

Biologists, Hunters, and Birders Wonder

WHERE HAVE ALL THE BLUEBILLS GONE?

STORY AND PHOTOS BY LOWELL WASHBURN

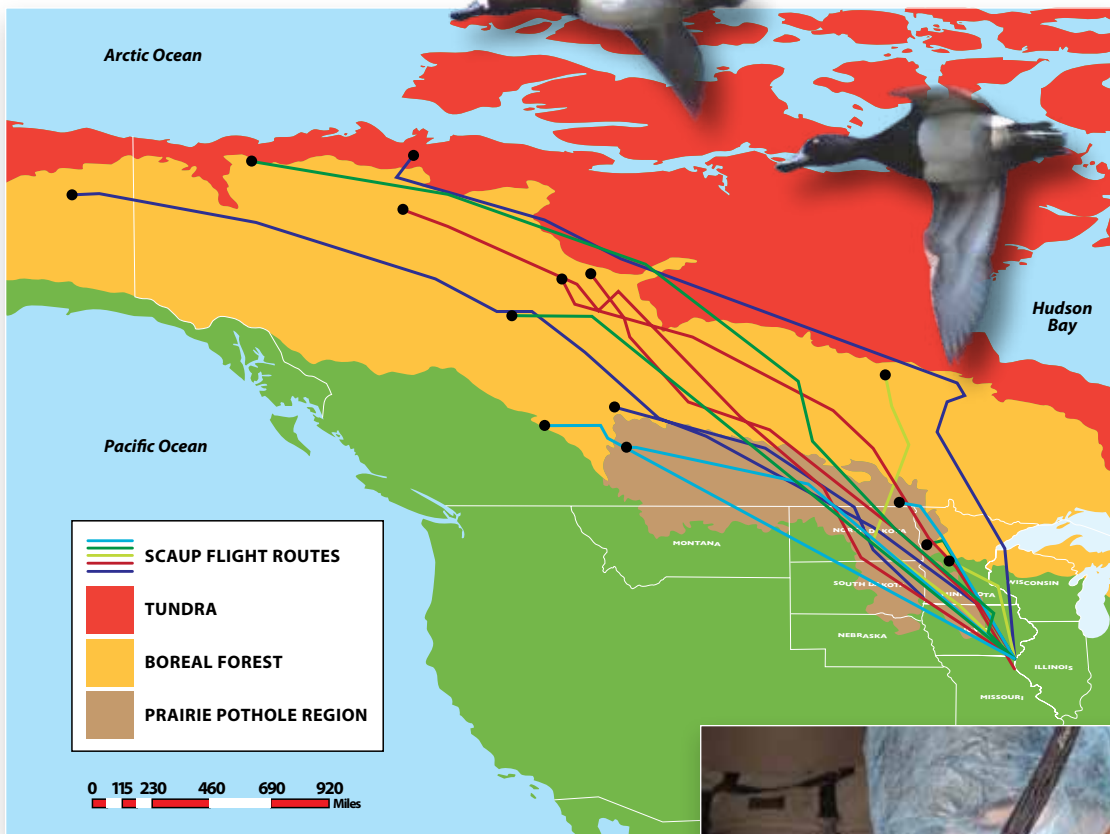
AN UNSOLVED MYSTERY, The Answer To This Duck Dilemma Could Come From Space

At the bottom half of the Mississippi Flyway, flocks of migratory waterfowl will wing their way northward through March toward ancestral nesting grounds. Although millions of migrating birds will fly across Iowa during the next several weeks, scientists are keeping an especially close watch for the mass arrival of lesser scaup ducks, also known as bluebills.

As northbound scaup invade Mississippi River Pool 19 at Keokuk, biologists hope to capture a large number for scientific research. Lured into baited, wire live-traps, the 2-pound birds, are weighed, measured and marked with individually numbered

After removing birds from a baited wire enclosure, DNR duck trapper Dave Hoffman bands a catch of lesser scaup ducks at Keokuk. More than 2,500 scaup were captured and banded last spring.





ABOVE: transmitter shown actual size.

Dr. Mark Mitchell, University of Illinois College of Veterinary Medicine, implants a 38-gram satellite transmitter into an adult female scaup captured at Mississippi River pool 19 at Keokuk. The purpose of the ongoing satellite study is to monitor the survival and habitat use of female scaup as they disperse from Keokuk for remote northern breeding grounds. Seventeen females were marked last spring. Three died during migration, two in northern Minnesota and one in southern Manitoba, Canada. One scaup travelled as far northwest as Alaska. Most, however, nested in the remote wilderness areas of western Canada's boreal forest.



