

January 2, 2016

Bass Pro Shops "Outdoor World"

SiriusXM Rural Radio Chanel 147

Rob Keck interviews Nate Wiese, Mora National Fish Hatchery Manager

(Rob Keck) To get us started today, our first guest is Nate Wiese and he is the manager of the Mora National Fish Hatchery, located in northeast New Mexico near the town of Las Vegas. He grew up in northern Wisconsin fishing for muskies and chasing adventures there in the outdoors. In high school, Nate volunteered at the Bullfrog Fish Farm rearing rainbow trout, and the farm's slogan was "Eat My Fish," well he still has the bumper sticker today!

Nate has a BS degree from the University of Wisconsin-Stevens Point in Fisheries Biology which he got in 2001, then a Master of Science from the University of Arkansas-Pine Bluff which he received in Aquaculture/Fisheries where he researched channel catfish rearing and economics. Well Nate has worked for the Fish & Wildlife Service since 2004 rearing salmon and steelhead at the Hagerman National Fish Hatchery and the Dworshak National Fish Hatchery, both in Idaho. He headed up Gila trout rearing at Mora National Fish Hatchery for two years. In 11 years working for the Fish & Wildlife Service, he has helped rear almost 20 million fish. Well Nate says that he has run out of names for all of them, but every one of them has been special. When not at work, Nate enjoys fishing and hunting, and has made some recent memorable trips to Alaska on big game hunts with his brother. I can tell you he is here to share that passion.

Please welcome Nate Wiese! Nate, WELCOME to Outdoor World!

(Nate Wiese) Hey Rob, thanks for having me aboard.

(Rob Keck) Man I tell you what talking about Alaska and up there big game hunting and fishing I have had some great memories up there and gosh let me ask you, are you in your chest waders right now? Or are you shivering to death?

(Nate Wiese) Of course, I have lived in more chest waders in this business than I can remember. I have got my favorite pair on, the one without leaks.

(Rob Keck) Oh, I tell you, in the heat and the cold those chest waders, I will tell you what; they are just part of that business and part of your everyday life.

Nate, when did you get an inkling that you were destined to a career in conservation? I get people all the time that ask me, gosh how can I break in, I would love to, I think I would like to, have a job somewhere in the outdoors in conservation. When did you really come in touch with yourself saying this is where I want to be?

(Nate Wiese) You know, boy Rob, for me I was 17 years old. I was maybe a little adrift as many teenagers are and I started in a work study program volunteering at Bullfrog Fish Farm. And

part of that job was helping kids catch their first fish in the trout fishing ponds and boy from there I was hooked.

(Rob Keck) Man I tell you what, it sounds like a lot of fun. Tell me about what triggered that interest? I think you were raising rainbow trout, but what was it about that job that really hooked you?

(Nate Wiese) You know I grew up in the outdoors of northern Wisconsin, a fantastic place, and it was really an obsession for me, it still is. I just get so excited to be outdoors and help others enjoy the outdoors. It has been a life-long passion for me and something I have pursued for a while now.

(Rob Keck) Well, you grew up in Wisconsin chasing muskies, and I tell you what I don't think there is anything more challenging than trying to catch a muskellunge. I know that chasing muskies is a far cry from starting out on bluegills and sunfish. Who took you and who mentored you on this biggest of all the fresh water game fish?

(Nate Wiese) Boy it was my dad; he has got a passion for Muskie fishing that is just infectious. I would say he infected my brothers first, my Mom was immune now, but even my Grandfather caught the bug, he caught his first legal Muskie at age 63.

(Rob Keck) Oh, wow, that is really cool. You know for many outdoorsmen, they would say that you are living the dream and I will bet there are some who have asked, well how did you get to where you are today in managing the Mora National Fish Hatchery. Maybe you could just give us a quick thumbnail of that career path that you took to get you where you are today.

