

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, September 6, 2021. We're excited to talk about all the fish. I'm Katrina Liebich with the US Fish and Wildlife Service in Alaska,

and I'm Guy euro, a road wary a traveler on the road looking for places to fish or internet to access and lately, I've been a whole lot better at the former than the latter.

Our guest is Ketchikan-based artist Ray Troll and we're gonna do this conversation in two parts, essentially. First, we're going to talk ratfish. They're a super cool, otherworldly looking cartilaginous fish in the order Chimaeriformes. And then we'd like to delve into how fish have inspired Ray's artwork over the years. So welcome, Ray and we are excited to talk to you.

Well, it's really fun to be here and got really fishy weather here today in Ketchikan. It's raining. It was 100% rain yesterday, all day long, man. So it's, as I like to say it's as close as you can get to actually living underwater.

Yeah, you picked a good spot. So first, ratfish, you feature them in your art a lot. you named your band after them. What about them has, like drawn you to them?

Well, how does it all start? Well, I came to Alaska in 1983. And straight out of art school, had my master Fine Arts degree in my back pocket came here as a fishmonger. Actually to help my sister start a little fish stand here. And I've never really been sports fishing, you know, on my own, you know, get really passionate about it started going out just dropping a line down there and started drawing fish a lot. Going through my fish id books. Was like, "Whoa, what is this one?" There's just something about it. We're talking about ratfish, Chimaeras, that look so vastly different than all the other fish. It's in the cartilaginous group, as you said, you know, so it's basically in the shark group. But yet it doesn't look at all like a shark. "What the hell is this thing?" is what I was wondering, as I tumbled deeper, deeper into the world of fish, I found out that, you know, for every fish in the sea, there's usually an expert or two that knows quite a bit about that one particular fish. There are a handful of people that know a lot about Chimaeras. It's a very small, exclusive and very cool club, you know, the Chimaera club. And I began to reach out to different scientists and write them letters, like "What's up with this fish?" Why I love rat fish. I think the thing about rat fish in particular, and maybe why my artistic senses and my paleo nerd senses were clicking or that it's one of the only Paleozoic survivors in the sea relatively unchanged. They predate the dinosaurs. You know, they go all the way back to the Carboniferous your fossils from 325 million years ago, they're pretty much look like a modern day rat fish. So just like a coelacanth, or a lung fish. They're unchanged. And they're really from that world, like two worlds ago. So we are in the Cenozoic there's the Mesozoic. These are these vast stretches of time. There's very few vertebrate survivors that look pretty much like you know, they did in the Paleozoic. And there's only a handful of our backbone creatures that do that. So I think in a world you know, way, this is like a visitor from another world. I have a species named after me now because I'm such a ratfish freak. My species is called *Hydrolagus trolli*, and it's Troll's long-nose Chimaera. There's a lot of different names for them. Chimaera means an animal put together from different parts from Greek mythology, but they're also called ghost sharks, or rabbit fish. Like there's been many descriptions of them, but you'll see the

market it is go sharks, which I think is a cool name. And there is actually an international ghost shark day. It's October 30. Yeah, so the day before Halloween, so they look cool, big turquoise eyes. So as an artist, they really were compelling. Their pectoral fins are very lace, like almost diaphanous, you can kind of look through them. And the males in particular, are even weirder, because they've got this strange thing upon their head. The males had these big claspers. And that thing in their head is called a tenaculum. They use that to basically hold on to the female, while nature takes its course. So there I'm sorry, I could go on about ratfish for...how much more time do we have?

We got like, yeah...

You talked about how the fish are like from two worlds ago and speaking in geologic time. What about them has allowed them to kind of be able to stay through stay the course stay unchanged, and still be able to be successful in the world of evolution.

One of the jokes is: If a creature reaches perfection, then there's why why change? But somehow they reached their ecological niche of perfection where really their body hasn't changed much, you know? Because they're kind of the ultimate maybe underachievers or something I don't know there's something about just getting slow and steady and that said there you know evolution is still has the pressure on them and they you know species come and go but the body plan is basically the same. They evolved poisonous dorsal fin spine that has been pretty effective I think in keeping other fish less interested in them. It's slightly toxic. Like I said it's not going to kill ya.

I was gonna say they've got those really odd looking seams on them and whenever I see him I always think of that Velveteen Rabbit story where the stuffed animal kind of like comes to life because the kid loves it so much. I was looking up stuff about their name and the Greek words that make it up it's hydrolagus and those words mean "water" and "hare". So I thought that was kind of cool, because I was always like I see them and I'm like, "man, they're just like, strange with those with those seams...yeah.