U.S. Fish and Wildlife Service metal leg bands. As bands are reported (mostly by hunters) it will enable scientists to compile data needed to make intelligent management decisions.

But for a smaller, select group of captured ducks, scientists plan to extend their research to a level "out of this world." It's where the usual approach to waterfowl management ends.

Immediately following capture, the special sample group, all females, will be transported to a nearby field station, admitted to the equivalent of an avian "MASH" facility. After being carefully anesthetized, the ducks will be surgically implanted with satellite transmitters. Following a brief two-hour recovery, the ducks will be released to rejoin the migration.

Says Louisiana State University professor and scaup project coordinator, Alan Afton, this high-tech endeavor allows scientists to collectively chart the birds' migration paths, habitat use and ultimate survival. Although previous land-based telemetry studies were conducted in Iowa, this is the first monitoring from space of Iowa-captured waterfowl. A pilot experiment was initiated last spring when satellite transmitters were implanted into 17 female scaup. That

preliminary effort has yielded fascinating insights into how breeding scaup disperse and the amazing distances they travel once the ducks leave the Keokuk pool.

Afton, who has been intensively studying lesser scaup for more than 30 years, hopes future studies will shed additional light on factors affecting the species' overall survival. Scaup populations have waned during recent

years—down from 7 million breeding birds inventoried during the 1970s to 3.5 million today.

“While most other duck species are holding their own or even showing an increase, scaup numbers continue to decline,” says Afton. “Although there are theories, no one can say for certain why the decline is occurring. What we do know is that migrating scaup are in really good condition when they arrive at Keokuk each spring. But by the time those birds arrive in northwestern Minnesota, they are in poor body condition.”

Ongoing water quality studies reveal 97 percent of surveyed wetlands in north-central and northwestern Iowa contain measurable levels of herbicides, pesticides or other chemical contaminants. Additional pollutants include widely ranging levels of phosphorus and nitrogen. Many researchers suspect pollution has disrupted aquatic food chains.

Biologists say spring migration is a time when female scaup stoke up on natural aquatic foods to build nutrient reserves essential to egg production. Failure to acquire reserves could lower nesting success and significantly decrease offspring. Tiny shrimp-like crustaceans, or amphipods, represent the scaup’s most important food source as ducks migrate across Iowa’s interior.

“For lesser scaup to maintain the healthy body condition needed for egg production, they must have amphipods,” says DNR Waterfowl Biologist Guy Zenner. “Historically, it was no problem for scaup and other water birds to find that nutritional source in Iowa. Today, wetland water quality has been compromised to the point that amphipods no longer exist in most of our marshlands. Scaup end up surviving on alternate food sources which are insufficient



LEFT: Waterfowl researcher Tore Buchanan of Peterborough, Ontario bands a lesser scaup duck captured on the Mississippi River at Keokuk. To better understand the ongoing and alarming decline of North American scaup populations, scientists from Louisiana to Ontario will assemble at Keokuk’s Pool 19 in March. The purpose of the joint venture is to capture a large number of migrants for study. **RIGHT:** Randy Robinson of the DNR’s Maquoketa Wildlife Unit in Miles releases a banded male scaup near Keokuk.

Project coordinator and Louisiana State University professor Alan Afton says more than 2,500 migrating scaup were captured and banded last spring. Seventeen female scaup were implanted with powerful satellite transmitters to allow scientists to monitor bird movement and survival from space. Additional transmitter implants are planned this spring.

“As scaup leave their Louisiana wintering grounds to head for breeding areas in northwestern Canada, the stopover at Keokuk becomes extremely important,” says Afton. “As scaup head north, up to 75 percent of the 3.5-million-bird migration will stop on this pool to feed on the abundant supply of fingernail clams. It would be hard to overstate the importance of this food source. If anything ever happened to the clam populations at Keokuk, it would have severe consequences on an already stressed population.” During the 1960s, a Mississippi River spill killed more than 10,000 waterfowl. View bird satellite-tracked migrations online this spring at www.iowadnr.gov.

to increase or even maintain critical body weights.

