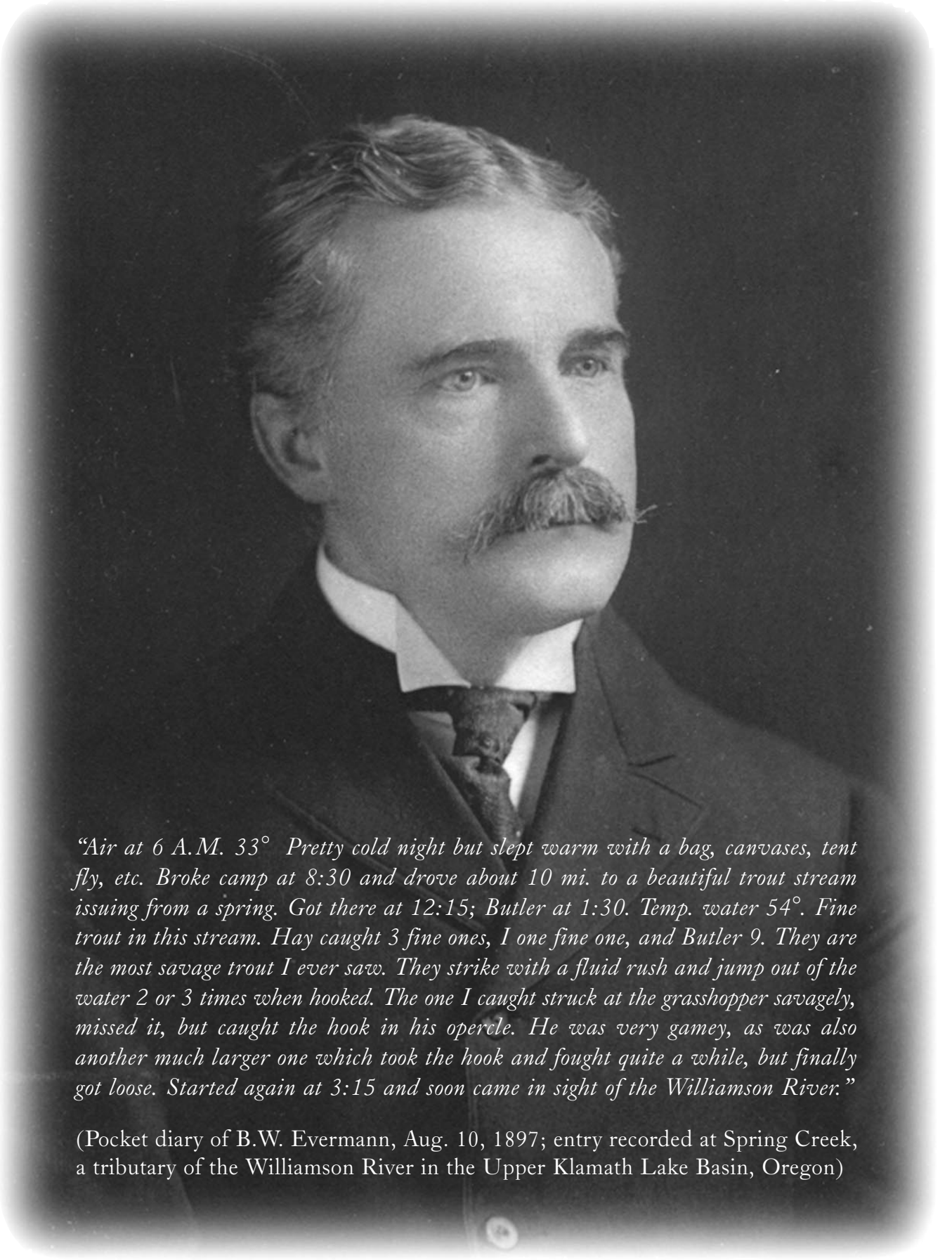

"Air at 6 A.M. 33° Pretty cold night but slept warm with a bag, canvases, tent fly, etc. Broke camp at 8:30 and drove about 10 mi. to a beautiful trout stream issuing from a spring. Got there at 12:15; Butler at 1:30. Temp. water 54°. Fine trout in this stream. Hay caught 3 fine ones, I one fine one, and Butler 9. They are the most savage trout I ever saw. They strike with a fluid rush and jump out of the water 2 or 3 times when hooked. The one I caught struck at the grasshopper savagely, missed it, but caught the hook in his opercle. He was very gamey, as was also another much larger one which took the hook and fought quite a while, but finally got loose. Started again at 3:15 and soon came in sight of the Williamson River."

