

HARNEY COUNTY HISTORY PROJECT

AV-Oral History #224 - Side A

Subject: Carp Study with Brad Ehlers from Malheur Wildlife Refuge

Place: Harney County Historical Society

Date: January 9, 1979

Interviewer: Nel Bosch

NEL BOSCH: This is Tuesday, January 9th, 1979. I'm preparing a tape for Pauline Braymen. We're expecting Brad Ehlers from the Malheur Wildlife Refuge to speak on the carp study they are conducting at this time.

BRAD EHLERS: I brought some stuff along this afternoon and --- to talk about the carp problem associated with Malheur Lake, and the Malheur National Wildlife Refuge. How many here are familiar with the lake? How many of you have hunted out on the lake itself? Looks like ... Some of this stuff I'm going to be going over will be pretty elementary to you, but I want to go over it anyway, to make sure everybody understands the background, to the problem. This map up here is of Malheur Lake. The basin is roughly from The Narrows to Windy Point, which is just north of Princeton. And it encompasses roughly 60,000 acres when the basin is full, and they have enough runoff. The average depth in the lake is four, to four and a half feet. Roughly half of the lake is covered with hard stem bulrush, and pretty high tules. Half of the water area is covered with some kind of emergent vegetation that comes up out of the water, eight to ten foot. The water inflow to the lake --- there is two main inflows. The Blitzen River, which comes off of the Steens Mountain down here, runs into the lake, past headquarters through the Bentz and boat lands. And then the Silvies River which comes out of the Blue Mountains and empties into the north end of Opie's Ranch. And the Blitzen has been, historically the largest

amount of input, coming off of Steens Mountain.

Then, as far submerging plants in the lake, what the ducks are eating out there, the reason that we get the numbers of waterfowl in the fall is sago pondweed is the most common plant out there. And it's excellent duck food. It's a thread-like green plant that grows from the bottom of the lake, and comes up to the surface, and sends out a little seedpod. And they eat the seed and the plant both.

Now I want to get into a little bit of the history of the carp. As most of you probably know carp is not a native fish in the United States. It was introduced primarily as a food fish, first to the eastern and midwestern parts of the United States. I always thought that it would be a fish that could be farmed and sold commercially for food. And in the midwest today, a lot of carp is sold in grocery stores as frozen fillets. Out west here you don't think about carp being much of food. But it is, it's pretty good when it's smoked. I don't really care for it fried, but smoked it's pretty good, it's pretty good meat.

It was introduced as, into the Harney Basin, into Malheur Lake from the Columbia Slough in the early 1920's. And large numbers of carp, they took --- until the 1940's, before a large number of carp were noticed in the lake. And carp feed on the vegetation. And they're bottom feeders, and they rustle up the bottom of the lake. Get it all stirred up, and the sunlight doesn't get down to produce plants, plus they eat the plants themselves. So they're in direct competition with the waterfowl for the sago pondweed.

The first carp control was in 1955, when an estimated 1.5 million carp, with four and a half pounds were killed with rotenone. Rotenone is the most common fish poison used. It's a biodegradable poison. It comes from a tree root in South America. And it shrinks the blood capillaries in the gills of the fish. It kills anything that breathes with gills in the water. It's not specifically carp. It shrinks the capillaries in the gills so that they do

not take oxygen up, and it suffocates the fish.

I got a little graph along that was drawn up, and this is to correlate the carp control programs --- there is one --- and the years goes along the bottom, and the waterfowl use days are along the side. So the higher the graph the more ducks there were on the marsh, primarily in the spring and the fall. It also correlates the duck production and their young ... In '55, the carp were controlled, and in '57, there was only five million use days of the --- of this restricted canvasback duck. And you can see a tremendous response. Now you're never going to get five million use days of canvasbacks anymore, because the total flyway population has dwindled down to about fifty thousand. This is primarily from reduction of breeding habitat.

But then again in '61 and --- '60 and '61, when the lake was controlled, and in '64 the duck use days went back up. The use days come back down, and in '68 they were controlled again, and then went back up. And in '74 they were really down again, and then in the summer of '75, was the last control that was done on Malheur Lake. It was at this time that it was realized that the price of rotenone was going up tremendously. It cost just about \$130,000 to treat that lake in the summer of 1977. There was an 82 percent kill, this is through gill nets. Those gill nets sat out in the lake before the control, and after the control and they were ... clear. And about 82 percent of the carp were killed, which is considered by most fish biologists as a pretty good kill. Especially when you got all that emergent vegetation bulrush covering 50 percent of the marsh.

