

WildlifeExpress

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STURGEON



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Photo: CC-BY Idaho Fish and Game

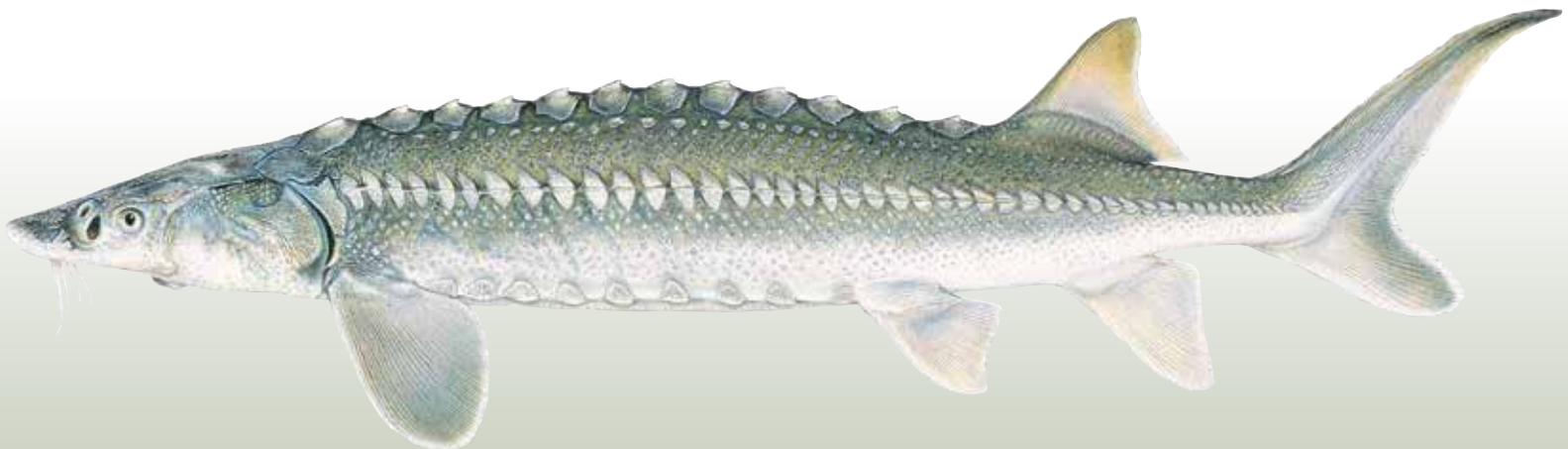
idfg.idaho.gov



WHITE STURGEON

White sturgeon have lived on earth unchanged for more than 100 million years. They swam in waters when dinosaurs roamed the land, which is why they sometimes get labeled as “dinosaur fish.” Their prehistoric look and the fact that they are the largest freshwater fish in North America also helps with this nickname.

These giants still roam two watersheds in Idaho, the Kootenai and Snake Rivers. Much has changed about these river corridors and their sturgeon populations, but the fish continue to persist in the Gem State through the efforts of Idaho Fish and Game and other partners working to protect them.

