

**KYLE STONE**

**Hooper, UT**

**An Interview by**

**Becky B. Lloyd**

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**THIS IS AN INTERVIEW WITH KYLE STONE ON DECEMBER 11, 2014. THE INTERVIEWER IS BECKY B. LLOYD. THIS IS THE GREAT SALT LAKE ORAL HISTORY PROJECT. TAPE No. u-3285.**

**BBL:** This is an interview with Kyle Stone. We are in Hooper, Utah, today. It is December 11, 2014. This is part of the Great Salt Lake Oral History Project. My name is Becky Lloyd.

So, Kyle, let's start with when and where you were born.

**KS:** I was born here in Ogden, September 25, 1982. Grew up in Weber County and have never lived outside of Weber County.

**BBL:** Is that right. And you're still living in Weber County now?

**KS:** Yes.

**BBL:** Your family's from the area?

**KS:** Yes. My dad was born in Ogden. My grandparents were from Southern Idaho. They moved to Ogden, raised a family, my dad, most of my cousins are still here.

**BBL:** That's nice to have family close. So you graduated from an Ogden high school?

**KS:** Yeah, Fremont High over in Plain City.

**BBL:** Then you must have gone on to get some secondary education.

**KS:** Yes. Got my bachelor's degree at Weber State.

**BBL:** In what?

**KS:** In zoology.

**BBL:** Okay. So you grew up by the Lake, you've always seen it.

**KS:** Yes.

**BBL:** Did your family recreate here or spend time at the Lake?

**KS:** No. We went to Antelope Island once or twice, camping trips, but for the most part we recreated in the mountains.

**BBL:** What brought about your interest in zoology?

**KS:** Always had an interest in animals, but knew that I didn't want to be a vet. I'd talk to people and everybody always, "Oh, you should be a vet." Or go into the medical field, and that's not where I wanted to be. I was always more interested in animal behavior as a kid and figured out that as a biologist I could do that for a career. I watched my oldest sister kind of struggle through her life and I knew that I didn't want to go that road, so I wanted to get an education, have a real career, and pursue my life that way.

**BBL:** What were you thinking specifically you'd do, then? You said you didn't want to be a veterinarian; you didn't want to do any of that.

**KS:** Yeah, I always wanted to do something research-oriented. Originally in junior high, high school age, like everybody, wanted to work on charismatic megafauna, so wolves and tigers and bears, things like that, that everybody wants to work on. It wasn't until my college days at Weber State I got involved with the avian ecology lab up there, Dr. John Cavitt, and he got me a job doing nest searching, looking at shorebirds, avocets and black-necked stilts around Great Salt Lake. That's where my background in bird studies comes from. Through that program, I learned about this program that I work with currently. So I met John Neill years before I got this job and was lucky enough to find an opening here and get hired on.

**BBL:** So you've been here since when?

**KS:** Since 2010.

**BBL:** What was the job that you were hired for?

**KS:** Here I was hired as a biologist for the Great Salt Lake Ecosystem Program. At the time that I was hired, we were working on an overwinter dietary study, looking at northern shoveler, green-winged teal, with Tony Roberts. He was a PhD candidate at the time. He's since finished and defended and has his PhD now and has published three or four different papers from that research. But at that time we were doing the fieldwork, so it was a lot of scientific collections of ducks. With my background with birds, it just seemed to fit to bring me on. Then everything that...I knew a little bit about brine shrimp, so I was able to kind of fill in the blanks a little more over the course of the last five years.

**BBL:** Okay. Tell me some of your responsibilities now, what you do. Is there such a thing as a typical week or not?

**KS:** No, there really isn't. There's kind of a seasonal shift throughout the year. So our primary focus is, between October and January, with the brine shrimp harvest going on, we're on the Lake anywhere from one to two times a week just checking out population demographics through the shrimp. So we're collecting shrimp, we're bringing them back to the lab, counting them and determining how many there are per liter of lake water and basing our management decisions on that.

