

4/19/2021

Green and White Sturgeon Transcript

Hey to all you fish enthusiasts out there, whether you're an avid angler or just curious about fish, we'd like to welcome you to Fish of the Week! It's Monday, April 1, 2021. And we're excited to talk about all the fish. I'm Katrina Liebich with the US Fish and Wildlife Service here in Alaska,

and I'm Guy Eroh, a freelancer o-fish-ionado

And our fish of the week is the sturgeon. Today we'll be homing in on green and white sturgeon specifically since they both range along the Pacific coast from Alaska in the north down to the Pacific Northwest and California in the south.

We have two special guests with us today. We've got Laura Heironimus, who's the sturgeon smelt and lamprey unit lead at the Washington Department of Fish and Wildlife. And we've got Ken Lepla, who's the white sturgeon program lead for the Idaho Power Company. Welcome you too

Glad to be here.

Hi. Thanks for having me.

Okay, so basics first for the folks listening so they can visualize what these two species look like. Ken can we have you describe white sturgeon and Laura take green sturgeon. So how big they can get? And do they have any particularly interesting anatomical features?

I'm quite certain, the largest, longest freshwater species in in North America, some individuals can live up to 100 years of age. Lengthwise, you know, they can historically approached probably over 16 to 20 feet. Today, it's probably more common to have sturgeon, around 10 to 12 feet is some of the larger individuals. Seven eight feet is fairly common at least in our neck of the woods. Sturgeon white surgeon or you know kind of gray in color on the on the dorsal side and kind of a white ventral body. They have five rows of scutes that are used for protection when they're small, fairly sharp as a young juvenile, but they will you know, dull and kind of smooth over a little bit as they grow older in size and age.

On a mature like an adult, like a sizable 11-12 footer, how big can some of these dorsal scoots get just to give an idea for someone who's never even seen a surgeon?

Oh, you know, I guess maybe an inch or so across would be a large scute on adult sturgeon.

And then in terms of their mouth, I mean, I've actually fished on the Columbia and cut some of those, those white sturgeon and they're super cool, and they have a really interesting mouth and snout. Can you just describe kind of what their face looks like?

4/19/2021

So you know, you have this kind of a long day elongated, stout and just protrusible mouth, you know, kind of some folks think it was a vacuum cleaner, and they're an opportunistic feeder laying on the bottom and they're accustomed to living in you know, dark turbid waters and deep runs and pools and so that's now you know, is covered and all types of sensory pores and, and barbells or barbells to detect their prey at, in these dark, low level light conditions.

A lot of those traits that can just mentioned are common to all the species of sturgeon that are out there. But Laura, since you work on both white and green sturgeon, can you talk about some of the differences between these two species.

Sure yeah, green sturgeon are very similar to their white sturgeon cousins and a lot of ways, but they are smaller and usually a little more green. So green sturgeon max out around two and a half meters are around eight feet in length. Generally, we see them commonly around four to five foot and Washington estuaries. So green, that's a great identifier, but it's not always, you know, the color can be misleading at time. So some other characteristics that we give to anglers are, if a fish has fewer than 11 dorsal scutes, it's likely a green sturgeon, more than 11 dorsal scutes, and it's likely a white sturgeon. The location of the vent, if it's between the pelvic fins is generally a green sturgeon. For white sturgeon, the vent is a little bit further back from the pelvic fin. And then green sturgeon also have a line of scutes coming from behind there, there, vent that you can look for.

cool. And we recently talked about Gar with our friend Solomon David down in Louisiana and learned how those fish have been around since the late Jurassic. And I think sturgeon fall into that ancient fish category as well. Right?

They do. I mean white sturgeon is kind of a prehistoric looking fish. They're ancient, ancient species with lineage going back, dating back over 200 million years.

I mean, I tell ya, that group of fish, the ones that are ray fin fishes, the actinopterygians, but that were before the teleost genome duplication. Those are some of the coolest fish out that were your gars, your sturgeons, paddlefish or you know, closely related to sturgeon and they're just all really unique looking fish that have been around for hundreds of millions of years. They're awesome. I'm sure you guys feel the same way getting into this line of work

living dinosaurs. love them.

It's commonly referred to as living dinosaurs. Correct.

What are the kinds of ways folks are fishing for sturgeon recreationally and when are the most likely times a years of year that they're catching them

The times of the year, you know, early spring fully in the fall really, and there's a little bit of a dog days of summer, maybe when water temperatures are up in later in August, September, but, you know, generally, sturgeon fishing goes on all year long. So for recreational anglers, typically they're using, you know, really stout fishing rod. Generally, you know, six to eight feet in length and the test of those lines,

4/19/2021

I mean, it's usually monofilament or braided Dacron, generally, it's recommended to have at least, you know, 50-60 pound test that a lot of anglers, you're probably up in the neighborhood of 80 pound test, you know, there's a dropper way to get it down to the bottom and sit in the in the current and using various sizes of hooks from 10 ots to 12 probably is pretty common seven ot to 12. Lot of air riding baits are being used from whatever, you know, can be caught as a game fish, if it meets the size requirements for that section of river. You know, pickled squid, that's typically our bait and hatchery trout, which we get from our local producer.