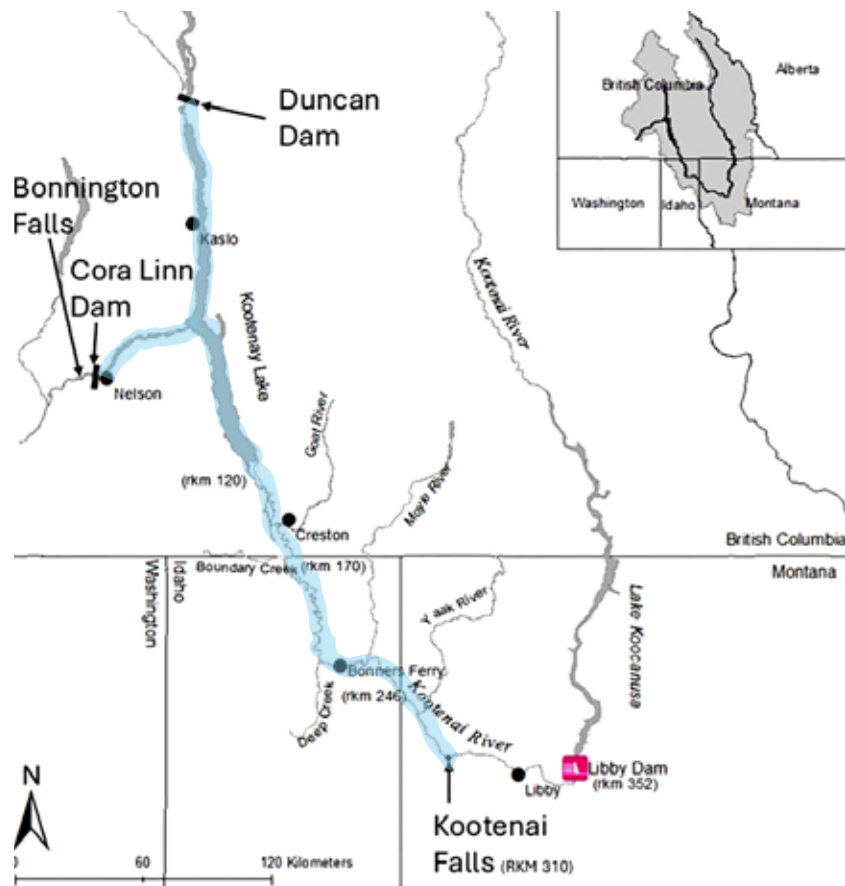


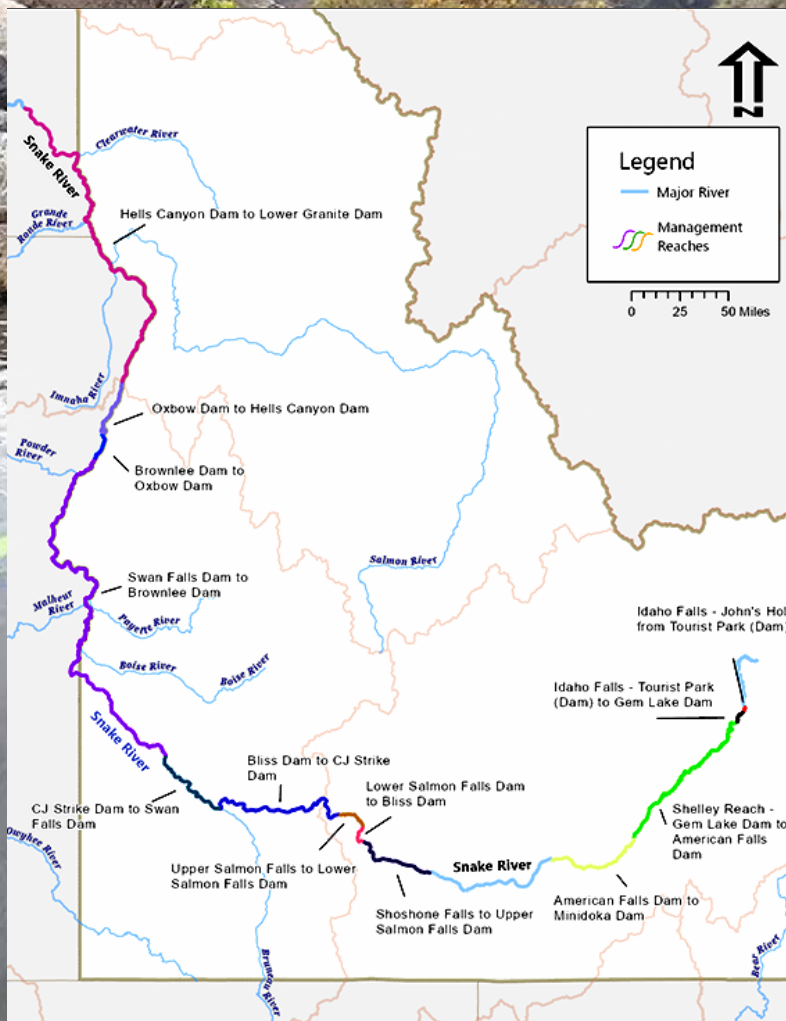
WHERE ARE STURGEON?



Kootenai River

The Kootenai River population encompasses areas in north Idaho, Montana, and British Columbia. Kootenai River white sturgeon were isolated from other Pacific Northwest populations about 10,000 years ago by the ice age creation of Bonnington Falls. More recently, habitat changes and dams in the Kootenai River altered flow of the river water, which eliminated natural reproduction. Therefore, the population is aging and was listed as Endangered under the Endangered Species Act in 1994. Since then, a variety of hatchery and habitat interventions have occurred to help boost abundance and try to recover the population. These fish are protected from all fishing, and management is a collaborative effort overseen by the U.S. Fish and Wildlife Service and Canada's Département of Fisheries and Oceans along with additional help from state, and tribal organizations.





