

## Gadwall *Anas strepera*

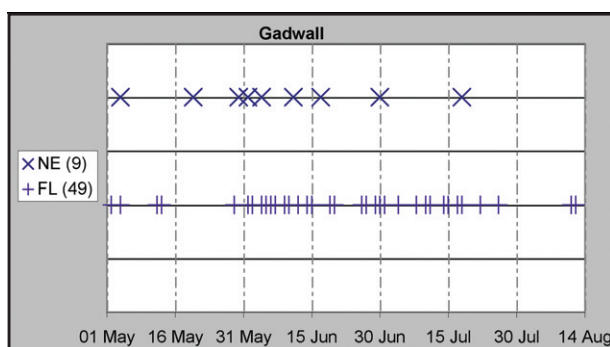
Like other puddle ducks, the Gadwall prefers shallow fresh and brackish water. Since the 1960s, it has increased greatly as a wintering bird, becoming abundant in the coastal lagoons, and has colonized as a breeding species. This colonization represents a southward spread of the Gadwall's breeding range, which continued on to northwestern Baja California after covering San Diego County (Erickson et al. 2002).

**Breeding distribution:** San Diego's Gadwalls are strongly concentrated in the coastal lagoons of the north county. During the breeding season our peak counts in this area, often including young, were 60 at the Santa Margarita River mouth (G4) 26 July 1998 (B. Peterson), 100 in the west basin of Buena Vista Lagoon (H5) 14 July 1998 (C. C. Gorman), 80 in the west half of Batiquitos Lagoon (J6) 15 May 1998 (M. Baumgartel), and 50 at San Elijo Lagoon (L7) 26 June 1999 (J. Ciarletta). In south-coastal San Diego County the Gadwall breeds at least in the Tijuana River estuary (V10/W10; up to 20 on 16 May 1998, B. C. Moore) and the San Diego Bay salt works (U10/V10; seven nests in 1997, M. R. Smith; average of 12 and maximum of 50 individuals in June 1993, Stadtlander and Konecny 1994).

Breeding or summering Gadwalls occur also at many ponds and well-vegetated reservoirs inland, especially in the lower Santa Margarita and San Luis Rey River valleys (up to 20 at O'Neill Lake, E6, 4 July 2000, P. A. Ginsburg; 25 at Whelan Lake, G6, 17 June 1997, D. Rorick). Warner Valley proved to be a minor center for the Gadwall, with the birds using ponds and marshy areas throughout the valley as well as Lake Henshaw (G17), which had up to 13, including young, 17 July 1998 (C. G. Edwards). Gadwalls summer, apparently irregularly, at San Diego County's highest lakes, Cuyamaca (M20; up to two on 26



Photo by Anthony Mercieca

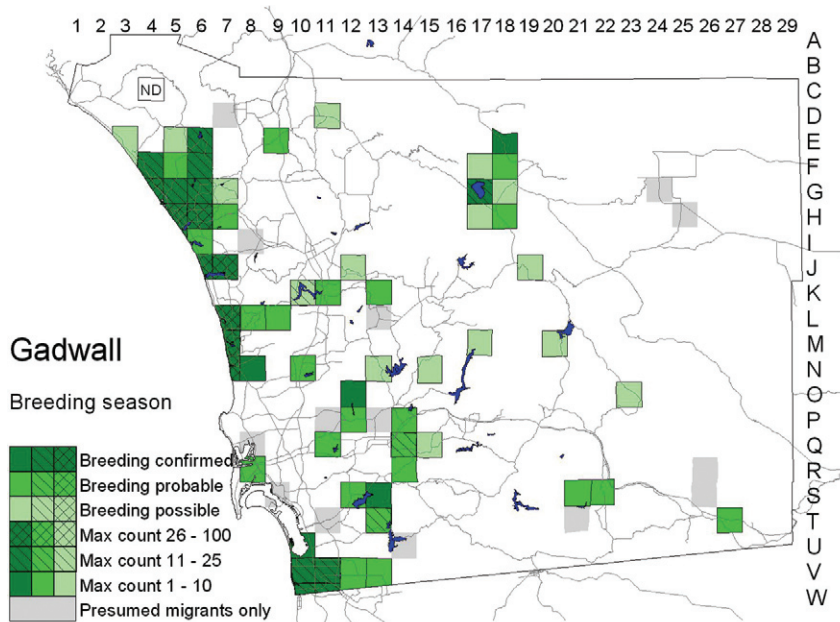


May 1998, B. C. Moore) and Big Laguna (O23; two on 24 July 1998, E. C. Hall, and 7 July 2001, J. R. Barth). The summer range extends slightly onto the east slope of the mountains in McCain Valley (R26, two on 6 May 2001; S26, two on 9 June 2001, P. Unitt) and at Tule Lake (T27; up to 10 on 6 June 2000, J. K. Wilson).

**Nesting:** Gadwalls nest on the ground, hiding the nest in dense low vegetation near water. In coastal San Diego County stands of pickleweed are the usual nesting habitat.