(Nate Wiese) Boy I like to say you know I am living "in" the dream. It is just incredible, an amazing adventure for me and I spent a lot of time money and energy getting the right education in this business. And you know most of that is thanks to my Mom. She would always say you will always have your education. You know, at that point in my life I was more ready for professional bass fishing, but you know how that goes.

(Rob Keck) I do.

(Nate Wiese) But you know she was right. You know you had to spend some time in college and you had to get the right keys to open the right doors in this business. I mean struggling through some chemistry and statistics, it is still stuff I use. And after that it was volunteering. I took every chance every opportunity I could get to work more with hatcheries and now I am able to work with the U.S. Fish and Wildlife Service all across the country from California all the way up to Washington D.C.

(Rob Keck) Wow. That is, it is really amazing. Tell us about some of the duties that you have there at the fish hatchery?

(Nate Wiese) Well no offense Rob, but you have got a pretty good gig but I have got the greatest job in the world man. My most important duty is to motivate my team and run the most complex aqua-culture facility in the world. We have dozens of pumps, generators, blowers, sterilization systems. Everything is running 24/7 to keep these fish alive. You have got to be on your "A" game every day. One slip and we have lost the whole program. But, besides that, it is involving our stakeholders and getting more interest in the Gila Trout. This is a super cool species and an indicator of the health of how our systems are doing. You know, these fish live down in the Gila wilderness, the home of 400 inch giant elk, turkey hunting and we just want to see that everything is going well down there.

(Rob Keck) Well we are going to talk more about that when we come back from the break, but we have to move to our first break. When we return we are going to continue our conversation with the manager of the Mora National Fish Hatchery, Nate Wiese. This and a whole lot more coming right up. I'm Rob Keck, your host here on Bass Pro Shops Outdoor World, only on Rural Radio SiriusXM Channel 147.

(Rob Keck) Welcome back to Bass Pro Shop's Outdoor World, here on Rural Radio, and if you have just turned in we are visiting with Nate Wiese the manager of the Mora National Fish Hatchery located in northeast New Mexico.

Looking at that job that you have there managing this complex system at times I can imagine it has got to be a challenge, it has got to be overwhelming. How did you assemble a team that could take on such a big challenge?

(Nate Wiese) Boy I am really fortunate I work with people that are in the same business, really motivated and passionate about what they do. And that is what it takes, you know, this is agriculture at its largest level. We are 24/7 all the time depending on electricity and pumps and these guys, we work together as a team we take shifts as a team. This hatchery has a person dedicated to it all the time.

(Rob Keck) Well, tell us about the status of the Gila trout. I mean that is where we are focusing here in this segment. Tell us about that fish.

(Nate Wiese) You know, the Gila trout are still considered threatened under the Endangered Species Act. Just in 2014 we were numbering them in the wild probably less than 30,000 individuals. That is scary just 12 months ago we were talking about uplisting, that means putting it back on the endangered status, just a short time ago.

(Rob Keck) Yeah, well where are they found? Tell us about that. Where do they naturally occur and how have they adapted to living in such an arid forest land?

(Nate Wiese) Yeah, the Gila trout is incredible. It is one of the only two native trout in Arizona and New Mexico. It shares that status with the Apache trout in Arizona and Rio Grande Cut Throat in New Mexico. Not places that you would think of trout living. And it is a tough place to

live. We don't have a lot of water and the trout have had to adapt to essentially warmer water temperatures, even above 75 degrees. Then the females are really prolific, each female has over 600 eggs, and that is important when you only have a few individuals that make it through a drought or a wildfire.

(Rob Keck) Well have the wildfires been having an impact on the quality of the water and of course then on the status of the trout?

(Nate Wiese) It has, you know we have had some substantial wildfires especially in New Mexico and Arizona over the past few years. The most significant one was just three years ago, it literally wiped out 80% of the Gila trout habitat that we had. And so we are rebuilding from that, but it is happening really quickly with the help of the hatchery.

(Rob Keck) Well, I know with any successful effort it takes a great team. You have pointed that out. In this case you also team up with, and partner with, other agencies and organizations as we look at the Gila trout restoration. Why don't you share with the listeners some of those agencies and organizations that are involved with the recovery efforts on the Gila trout?

