



CLOCKWISE FROM TOP LEFT: COMMON LOON, GREAT BLUE HERON, BALD EAGLE, RIVER OTTER

Photography by Joe Rossi

Minnesota's **Wild** Anglers

Meet seven Minnesota critters that *dive after*, *scoop up*, *stalk*, *ambush*, and *chase fish* for breakfast, lunch, and dinner.

By Michael A. Kallok

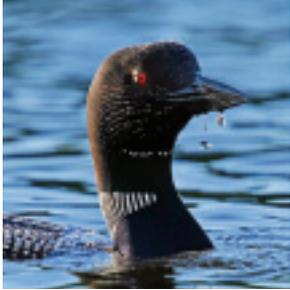
Have you ever watched a loon dive into a lake or a heron walking in shallow water along shore? Perhaps you've gazed up at an osprey soaring over the water. Along a river, you might have caught a glimpse of a river otter.

What were these animals doing? They were probably fishing. Like people who fish, these wild anglers know Minnesota's lakes and rivers are good places to fish. They are all really good at finding and catching fish.

When you go fishing, you use a fishing pole or a rod and reel. Minnesota's wild anglers rely on their natural abilities and adapted traits such as sharp talons and bills to catch a meal. Some can swim fast, using webbed feet. Some can soar through the air and dive with incredible speed. Some prefer to fish alone, and others work well as a team.

Wherever fish live, chances are good that Minnesota's wild anglers are nearby.

Surface Divers



LEFT: COMMON LOON. RIGHT: AMERICAN PELICAN

Loons and pelicans are known as surface divers. When they **see** or **feel** fish as they swim upon the water's surface, they **dive** after or **scoop** up the fish.

Common Loon (*Gavia immer*)

Minnesota's state bird, the common loon, leaves its winter home along the Atlantic Ocean or Gulf of Mexico and flies to Minnesota in spring after lake ice melts. When a male loon arrives at his summer lake, he begins fishing. He dives deep and swims fast to catch bluegills, perch, and other small fish. One day the male loon's mate joins him. In the north-

ern lake where the pair nests, the adult loons spend most of their time looking for small fish in shallow water.

Hunt and Chase. To hunt for perch, a favorite meal, the loon swims along with its eyes just below the surface. When it spots a school of fish, the loon dives and chases the fish.

The loon's giant webbed feet are way

back on its body—like an outboard motor on the back of a boat. The loon kicks both of its big feet at the same time to propel its streamlined body beneath the water. To turn quickly, it uses its tail like a rudder and sticks one foot out to the side while kicking with the other.

Though loons have been observed flying as fast as 90 miles per hour, no one is quite sure how fast a loon can swim. But to catch a fish, a loon must swim faster than Olympic champion swimmer Michael Phelps.

Float and Dive. Like a submarine, a loon adjusts its *buoyancy*, or ability to float, by taking in or releasing air. When a loon breathes in, air goes through its lungs and into stretchy membranes called *air sacs*. When the air sacs are full, the loon swims high in the water. When ready to dive for a meal, the loon quickly exhales the air.

Most birds have hollow bones. A loon's bones are hollow, too, but thicker and with less air inside. This helps loons dive quickly because they are heavier and less buoyant. Loons can dive deep. In wintering areas in the Gulf of Mexico, they can dive as deep

as 200 feet. In Minnesota, small perch and sunfish are most abundant in shallow water. Loons usually stay underwater for less than a minute, but they can hold their breath for as long as 10 minutes.

Catch and Eat. When a loon gets close to a fish, it thrusts its head forward and grabs the fish in its bill. Tiny, hooked teeth, called *denticles*, on the loon's tongue and roof of the mouth hook the slippery fish. The loon swallows the whole fish, head first—usually while still underwater. Each day an adult loon eats about 2 pounds of fish—that's about 50 small perch.

Feed the Chicks. The parent loon grabs small fish, aquatic insects, or amphibians such as frogs and delivers them in its scissorlike bill to feed its young at the surface. A 1-day-old loon chick can swim. Young loons rely on their parents for food for about two months, but two days after hatching, loon chicks begin peering into the water and chasing minnows.

A loon prepares to deliver a minnow to its chicks.



Wading Birds



LEFT: GREAT BLUE HERON. RIGHT: GREAT EGRET

Heron and egrets do their fishing in shallow water by **wading silently** on their tall, skinny legs.

Great Blue Heron (*Ardea herodias*)

Standing as tall as 4 ½ feet, the great blue heron is the largest heron species in North America. Look for it along the shores of lakes and slow-moving rivers. Once in a while, you might see one in grasslands hunting for grasshoppers or mice.

