Northern Rough-winged Swallow Stelgidopteryx serripennis

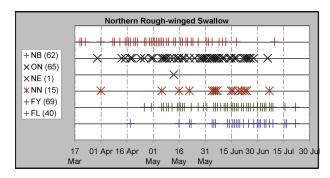
As the fan palm to the Hooded Oriole, so the box-frame bridge to the Northern Rough-winged Swallow—an accoutrement of southern California civilization opens a door of opportunity to a bird preadapted to capitalize on it. Armed only with the flexibility it shares with many species programmed to nest in cavities, the Rough-winged Swallow has maintained its status as a common summer resident. It is even more common in migration but rare in winter.

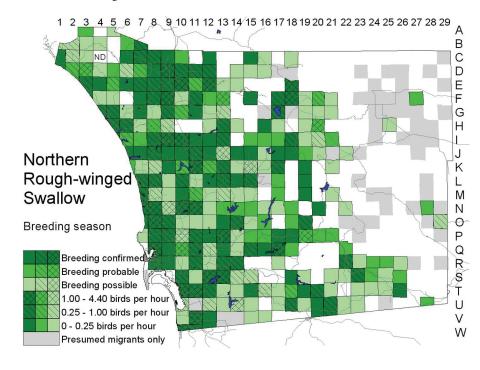
Breeding distribution: The Northern Rough-winged Swallow is widespread in San Diego County's coastal lowland, becoming scarcer and patchier at higher elevations. It is absent as a breeding bird from Point Loma and Coronado. A few pairs nest as high in the mountains as about 4000 feet, as at Pine Hills (K19; nest building 5 May 2001, S. E. Smith) and near Green Valley Falls Campground (N20; nest building 23 May 1999, B. Siegel). In the Anza-Borrego Desert, the Rough-winged is widespread as a migrant but rare as a breeding species. Occasional pairs evidently nest in the eroded bluffs of the Borrego and Carrizo badlands: one pair at Font's Point (F27) 27-28 May 2000 (G. Rebstock), another pair copulating in Arroyo Seco del Diablo (O28) 8 May 1999 (R. and S. L. Breisch). The species is regular in small numbers around Carrizo Marsh (O29), with up to 15 on 6 May 1998 (P. D. Jorgensen). Though the Rough-wing nests commonly in the Imperial Valley, and man-made structures are now its primary nest sites on the coastal slope, the only place in the Anza-Borrego Desert where the birds have been seen near buildings in the breeding season is around the Casa del Zorro (H25; two on 23 May 1998, H. L. Young).



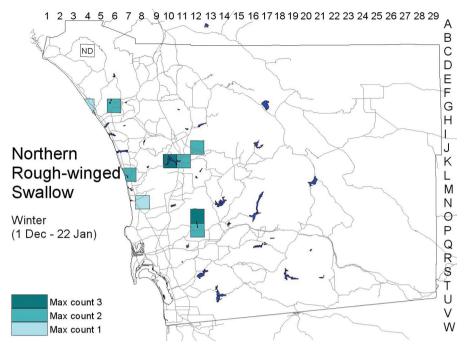
Photo by Anthony Mercieca

The Rough-winged Swallow is not colonial, so large numbers are usually of migrants rather than of breeding birds. But if suitable nest sites are clumped—as with several drain holes under a single bridge—multiple pairs often nest in amity. From 1997 to 2001, the largest numbers were reported consistently from lower Los Peñasquitos Canyon (N8), up to 150 on 2 May 1999 (P. A. Ginsburg). Such large concentrations during the breeding season may be of birds unable to find suitable nest sites—the availability of sites may limit the population (DeJong 1996).





Nesting: Burrows in banks and bluffs were the Rough-winged Swallow's primitive nest site. The literature is inconsistent on the question of whether the birds dig the burrows themselves, as does the Bank Swallow. None of our atlas observers reported the species excavating. Clearly, the birds spare themselves the work of digging whenever possible, preferring existing burrows or artificial structures that mimic them. Of the 32 nest sites our observers described, seven were in banks, bluffs, or cliffs, three were in road cuts, three were in buildings, one was in a pipe in a water tank, and 18 were in drain holes under bridges. I investigated one reachable nest hole in the



Hollister St. bridge over the 1993 channel of the Tijuana River (W11) and found that the nest was right at the lip of the hole—therefore far closer to the entrance than the mean 82.4 cm Hill (1988) reported for 44 nests in pipes.

Our observations imply that egg laying by Roughwinged Swallows is concentrated from mid April to early June, encompassing the range 1–23 May of eight egg sets collected 1911–39. Reports of a nest with nestlings at Fallbrook (D8) 1 April 1998 (M. Freda) and fledglings along the Sweetwater River at Interstate 805 (T11) 18 April 1999 (W. E. Haas) suggest that a few birds lay as early as mid March. Rough-winged Swallows raise only one brood per year (DeJong 1996).

Migration: The Northern Rough-winged Swallow is one of southern California's earliest spring migrants. Even those seen in late December and early January may be returnees, as records in late October and November are so few. From 1997 to 2002 the earliest clear spring migrants were 12 north of Lake Morena (S21) 23 January 1999 (S. E. Smith). Scattered individuals at low elevations in late January and early February could have been wintering. The birds arrive by mid February every year, and by the last week of February they are common. Records from the Anza–Borrego Desert imply that spring migration continues regularly through the first week of May, possibly as late as 15 May (1999, two northwest of Clark Dry Lake, D25, K. J. Winter). Like that of spring migrants, the return of fall migrants is also early, in early July. Three in Borrego Palm

Canyon (F23) between 2 and 5 July 1998 (L. J. Hargrove) and one at Big Laguna Lake (O23) 7 July 2001 (J. R. Barth) were remote from nesting locations. Numbers of fall migrants build to August then decline through September, until by mid October the species is very rare.

Winter: In December and early January the Rough-winged Swallow is rare but annual around lagoons, lakes, and ponds in the coastal lowland, with one to four records each year 1997–2002. The highest winter counts during the atlas period were of three individuals (Lake Hodges, K10, 22 December 2000, R. L Barber; upper Santee Lakes, O12, 5 January 2001, I. S. Quon). The only earlier records of larger num-

bers are of nine near Oceanside 16 December 1983 (R. E. Webster, AB 38:358, 1984) and at least six at Santee Lakes in winter 1992–93 (C. G. Edwards, AB 47:301, 1993).

Conservation: Much of the Northern Rough-winged Swallow's original nesting habitat has been eliminated with the conversion of wild meandering streams, with their eroding banks, into channels lined with riprap and concrete. But the species' adaptability to man-made nest sites has probably more than compensated. Quarries, road cuts, and borrow pits are substitute habitat. The birds are opportunistic, quickly investigating new excavations—as I saw out the windows of the San Diego Natural History Museum when the pit dug for the building's expansion stood idle for weeks. Above all, the building of bridges composed of box-frame girders of concrete, with their drain holes beneath, has created thousands of new nest sites. Though European Starlings also use these holes, apparently they do not prefer them, perhaps because of their vertical orientation, and leave many to the more agile Rough-winged. In winter the Roughwinged appears to be increasing gradually: eight records before 1982 (Unitt 1984) versus 12 from 1997 to 2002.

Taxonomy: The paler, more southern subspecies *S. s. psammochroa* breeds locally, while the darker, more northern *S. s. serripennis* passes through in migration (specimen collected 3 miles west of Santee, P11, 1 May 1921, SDNHM 32101).