(Nate Wiese) Well, you are right Rob. Everything is about working together these days. Gila trout restoration may be spear headed by the U.S. Fish and Wildlife Service, but we have got Trout Unlimited involved, the New Mexico Department of Game and Fish, the Arizona Game and Fish Department, the U.S. Forest Service, even the University of New Mexico, and then there is countless volunteers and partners putting time in. It is really a team effort.

(Rob Keck) How do you do that? There is a lot of folks out there that struggle with that. In reaching out and bringing them in to make them an integral part, a working part. It takes some kind of savvy and it takes some special skills to do that. How have you worked to make all that happen?

(Nate Wiese) Well, you have got to bring some energy to the table and a vision of what the future can look like. For Gila trout it is easy, it is a charismatic species, people like it. It is something that we can all kind of rally behind, and hopefully these can bring along some of the lesser known species along behind them.

(Rob Keck) Well, as you well know, it takes money as well as man power, and great planning, and partnerships. Looking at the funding for this important project, where did that funding come from?

(Nate Wiese) Yeah, so here the hatchery dollars that come here and we spend are straight from federal appropriations, so that is kind of your direct tax dollars. But we still get a significant portion of, Gila trout work is habitat work, that comes through your Wildlife and Sport Fish and Restoration; your excess taxes on sporting and fishing equipment, and then also your state license dollars. And then we also get Trout Unlimited. They are an incredible partner that matches funds and they solely fund projects as well down here in New Mexico and Arizona.

(Rob Keck) Well I think they provide man power as well. Tell us a little about that.

(Nate Wiese) Oh yeah, we could not do anything without the volunteers at Trout Unlimited. What a great organization. In fact the lead for our Gila Trout Recovery Team is a member of Trout Unlimited, and so that is to show how much of the recovery of Gila trout has kind of spanned the agencies and taken a broader paint brush to species recovery.

(Rob Keck) Well, fishing for the Gila trout I think was closed for gosh almost half a century. The trout, as you mentioned, was considered endangered until 2006, and then was upgraded to threatened. What conservation work was done to make that improvement happen? How did you get it to come off the endangered list to the threatened list?

(Nate Wiese) It has been incredible, the Gila Trout work has been going on for years and years and they have been hauling fish to try to help them out with mule paniers back into the wilderness since the early 50's. But I think that what really happened was that the U.S. Fish & Wildlife Service started to recognize the incredible value of anglers fishing for the Gila trout and doing that and bringing the status up to threatened really helps bring more stakeholders to the table and makes that down listing a reality. And now we are on the right path towards recovery.

(Rob Keck) Well how about angler support, when you have had a situation where the season was closed for 50 years, and the situation that it has faced. Tell us about angler support, I know obviously Trout Unlimited which is full of trout anglers, but overall how do you have that kind of support for that work?

(Nate Wiese) I think the angler sportsman is incredible once we educate people about what we are trying to do it is amazing how they jump on board. New Mexico is a tremendous example, we still have 10 stream closures, not catch and release, I'm talking no fishing whatsoever, to create an area of habitat for these trout. And that is unbelievable support for this program.

(Rob Keck) It is. Why don't you describe what does a Gila trout look like? I grew up in Pennsylvania, we caught brookies, native brookies, up high in the mountains, and of course when I fished limestone streams I fished for browns that were just giants, and of course we had rainbows that were stocked all over the state, and I know what their colors look like. I know how brilliant a brown gets during the fall during spawning season, and just how gorgeous a brookie is with that red and then that white line along the bottom of that fish. Describe what the Gila trout looks like?

(Nate Wiese) Oh there are so many incredible trout species as far as the colors, and the Gila trout's no different. My favorite line is from Craig Springer, he said, "The Gila trout stole its colors from the New Mexico Sunset." And he is right; it has got this amazing golden hue, sometimes dashed with a pinkish stripe across, almost like a rainbow trout with fine dotted spots across the back. The spawning colors will even bring the oranges and the reds out of the

fins. And it is just incredible, just as you're speaking of the brook trout and the other trout all these trout species have really incredible colors.