Quiet While Fishing. Stealth is the great blue heron's advantage for catching fish. With its long, skinny legs, it can silently stalk through the shallows or stand perfectly still, waiting for a fish to swim by. Sometimes a heron will fish from a dock or a log drifting like a boat on the water. Because the heron's eyes are well-adapted for seeing in the dark, it can fish at night as well as during the day.

Eat the Catch. When a great blue heron spots a fish, it rapidly thrusts its long, pointy bill into the water to seize its prize. Not a picky eater, the heron will eat any fish not much longer than 12 inches. If it catches a spiny fish, such as a perch or bullhead, the heron will sometimes shake or spear the fish with its bill to force the fish to relax its spines so the heron can more easily swallow it.

Dinner Bill. For about a month after hatching, great blue heron chicks stay in the nest and eat regurgitated fish from a parent's bill. By 3 months old, they leave the nest. At first they are clumsy at flying and not very good at fishing, so their parents must care for them for a few more weeks.

Great Egret (*Ardea alba*)

Egrets begin arriving in Minnesota in April and nest in the southern two-thirds of the state near lakes and small rivers. They nest in trees in colonies, called *rookeries*, with two nests to several hundred nests.

Capturing Meals. Like the great blue heron, the great egret hunts for small fish by walking slowly or standing very still and waiting. Sometimes it stirs up the bottom with its feet to uncover aquatic insects or crustaceans to eat. Or the egret might fly low over water, fluttering its wings to herd fish into an area where they can be easily caught. Sometimes one egret will steal a meal from another egret.

Learning to Fish. An egret parent feeds chicks regurgitated fish from its bill. Young egrets begin to fish for themselves around 2 months of age. Juvenile great egrets don't walk and hunt as carefully as adult great egrets do. And they do not catch fish as often as adults. But as they grow up, they learn to walk more carefully and get better at fishing for a living.



A great blue heron spears a hefty bullhead, which was swimming in shallow water near shore.

Green Heron (*Butorides virescens*)

Weighing an average of ½ pound, the green heron is much smaller than the great blue heron, but this wading bird is a fishing superstar. The green heron stalks fish in the shallows and dives from the air to grab fish with its bill. This wild angler also does something truly remarkable: It uses bait. The green heron, one of only a few tool-using birds in the world, tosses bugs, twigs, bread crumbs, litter, or other small items on the water to lure a fish near the surface, where the bird can easily grab it.

GREEN HERON BY BILL MARCHEL



Aerial Divers



LEFT: BALD EAGLE. RIGHT: OSPREY

Eagles and osprey search for fish from the air or from a perch high up in a tree. When they spot a meal, they quickly **descend** and grab it with razor-sharp talons, curved like fishhooks to **help hold** slippery prey.

Bald Eagle (*Haliaeetus leucocephalus*)

Our national symbol, the bald eagle, soars over water looking for an opportunity to get a meal. This *opportunistic forager* prefers fish but also eats mammals, reptiles, and other birds. Watch for bald eagles year-round near open water.

Grabbing a Meal. To find fish or other live prey, an eagle glides overhead. When

it spots a meal with its keen eyes, it suddenly swoops in and grabs it with one or both feet. It carries its prey to a nearby tree, perches on a branch, and devours it. If the fish is big, the eagle might eat its catch on the ground. If the catch is small, the eagle can snack on it in the air.

Fish Thieves. Eagles eat a lot of fish, but instead of live fish, they often eat dead fish. Because of its imposing size and

fierce demeanor, an eagle can sometimes steal fish from a smaller, more successful wild angler, such as a heron or an osprey.

Trial and Error. Young eagles leave the nest when 2 to 3 months old. For the first few weeks, these fledglings still depend on their parents for food. Young eagles learn to hunt for fish by trial and error. Meanwhile, they feed mostly on dead fish they find floating or washed up on shore.

Osprey (*Pandion haliaetus*)

Because ospreys don't eat much else but fish, they must have access to open water. Come March, as ice melts on Minnesota's lakes and rivers, they return from as far away as South America.

Ospreys fish for whatever happens to be in shallow water or near the surface. That might be sunfish, suckers, bullheads, gizzard shad, or trout.