Snake River

The Snake River population naturally ranges from the confluence with the Columbia River in Washington to Shoshone Falls near Twin Falls, Idaho. The population also includes portions of the Salmon River. More recently, the department has stocked sturgeon in segments above Shoshone Falls around the towns of Pocatello and Idaho Falls to provide a unique angling opportunity in those areas. Historically, it is unlikely that Snake River sturgeon traveled all the way to the ocean (though not impossible). Genetic testing now shows us that they did not mix much with lower Columbia River sturgeon, which have anadromous fish in the population. But, Snake River white sturgeon would have migrated hundreds of miles up and down the Snake

River to complete their life cycles when the river was free-flowing. Today, the Snake River is divided into nine highly altered segments, separated by dams. This segmented habitat has negative effects on the sturgeon population due to water flow and temperature changes, as well as reducing a significant natural food source of the past (salmon and steelhead). Snake River white sturgeon are designated as a Species of Greatest Conservation Need in the State Wildlife Action Plan for Idaho. Since the Snake River is along the state border, the states of Oregon and Washington also have management authority, and Idaho Power Company is integral for sturgeon monitoring and conservation related to mitigation responsibilities associated with their hydropower facilities.

Snake River white sturgeon population segments are managed under three management scenarios: Core Wild, Stocked, and Non-native Range.

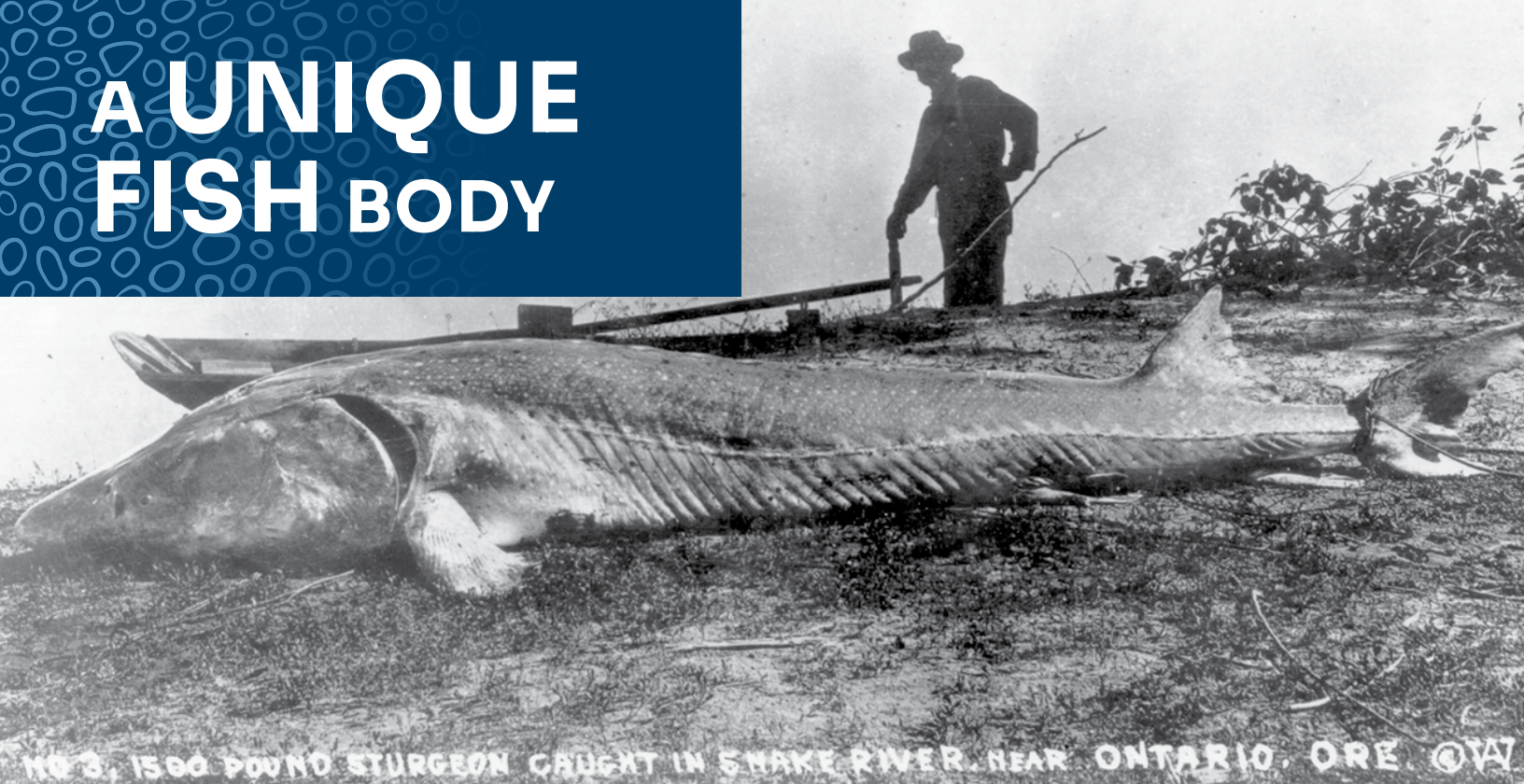
- Core Wild segments are designated as those that are self-sustaining with sufficient natural reproduction to maintain or increase abundance without hatchery stocking. Emphasis is placed on maintaining environmental conditions required to support life history requirements for white sturgeon reproduction and survival. The current segments with this designation are Hells Canyon and the Bliss Segment.
- Stocked segments are designated to be managed through hatchery stocking to sustain abundance because of a lack of regular natural reproduction due to habitat limitations (e.g. flow, water quality, fragmentation). Abundance in stocked segments will be maintained or increased through hatchery stocking or transfers.

