of this species further, we attached miniature tags to 38 Golden-crowned Sparrows wintering in two areas of California: coastal Marin County and the inland foothills of the Sierra Nevada in

Placer County. We recovered 17 of the tags the following fall and winter.

Eight out of 9 birds recovered at coastal-wintering sites went to coastal-breeding sites along the Gulf Coast of Alaska and followed a coastal route during migration, while 7 of 8 of the recovered inland-wintering birds migrated to interior sites in the Yukon, Northwest Territories, and British Columbia, Canada, via an inland route. Coastal-wintering birds migrated significantly farther than inland-wintering birds and at a greater rate (km/d) during spring migration. We found no differences between groups in the rate of fall migration, dates of migratory departure and arrival, duration of migration, or the proportion of birds that returned.

Our findings suggest there may be structuring in the migratory geography of the Golden-crowned Sparrow. This should be considered in the context of conservation efforts for this

species. For example, Golden-crowned Sparrows that winter in the foothills may experience different impacts of climate change on their Yukon breeding grounds than those that winter on the coast and breed along the Gulf of Alaska.

Main Points

Most birds from coastal-wintering sites went to coastal breeding areas and followed a coastal route, while most inland-wintering birds went to inland sites via an inland route.

Coastal birds migrated farther and at a greater rate than inland birds.

Conservation actions for Golden-crowned Sparrows should consider the distinct wintering and breeding areas between regions within the species' range.

R.L. Cormier, D.L. Humple, T. Gardali, N.E. Seavy. 2016. [Migratory connectivity of Golden-crowned Sparrows from two wintering regions in California](#). 2016. *Animal Migration*. 3: 48-56.