(Rob Keck) Man that is so cool. Well look time rolls so quickly we have got to take our next break. So hold that thought and when we return, folks, we are going to continue our visit with Nate Wiese, here on Bass Pro Shop's Outdoor World, only on Rural Radio, SiriusXM, Channel 147. I'm Rob Keck, thanks for joining us, and we will be right back.

(Rob Keck) Welcome Back to Bass Pro Shops Outdoor World, here on Rural Radio, SiriusXM, Channel 147. Thanks for joining us!

If you have just tuned in, we are privileged to have with us Nate Wiese, the manager of the Mora National Fish Hatchery located in northeast New Mexico, and we are talking about the Gila trout.

Nate, what is the condition of Gila trout populations in all the places that they are found. I know they are on the threatened list now, they have been upgraded from endangered, but tell us about the condition of the fish.

(Nate Wiese) Boy just last year Rob we were talking only 30,000 Gila trout left in the wild. Now in 2015 the hatchery was able to supplement that population with additional 30,000 fish into suitable habitat. So we are on our way. The habitat is recovering from the fires and populations are coming up.

(Rob Keck) Well let me ask you this, those hatchery fish, do they adapt to those wild conditions very easily?

(Nate Wiese) Boy, you are jumping into a piece that is really a passion for me, because I think for a long time hatcheries, maybe the fish have not been as adapted as we want them to. Now in this particular program we are trying to learning from past mistakes and I think these fish are becoming more and more adaptive and we are seeing successes of streams that we have re-populated with hatchery stocks doing really well.

(Rob Keck) Well will they reproduce in the wild?

(Nate Wiese) Oh yeah, the hatchery fish are 100% reproductively available, and we specifically try to make sure there is a genetic diversity going into each stream so we are not just inbreeding a stream into one particular line.

(Rob Keck) All right, you said there was 30,000 out there, now another 30,000 is going to be supplemented. Can you tell us then how many Gila trout are there? Is it just the math of putting those two numbers together?

(Nate Wiese) Hey, that is pretty simple math for me, 60,000 would call it a pretty good guess. You know, the fish we put in we expect some overwintering mortality from those. The average life span of a Gila trout is 5 to 6 years, so they are not really long lived species. So we continually see the ebbs and flows while we do spawning.

(Rob Keck) How big do they get? I have seen giant browns and brookies. Man if you get one five pounds I mean your like at the top of the class there. Of course we have seen some giant rainbows from some of these fisheries, but how about the Gila? How big does it get?

(Nate Wiese) Boy a five pound Gila trout right now would put you right in the running for the state record. So that is about the size you will see and most of the streams we are stocking the fish are limited by the streams. A real small headwater mountain stream, there's not a lot of food like a brook trout, or what brook trout's live in.

(Rob Keck) Well how is the Gila trout recovery program different from other hatchery programs? I grew up around hatcheries there in central Pennsylvania and toured many of them, and of course was part of stocking them when we had float boxes floating them down streams into some remote areas, but how is it different? How is the hatchery program different with the Gila trout?

(Nate Wiese) Well first off, I think we have the coolest trout in the world, but past that we are on the cutting edge of genetics and fish husbandry. We are trying to make hatchery fish that thrive in the wild. We are not just necessarily a put-and-take type of Gila trout program; our purpose is to work ourselves out of a job. We want fish that can survive in the wild and we can move on to other species of concern.

(Rob Keck) Pretty cool. Well I know your optimism, it just gushed out, but I got to ask you, looking at wildfires and the devastation and the changes we have had in habitat and as it affects fisheries and as it affects our clean water, what is the future of the Gila trout as you see it, and how do genetics come to play there in your hatchery work that you have just touched on?

