

## FEATURED PHOTO

### A LEUCISTIC WILLET IN CALIFORNIA

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For several weeks in June 2002 a largely white-plumaged Willet (*Catoptrophorus semipalmatus*) was observed at the Bolsa Chica Ecological Reserve, Orange County, California. During this time numerous observers saw the bird as it foraged at the reserve and occasionally on the ocean front at the adjacent Bolsa Chica State Beach. Mike Bowles obtained the photographs shown on this issue's back cover, which made possible a closer study of this interesting bird.

Albinism, which involves a complete absence of all pigments from both plumage and soft parts, is decidedly rare in birds (Sage 1963, Gross 1965). More common is an absence of pigments in some or all of the plumage but not the eyes or soft parts, a condition frequently termed "partial albinism" but properly called leucism (Buckley 1982, 1987; Collins 2002). Leucism can vary in extent from only a few scattered white feathers to bilaterally symmetrical patches or completely white birds with only the eyes and soft parts pigmented (Buckley 1982, 1987). An entirely white-plumaged Anna's Hummingbird (*Calypte anna*) with dark eyes and bill (e.g., Childs 1994) gives an example of complete leucism. A recent Featured Photo (Garrett 2001) examined a case of partial leucism in Heermann's Gull (*Larus heermanni*). Leucistic individuals are not frequently encountered, and this appears to be the first photographically documented instance of it in the Western Willet (*C. s. inornatus*). On the other hand, it is surprisingly frequent in the Eastern Willet (*C. s. semipalmatus*), with several seen each year along the Atlantic and Gulf coasts (Mills 1970; P. Buckley pers. comm.). The reasons for this interpopulational difference are not understood. However, each individual offers an opportunity to learn more about the pigment systems present in birds and the functional significance of their color patterns.

When walking or standing, the leucistic Willet at Bolsa Chica appeared largely white with a dark eye and dark distal half of the bill. The raised wings, however, showed extensive dark pigmentation of the underwing coverts, axillars, and flight feathers. This suggests a loss of phaeomelanin in the body with retention of darker eumelanin in the wings and axillars. If true, this should be more correctly considered a case of melanic-melanic schizochroism rather than incomplete leucism. The dorsal side of the older, unmolted secondaries and outer primaries showed substantial bleaching compared with the newly molted innermost four primaries. The unpigmented tips of the outer primaries also showed extensive wear and erosion of the vane, leaving nearly bare terminal shafts. The deposition of harder and granular melanin pigments in the tips of outer primaries has been suggested to be a mechanism to prevent the type of excessive wear noted here (Burt 1979).

Albinistic and leucistic birds lacking much of the normal protective coloration are generally not thought to live long in the wild. Bolsa Chica's leucistic Willet was at least one year old, as indicated by the start of a complete prebasic molt (the first prebasic molt in Willets is incomplete; Lowther et al. 2001). The fact that this bird was well southwest of the largely inland breeding range of the western population of the Willet during the breeding season suggests that it was a younger, prebreeding individual, perhaps one or two years old. The age of first breeding of western Willets appears to be three years (Lowther et al. 2001).

Since this Willet's legs were pale yellow, rather than the normal gray or greenish gray with darker melanins obscuring the yellow carotenoid pigments occurring with them, the legs showed melano-carotenoid schizochroism (Buckley 1982, 1985; Collins 2002).

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