(Pocket diary of B.W. Evermann, Aug. 10, 1897; entry recorded at Spring Creek, a tributary of the Williamson River in the Upper Klamath Lake Basin, Oregon)

Walking in 100-Year-Old Footsteps in Southern Oregon

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Barton Warren Evermann (1853-1932, Figs. 1 and 8) was a naturalist for the U.S. Fish Commission, the precursor to the U.S. Fish and Wildlife Service and the National Biological Service. In 1896, Evermann and five other naturalists conducted surveys of ten locales in Idaho, Oregon and Washington to determine their feasibility for fish culture. Evermann coordinated these surveys, but did not participate in all of them. He directed S.E. Meek and A.B. Alexander to visit Upper Klamath Lake, Oregon, to determine the success of an 1889 stocking of whitefish (where they found out that none of the 400,000 fish had survived to spawn). Meek and Alexander sampled fish from the lake and reported their observations to Evermann, who published them with Meek in the *Bulletin of the United States Fish Commission* in 1897. That year, Evermann himself traveled through the Upper Klamath Lake region and recorded his observations in a personal pocket diary.

In July 1997, five NANFA members, with a photocopy of Evermann's diary in hand, celebrated the centennial of his travels through southern Oregon by visiting several of the sites he described. The original diary is kept at the California Academy of Sciences' archives in San Francisco. Dan Logan (Santa Rosa, CA), who spent several years studying the history and fishes of the Klamath Lake Basin, obtained a copy and was our guide on this trip. Joining Dan were Louise Christensen-Zak (Bothell, WA), Norm Edelen (Portland, OR), Lisa Hayashi (Portland, OR), and myself.

Fig. 1.
B.W. Evermann, Oct. 10, 1905. Courtesy of Evermann Collection, Special Collections, California Academy of Sciences.

The Upper Klamath Lake Basin we saw was very different from the one Evermann described 100 years earlier.

History of the Klamath Basin

During the last ice age, precipitation and mountain runoff created many large lakes. In Oregon, none was larger than the 1,100 square-mile Lake Modoc, one-million years in the making, and ten times the size of present day Upper Klamath Lake. It was in this ancestral lake, located in what is now northern California and southern Oregon, that the Klamath Basin's famed redband trout, bull trout, and suckers evolved. When the climate changed and became drier about 11,000 years ago, Lake Modoc receded, creating many of the Basin's lakes, rivers, and valleys. Winter mountain runoff and springs continued to fill the channels and lakes left by Lake Modoc's retreat, enabling them to survive while ones located further east evaporated. By the time white explorers first arrived, the Klamath Basin—described as a "western Everglades"—was a huge expanse of more than 350,000 acres of lakes, rivers, marshes, wet meadows, and seasonally flooded basins.

Currently, less than 75,000 acres of wetlands remain in the Klamath Basin because, in 1905, the states of California and Oregon ceded the "good land [that] lay wasting beneath the surfaces" of Klamath Basin wetlands to the U.S. government for reclamation. The U.S. Bureau of Reclamation subsequently created the Klamath Project to provide land and water for agriculture. Over the past 100 years, rivers were dammed,

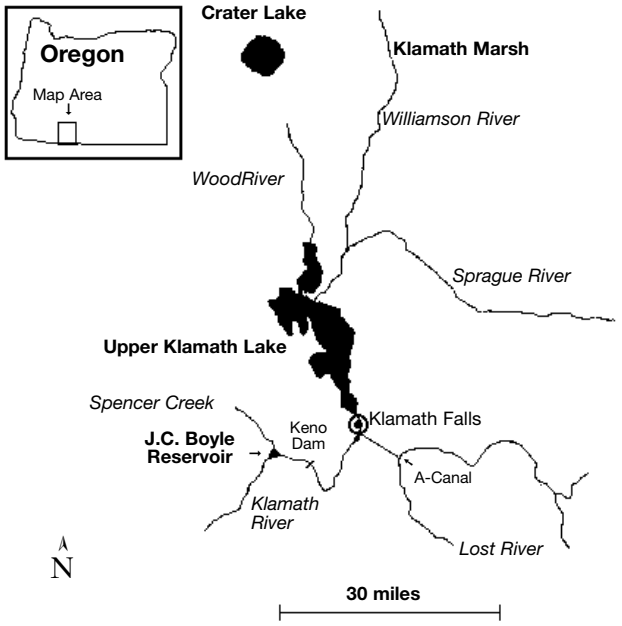

Fig. 2. Map of Upper Klamath Lake, Oregon, including its tributaries and sites visited in the 1897 and 1997 trips.