Our dates for nests with eggs ranged from 1 May to 18 July, but we saw chicks as early as 2 May, implying egg laying as early as about 6 April.

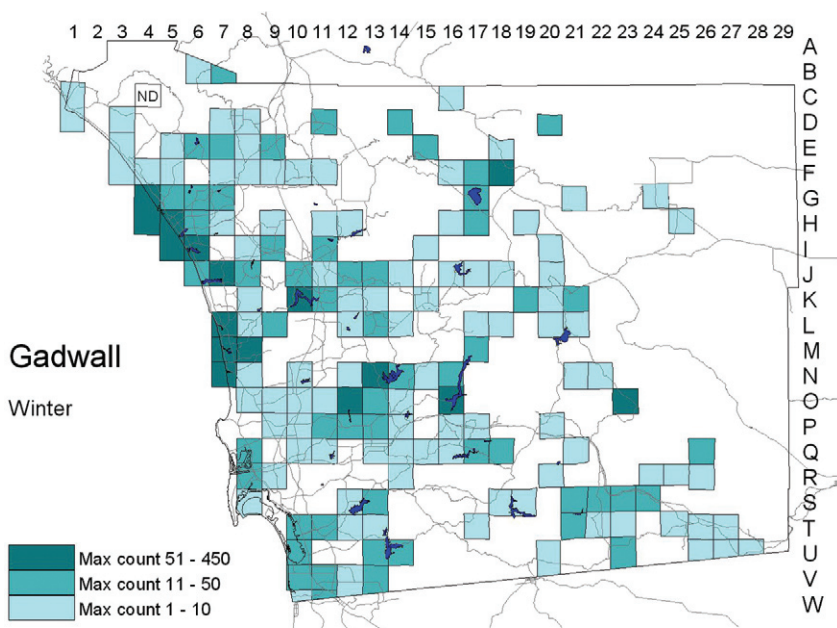
**Migration:** With the Gadwall's increase as a breeding species in San Diego County, its migration schedule is less distinct than formerly. Nevertheless, fall arrival is in late October or November, later than that of other puddle ducks. Quarterly surveys at Batiquitos Lagoon in 1997 found no Gadwalls at Batiquitos Lagoon on 27 and 28 October (Merkel and Associates 1997), though the species winters there commonly. On the basis of monthly surveys done in the early part of each month, King et al. (1987) found Gadwall numbers at



San Elijo Lagoon to be at low summer levels in October but at high winter levels in November. Records for the Anza-Borrego Desert range from 26 October (1988, four at the Borrego Springs sewage pond, H25) to 15 March (1983, one at Lower Willows, D23, A. G. Morley). Spring departure is largely in April: numbers are at high winter levels early in that month but then drop quickly.

**Winter:** In winter as in the breeding season, the Gadwall is most abundant in northern San Diego County's coastal lagoons. Our counts there ranged up to 450 in the west basin of Buena Vista Lagoon 22 December 2001 (J. Determan), 227 at San Elijo Lagoon 26 December 1999 (R. T. Patton), and 138 at the San Dieguito River estuary (M7) 13 February 1999 (D. R. Grine). In the tidal salt water of Mission and San Diego bays the Gadwall is irregular, generally uncommon, and restricted to shallow marshy areas. Inland, it is considerably more widespread and abundant in winter than in summer, with up to 117 in the upper ponds of Santee Lakes (O12) 13 February 1999 (I. S. Quon) and 100 at Swan Lake (F18) 29 December 1997 (G. L. Rogers). We found it wintering repeatedly as high as 5400 feet elevation at Big Laguna Lake (O23; up to 60 on 24 December 2001, P. Unitt). In the Anza-Borrego Desert the few winter records are all from ponds in the Borrego Valley and of no more than four individuals, as at the Roadrunner Club (F24) 15 December 1991 (A. G. Morley).

**Conservation:** Through the second half of the 20<sup>th</sup> century, over much of North America, the Gadwall increased and spread (LeSchack et al. 1997). In San Diego County, the species was just a winter visitor until 1971, when Alice Fries discovered a brood of chicks at Buena Vista



Lagoon (AB 25:906, 1971). It spread rapidly over the next two decades, throughout the county's coastal slope. Winter numbers also increased over this period. King et al. (1987) observed an increase at San Elijo Lagoon from 1973 to 1983. From 1961 to 1980 the San Diego Christmas bird count averaged 5.6 Gadwalls and sometimes missed the species. From 1989 to 1996 the average was 221. Similarly, the Oceanside count averaged 56 from 1975 to 1979 but 323 from 1989 to 2002. Though the Gadwall takes advantage of many artificial bodies of water, the change seems less likely due to local habitat changes than to broader forces such as regulation of hunting. The increase could reverse, too: from 1997 to 2002 numbers on the San Diego Christmas bird count were on the decline, averaging 63 during this interval.

**Taxonomy:** Gadwalls in both North America and Eurasia are nominate *A. s. strepera* Linnaeus, 1758.