Yeah, that's the one that one genus is Hydrolagus, which means water rabbit, but I know you know that stitched together look, those are the Ampullae of Lorenzini. Those stitch marks that you see all over ratfish, they look like they're sewn together. But that's actually a characteristic they share with all sharks and all cartilaginous fish have the Ampullae which are the electro receptors, so they sense electricity, just like all sharks do.

Clearly, you wanted to catch one at some point. But can you talk a little bit more about people who do want to target these fish?

Well, I think artists and naturalist maybe want to target them to catch them and look them. They are edible, but I've never eaten one. They are commercially harvested in places like South Africa and down in New Zealand and in Australia. But yeah, I've never eaten one but they have been commercially harvested in the past or at least, you know, selectively harvested I guess because of their oil in their livers, as many sharks have been targeted for the oil and their livers but ratfish oil is supposed to be especially very, very great for you know, mechanical instruments and that kind of thing. I've known

people who swear by you know, ratfish oil or some of the best lubricants out there for like guns or for metal parts and they'll have a little jar of rockfish oil over here.

I did not expect coming into this episode, I will be asking a question about fishing for ratfish because I didn't know that it could be done. But apparently it can. So even if they're not way down in the deep ocean and you're able to catch them off your dock, how are you setting up your rod if you're trying to target these fish?

Just go to the bottom like you would for a for a halibut or you know rockfish that though could be at the bottom. So drop your rig to the bottom and you can use almost anything for bait. just crank it up a couple cranks you know, just have your bait down there. They're not going to be a fighting fish, you'll feel you're not going to fight too much. There'll be a little bit of a tug. Bring them up. They don't suffer from barotrauma like rockfish would so you can crack him up and release them. But really last year, you know, especially with the pandemic, we there's no cruise ships here in town. We have this beautiful huge long dock down here in Ketchikan you know it's like the world's biggest fishing pier now and I was going down, especially last year, no ships at all. There'd be various people be done their fishing and I would say half the time people were catching ratfish.

Wow. that is so cool.

And I've got videos of them catching the rat fish.

I'll have to make a trip to Ketchikan!

They're trophy ratfish, they reach two feet in length, you know, thereabouts

I would love to see one. Yeah, in real life. I've seen the art. I've seen pictures, but I did not know that they were accessible like that.

I've had dead ones in jars. And that's about as close as I've gotten.

They never look as pretty in a jar.

No.

Yeah, they're really beautiful. And in life, you know, there's the turquoise eyes and the spots, the sort of golden side. And so yeah, I love them.

What's your first memory of drawing a fish? Like how old do you think you were when you started kind of noticing fish?

You know, I really started drawing fish more in undergraduate school in Kansas and I started I was fishing for catfish. I did noodle in the rivers there. So yeah, they started showing up in my art then and then, and when I moved to the northwest and moved to Seattle in '77 eventually went to WSU for my

master Fine Arts degree. And there was some of my professors were doing these massive paintings of trout. Like these 12 foot paintings, Galen Hansen, you should check out his art. And these oil paintings. A 12 foot painting of a trout will just like just floored me and I'd already been doing them I started doing more but then when I came here to Alaska to be a fishmonger with an art degree, I couldn't help but you know, draw and paint them. And soon I got an audience Do you know that was digging my work?

So do you have a favorite species to draw? Is it the rat fish? Are you got some other favorites?

Oh, yeah.

And yeah, I think that rock fish are pretty extraordinary. You know, the Sebastes genus is wonderful.

I think I got one of your rockfish, pieces of art from the American fisheries society conference from a few years back. I was able to snag a couple of those

rock Fisher are so cool. Yeah, I know being a creative type too. You know, I have songs about rock fish recompression and songs about ratfish. We have a song about lump suckers of love. Because they are just they just want to love and be loved is my theory about lump suckers. And with a name like lump sucker what are you going to do?

So when you're drawing a fish are you looking at an actual fish in hand that you've caught? or someone's caught? Or how do you? How do you get so specific with your drawings? I mean, they're very scientific, actually. I mean, they're surreal, but scientific.

I guess. I've been described as a scientific surrealist, you know, which I like that. So it's dreamlike, but yet it's accurate. But I like yeah, like to get the fish or the creatures as draw them as well as I can and, and to really study them. And so yeah, I take pictures when I go fishing. You know, if I catch a fish, I'll photograph a fish. I've lots of lots of old school love, you know, four by six prints. You know, I do have fish in jars too have learned a lot by having fish in jars. Yeah. So I do that. And then you know, of course, the old internet searches, look for other images and that kind of thing. But yeah, I like to draw them from life as and as accurately as I can.

