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# NORTHWEST WILDLIFE PRESERVATION SOCIETY

## *Western Grebe*

*Aechmoforus occidentalis*



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The largest species of grebe in North America, this elegant diving bird travels in large breeding colonies that migrate between wetland nesting sites and the shores off the Pacific Coast. They are best known for their elaborate courting displays, which are performed in plain sight on open waters

**Scientific Name:** *Aechmoforus occidentalis*

**Family:** Podicipedidae or grebe (pronounced "greek") freshwater diving birds

**Nicknames:** "swan grebe" or "swan-necked grebe"

## **Characteristics**

The western grebe is highly specialized for fishing and diving. It has an average length of 64cm (25 inches) and weighs up to 1.8 kg. It has a distinctly long, curving neck, vivid red eyes and an elongated and sharply pointed bill. Both male and female individuals are marked by a black plumage running from the top of the head and over the back, contrasting with the white plumage of their throat and underside.

Interestingly, the grebes do not have webbed feet like ducks; they have three distinct lobed toes. This specialized adaptation allows the grebe to navigate and propel itself through waters with dense vegetation. They experience greater difficulty moving on land as their hind legs are located very far back on their body.



*Photo source: Monika Wieland*

### **The lobed toes of a western grebe**

The western grebe is very similar in appearance to the Clark's grebe and they are often mistaken for one another. However, the western grebe has black plumage around its eyes where the Clark's grebe has white plumage.

## **Life Cycle**

The western grebe is known for its highly elaborate mating rituals. During the breeding season beginning in late April and early May, they practice two distinct courting displays. In the "rushing ceremony" a female and male grebe will sprint a 20 metre stretch across the water's surface in an upright position, side by side, until they both dive underwater. After their pairing is established they will engage in a "weed ceremony," plunging underwater to retrieve vegetation which is held in their beaks and fanned in the air as they serenade each other in a dance.

In May, the grebe pair will build a floating nest to lay their eggs. The gestation period spans 24 days, during which the male and female will take turns incubating the eggs. Each egg is laid one day at a time; typically 3-4 eggs will be laid. During this period the male will help guard the nest and defend the eggs. Once all the eggs have hatched, the grebes leave their nest, the chicks riding on the parent's backs or hidden under their parent's wing. This period of "back brooding" lasts about two to four weeks until the chicks are full grown. At 10 weeks old, the offspring have sufficient plumage to take short flights.

Because the nesting phase requires relatively calm waters, the disturbance of strong winds, storms and boating wakes can cause nest failures. If water levels are too high, the grebes will experience greater difficulty accessing sufficient vegetation to anchor their nests.

In Canadian populations, the western grebe's average lifespan ranges from 9 – 16 years.

## **Habitat & Behaviour**

The western grebe inhabits freshwater lakes and marshes across north-western North America, in Canada, the United States and parts of Mexico. They are nesting birds and the wetlands and lakes that provide nesting sites are critical to their survival. Within a given colony, the nests will be found in fairly close proximity to each other, each approximately 50 cm in diameter, anchored to cattails, rushes and willows. The western grebe spends most of its time in the water. During seasonal migrations they will fly nocturnally. Their colonies can range from hundreds to thousands of individuals.

As inland waters and lakes freeze over during the winter, the grebes will migrate to the ocean waters and estuaries along the Pacific Coast of North America. They seek out sheltered bays and lagoons that provide adequate amounts of fish.

The western grebe is a piscivore and needs access to deep, open waters where they can dive and forage for small fish. They use their hind feet to dive underwater and then spear their fish with the sharp point of their beak or catch their prey in a pincer motion. The grebe can remain submerged underwater for just over one minute. Alternatively, the western grebe will feed on crustaceans, molluscs, worms and aquatic insects.

They can be recognized by their high-pitched, far-reaching call, that is said to be a harsh squealing “kreeh khreet.”

## Threats

The conservation status of the western grebe is currently listed as “least concern,” with an estimated 80,000 birds in North America. However, the population of western grebe in British Columbia is found on the Red List of species 'at risk,' due to insufficient nesting conditions and low breeding numbers.

According to the International Union for Conservation of Nature (IUCN), loss of habitat is the most critical threat to grebe species. Because the grebes tend to return to the same nesting sites year after year, they are particularly vulnerable to any changes in those environments, and may not seek out alternatives breeding sites. The loss, degradation and fragmentation of habitat are largely due to human impacts on the environment, particularly the conversion of wetlands for agricultural use.

Other threats to the grebe's habitat come from human industries and recreational practices. The accumulation of pollutants in the environment, from pesticides, agrochemicals, pipeline effluents and oil spills, can contaminate wetland ecosystems. DDT in particular was found to have a devastating impact on populations of western grebe, causing increased breeding failure. Recreational activities in and around large lakes, such as boating and water sports, can be particularly disruptive to the grebe's nesting and breeding cycles. Gill nets used in the fishing industry are also responsible for a large number of grebe fatalities.

Its natural predators include gulls, bass and pike, which will occasionally prey on vulnerable grebe chicks. In the early 1900's the western grebe was extensively hunted by humans for its silky white plumage.

## What We Can Do To Help

In 1985, the International Union for Conservation of Nature and Natural Resources (IUCN) created a Grebe Specialist Group to spearhead new research initiatives on grebe species and to establish appropriate conservation protocol. This research calls for the equally critical work of conserving wetland ecology and habitat. In British Columbia, the western grebe is protected under the *Wildlife Act* and the *Migratory Bird Convention Act*.

Other conservation strategies include:

- protecting lakes, nesting sites and their surrounding environment
- favouring sustainable shoreline development to minimize the environmental impact of human infrastructures
- restricting boating activity near nesting sites
- hosting festivals to raise public awareness about the western grebe

## Where & When to view the Western Grebe

In British Columbia, western grebes can be observed between April and June on the Salmon Arm and at the mouth of the Salmon River, as they gather in large breeding colonies. This is an excellent opportunity to observe the grebes' spectacular courting displays.

## Bibliography & Web Resources

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