**BBL:** Right. So you go out on the boat too? You go with Jim?

**KS:** Yeah, so I go with Jim.

**BBL:** Who's the third person who goes usually?

**KS:** Ashley, or one of the technicians. So we do have technicians that are seasonal employees. Usually they're fresh out of college, this is their first wildlife job, and they basically get to cut their teeth on a real world experience.

**BBL:** That's interesting. Jim was telling me, and I think you just said this too, you go out about once a week.

**KS:** About once a week.

**BBL:** For sure every week and sometimes it's even more than that.

**KS:** Yeah. That's October through January. Then in the springtime we kind of relax that and go maybe every other week, just so that we can keep an eye on the population, what's going on. But from a management standpoint, the cysts number in the fall is what we're really looking at. I'm sure John explained to you what a cyst is.

**BBL:** Right. We talked about that and how you determine how long they can be harvesting. That's good. So tell me about these trips on the Lake, the boat trips.

**KS:** Yeah, boat trips on the Lake, they're normally a nine to ten hour day, so you're going to spend, we travel, I think it's about 170 miles round-trip around the Lake. We hit seventeen different sites and at each site we do the exact same thing. So it's kind of a repetitive day, but we're looking at the same, we're interested in the same parameters in every place. So water temperature, salinity, dissolved oxygen, shrimp demographics at that site. Then we take that and compile that. That's what we make management decisions from.

**BBL:** When you're out there, Jim was explaining to me that he's almost sort of choreographed what you do at each site. So do you have specific jobs that you do each time, or is it just like, okay, it's your turn to go do this?

**KS:** Normally we just take turns so it's whoever drove to that spot, it's somebody else's turn to drop the anchor or pull the anchor and we take turns dropping the net to the bottom, which means somebody else needs to be checking the depth, just in the interest

of time management, so that way it's this person's job to do the net, so that means this person's going to take the depth so that this person can just focus on getting the net haul done. Then the other people can work on taking temperature and all that. Then we go to the next site, we'll shift and somebody else will do the net, somebody else will take the depth, so that way you're not just doing the same thing over and over and over again. You'll at least get it spaced out every three or four sites.

**BBL:** But I guess it becomes pretty automatic. Nobody has to say, "Okay, drop the anchor."

**KS:** Yeah, we just write a note, you know when you get there, we usually keep track, because after seventeen sites and eight hours on the Lake, it gets hard to remember, "Wait, who did the last one?" Because most of these sites, you average fifteen to twenty-five minutes between sites. So you go, drive for twenty minutes, get to the site, spend there ten or fifteen minutes taking the Lake parameters, drive for another fifteen, twenty minutes, do it all over again. Drive for twenty minutes, do it all over again.

**BBL:** Right. So you like that?

**KS:** Yeah. Lake days, there's always something different on the Lake, whether it's just the weather, a calm day, as well as slightly rough days. During the harvest season there will be the brine shrimpers out there and we'll see them harvesting. Sometimes it feels like you're making a run on a navy armada because there are just boats as far as you can see and you have to cross the line. With the way they harvest, you can't really disturb the water too much and it's set up in the rule that we shouldn't be driving it through streaks or doing too much to disturb their work. So you have to give them enough of a buffer zone. So sometimes you have to stop and kind of chug through really slow, or just give

them a wide berth around what they're doing. All the way to different wildlife. Every once in a while we'll see a grebe that got lost, a freshwater grebe, or like a Clark's or a Western grebe. They're primarily fish eaters. With there not being any fish in the Great Salt Lake, you see one out there and you're like "What are you doing. You're just lost out here." Some of the historical accounts. Jim has seen loons on the Lake. They have no business being out there. So there's always something unique.

**BBL:** Did you have a lot of boating experience before this job?

**KS:** I had some, but not as much as I have now, obviously.

**BBL:** Did you have to take classes or something to become...is there such a thing as being certified?

**KS:** There probably is, but we didn't really do that.

**BBL:** Just kind of on the job training.

**KS:** It's kind of on the job training. Jim's a really good captain. He's been doing it for a lot of years, so I've learned a lot from him. There's obviously the State rules, boating safety and how you should pass somebody or anything. We went over that. We kind of got a crash course on that. It is different being on the Great Salt Lake. There's not a lot of boat traffic, other than other brine shrimpers.

