

A Great Place To Be a Bluebill

Researchers at Red Rock Lakes in southwestern Montana are trying to figure out why lesser scaup are faring so well at the remote national wildlife refuge but so poorly elsewhere in North America. **By Tom Dickson**

Populations of many North American prairie duck species such as mallards and teal have risen to record levels in recent years, owing mainly to abundant grass and water in the Prairie Pothole Region. But lesser scaup numbers have been dropping, and no one knows why. For the past decade, researchers at the Red Rock Lakes National Wildlife Refuge (NWR), about 30 miles west of West Yellowstone, have been trying to learn more about the ducks and provide answers.

Lesser scaup and the slightly larger greater scaup—two nearly identical species, both called “bluebills” by many waterfowl hunters—are diving ducks. Rather than feed in shallows like mallards and other dabbling ducks, divers hang out in deeper water, swimming to the bottom to fill their bills with aquatic vegetation, seeds, insects, and crustaceans before resurfacing to eat. The lesser, comprising about 90 percent of the continent-wide bluebill population, is the most numerous and widespread of all diving duck species, which include canvasbacks, ringnecks, and redheads.

Numbers of both scaup species have declined steadily since their peak in the mid-1980s. Today’s combined population of 4 million is far below the goal of 6.3 million set by the U.S. Fish & Wildlife Service (USFWS).

Lesser scaup breed mainly near lakes and ponds in Canadian forests and on Alaskan tundra. Some studies are focusing on western Canada, which has the greatest amount of breeding habitat and where population declines are greatest. One theory is that the decrease in scaup numbers could be caused

Tom Dickson is editor of Montana Outdoors.

by habitat loss from intensive logging, mineral extraction, and agriculture.

Another theory: The birds’ contaminated diet may be harming their eggs. “Many lesser scaup winter in coastal areas like the Gulf of Mexico and San Francisco Bay,” says Jeff Warren, research team leader for the USFWS study at Red Rock Lakes. “PCBs and other contaminants in the aquatic foods that hens eat could be damaging egg development and reducing nesting success.”

Researchers are also looking at places



where lesser scaup are doing well—like Lower Red Rock Lake, a wetlands complex with one of the highest densities of breeding lesser scaup in North America. This high-altitude wetlands-prairie-sagebrush complex is home to nearly 300 bulrush islands and vast tracts of sedge, making it ideal for scaup nesting. Warren and his crew study different demographic factors such as adult survival, nesting success, and duckling survival to see if any influence the overall population. “We want to see if something like nesting success is a factor in population declines, and then whether there’s anything we can do about the factors that may be at play,” he says.

BLUE BILL, AMBER EYES Lesser scaup are the most numerous of the diving duck species. Most lesser scaup breed near lakes in Alaska and western Canada, where numbers are dropping. Scientists are studying a thriving population at Red Rock Lakes National Wildlife Refuge for clues that might aid scaup elsewhere.

At the refuge each August and September, when ducks molt (lose feathers so new ones can grow in) and are flightless, crews in canoes round up lesser scaup ducklings and hens into wire mesh traps. So far roughly 4,000 ducks have been captured, marked, weighed, and measured.

When marked scaup are re-sighted, re-captured, or harvested by hunters—or the birds’ identification numbers are called in by observers—researchers use each duck’s history to understand population trends and estimate harvest and seasonal survival.

Among Warren’s findings so far:

▶ “One surprise has been that these scaup rely more on seeds and invertebrates eaten at the study site for egg production than expected,” he says. “Lower Red Rock Lake is a more important prebreeding area



for hens than we thought.”

▶ Eggs laid at Red Rock Lakes are largely contaminant free. “It could be that feeding here in this near-pristine environment cleans out a hen’s system of any contaminants she picked up elsewhere,” says Warren.

▶ Average clutch size (the number of ducklings produced by hens) is smaller than at other study sites in North America. “We don’t know why, but it may be that this site has the shortest and most variable growing season of all the sites studied, which included Alaska and the northern edge of the boreal forest in Canada,” says Warren.

▶ The nest survival rate (percent of nests that survive to produce ducklings) is higher at Red Rock than almost anywhere in North America. “The abundant islands and vast tracts of sedges where hens can hide their nests is probably why,” says Warren. “It shows the value of protecting these large, intact landscapes.”

Warren and other researchers have recently begun studying how hunting affects the Red Rock population. They hope to learn if hunting harvest there is “additive”—the



SCAUP STUDY Clockwise from above: USFWS biologists and volunteers round up molting ducks; measuring a duckling’s head and bill size; releasing young scaup back to the water.



ducks would have survived if not killed by hunters—or “compensatory”—ducks shot by hunters likely would have died anyway from disease, predation, or other natural causes.

“We’re working with the USFWS Division of Migratory Bird Management so that what we learn can help them figure out the appropriate scaup hunting season limits and lengths for the future,” Warren says. 🐾

CLOCKWISE FROM LEFT: MAP BY LUKE DURAN/MONTANA OUTDOORS; FRED GREENSLADE/IMAGES ON THE WILDSIDE; MARILYN KIROUS; JEFF WARREN; MARILYN KIROUS