

### Brant *Branta bernicla*

San Diego and Mission bays were once two of the Brant's major wintering sites on the Pacific coast of North America. With uncontrolled shooting, then development of most of the bays, the Brant's numbers collapsed. Since the 1970s they have increased again, so that by the end of the 20<sup>th</sup> century about 750 to 1500 Brant were wintering annually around San Diego. Eelgrass in the bays is the key food source sustaining the birds. In the mid 20<sup>th</sup> century many of the Brant shifted to new winter quarters in the Gulf of California, establishing a new migration route over the mountain passes of eastern San Diego County.

**Winter:** South San Diego Bay is currently the Brant's primary habitat in the county. Within the bay the birds are concentrated strongly along the Chula Vista bayfront and in Emory Cove (U10), sites of the largest stands of intertidal eelgrass (Macdonald et al. 1990, Manning 1995). Covering virtually all of the Brant's habitat in San Diego Bay weekly from April 1993 to April 1994, Manning (1995) found a December–January average of about 350 and a maximum of about 550. From 1997 to 2002 numbers were somewhat higher: Barbara C. Moore estimated 500 along the Chula Vista bayfront repeatedly through the atlas period. Totals on San Diego Christmas bird counts reached 1118 on 15 December 2001 and 1292 on 14 December 2002. Relatively few Brant use central and northern San Diego Bay; our highest count there was of 53 around North Island Naval Air Station (S8) 15 December 2001 (R. T. Patton).

Brant have used the San Diego River flood-control channel (R7/R8) for decades. Counts of 50 to 200 are regular here, with a maximum of 260 on 20 December 2000 (G. Grantham). Counts of 100 to 200 are now regular on Mission Bay, with a maximum of 230 on 7



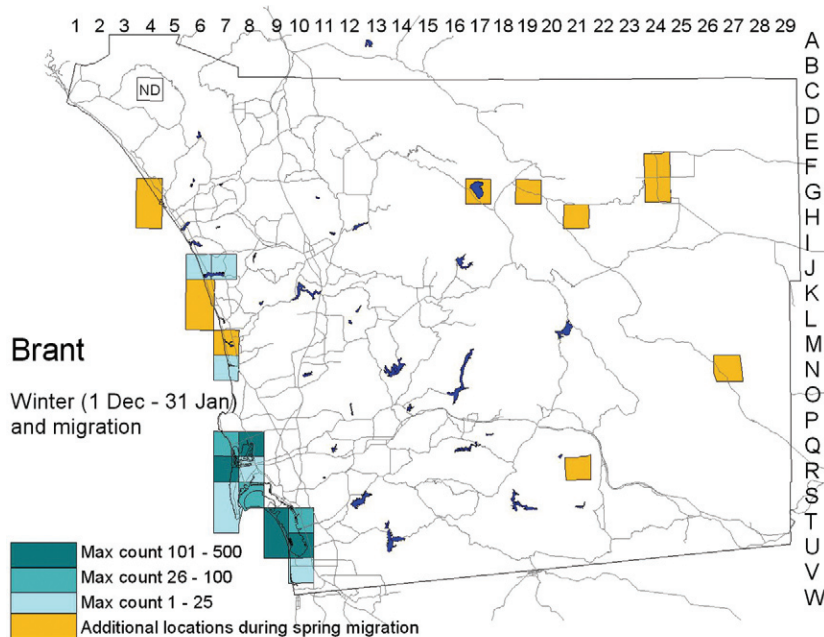
Photo by Anthony Mercieca

December 1998 (J. C. Worley). Elsewhere along San Diego County's coast, however, wintering Brant are rare. Our only December–January records during the atlas period were of one at Batiquitos Lagoon (J6/J7) 10 and 30 December 1998 (M. Baumgartel, R. T. Patton) and two at Los Peñasquitos Lagoon (N7) 3–4 January 1998 (K. Estey, D. K. Adams). The Oceanside and Rancho Santa Fe Christmas bird counts record the Brant rarely, just one or two individuals, except for 50 on the Oceanside count 31 December 1977.

**Migration:** Fall migrants may arrive as early as 28 October (1972, one at the San Diego River mouth, G. McCaskie), but the third week of November appears to be the typical arrival schedule. The earliest date Preston and Mock (1995) recorded on central San Diego Bay was 22 November 1994 (43 birds). Southbound migrants usually pass through unnoticed, offshore or at high altitudes, but northbound migrants are conspicuous and often outnumber wintering birds—most Black Brant winter in Baja California. On San Diego Bay Manning (1995) recorded higher numbers in February and March than in December and January, up to 714 on 29 March 1994. Some birds are moving north

as early as 2 February (1992; 75 flying past Los Coronados Islands, P. Unitt). By April most have departed, but some are seen through early May. A few stragglers fail to migrate. Numbers of such oversummering birds range up to six near the Chula Vista Nature Center 30 May–5 June 1999 (B. C. Moore) and 10 in the Tijuana River estuary (V10) 27 June 1998 (C. G. Edwards).