**BBL:** I was going to ask, other than the brine shrimpers, do you usually run into any other boats?

**KS:** Usually we see sailboats, but for the most part you'll find them in the first two, three miles from the marina. They don't usually travel to the far reaches that we do.

**BBL:** That's interesting. How do you keep yourself entertained on these trips?

**KS:** Music. We have one old radio that's actually rotting from the inside due to all the salt content. Some days it works, some days it doesn't. So it's a lot of music. We usually try and break it up, listen to different...because everybody has different taste in music, so try and take turns with whose iPod gets plugged in that day. Or just keeping up on daily events of everybody's lives: "What did you do this weekend?" What did you do this weekend?" So it's a lot of talking. You have to be close to the guys you work with because we spend a lot of time, you know, you spend ten hours cooped up in a little boat.

**BBL:** Right. You find out what they did for the weekend (laughs).

**KS:** You're going to find out everything about them, what they're upset about, what they're not upset about, everything like that.

**BBL:** That's interesting. Have you had any scary times on the boat?

**KS:** We've had a few.

**BBL:** Weather-wise.

**KS:** Weather-wise. Weather is the biggest thing. Weather can change in a matter of minutes. The weather predictions don't always get it right. So we check the weather as close as we can before we go, but every once in a while, we'll have a storm blow in. Wind is more critical than anything. A little rain, a little snow isn't going to hurt anything. But wind and lightning.

**BBL:** I didn't think about lightning. Sure.

**KS:** Yeah. Lightning gets a little scary.

**BBL:** Has it been close to you before?

**KS:** We've had a couple. I can think of two real instances. We were out doing our normal shrimp sampling and we were in Carrington Bay, which is the western bay of



Great Salt Lake. We were watching a storm kind of boil up from the south and it was actually on the east side of Antelope Island, so in the Farmington area. We were watching lightning crash in Farmington/Centerville and we were all the way out there, but we checked the wind again and it was blowing from the southeast there, so it was only a matter of time before lightning was going to strike. At that time we were based out of the Antelope Island Marina, so the storm was going to be right where we needed to get back to. So that day we had to abandon our work early and just head back in for safety,

One of the other times we were doing an airboat survey of migratory birds. As part of John Neill's work we were looking at the different birds that move in different times of the year. This was one of the spring counts in May. We were out on the airboat, so there again, all aluminum boat, in two or three inches of water and a lightning storm came in. This time we were on the east side of Antelope Island and it came from the west. But we actually watched it cross right over us. We were halfway out to the site where we were going to begin counting when we turned around, went back to the boat ramp, tied the boat up, got in the truck and we were just sitting in the truck waiting for the storm to pass. It took maybe fifteen, twenty minutes and the storm just went right over the top of us. Got back in the boat, went out, counted everything and got our work done for the day.

**BBL:** Wow. Interesting. Memorable times, though.

**KS:** Oh, yes. Very much.

**BBL:** Have you been driving the boat sometimes when it's really choppy and dangerous?

**KS:** Oh, yeah. Like I say, we take turns driving for the most part.

**BBL:** So everybody gets a turn at the good and the bad.

**KS:** Yeah. There are other days that if Jim doesn't go, I'll take over and be captain that day. So I've dealt with choppy water. It can get a little nerve-wracking at times.

**BBL:** What are your favorite places on the Lake or around the Lake?

**KS:** There's so many that to narrow down specific places around the Lake, probably one of the best ones, though, is Farmington Bay. If you look at it in the low years, it kind of makes a L-shape and right in that corner there's sewer treatment outflow and it's where the Salt Lake Sewer Canal comes in and for whatever reason, that's just where the birds tend to congregate. It doesn't smell the best, it doesn't look the best, there's a lot of algae, there's a lot of just, it's not really garbage, but just broken tree branches and things and that's where a lot of it collects. So it doesn't look the best, it doesn't smell the best, but it's one of the greatest places for avian diversity on the Lake. I've seen anywhere from fifty to sixty thousand avocet in a day right there. Several thousand stilts and hundreds of thousands of ducks and grebes. It's just teeming with life. It's one of those places that makes you realize how small you are in the world.