- Non-native Range segments, located upstream of Shoshone Falls, are managed through hatchery stocking to support white sturgeon and provide angling opportunities. These segments lack natural reproduction and will be supported solely through hatchery stocking.

The white sturgeon hatchery stocking program developed to support Snake River sturgeon uses fertilized eggs collected in the wild (within the C.J. Strike Reservoir to Bliss Dam segment). Those eggs are hatched and reared in the hatchery then released into segments not supporting sufficient natural reproduction. The technique of hatchery rearing eggs collected in the wild and releasing them back in the wild is known as repatriation. The Snake River white sturgeon hatchery stocking program is a collaborative effort between the Idaho Power Company and IDFG.



A UNIQUE FISH BODY



NO. 3, 1500 POUND STURGEON CAUGHT IN SNAKE RIVER, NEAR ONTARIO, ORE. ©W

White sturgeon are huge fish. In the late 1800s and early 1900s, there are records of white sturgeon being caught in Idaho that weighed over 1,500 lbs. and were reeled in using horses! Their enormous size was made possible by the vast numbers of salmon, steelhead, Pacific lamprey and freshwater mussels that would have been historically available to them. Today, sturgeon over 10 feet in length and weighing hundreds of pounds still swim around in the Snake River.

White sturgeon are different from other fish. They do not have a bony skeleton. Their skeleton is made of cartilage. Cartilage is what is found in your nose and ears.

Sturgeon are also not covered by scales as most fish are. A sturgeon is covered by thick skin that feels like sandpaper. The side of the sturgeon's body is also protected by five rows of bony plates, called scutes.

They are creatures of large rivers and are uniquely adapted for life on the bottom. Torpedo-shaped bodies help them swim in brisk river currents, and their small eyes are adapted for the dark, deep pools where they live. Four sensitive whiskers (called barbels) help them identify food in the dark water, and their suction-tube mouths easily vacuum up whatever food they come across.



STURGEON LIFE CYCLE



Sturgeon must reach a mature age before they spawn or lay eggs. Females don't lay their first eggs until they are over 5 feet long. This can take between 12-50 years depending on food resource available where they live. Depending on the female sturgeon's age and health, she can lay up to 700,000 eggs. Spawning in Idaho's rivers typically occurs in the spring associated with high spring runoff water flows in May and June. A female will only lay eggs every 3-5 years.

The female will deposit her eggs over rocky areas where the water is flowing swiftly and large cobbles are found at the bottom of the river. Males spray milt over the eggs, and once fertilized, the eggs sink to the bottom where they stick to plants or rocks.

In only eight days, the eggs hatch. The tiny sturgeon look a bit like black tadpoles. At this young age, the sturgeon hide between rocks and are fed by a yolk sac that is attached to their bellies.

