American Dipper

June 2018

Cinclus mexicanus

Field Notes

General Description

Skye Schelz

American dipper. Note short tail, large feet, and white-feathered eyelid.

"Find a fall, or cascade, or rushing rapid, anywhere upon a clear stream, and there you will surely find its complementary Ouzel, flitting about in the spray, diving in foaming eddies, whirling like a leaf among beaten foam-bells; ever vigorous and enthusiastic," wrote conservationist, John Muir, in praise of the "Water-Ouzel" in high Sierra Nevada streams.

The American dipper (family Cinclidae), is a chunky, gray, sparrow-sized bird with a brownish head and short tail. While its drab color is unremarkable, its habits are not. The dipper is North America's only truly aquatic songbird.

Range and Habitat

Cinclus mexicanus unicolor is the northernmost of five subspecies in North America. This subspecies ranges throughout the western United States and Canada, from Alaska down to southern New Mexico and inland to eastern Wyoming and Colorado.

Relatively unpolluted, fast-flowing mountain, coastal, and desert streams with cascades and riffles provide ideal food and nesting conditions. Dippers prefer streams less than 15 m wide and less than 2 m deep, though in the winter, they may use larger, slower-moving bodies of water. Boulders, fallen trees, and driftwood provide cover and escape from predators. Dippers often build their nests on cliffs and under bridges or large, overhanging rocks, out of reach of predators and floodwaters.

Dippers tend to remain on their breeding grounds year-round, thanks to some special adaptations for enduring the cold. Dense body feathering, downy at its base, keeps them well insulated. Even their eyelids are insulated by feathers that flash white when they blink. A large preen (uropygial) gland produces oily wax for waterproofing their feathers. Lastly, their unusually low metabolic rate helps them maintain normal body temperature in very cold conditions.

Behavior and Feeding

True to their name, dippers bob their entire bodies up and down frequently, especially when aroused. This behavior may offer an alternative to vocal communication in the noisy, stream environment. It may also enhance vision into the water.

The dipper's most remarkable trick is the way it forages by swimming, diving, or walking underwater along the stream bottom! It stays underwater typically for 5–15 seconds, foraging for aquatic insects under pebbles and leafy or woody debris. Small fish, fish eggs, beetles, and flying insects are also sometimes prey.

How does a dipper accomplish this underwater feat? Its short, strong wings help it swim/paddle across the top of the water and move underwater. Its long legs and sharp (but not webbed) claws firmly grip the stream bottom. Underwater, a transparent, third eyelid (nictitating membrane) helps it to see, and enlarged sphincter muscles in its eyes enhance its ability to focus. Scales shut over its nostrils when submerged. Finally, an unusually high level of hemoglobin in the blood boosts oxygen storage while underwater.

Life Cycle

Dippers breed annually, beginning at 1 year. In early spring, the male's loud, varied song of trills and repeated notes attracts a mate to its linear, stream course territory. Mate fidelity from year to year is common, and males will sometimes pair with a second female (polygyny) in the same summer.

Both adults help build a dome-shaped nest of moss, grass, and leaves. Typically attached to a cliff, overhanging dirt bank, or under a log or bridge, the nest has a small, round side opening facing the water.

The female lays 4–5 oval, white, glossy eggs and incubates them while the male brings food. Eggs hatch in 14–17 days, and the young fledge at 25 days. Dippers may produce two broods in a season, typically at lower elevations or southerly latitudes.

Conservation

While dipper populations appear stable, disturbances to stream ecosystems, like siltation from roads and timber harvest, water diversions, or toxic mining runoff can impact dipper prey and nesting habitat.

Where to See

American dippers breed in all Klamath Network parks except Lava Beds NM.

More Information

https://birdsna.org/Species-Account/bna/species/amedip/introduction

Video of underwater foraging:
https://www.youtube.com/watch?v=cV6IDY1TSC0

Song of the dipper:
https://macaulaylibrary.org/asset/8992/play