There is another thing about carp control; you'll never get them all. So it's going to be --- every three to five years you're going to have to do something about the carp again. In view of this increased cost, \$130,000, and if the price of rotenone keeps going up, there was --- several possibilities were discussed. Different methods to get rid of the carp

at cheaper, a cheaper solution. Now one of these that we are doing right now is a ... study. There was twelve different carp that were tagged. There was actually a transmitter put on the fish itself. ... Myself and the fish biologist from Olympia went out and netted twelve of these carp in different locations. We tried to get them in different locations of the lake. What we want to find out is if they bunch up in the wintertime or not. So you can control a small area with rotenone and reducing the cost. But it's kind of a harness-like thing that you put on with Velcro. It's like a plastic zipper that holds onto the ... The transmitter itself is one of these little things on the side ... You want to take a look at that thing on ... It weighs just a couple ounces. And it emits a sound, and then this sound is picked up with a receiver when you fly over the lake. And we can pick it up about a mile away. But the beep will get louder as you go over the fish and then you hope it's a ... The antenna is on wings of the plane.

Right now we had --- one fish has moved about five miles across that lake. We didn't think they would do that early. This was way back in --- first week in December. It moved about four miles, and that was in a period of one week. Through --- this is pretty good bulrush land here. Most of them are pretty sedentary. They are roughly in the same spot that we trapped them. So I think the primary factors would be the oxygen in the water. They get the oxygen level down in the water. You need a snow cover on the ice to prevent the sunlight from going through. It reduces the oxygen through the plant. And also, when the sunlight doesn't go down, the plant is decomposing and using up oxygen, so a snow cover on the ice is about the only way that the oxygen level can drop way down in shallow water.

And we expect them to --- if they are going to bunch up, we expect them to bunch up where the oxygen levels would be the highest. And that would be where the river

comes in. And probably here at Blitzen River, it should be the highest oxygen level. Better than at ... Springs.

I brought a transmitter along, and I'll let you listen to the beep. See if I covered everything I planned on. Does anybody have any questions so far?

INTO LIIMATTA: How long will that transmitter be operating.

BRAD: It's guaranteed --- at 80 percent of them, or something like that, are going to last six months or more. Now we have lost two fish, I don't know where they went. But they also could be--- the fish biologist said that they'll even be buried in the mud. There is so much mud on top of --- the signal won't be sent out, you can't get through ... Or if the transmitter is lost --- or died. This is the transmitter that was made for this --- for the project. The fish are pretty good size and we needed more than a mile --- we needed more than an eighth of a mile range. Most of the transmitters we put on the fish are for a -- such a short distance because most of them are stream fish. That was done in a previous study. We've got to be able to pick them up for quite a ways away. We can't be walking around out on the ice looking for them. We've got to ...

NEL: Would the ice with snow covered tend to reduce the transmitting area?

BRAD: No.

NEL: No, just the light.

BRAD: Ice doesn't affect it at all.

MAN: ...

BRAD: ... Yeah, we appreciate it if you'd let me know. The antenna is in the --- it's in the harness, and the antenna is on the airplane. And this harness sends out a signal and picked up by the antenna, and we got this thing here that puts out the sound on the plane that picks it up. And a smaller antenna that is used on the ground. Can you all hear that?

That's the sound. Each one of them is a little different. Some transmitters are real strong. We have got one transmitter that we can pick up at three miles away. When we're coming over the shore of the lake you can hear that old number one way down on the southeast corner of the lake. But some of them are real weak. We have one that you have to get right over top of it to hear it. But most of them the sound is just like that. And as you go over the fish, they get weaker as you go away, and they'll get stronger. We can pinpoint them within a mile or a half-mile at the most.

...

These transmitters have been used in a --- quite a few different wildlife studies if you watch Wild Kingdom at all. Quite a few on those. It's about the only way we're going to --- we can see congregations of fish in the river, but we don't know if all the carp are in there, or how many are in there. We don't know how many got away. But we trapped one up here. This is the --- if you're familiar with the Saddle Butte access that the hunters come in on. They land their boats right there. And we got one there --- we couldn't get any on the east side because we had a --- there's a little emergent vegetation over there, and the water is fairly shallow, and most of the carp evidently were killed out there. We needed a fish that had to be two and a half pounds or larger to handle this harness. We just couldn't pick any up over here. When we got two way over here where the Silvies comes in--- and then perhaps a couple along the --- quarantined the ... Island Dike here. Then two way down in this South Bay. And then several in this bulrush area right around in here.

As I say, the only one that's moved appreciably is this number one, which has moved over four miles in one day, and then it's moved a couple miles more. Then it's just about at the mouth of the Blitzen ... Any other questions on that?

MAN: ...