diverted and channelized, and 80 percent of this great wetlands system was drained and converted to farmland.

Upper Klamath Lake

Upper Klamath Lake is a high desert lake (4,300 feet elevation) in south-central Oregon about 30 miles from the California border. The lake is an ecotone, being situated between two different ecological zones. The heavily timbered Cascade Mountains (named for their numerous waterfalls) rise immediately to the west and north (Mount Mazama and Crater Lake are a short drive north). To the east and south is arid sagebrush steppe. The lake is approximately 25 miles long with an average width of approximately eight miles. It is shallow, with an average depth of eight feet. The town of Klamath Falls is located on the south end at the lake's outlet. The lake drains south into Klamath River, which flows into California and to the Pacific Ocean.

Major rivers in the Upper Klamath Lake Basin are shown in Fig. 2. The Williamson River flows from the north. From its headwaters in the north-central part of the Basin, it drains into the Klamath Marsh Refuge. There it breaks up into sloughs and channels, filling the marsh's shallow ponds before continuing southward. The confluence of the Williamson and Sprague is the Basin's greatest source of water, contributing almost half of the lake's total annual water supply. A third major tributary, the Wood River, flows south from the slopes of Mt. Mazama.

An important river to fish and local agriculture is the Lost River. Located southeast of Klamath Lake, Lost River is a sluggish, channelized river connected to the Klamath River via canals downstream from Klamath Falls. The Lost River is a naturally closed sub-basin. Originating at Clear Lake in California, it flows in a 90-mile arc into Oregon, then back again to California where it terminates at Tule Lake, only nine miles from its Clear Lake source. Lost River's downstream flow is controlled by channels and diversion canals to prevent the flooding of reclaimed lands around Tule Lake. Some of this water is channeled into the Klamath River, entering at a point between Upper Klamath Lake and Keno Dam (see "A-Canal" in Fig. 2). The same canals are used to channel Klamath River water into the Lost River when needed.

Fishes of the Upper Klamath Lake Basin

Over half the fish species in the Upper Klamath Lake Basin are exotic (Table 1). The lake has three endemic (native to the basin only) suckers; two of them—the Lost River (Fig. 3) and shortnose (Fig. 4) suckers—were listed as federally endangered species in 1988. Lost River suckers spawn in the Williamson, Wood, and Lost Rivers, and the springs of Upper Klamath Lake. Shortnose suckers spawn at the same locations, except for the Lost River. The third endemic sucker, the Klamath largescale sucker, spawns in the Williamson and Sprague Rivers.

1997 Explorations

After a long drive we arrived in the town of Klamath Falls around 1 A.M. on Friday, July 4. We slept for a few hours, then woke early to begin our exploration of the arid sagebrush steppe that would be our home for the next three days. We knew we'd see fish and other animals we hadn't seen before. During the next three days we visited five sites around Upper Klamath Lake that Evermann mentioned in his diary.

Site 1. Spencer Creek and Klamath River

"Got several snakes (Thammopsis), a toad, a cricket frog and a lizard near Parkers. This place is said to be 32 mi. from Ashland and 31 mi. from Klamath Falls. Air at Parker's at 3 P.M. 70°. Started again at 3:45 P.M. and drove to Mr. Anderson (13 miles from Parker's) 18 miles from Klamath Falls or about 1/2 mi. from Spencer Creek. Got there at 7:30 P.M. Good place to camp except dusty. Good water, wood and hay, etc. Did not get to bed till 10

Fig. 3. Lost River sucker, *Deltistes luxatus*.
Photograph by Rollie White, USFWS. Used with permission.