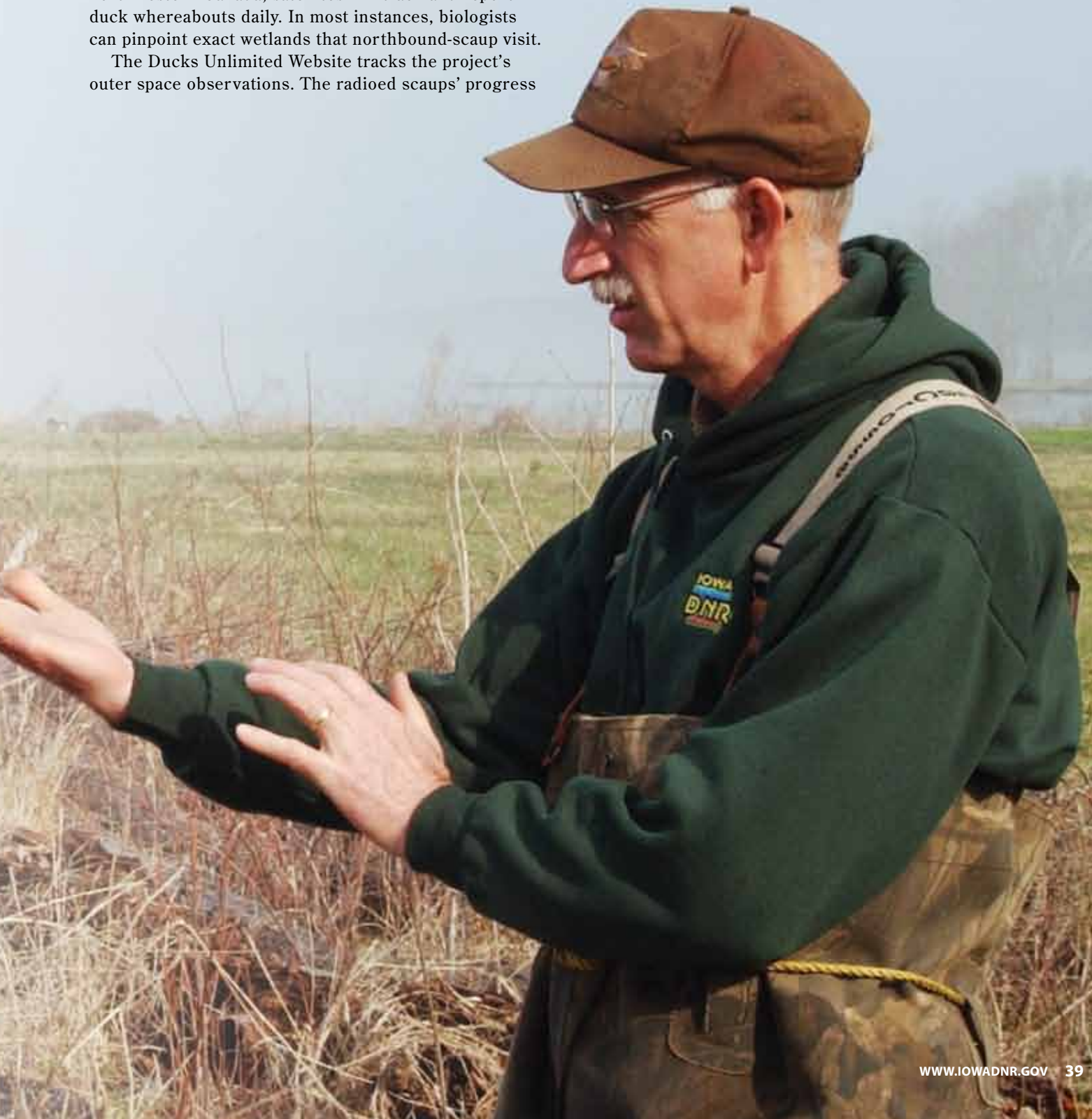
“This isn’t just about ducks or duck hunting,” says Zenner. “It’s a water quality issue and everyone living in Iowa should be very dismayed by these findings.”

After arriving in Keokuk this spring, the scaup migration will stall as birds pause to refuel on abundant fingernail clams in Pool 19. Following food and rest, flocks leave the Mississippi River and disperse northwest across Iowa. As those newly radioed hens continue their journey to the boreal forest breeding grounds of northwestern Canada, satellites will track and report duck whereabouts daily. In most instances, biologists can pinpoint exact wetlands that northbound-scaup visit.

The Ducks Unlimited Website tracks the project’s outer space observations. The radioed scaups’ progress

can also be monitored on the DNR Website, www.iowadnr.gov. Providing information during spring and fall migrations, the long-lived transmitters will monitor scaup through the 2009 migration.