BRAD: Well, as far as poisoning ... There's a couple other fish poisons that right now, rotenone is the most practical one. The toxic one which is the one that is used to reclaim Trout Lake. It goes down into the water and stuff there. There is also ... so we're a little leery of using something like that. But also, as I said, it kills everything that breathes with gills. It also kills off the ... at the same time. Which is real important to duck ... Ducks --- like the sago pondweed, the sago pondweed also holds a lot of other little animals. Most people call them bugs in the water, but they're actually animals, a whole bunch of different species that they live on. Primarily diving ducks ... A lot of animals ... picking up, picking up other than plant life. ... exists for a year or more ... Another thing that we had to check on is the killing off of large portions of fish life. The original purpose was to establish Malheur Lake as a Wildlife Refuge wasn't to protect the, who lived here in, and other water bird count ... Malheur Lake, which is right here. By poisoning out the fish ... which reduced their food supply. You can see ... the amount of pelicans that come in the fall to feed on the lake dropped off quite a bit last fall, primarily due to that. ...

MAN: ...

BRAD: Well the native fish species were trout ... perch, sunfish. Some old crappies ... Are crappies native to the basin?

MAN: Crappies?

BRAD: Yeah.

MAN: No.

BRAD: No. ... That was the most in the gill nets. ... chubs were the most common fish over here on the east side of the lake. Other than that, the carp, the carp was --- nearly 90 percent of the weight of the fish in the lake. There were only two rainbow trout that were

caught. Quite a number of yellow perch and ... and sunfish. Most of the perch were pretty small. ... were ... There is still some of every fish out in there. Gill nets ...

MAN: ...

BRAD: Okay, that was discussed before the control in '77. Gill nets were set in the Silvies River. And compared --- the carp population in Silvies River, what was treated from the Opie Ranch on down, in '77. The rest of the river was so shallow that it was felt that it wasn't even worth treating, because the carp population was such a small percentage compared to the lake. You'd never get them all anyway. ... And then the Blitzen River was treated from Springer Dam on into the lake. And those areas were treated before, so the carp wouldn't go up the river to ... Because there were carp dying several days after treating ... Our method, that was brought up before that, the thought was using these fish commercially. It would be possible to skim off a few of the carp and use them commercially because there were several companies we were in contact with ... In view of the distance they had to haul them ... They just didn't want to come in. Something set up ... in getting out on the lake, when the geese--- the west half of this is all pothole country which is pretty hard to get at. Although the majority of the carp were in this ... Duck hunting picked up considerably this fall ... The average bag was five birds.

...

MAN: ...

BRAD: ...

NEL: Now you still have ten of these fish that have the radios on them?

BRAD: Yeah.

NEL: Do you have them all ten positioned, you know right where they are at this time?

BRAD: Yeah.

NEL: Is there any indication other than that?

BRAD: No, not now. If they're going to group up, we expect it to be before the middle of February. Right now, like I said, the oxygen levels I think are ... Right now the oxygen level seems to be going down every day. But carp is, carp is ---

MAN: ...

BRAD: No, we're just demonstrating, finding out which location ... The way the cost of rotenone has gone up ... we feel it is going to cost about \$200,000 to \$250,000 ... This is the question we're going to be asking ... And all that ... and bird life ... I don't think so.

WOMAN: ...

BRAD: No, they'll just, they'll just increase to the point where they won't, they won't have much ... But they never die out enough --- they have never died off enough in the lake that we know about. To a point where they would allow the vegetation to grow back. ...

NEL: What do these radio devices cost?

BRAD: I'm not even sure what these transmitters cost. I think the whole project, including the tracing with the airplane and stuff, is right around \$3,000. Nearly a quarter of a million ... Historically its been two to three years after the carp control program, if there's enough water that year. The duck and goose ... have responded in the fall. About a hundredth of that, they didn't think that it was that good out there this fall. I thought there would be quite a few birds out there this fall. More than I've seen in a bunch for a long time, but I'm not that familiar with Malheur Lake and what it was historically. Now it's never going to be as good as it was in the '50's. Because we don't have the ducks in the flyway anymore. There's not that many birds in the flyway anymore. Plus we have other developments like the Columbia River Basin. ... Especially now ... As far as ... They're just not having the luck they did ... I believe the flyway population is something like 60,000 birds. And we've

had more than that on Malheur Lake, way more than that at one time ... About 90,000 ... that was when the flyway population was a hundred thousand ...

WOMAN: Are there any more questions? We thank you very much then.

*(Note: Real poor tape. Second sound interview breaking in. One does well to pick up Brad Ehlers conversation. Other persons not at all audible.)

bl