Within 12 days, the yolk sac is gone, and they start to eat insects and other small foods. At 20 days old, they look like adults and begin to feed on the river bottom.

White sturgeon grow slowly and have a long life span. They can live to be 100 years old, and they never stop growing during that time! Growth rates vary with food availability, water temperature and age.



AGING ANIMALS

Wild animals don't celebrate birth or hatch dates, so how can a scientist tell the age of an animal, and why it is important?

Knowing the ages of animals is important in managing wildlife. In a group, or population, of animals, both older and younger animals must be present for the group to be healthy. If all the animals in a group are young or old, something might be wrong.

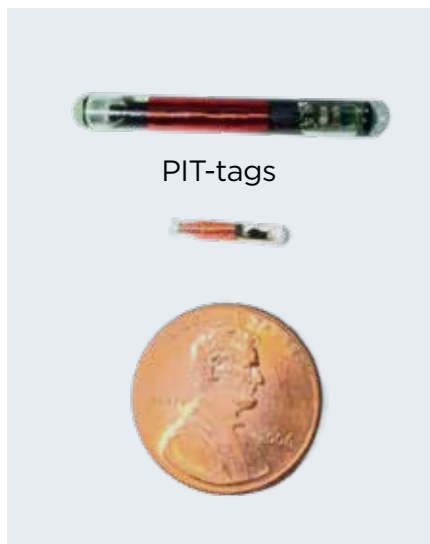
Aging structures, like scales or fin rays, are used on many fish to estimate how old they are. It's all in the rings.

Many animals and plants have structures that "tell" us their age. Have you ever looked at a tree stump? If you have, you have probably seen the growth rings. These are circles radiating out from the center of the stump. Each ring represents one year of growth. Fish aging structures also have rings on them from annual periods of low growth and high growth, often relating to winter and summer. But, while sturgeon do create growth rings on their fin rays, these fin rays aren't very accurate for assigning age.

Instead, scientists use tags and recaptures of fish. Many Idaho white sturgeon are

PIT-tagged. A PIT-tag is small tag (like a grain of rice) that is inserted into the muscle of a sturgeon, each PIT-tag uniquely identifies a single fish. So, when a fish is caught years later, they know it's the same fish and know exactly how much it's grown since they first tagged it, or last captured it. Using this information, they can estimate annual growth rates of certain size fish in specific segments to estimate how long it takes sturgeon to grow certain sizes, and therefore, estimate the age of certain size fish.

Even though animals can't tell us how old they are, scientific studies show us how to get an idea of their age by looking at the clues their bodies leave.



Idaho Fish and Game staff capture, measure and tag sturgeon, which provides critical information about their locations, movements and growth.



STURGEON FISHING

Angling for these giant fish has become very popular. As the number of anglers increases, so does the importance for each of us to minimize our impact on both the fish and their environment. This includes using the right gear, rigging it properly, and leaving the river as well off (or better) than you found it. More importantly, you need to make sure you treat hooked fish properly to ensure their survival. Cut bait, squid, herring and shrimp are all popular baits and are usually fished on the bottom of deep holes.

Anywhere In Idaho where you're fishing, you are not allowed to keep a sturgeon, or lift it out of the water. A sturgeon's body is not designed to be out of the water. Lifting them out of the water can crush their organs. All photographs and hook removal must take place with the fish in the water. Catch, keep in the water, and release!

You need a fishing rod built for big fish and a reel with enough line capacity and drag to successfully fight a sturgeon. Barbless hooks with a sliding sinker rig must be used.





By M. Koenig for IDFG

You also need heavy fishing line. Choose a line with at least a 60-pound test. That means it should not break until 60-pounds of pressure is applied to the line.

Sturgeon fishing can be a blast. The cold fingers, hard work, and stinky smell of the bait can create a lifetime memory for many anglers! Its size and fight will be something you won't forget!



Photos: CC-BY Idaho Fish and Game

STURGEON VIEWING

Want to see a sturgeon up close? MK Nature Center in Boise has four sturgeon in their large pond. Between April and

October, you are almost guaranteed a view of these fish swimming at the bottom. A long bridge is there to help you get a “bird’s-eye” view of the bottom dwellers. These sturgeon range in size from about 3 feet long to 8 feet long. Since they are in a pond and not a fast-flowing river, they will not reproduce. They have been stocked for wildlife viewing and enjoyment.





Sturgeon Photo: CC-BY Martin Koenig for Idaho Fish and Game

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