Your artwork can be found in lots of different places. You can see it on T shirts, you can also find us bring in life to the otherwise kind of bleak gray cubicle walls of many government fisheries office.

It's quite a task to make government offices look cool.

I have some in my office.

[laughs]

Are you surprised that people have really gravitated to your work so much? Or what's it been like this kind of rise and celebrity as you say, you started off as a fishmonger with an art degree. And now you really are a celebrity in the world of fisheries.

Well, what is celebrity in the world of Fisheries mean? Exactly like, but yeah, it's cool to go to an ichthyology meeting. And you're, you know, I go, I started going to scientific meetings, you know, it's kind of weird to let an artist into a scientific meeting. And that's kind of cool coming in as complete outsider to that culture. But I began to find that people come to my talk, where I was just like, randomly showing pictures of, you know, my art, but it's a feedback loop, you know, as an artist, or some creative type person, or even as a scientist, you know, as you get your work out there, you get an audience, you garner an audience, and you're starting interacting with that audience. And like I said, I'm inspired by the science. And I like to think actually, that my art has kind of helped inspire some science back, you know, I mean, that inspires the scientists.

I think a lot of people know about kind of the life cycle of salmon now and now thanks to spawn till you die shirts, posters, that seems like a popular one.

Well, yeah, I mean, my job is to, you know, I looked at it as is to try to create a compelling image that maybe draws you in and maybe makes you want to ask that question: Well, what does that what does that phrase or what does that job mean? So, yeah, lifecycle of salmon spawn, till you die.

I really am a big fan of how you work humor into a lot of your artwork, and seeing I think that's a great way to connect with people. And this is getting into a little bit of also how I think that your work has a little bit more appeal beyond just the fisheries biologists and the people who go to these big meetings. I was talking to a buddy I was out fishing with a friend of mine just this past weekend, I was kind of bragging about how I was going to get to interview you this week. At night we went to dinner and Jackson Hole Wyoming and our waiter was wearing the fish and chips shirt.

Good. my evil plan is working. Global saturation domination one t shirt at a time.

I saw your exhibit at the Anchorage Museum, the paleo exhibit and that was really cool because it's just really like large prints and like you really get a sense for maybe how that world or there's, you know, a couple of worlds ago were. Do you have any other plans to do exhibits like that or other topics?

Yeah, I've done several exhibits over the years. One on the Amazon actually was one that traveled around the planet for a while the Amazon voyage exhibit and then cruise the fossil freeway exhibit. This is the fossil coastline exhibit. I did one on the buzzsaw shark.

Oh yeah, I saw that I saw that the Seward aquarium.

Please tell us.

Guess who the closest living relative of the buzzsaw shark is?

The ratfish.

The rattfish. So yeah, once upon a time rat ish had their heyday, the ghost sharks ruled the seas. And they really were and that was back in the late Permian. There was one group within the go shark lineage that grew to a really big ass size, if I can use that word here in the podcast, reaching 20, maybe 30 feet in length. But what's strange is that in their lower jaw, just like all sharks, they're producing teeth throughout their life. But this was a this was a contract in a cartilaginous fish that was retaining its teeth. Never shed their teeth, but in the lower jaw it kept them and these teeth...That's the only animal to cheat the tooth fairy as I like to say, and it retained them in this bizarre world that it was using to basically slice prey apart. These are like serrated sharp teeth like a modern day ratfish with the blunt chompers the rabbit like teeth.

How many hours in your day are you putting pen to paper drawing these things?

I typically I'm out in the studio 40 hours a week. You know, I show up I like to show up since I'm self employed, you know, like to have structure like to be out there about nine o'clock work till noon. take a little break, wander around town go down to the gallery. My wife runs our gallery, the Soho coho. And we have a web store troll art calm that I'm using coming in doing Photoshop stuff. My studio is totally analog. like to leave it analog. So I'm drawing and painting out there.

What's your favorite medium to use?

Pen and ink probably. I'm really more comfortable drawing, you know, the painting. Painting, I have to think you know, like, what does red and red in orange, red, and yellow make orange? That's right blue. And if I could grab a pencil, there it is, you know, so colored pencils and or pastels. But I still mixed it up. But the pen and ink with digital colors is a lot of what I'm doing these days,

How is your studio space set up? How do you like to work when you're creating these artworks?

It's good question. It depends on the media, the studio is across the street, not across the streets across the driveway. It's about an 800 square foot space. And I do have a massive wall that if I'm doing a mural thing, I can stretch a canvas on. But then I've got another section that's basically a drafting table with the I can angle the table, bring it up to me do some really tight pen and ink stuff. And usually I'll pencil stuff out and then I'll ink it and then I'll scan it here in the house and do digital coloring or I work with a digital colorist by the name of Grace Freeman, who does a lot of my really more elaborate digital coloring. So it's cool to collaborate.