After our spring smelt fishery, we had a lot of anglers come in, and dip smelt just to use for the upcoming sturgeon seasons. That's a pretty popular one at the lower estuary. That and we get a huge round of shad in the Lower Columbia too and the sturgeon love to feed on shad. They're not a native species, but we've seen where some of these large sturgeon will actually swim up and some of the shad fishermen will put all their shad on the stringer and one big sturgeon will come up and suck down the whole stringer, and swim off with it.

Oh, man.

I also recently saw some really good cool footage that someone posted online of they had an sonar and they caught footage of they were tracking all these adult salmon migrating in and not one but two adults sturgeon turned around and ate full sized Chinook salmon migrating back into the river. Pretty cool.

Wow. Yep, yeah, their mouths are super impressive.

When you're dealing with fish have this kind of size is there anything in particular with regards to safety that someone should consider when they're fishing for them?

so just remember that white sturgeon are long lived fish that are meant to swim long distances up river and fast velocities. So they're very strong. And I think that some people underestimate how strong their tails can be. So you know, hold them by both ends. If you're gonna have anywhere near your face, cuz I've known more than one or who've been tail slapped by a sturgeon.

That is a good tip right there.

Hey there everyone. One thing we want you to always keep in mind regardless of where you're fishing, or what you're fishing for is safety. Every week, we're going to give you a tip or two that you can use to stay safe while you're fishing. Today we're talking about fuel. If you're going out on a boat that uses a gas or diesel engine for propulsion, you do not want to end up stranded out on lake, river ocean without enough fuel to get back home. The first line of defense against this type of stranding is to plan where you will be going and ensure that you have enough fuel to cover the trip. That said, I don't know that I have ever been on a fishing trip that has gone exactly as planned. So make sure that your fuel gauge is functional and then check it with enough frequency that you don't get in trouble. Consider refueling options before going out on the water, either by familiarizing yourself with marinas in your area or by bringing out extra cans of fuel with you on the trip. Also consider currents when making your plans for the day. I've been on trips where we ran out of gas downriver from where we had launched and had to

4/19/2021

row our way back up. Luckily, the river didn't have a strong current, but we still felt it in arms. That leads me to the final point for small vessels, be sure to have an alternative method of propulsion. I'm talking about either oars or paddles. So that if you do get stuck, if your motor quits on you, then you still can get back to where you started. You know what they say about being up a certain creek without a paddle? Don't let that happen to you.

I got kind of a fun question. So there's always these stories of Alaska's Iliamna Lake monster. And I've also heard of, you know, sightings of possibly sturgeon in Iliamna Lake for folks that aren't familiar with that lake, it's huge. It's like 1000 square miles. It drains into Bristol Bay via the Kvichak River. And, you know, from a biology perspective, do you think it's possible that either greens or whites could have made it all the way around the Alaska Peninsula via something like False Pass or Unimak Pass?

I would certainly think it's possible. You know, they have such a range for the species, it's very possible that they could, you know, stray in there for feeding benefits. I'm sure there's probably salmon runs, or

Yeah, I would think probably more likely white. But sturgeon get themselves in all sorts of interesting places. So I definitely would think it's possible.

I'm gonna throw out my own fun question. While we're doing fun questions. I know on the East Coast, there are some of these behaviors of sturgeon, where they'll come up and they'll jump up out of the water. And it can be a hazard sometimes, where even places have even put up signs that warn people who are out on boats that hey, these big 1000 plus pound fish potentially might come up and just jump out of the water. Is this behavior that's exhibited by either white or green sturgeon or not?

We, at times, you know, you see sturgeon as you're going up river had to have you on the bay. You'll see sturgeon jump, but it's typically more of a roll or a splash. See the tail.. I think it's...I've not seeing one completely jump out of the water. But that might be just my observation.

I have! I've seen a white sturgeon jump completely out. It was almost like that Animal Planet, like a great white shark, tail around there and everything. And we see green sturgeon jumping during their summer aggregations. It's really cool to see. And they're more like a roll too like, like you described, I don't think they're jumping quite at the frequency, as some of the Atlantic and Gulf sturgeon have exhibited. And I don't think they're a danger to any boaters out here.

Based on the life history traits that you guys have talked about where these fish they mature late, they don't grow particularly fast. They they're a very old, long growing fish that's just ripe for overfishing, and also habitat issues with all the dams that we've heard about. Are these fish threatened by any of this stuff that I've suggested? Are they doing fine? What's up with that?

That's kind of the common theme for sturgeon species, really worldwide is, you know, habitat alteration, degradation due to development of river systems. And, you know, generally, sturgeon are for the reasons you mentioned, are slow to respond to management actions given late maturity and spawning periodicity. And, you know, given that they're inhabiting large river systems, generally habitat restorations and those sorts of fixes are quite challenging in that type of environment.

