

# ABOUT THE COVER

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## Western Grebe

Western Grebes (*Aechmophorus occidentalis*) are rare winter visitors to coastal Massachusetts, but they are spectacular birds and well worth watching for. A genus name that means "spear-bearing" and folk names that include "swan grebe" and "swan-necked hell-diver" suggest that this is a bird worth watching. This large grebe, mostly black above and white below, has a swanlike neck topped by a crested head punctuated with a bright red eye and a long sharp-pointed greenish bill. It is very similar in appearance to its congener the Clark's Grebe (*A. clarkii*), but the Western Grebe has the black crown extending down to include the eye, while the Clark's Grebe sports a white eyebrow. The Clark's Grebe also has a much yellower bill, and in flight shows a more pronounced white wing stripe. The sexes are similar in plumage in the Western Grebe, but females are smaller and have shorter, thinner bills. The taxonomic history of the Western and Clark's grebes is somewhat confusing. Both species were described in 1858, but lumped into a single species, the Western Grebe, by the American Ornithologists' Union (AOU) in 1886. There they remained, treated as color phases until 1985, when the same august AOU re-split them into separate species on the basis of behavioral differences that suggested reproductive isolation and DNA differences. Thus, the literature for the two species treated them as one for nearly a century, and often the color phase of the birds being studied was not identified. There are currently two subspecies recognized for the Western Grebe.

Western Grebes nest on suitable lakes over most of the western half of the United States and southern Canada. Most migrate to the Pacific coast where they winter from southern British Columbia to central Mexico. A few winter on the Gulf Coast of Texas and on interior lakes. Stragglers reach the East Coast. In Massachusetts there have been apparent flight years, with multiple sightings reported from November through May in 1934-1946 (17 reported), 1946-1947 (a dozen birds reported from Gloucester), and several in 1972-1973, 1979-1980, and 1982-1983.

Western Grebes are gregarious at all seasons and nest in colonies that range from a few pairs to several thousand birds. They are monogamous but will re-nest after nest failure. Suitable breeding habitat requires lakes with extensive open water edged with emergent vegetation. They are nocturnal migrants that arrive at their breeding colony and experience muscle atrophy that leaves them flightless until after a postbreeding molt. Their courtship displays are spectacular and among the most complex ritualized displays known in birds. They defend the territory around their nests, uttering *tuk-tuk* threatening calls, and may make spearing bill-jabs at opponents from under water. Their advertising call is a harsh *cree cree*. Their two most prominent courtship displays are the rushing ceremony and the weed ceremony. In the former they perform a ratchet-pointing display in which they give harsh, ratchet-sounding calls while pointing their bills at their partners, culminating in rushing, where they run across the water, side-by-side, wings lifted, necks arched, heads lowered, and bills pointed forward and slightly upwards. The weed ceremony culminates in weed dancing, the pair facing each other, bodies stretched up and out of the water, bills crossed and

dangling weeds. Interspersed are displays with such exotic descriptive names as dip-shaking, bob-preening, and arch-clucking. Courtship displays often are accompanied by various clucking and trilling calls.

Breeding colonies are in flooded emergent vegetation, with nest sites selected by the male, and with female approval, nest-building is begun by both birds. The nest, which takes 1-3 days to complete, is a solid mound of weeds with a shallow depression, either floating and anchored to emergent vegetation or built up from the lake bottom or a snag. The usual clutch is 3-4 bluish eggs, often stained by the wet vegetation of the nest. Both parents have brood patches and share incubation responsibilities. The eggs hatch in a little more than three weeks. The chicks, within minutes of hatching, climb up under the back feathers of the adult bird. The parents soon leave the nest, and may travel a mile or more, back-brooding the chicks for 2-4 weeks. The fledging period is roughly 9-11 weeks. The young are fed small solid food, mostly aquatic insects, by their parents. They are also fed feathers from the first day. Western Grebes have feather balls in their stomachs that may function to protect the stomach and intestines from fish-bone damage. The chicks can dive and feed themselves after several weeks. The diet of Western Grebe adults is mostly fish that they pursue and capture with spearlike thrusts similar to those of herons and Anhingas.

Western Grebes historically have faced multiple problems of survival. At the turn of the twentieth century, plume hunters slaughtered thousands of Western Grebes for their silky white ventral plumage that was used for hats, capes, and coat trimmings. Large colonies were destroyed. Habitat alteration, especially large drainage for agricultural purposes, has further eliminated colonies, and pesticides have severely impacted others. Human disturbance, e.g., from boats, may cause temporary desertion and result in egg loss to gulls and corvids. They face natural threats as well. Winter kill of fish may produce summer starvation, and storms may destroy entire colonies. Despite these ravages, the North American population has reached more than 100,000 birds, and a winter sighting in coastal Massachusetts remains a thrilling possibility. ↗

William E. Davis, Jr

## About the Cover Artist

The work of noted wildlife artist Paul Donahue has appeared many times on the cover of *Bird Observer*. Some of our readers may also have enjoyed the experience of visiting the rain forest canopy walkway at the Amazon Center for Environmental Education and Research off the Rio Napo in the Department of Loreto in northeastern Peru. This canopy walkway, the world's longest, is the creation of Paul Donahue and Teresa Wood. Paul can be reached at PO Box 554, Machias, Maine.

The Western Grebe drawing on our cover first appeared in a catalog of Victor Emanuel Nature Tours, Inc. (VENT). *Bird Observer* is grateful for permission from VENT to use this drawing. Founded in 1975, VENT is one of the largest and oldest natural-history tour companies, visiting over a hundred United States and foreign destinations annually. VENT is committed to supporting local conservation organizations and using local drivers and guides at tour destinations. For more information, write VENT at PO Box 33008, Austin, TX 78764, or call 800-328-VENT.