The principal spring migration route for Brant leaving the Gulf of California crosses eastern San Diego County. The heart of the corridor parallels Highway S2 from the Anza–Borrego Desert up through San Felipe Valley to Lake Henshaw (G17). Most of the birds make the trip nonstop, noted only when they pause on Lake Henshaw because of storms or the fierce headwind so frequent at this season. Counts on the lake range up to 754 on 4 March



1983 and 688 on 16 March 1984 (R. Higson, AB 37:912, 1983; 38:958, 1984). Occasionally, however, Brant can be seen in flight headed northwest up the corridor, such as 15 near Canebrake (N27) 17 April 1998 (P. D. Jorgensen) and 40 in San Felipe Valley (H21) 26 April 2001 (P. Unitt). Spring migrants have been recorded widely elsewhere in eastern San Diego County, with up to 38 at Lake Cuyamaca (M20) 22 April 1967 (AFN 21:540, 1967), 50 flying up Banner Canyon (K21) 13 March 1977 (AB 31:1047, 1977), 75 at Yaqui Well (I24) 19 April 1984 (B. Wagner, AB 38:958, 1984), and 31 on the golf-course pond at Club Circle, Borrego Springs (G24), 19 April 1999 (P. D. Ache). Several have been found exhausted or dead, such as one near Canebrake 11 March 1989 (R. Thériault, SDNHM 47503).

The passage overland takes place mainly in March and April. In 1983, when El Niño generated repeated storms, Roger Higson monitored Lake Henshaw regularly and noted the Brant from 4 March to 29 April. Extreme dates are 18 January (1993, one on the Borrego sewage pond, H25, J. Dougherty) and 1 May (1992, one dead and one exhausted along Highway S2, R. Thériault), except for five at the Roadrunner Club (F24) 24 May 1988 (T. Hatch) and one at the Borrego sewage pond 1 June 1988 (A. G. Morley). Such records parallel the regular summer stragglers at the Salton Sea (Patten et al. 2003). It seems likely that south-bound migrants follow the same route but are not detected because of the lack of headwinds impeding them.

**Conservation:** Nineteenth-century writers commented on the fabulous abundance of the Brant on San Diego Bay, but the only specific estimate is of 50,000–100,000 at Spanish Bight (now filled) between Coronado and North Island in the 1880s (McGrew 1922). By the 1890s these numbers were already being depleted (Belding 1892), and by the early 20<sup>th</sup> century the Brant was rare (Stephens 1919a). “Reckless, idiotic shooting...reft the bay of one of its chief attractions” (McGrew 1922). Through the middle of the century Brant numbers on San Diego Bay

varied from zero in the early 1930s and late 1970s to 1100 in 1942 and 1573 in 1961 (Moffitt 1938, 1943, Christmas bird counts). In 1952, Leopold and Smith (1953) omitted San Diego and Mission bays from their rangewide survey, considering numbers there negligible and writing, “pollution, dredging, and other developments, plus continued disturbance by boats and airplanes, have rendered this area of less use to Brant.” The increase since the late 1970s may be due to improved water quality and recovery of eelgrass. By 2000, eelgrass covered the maximum possible remaining available habitat in San Diego Bay (M. Perdue pers. comm.). The Brant feeds also on sea lettuce, apparently relying on this plant when eelgrass is not available (Moffitt 1943). Slow regrowth of aquatic plants in Mission Bay after the dredging and development of the late 1950s has allowed some Brant to return there. At the Brant’s low point in the 1970s the San Diego River flood-control channel was the species’ only consistent site (Unitt 1984).

The shift of the Brant’s main wintering population to Baja California and the spread of the winter range to the Gulf of California may have been a response to the disturbance and loss of habitat at San Diego. In Sonora, the Brant was first noted in 1958 and increased rapidly to about 25,000 birds (Russell and Monson 1998).

**Taxonomy:** The Black Brant is the subspecies of Brant migrating along the Pacific coast and regular in San Diego County. There are seven sight records of the light-bellied Atlantic subspecies *B. b. hrota* (Müller 1776), all summarized previously by Unitt (1984). Because there is no specimen, however, it is possible that some or all of these were of the gray-bellied population breeding in the western Canadian arctic, wintering mainly in Puget Sound, and reported from Baja California (Reed et al. 1998). Delacour and Zimmer (1952) and Buckley and Mitra (2002) suggested that the name *B. b. nigricans* (Lawrence, 1846) applies to these birds and that *B. b. orientalis* Tugarinov, 1941, should be used for the Black Brant.