“Once we pinpoint the actual wetlands scaup are using, we can go in and sample those same locations for food,” says Afton, “and look at the landscape features affecting those habitats. If we can identify a fairly narrow corridor that scaup are utilizing, then we can focus on improving the condition of those particular wetlands.”





The lesser scaup is one of North America's most abundant and recreationally important waterfowl. But as continental scaup numbers continue to plummet, hunters have been forced to tighten their belt—mainly through decreases in daily bag limits. During the 1980s, hunters could bag 10 scaup each day. The limit was reduced to six daily during the 1990s and was dropped to just three in 1999. In 2005, the scaup take was further reduced to two birds daily.

Although the moves seem logical on the surface, wildlife managers doubt the measures will affect [or increase] future scaup numbers. According to Louisiana State University scaup researcher Alan Afton, waterfowl populations are driven by two major factors—survival of adult birds and production of young.

Although scientists have been evaluating scaup band recoveries since the 1950s, the data has shown no significant decline in the survival of adults. Therefore, all evidence suggests population decreases are resulting from a decline in successful reproduction, not hunting. Unfortunately, restricting the hunters' bag is the only option immediately available to waterfowl managers.

A HUNTER'S REFLECTION, BY LOWELL WASHBURN

THE BLUEBILLS DON'T COME HERE ANYMORE

Along the Mississippi River counties of Iowa's eastern coast, gunning for bluebills is a time-honored tradition among duck hunters. Nowhere has the passion for hunting migrating 'bills been carried to greater extremes than along the bluff shrouded corridor of America's "Great River."

Although a duck hunter since the close of the 1950s, it wasn't until the mid-60s that I received my first introduction to the joys of scaup. The hunt didn't take place in a blind along the famed Mississippi, however, but on interior waters of Clear Lake. As was the case on Iowa's big water lakes and rivers, annual flights usually began to pick up about the first week of November. From there it reached a rapid crescendo as Canadian freeze-ups sealed away critical supplies of submergent aquatic food plants. Major storm systems greatly enhanced the migration intensity.

For serious duck hunters, certain weather cues could not be ignored. When local TV forecasters announced 11-inches of heavy snow had fallen at Bismarck, or the season's first blizzard had paralyzed traffic and closed schools at Fargo, or the mercury plunged to negative numbers in International Falls, we took those words as an iron-clad guarantee that 'bills were on the way. We were seldom disappointed.

As daylight approached, newly arrived divers swarmed like bees. There were little bunches, big bunches, high flocks and low. Thousands of ducks suddenly forced to exit the North Country by a dramatic and magnificent late autumn weather event.

Although diver flights contained a variety of species—redheads, canvasbacks, goldeneyes, buffleheads, and others—migration was always dominated by lesser scaup. The sheer numbers were astounding. In spite of traveling all night, the storm-tossed birds remained restless and active. On open water, flocks rose and fell like great swarms of insects.

Hunting was incredible, largely because November bluebills consistently exhibited three traits. They were fast, fat, and exceedingly uneducated in the ways of human hunters. When the flight was on, we would sometimes take our limits and pack up decoys by the time normal folks were getting ready for work. On the very best days, we were done before sunrise.

For most of us younger hunters, recreational budgets were limited. Sometimes we ran out of ammo and had to suspend operations until we could scrounge the \$2.60 needed to purchase the next box of high-brass, 12 gauge shot shells.

Those awe-inspiring scaup migrations continued for the remainder of the 1960s and through the 1970s. In 1979, the bag limit was raised to 10 scaup daily. The blast furnace drought of 1980s arrived shortly thereafter, and continent-wide duck numbers began a rapid decline. The droughts

eventually passed. Water returned to Canadian wetlands. Duck populations rebounded.

But for reasons unknown, lesser scaup never recovered. Today, although still huntable, scaup are listed as a species of special concern by biologists with the U.S. Fish and Wildlife Service and are current subjects of widespread scientific investigation.

At Clear Lake, the great bluebill flights of yesteryear have vanished. In spite of this, a dedicated handful of diehard diver hunters still gather late each autumn to stand watch over bobbing spreads of black and white decoys.

November storm fronts still arrive with a vengeance. They still get 11-inch snowfalls at Bismarck, school closing blizzards in Fargo, and negative temps at International Falls. Braced against chilling winds, hunters still keep vigil. But bluebills don't come here anymore. To see four or five small flocks of migrating scaup constitutes a good day. This same decline is reported along traditional big waters up and down the great flyway.

Last year, I shot three scaup at Clear Lake. The season before, I bagged two.

Hopefully better days are ahead. 🦆