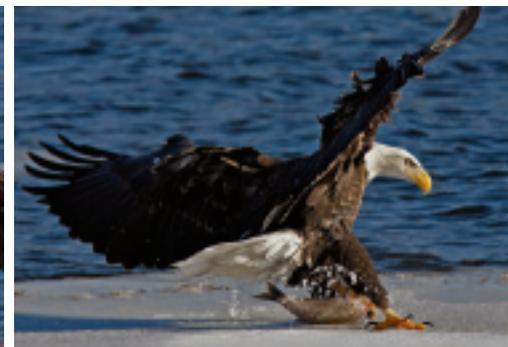
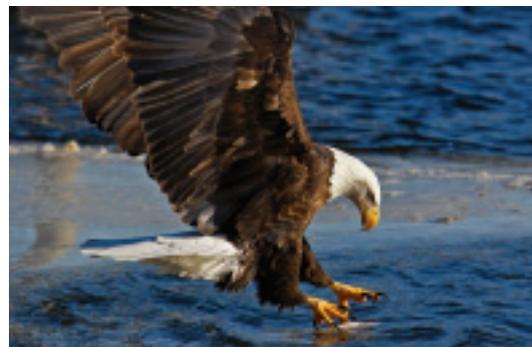
Feet First. An osprey hunts from its perch near the water. Or it soars high over the water in search of schooling fish near the surface. To catch fast-moving fish near the surface, the osprey makes a gradual dive, like a plane coming in for a landing.

To grab a fish swimming as deep as 3 feet, the osprey makes a steep dive, crashing straight down like a rock, feet first. The osprey's large feet have long talons and a reversible toe that works like a thumb to help hold slippery catches.

Fishing Expert. When the fishing is easy, researchers have found that for every 10 dives an osprey makes, it will catch as many as seven fish. These fishing professionals of the bird world rarely scavenge on dead or dying fish. Using their powerful wings, ospreys can easily haul a 2-pound fish from the surface of the water. After a dive, the osprey twists its entire body back and forth in the air like a dog shaking off water. Then it heads back to its perch or nest to chow down.

Born to Fish. Ospreys usually take their first flight sometime before they turn 2 months old. Researchers studying ospreys in Florida observed fledglings trying to catch fish five days after taking their first flight. While learning to fish, they depend on their parents for food.

A bald eagle grabs a gizzard shad from the Mississippi River.



Furbearers

MINK BY BILL MARCHEL



RIVER OTTER

Scavengers such as raccoons, skunks, and black bears eat fish when they find them. Mink have the ability to **pursue** and **catch** live fish, but the best of all fishing mammals in Minnesota is the river otter.

North American River Otter (*Lontra canadensis*)

The river otter, a full-time resident of Minnesota, fishes year-round in rivers, lakes, and wetlands. While fishing below ice, the river otter can hold its breath as long as eight minutes. To catch a breath, it pops up through an ice hole or a place where river current has kept the water open. Otters sometimes appear playful as they roll in the grass or slide down snow-covered hills on their silky fur.

Underwater Pursuit. This member of the weasel family prefers to hunt at night. Paddling its webbed feet and flexing its long body and strong tail, this

powerful swimmer pursues its prey. It has excellent underwater vision. The river otter can also locate fish in murky water, thanks to *vibrissae*, sensitive whiskers near its nostrils that help detect vibrations made by swimming fish. The otter's oily fur repels water. Its nostrils and ears close when it dives. The river otter catches a fish with its teeth and uses its front paws to hold the fish while eating it.

Waterfront Living. River otters live in dens, which are usually natural hollows along the banks of lakes and rivers. While most of their diet is fish, they also dine on crayfish, amphibians, and even turtles.

River otters are also right at home on land. They run and bound well and won't pass up a meal of mice or small birds.

Hard-Working Mothers. When it comes to raising young otters, the mother otter does all the work. Giving birth to litters of one to six young, the female otter feeds them in the den for about two months. When the kits are old enough, the mother otter leads them out of the den for their first swimming lesson. Being naturally built for swimming, the

young otters quickly get the hang of it and begin fishing on their own.

Learn from Watching Wild Anglers

You can learn a lot about fishing from watching and listening to experienced anglers. You can also learn by observing and asking questions about the behavior of Minnesota's wild anglers. Do you ever wonder why you always see a loon at your favorite fishing spot? Can you walk quietly along the shore like a wading bird? Are you patient like an eagle? **V**



River otters eat a variety of fish, including pumpkinseeds (opposite page) and bullheads (this page). They also dine on crayfish, turtles, and frogs.

A NOTE TO TEACHERS

Find links to teachers guides to this and other stories online at www.mndnr.gov/young_naturalists.

 www.mndnr.gov/magazine Watch a pair of river otters diving for fish on a Minnesota lake.