4/19/2021

Yeah, I can also add that white sturgeon are listed there on a portion of their range in the US, at least in the Kootenay River and Idaho. And then in some of the Canadian waters too. And then green sturgeon are listed the southern DPS of green sturgeon is listed as a threatened species under the Endangered Species Act. And the northern DPS the green sturgeon is considered a species of concern. It's not currently listed, but as a species to watch. And then I forgot to say that so in the Kootenay River and Idaho white sturgeon are listed as an endangered species under the Endangered Species Act.

Okay. But there are places also where sturgeon are being managed. And, you know, I'm assuming probably some heavy caps on what you could keep, when, it's not just all catch and release. But there are places where you can fish for them, correct?

Yeah. And the Columbia River, we do have fisheries, at least in Washington, Oregon areas. So in the Lower Columbia, below Bonneville, this is one of the healthiest populations. We have both recreational and commercial fisheries. And the two states Washington and Oregon we work together to conduct stock assessments on an annual basis in this area. And we set strict harvest quotas on the proportion of legal size fish that are available. So for example, this past year, it was somewhere around 6000 fish total, that could be harvested. And then in policy that is split 80% to recreational anglers, and 20% to commercial fishers. Upstream from there, there's a number of other pools, and in a lot of those areas, retention is completely closed, except for where we have hatchery programs to help mitigate and restock sturgeon, and where those programs have led to a sufficient number of sturgeon being available for harvest. So where we have really strict regulations on harvest, it's because we want to be able to sustainably manage these populations. And if you look worldwide, most sturgeon populations are in decline. Many IUCN lists as critically endangered, or possibly extinct. So we're trying to learn from the mistakes that have happened already with sturgeon and other places and trying to maintain these populations and rebuild them for the future.

Now, I don't think we could talk about harvest of sturgeon and sale of sturgeon without talking about caviar a little bit. Is that something...are people allowed to sell the caviar? Do you ever have problems with tempted poaching or anything like that?

So where we have open seasons, most of the slot limits that are in place don't allow harvest of any spawning size or mature fish. And so encountering a fish, that would have eggs that could be made into caviar is very rare in our fisheries. It has to be just a very early maturing fish to even have those kind of eggs available. So we don't have really any caviar production from any of our recreational or commercial fisheries. But there are farms in throughout the US. So I know, at least in California, and in Texas, and I've even seen in Italy, they have white sturgeon farms. And I actually just learned that recently, the Yakama Nation is planning to open an aquaculture facility for caviar and meat production. And that'll be based out of Washington.

Wow. So you so you have both kind of some aquaculture for the production of caviar. And then you also have conservation based aquaculture for being released out into the wild. That's kind of neat.

Yeah, absolutely.

4/19/2021

So we usually do a segment on eating and preparation and for some species, obviously, it's not a big portion of the show, just because yeah, there's limitations. So if you catch a sturgeon it's legal you follow the regulations and you want to keep it how do you actually like get into it? It seems like it's you know, a little bit armored with its sharp scales, and it's skin like, Is there a certain way to fillet a sturgeon? And what does the meat look like once you get in there?

It's kind of a thick white meat, and I've seen it grilled, smoked, canned.

I was just going to say I'm not sure, you know, maybe people fillet as well but it seems you know, like, they tend to maybe stake me if it's a smaller harvestable fish, generally, you can probably steak it or throw it on the grill. smoke it. To me, it's kind of a white flaky, you know, flesh kind of tastes to me like swordfish. So I don't know. Have you had it, Laura?

I have tried it once in poke. I don't know if I wasn't like super impressive, but I also had tuna and I really liked the tuna better. I think it's I've heard it's all about how you prepare it. And I just haven't had a lot of experience with eating sturgeon. I think I just love them too much to eat them. Don't like I have no problem eating salmon and other species. But sturgeon are generally like little puppy dogs. Me and I love them. So I just want other people to catch them.

Yeah, same here. [laughs]

So thank you, Laura. And thank you, Ken, so much for joining us it's been a pleasure hearing about this fish that we sometimes see up in Alaska. And yeah, just really interesting to learn about kind of their biology and what they're doing down in the Pacific Northwest. So thank you.

Thanks for having me. Thank you so much.

Thanks to our guests and to everybody else, get out there and enjoy all the fish.

Thanks for listening to fish of the week. My name is Katrina Liebich. And my co host is Guy Eroh, our production partner for the series is Citizen Racecar. The show is produced by David Hoffman, co produced and story-edited by Charlotte Moore. Post production by Garrett Tiedemann. This other week is a production of the US Fish and Wildlife Service, Alaska Region Office of External Affairs.

As the service reflects on 150 years of fisheries conservation, we honor, thank, and celebrate the whole community, individuals, tribes, the state of Alaska, our sister agencies, fish enthusiasts, scientists and others, who have elevated our understanding and love as people and professionals of all the fish.