I mentioned that like the little one panel things. But I also am a big fan of these larger pieces that work in all these different fish from various ecosystems. You all usually it's one ecosystem kind of per piece, when you're making something like that, where you have all these different pieces sort of fitting together, do you plan that out at the beginning and then go on to draw it or you just kind of draw freeform and add things in where they go?

That's, a good question, too. I'd like to maybe have a rough pencil sketch of one kind of thinking. But then what's exciting for me, especially when I do those big pieces, and now you're making me I want to do a big piece again. One of the last big murals I did was for the University of Washington, and that was

seven by 15 feet eight by 15 feet, I had a rough sketch. But what was cool is that just kind of painted the sort of water column behind it, but then every day, I would just go out and add another fish. So I was started and make these moves every day for like a chess game in a way you know. So if I put a fish here, I'm going to balance fish over there. And I knew if I put a ratfish here, maybe the male ratfish would be over here, they'd be straight on but didn't put one over here. So you start I start stacking them end up behind each other and just let it evolve like a dance, you know. So I like I like that kind of evolutionary approach where the art starts just speaking to you and it can, you know, those pieces can take a year to do. So every day I'm living with this thing I go up what's the next move?

Do you have a favorite kind of ecosystem that you inspire to draw or like a certain class of fish that you haven't drawn yet?

Katrina if there was this one mural that maybe I'd maybe like to do before I kick the bucket since I'm so old now. Funny how that happens. But I've always wanted to do the Abyss at a large scale so that I could really literally almost step you know up to it and I've always wanted to do it and have a glow in the dark. When you flip the lights off, you know all the glowing, but you know the deep sea angler fish. Those are mind blowing fish.

So, you've been talking a lot about how your work has been inspired by the natural world, but how are you inspired by other artists out there?

So I am a Chimaera, if you will, ratfish, you know, made up of many different parts, but yeah, people oftentimes say R. Crumb and yeah, I love R Crumb. I still love R Crumb. He's that he hasn't left us. Yes. But you know, I really, as a kid, I grew up on Mad Magazine, and Alfred E. Newman, and all that kind of good stuff. So Mad Magazine was a big influence on me, Monty Python, you know, that surreal humor. But I am a student of art history too. So I go back to Hieronymus Bosch and Pieter Bruegel very much. Albrecht Durer was one of the first artists ever, like paint dirt, you know, or grass to do a whole canvas on grass. You know, I love more ancient art. There's a lot of that kind of Egyptian kind of profiles and things. So there's that stuff. And I think that I'm influenced by northwest coast, indigenous art, you know, being a white guy in this culture, this live here for you know, 10,000 13,000, maybe more years down this coast. I'm influenced by it. I've and many native artists, friends, Tlingit, Haida, Tsimshian friends, and their place in the natural world and how they coexisted with this beautiful landscape and all these creatures here. And I'm lucky enough to be here in this part of the world.

Do you have any messages you'd like to give our listeners about fish, or maybe folks that are aspiring to be artists may be crossing into that fisheries realm a little bit.

I think scientific illustration is a necessary it's a it's a cool thing. It's a wonderful thing, I think we still need those graphs and charts. And I think we still, we need people to make compelling images, just so that we have a visually rich time here on our on the planet while you're here. And I think it's important that science is conveyed to the general public, in almost any way it works in any way you can get the message across, be it music, be it painting, be it a T shirt, be it a podcast, scientists need help. Because, you know, and conveying that because that it can be kind of an exclusive club where they're speaking a dense language and others don't understand at all. And you guys are making important

insights, but you maybe don't have that entertainer gene. But I think science communication is really, really important. And I think deep science work by the true science nerds a drill way down into it. We got to keep the science going. But I think getting the word out to the public is really important. And whatever way you can do it.

Ray it's been great having you today. We really appreciate your time. And this has been a fascinating conversation. And we hope folks get out there and learn about ratfish. Go look them up online. They're a beautiful, strange creature and enjoy all the fish.

Thank you Ray.

Well, thanks Guy. Thanks Katrina. It's been fun and yeah, get out there and love those ratfish. Respect the ratfish. They will teach you many things.

Thanks for listening to fish of the week. My name is Katrina Liebich and my co host is Guy Eroh. Our production partner for this series is Citizen Racecar. Produced and story edited by Charlotte Moore. Production management by Gabriela Montequin. Post production by Alex Brower. Fish of the 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, individual 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.