**BBL:** You get to help with some of the avian stuff?

**KS:** Yes.

**BBL:** Maybe someday would you like to be doing that primarily?

**KS:** Maybe someday, yeah. If John Neill ever moves on, I will definitely try to slide into his job.

**BBL:** Right. I imagine at the same time that the brine shrimp research is pretty interesting.

**KS:** It is. It's something that every time we learn something new we realize how much we don't know. Just like any good research, you ask one question you come up with more questions than it does answers.

**BBL:** Tell me something that's been really interesting for you to learn about brine shrimp. Does anything come to mind when I say that?

**KS:** Let's see. Probably just the amount of shrimp out there. You think about the biomass of shrimp that are in the Lake. There was a round calculation done that we use in presentations to different schools that we go to. It was based off of 2008 numbers of 5.8 adult shrimp per liter, which doesn't sound like very much, but when you think about that lake level at the time, and I think that the Lake stretched right around 1,200 miles, square miles of surface area at that time, it came out to, I think it was thirteen thousand bull African elephants worth of biomass. So you had that equivalent of thirteen thousand, just almost incomprehensible amounts of life out there that come down to individuals that are less than a centimeter long. That's just the brine shrimp. That doesn't count the brine flies. There was a study done back in the '60s or '70s with brine flies looking at the extent that they might have in the Lake. They estimated them like 1.7 billion flies per shore mile around the Lake. So when you think about that, it's just...

**BBL:** Staggering.

**KS:** Yeah. So it's far from a lifeless lake.

**BBL:** Is that something you do, you go to schools and do presentations?

**KS:** Yes, we do. Anytime there's...in the last four or five years we've had a pretty good working relationship with BYU, one of their fisheries programs has people from the Division of Wildlife come out and talk to the students.

**BBL:** I thought you were talking about elementary schools.

**KS:** We do elementary schools as well. I've gone to four or five different elementaries and just presented basic things about brine shrimp. It's usually because a teacher's gotten a package of cysts, because it's something easy they can do in the classroom. You grab an empty soda bottle, fill it with saltwater, a little algae in there, dump the eggs in and in two days you have brine shrimp. Then you can watch them grow for a few weeks. It's something that the kids can do and it's easy and it's simple. One of the classes wanted a little more information than that, so they had us. I was the one that was luckiest enough to go down and chat with them. They were a second grade class. They just loved it because they got to see it firsthand. It was one of the charter schools. So they were actually able to go to the Lake, visit the Lake, see the Lake and just how big it really is, and then take a piece of that back to their classroom and watch the shrimp grow. Then have me come out and explain anything that the teachers couldn't fill in.

**BBL:** That's cool. That's fun. But you say you have a regular gig down at BYU?

**KS:** BYU. We go down once a year with one of the fisheries classes. It's an introductory fisheries class. They get exposed to quite a bit of things from the Division. There are several people from the aquatic section that go down, so they talk about sport fish, native fish, the hatchery system of the state of Utah. I think they get to tour a hatchery at one point. Then they have Great Salt Lake come in. So when you look at the agenda for the class, all this fish-related stuff, and then Great Salt Lake. So you kind of think in your mind, *but there's no fish in Great Salt Lake. This is a primarily fisheries class.* But we manage the only commercial fishery in the state. It's just not for finfish. So

it's kind of that, it makes people step outside of that box and think about what fishery really means; that they actually fish for brine shrimp eggs.

**BBL:** Huh. Interesting.

Tell me more of your responsibilities. What else do you do when you're not on the boat?