(Nate Wiese) Yeah, I mean it is like everything, you know we can say climate change or we can say anything, but the bottom line is we have got to be adaptable. And that is what we are trying to do at the hatcheries, we are trying not to do the same thing we have done in the past, we want to adapt, overcome, make differences. You know in this day and age in genetics, we certainly don't overlook those CSI TV programs and the white coat labs, every single fish we breed here is genetically tested, and based on that testing we basically arrange marriages of those fish, and we are trying to maximize diversity and preserve those rare alleles. We are breeding the top race horses of the Gila trout line so they can thrive into the future.

(Rob Keck) Well you have probably answered my next question, but I am going to ask it anyway. The Mora National Fish Hatchery is one of 70 national fish hatcheries across the United States.

You have said this is the most unique of all of those, what makes it so unique and so different from the other 69?

(Nate Wiese) Mora is the newest fish hatchery in the U.S. Fish & Wildlife Service, and you have got the youngest hatchery manager in the system. So don't tell anybody, but they just gave the teenager the keys to the new Corvette. We are making waves; we are changing the future of hatcheries. My current staff, we are experimenting with increased water velocities to get these kind of couch potato hatchery fish on a treadmill. It all makes sense right? This year we got to velocities of four body lengths per second. Now Rob, I know you are about 6 foot tall, that would be like you running 4 minute miles 24/7 for six months straight. I bet you would even win the Boston Marathon after that.

(Rob Keck) I could probably go sheep hunting on a regular basis. You know all about that, climbing those high mountain areas in Alaska. Well let me ask you this, I know this has to be part of your plan as well, but I have got to ask you, do you conserve or re-circulate water to raise fish in such an arid area?

(Nate Wiese) Oh yeah, you know moving from the mid-west where water is plentiful, and you know back in the east water is still pretty plentiful, northern New Mexico is light years ahead of the country as far as water conservation, and the hatchery is no different. We re-use 95% of our water in a recirculation system. This isn't really your grandpa's farm pond anymore.

(Rob Keck) Well you have already pretty well lined that out for sure and I am so impressed. Impressed with what you have done, and what your team has done. I imagine there is probably some listeners out there, some high school kid that loves to fish and maybe is really hooked on fly fishing for trout and now you have just peaked his interest with this Gila trout, what could a high school kid listening right now do to get a job in working with the U.S. Fish & Wildlife Service?

(Nate Wiese) Boy my biggest advice, get out there and volunteer. You know it is hard to get me out of my chest waders as a hatchery manager, you got to be persistent you got to keep showing up and don't get discouraged, you will earn your keep. My favorite story, I got fired the first day of volunteering at the Bullfrog Fish Farm, as a volunteer. It was a miscommunication on our start date, but my boss Herby said, "I don't need to deal with this." You know what, the next day I talked to my mom, I went back, and he was not very happy, I went back the next day, and eventually I did all the jobs that no one else wanted to do, and guess what? He was one of my greatest mentors of my career, only because I was persistent and kept coming back.

(Rob Keck) Great piece of advice. Well look as we close out this portion of our show, I want to give you the chance to share some final thoughts as we move on.

(Nate Wiese) Yeah, well Rob I would like to ask you, have you ever caught a Gila trout?

(Rob Keck) I never have. I have caught all the others, I have been to Alaska and fish for some of those giant rainbow's up in the Kvichak that flows into Lake Iliamna, I mean I love, love, to trout fish, but I have never ever fished for the Gila trout.

(Nate Wiese) Well I will tell you, it is exciting to me just the opportunities we have all across the country, including Alaska, it has a spot in my heart for sure. But it is prime time. I am heading out Monday, I'm releasing 10,000 more Gila trout to the wild. These are the good old days of fishing and hunting for sure.

(Rob Keck) Yeah, they really are. Well Nate, as always we just don't seem to have enough time. Great information, you are a wealth of knowledge, and congratulations on the many achievements you have done in managing and restoring our fish populations, but especially what you have done there with the Gila trout. Hope you will come back soon, and thanks for joining us today on Outdoor World.