**KS:** When we're not on the boat and we're not processing samples from the boat, if we're not counting birds, we do have another program, another experiment that we do. This is the seventeenth year of. We do an overwinter cyst survival study. Actually we start that in December. What we'll do is we'll go out to the Lake and we'll collect a streak sample. So we take brine shrimp cysts that are floating in the streak, collect some, clean them and separate out any with a cracked shell or bad cysts in there and take only good whole cysts that we feel like would have a good chance at hatching and we count out a specific number, put them in a mesh bag so that they can't escape, nothing else can get in, and attach them to a block of wood, so it makes a float. Then we put several of them in the Lake, several of them up on the beaches, and we collect them every two weeks. Then we hatch those out and look at how the hatching rate declines over the winter.

**BBL:** That's what happens, it declines over the winter?

**KS:** Yeah, it declines over the winter, because at the start of it, maybe ninety-five percent of them will hatch. By the end of the winter it might drop to forty percent and we want to track that just to know, part of that twenty-one cysts per liter, shutting the season down, that needs to be twenty-one good viable cysts per liter. So if our hatch rate is really

low, but the cyst count is up, it still equals out to that twenty-one. So there's a lot more factors than just how many are there.

**BBL:** So are those separate trips, then, from the regular seventeen stations?

**KS:** Yes. So in the Lake we have three additional stations and then on the beach there are three stations, so that would be an entire day because they're on the western shore. So we have to get in a truck, drive all the way around to the west side, then take ATVs along the beach to get out where these things are stationed, collect those. And there again that's something we do from December to March. So primarily our busy time is in the winter. So we're out there when the snows come on and these really bad inversion days. It's just bitter cold and you can't see anything. The fog's rolled in.

**BBL:** You're numb because you're cold, can't feel anything.

**KS:** Yeah. Riding an ATV in negative degree weather is not a lot of fun.

**BBL:** That's interesting. What else? Are there other things you do?

**KS:** Yeah. Me personally, I've kind of been responsible for facility maintenance. So not the most glamorous thing, but we got this new building four years ago and somebody has to make sure that all the doors open and the windows aren't broken and the light bulbs are there and the heater works and the furnace works. Anything else, any other division program, they're going to have a maintenance crew, a cleaning crew, and that's one thing that our program doesn't have; we're our own cleaning crew and maintenance crew.

**BBL:** You know, I wondered about that when I first got here because you guys are pretty far out. I can't picture that they would send someone out here just specifically to clean and maintain.

**KS:** They don't.

**BBL:** Do you do the repairs? Say the furnace breaks, do you know how to fix it?

**KS:** Small things. If it's something little, I've done a few things. We have part of this particular water heater system, we have a mixing valve so you can adjust how much hot water gets mixed in with the cold water, so we basically get an additional temperature setting. So rather than just setting your water heater to 120 degrees, there's another mixing valve and that's on about a six month repair program. I have to tear it down and clean it all out, because we have such hard water out here that it just calcifies inside of there, so every six months I have to tear it apart, soak it in vinegar, and then clean it up and put it back. It's just those little things that you don't think about. That's one thing that I've been fortunate enough to do.

**BBL:** I guess you have to bring your lunch every day, because you can't run out to Wendy's.

**KS:** Yeah, we've nowhere to run out and grab. That's the other thing. You've got to know if you're going to be on the Lake that day because, you could run out somewhere. It's an hour round-trip anywhere from here. But on the Lake, there's nowhere to stop. So you've got to know and plan ahead for what's going on.

**BBL:** So have you been around to pretty much all of the Lake on the boat? Have you been to all parts of it?

**KS:** Yeah, I've been in all the different bays. We do quite a bit of work in the north arm as far as Gunnison Island and the pelicans. So we band about 500 pelicans every year. That's a pretty intensive couple of days, just the logistics to get out there, being on the western edge of the north arm. There's only one boat harbor on Promontory Point that

you can get into the north arm. To ban 500 pelicans in two days, it requires a team of thirty people to get out there each day.

**BBL:** So you don't go out there and sleep?

**KS:** No. We'll go out two days throughout the summer. So it's usually once in July and once in August.

**BBL:** I see.

**KS:** We'll make a couple of different trips.

**BBL:** So who do you partner with to get those thirty people?

**KS:** Some of that's partnered with the Salt Lake office, so we have non-game biologists in Salt Lake that are actually responsible for the bands and wing tags that we put on them. Then we usually use other regional biologists, people from the northern region. We partner with Salt Lake City airport, because they're interested in where these pelicans go as a safety standpoint for bird impacts on jets.

**BBL:** Is that like a lottery where you get to put in and some people get to go?

**KS:** It really is. Gunnison Island's one of those places that there's only a handful of people that have ever been out there or will ever get to go. So it's kind of competitive. So a lot of times we'll lean towards people that have some banding experience or at least are familiar with handling animals. So we do take quite a few people from the Division. It's unique for people in other regions or sections to get involved with our program and know kind of what we do.

**BBL:** So do you just go and grab a bird and then hold it?

**KS:** Yeah, at this point we're banding the flightless juveniles.

**BBL:** I see.



**KS:** Pelicans, because they're such a gregarious species, they hang out in the same areas and the chicks, just by their nature, will hang out in these big pods. So you take five or six, ten people and surround them and kind of herd them into a...we take fencing and make a little makeshift corral out there and put them in that, then we set up seven or eight banding stations and we just have different people, they go and pluck one out of the pile and carry it over. We put a band on it, put tags on it and let it go. It makes for a fun day. But by the time you look at all the logistics of getting everybody out there, we usually take three or four boats, we have people from State Parks that help us, Dave Shearer down at Great Salt Lake Marina, he usually sends a boat up and helps us out to get people ferried across out there. Some other partners we've worked with, Tracy Aviary, they've sent some of the people to come out and help band because they have a bit of a banding program there in the aviary. They have some captive pelicans, so once a year they go through and do just a general health check of their pelicans and trim some of their flight feathers, because some of these birds, they just can't survive in the wild anymore. So they go through new feather trims and look for lice and different other parasites. John Neill and I were lucky enough to go down last year and help them with that. So it was just one more way to kind of foster some of those relationships we have with some of the other members of the community.

**BBL:** Sure. That's great. What else? Are there other things you do that I haven't asked you about?

**KS:** Not really. Primarily birds and brine shrimp for me.

**BBL:** That's a lot. You've got a lot going. You keep busy year-round.

**KS:** Yeah, we do. I guess along with bird work, we do have another PhD candidate, she's now in her second year working the Wilson's phalarope on the Lake. They're a small shorebird. They're one of the birds that we know very little about. They come to the Lake, they double their body weight, then they fly direct to Argentina. Straight, non-stop flight. So we're looking at some of their distribution around the Lake, the food resources that they're targeting, whether it's adult brine flies or brine shrimp or brine fly larvae, we don't really know for sure, so we're looking into that. That's kind of a unique project. It gets back to what I wanted to do with a little more bird behavior. We actually spend a lot of time just sitting and watching the birds and recording their behaviors for five, ten minutes at a time and see what an individual bird is doing in that five minutes and then looking at five or six different birds. So we'll get a snapshot of like an hour and see what these birds are doing.

**BBL:** That's interesting.

Is there anything else? Anything I haven't asked you that you think I should? Or that you'd like to include, talking about your experience with the Lake?

**KS:** I can't think of anything. It's been a really fun, interesting place to be. I definitely spend more time out there now than I ever have, just on my personal time.

**BBL:** Do you? What do you do personally out there, can I ask that?

**KS:** I spend more time waterfowl hunting out there now than I ever did. We used to come to the freshwater marshes, but now I know some of the different areas on the Lake. Anytime we have people, friends or relatives that come from out of state and they ask me about what I do, I try to get them out to the Lake so they can see what it is that I do and why I love what I do.

**BBL:** That's great. Nice. It's turned into a recreation for you, in addition to your job.

**KS:** Yeah.

**BBL:** Very good. Well, okay. I think those are all the questions I had. Anything else you want to add?

**KS:** I don't think so.

**BBL:** Okay. I appreciate your time and thank you for agreeing to let me interview you. I don't know if you actually had a choice or not (laughs).

**KS:** Yeah, we had a choice. No problem. Thanks for having us.

**END OF INTERVIEW**