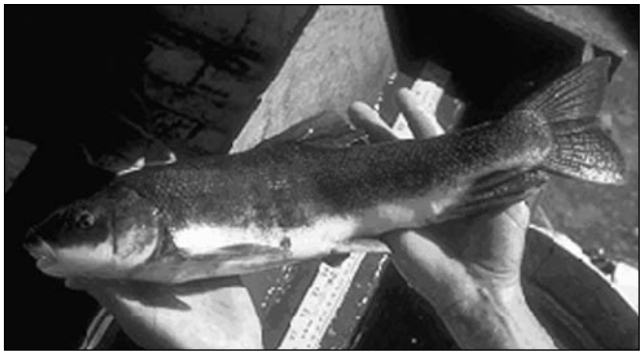

Fig. 4. Shortnose sucker, *Chasmistes brevirostrus*.
Photograph by Rollie White, USFWS. Used with permission.

Table 1. Fishes of the Upper Klamath Lake Basin.

Common Name	Scientific Name	Comments
Klamath lamprey	*Lampetra similis*	native/endemic
Miller Lake lamprey	*Lampetra minima*	native/endemic
Pacific lamprey	*Lampetra tridentata*	native; landlocked
Pit-Klamath brook lamprey	*Lampetra lethophaga*	native
white sturgeon	*Acipenser transmontanus*	exotic
brown bullhead	*Ameiurus nebulosus*	exotic
channel catfish	*Ictalurus punctatus*	exotic; discovered in lake in 1997
rainbow trout	*Onchorynchus mykiss*	native; possibly two forms: resident redband trout (*O. m. newberrii*) and an anadromous form landlocked by Klamath River dams
bull trout	*Salvelinus confluentus*	native
eastern brook trout	*Salvelinus fontinalis*	exotic
brown trout	*Salmo trutta*	exotic
sockeye salmon	*Onchorhynchus nerka*	exotic; landlocked (kokanee)
mosquitofish	*Gambusia affinis*	exotic
Klamath largescale sucker	*Catostomus snyderi*	native/endemic
Klamath smallscale sucker	*Catostomus rimiculus*	native
Lost River sucker	*Deltistes luxatus*	native/endemic; federally endangered
shortnose sucker	*Chasmistes brevirostris*	native/endemic; federally endangered
blue chub	*Gila coerulea*	native/endemic
tui chub	*Siphateles bicolor bicolor*	native
Klamath speckled dace	*Rhinichthys osculus klamathensis*	native
fathead minnow	*Pimephales promelas*	exotic
goldfish	*Carassius auratus*	exotic
Klamath Lake sculpin	*Cottus princeps*	native/endemic
slender sculpin	*Cottus tenuis*	native/endemic
marbled sculpin	*Cottus klamathensis*	native
Sacramento perch	*Archoplites interruptus*	exotic
pumpkinseed	*Lepomis gibbosus*	exotic
bluegill	*Lepomis machrochirus*	exotic
green sunfish	*Lepomis cyanellus*	exotic
black crappie	*Pomoxis nigromaculatus*	exotic
white crappie	*Pomoxis annularis*	exotic
largemouth bass	*Micropterus salmoides*	exotic
smallmouth bass	*Micropterus dolomieu*	exotic
yellow perch	*Perca flavescens*	exotic

Fig. 5. Redband trout juvenile, *Onchorynchus mykiss newberrii*. Photograph by Jay DeLong.

P.M. Air at 9 P.M. 59°. The Klamath River flows in sight of this camp—across a field to the south."

(B.W. Evermann, July 16, 1897)

Evermann didn't look for fish in this dusty area on the south end of Upper Klamath Lake just west of Klamath Falls. He spent his time collecting reptiles and amphibians. We, however, looked for fish. The site where Spencer Creek flows into the Klamath River is now impounded as J.C. Boyle Reservoir, one of the many impoundments throughout the basin that were absent in Evermann's day. These impoundments have had significant impacts on the fishes of the river. Salmon and steelhead were once common in the Klamath Basin; an observer in 1850 noted that the Klamath River was so choked by salmon that settlers sometimes had difficulties coaxing their horses to ford it. There are presently no anadromous fish in Upper Klamath Lake Basin. Three dams built on the Klamath River, plus a fish wheel built by the U.S. Fish Commission across the river (designed to harvest salmon for hatchery broodstock), exterminated runs of chinook salmon, coho salmon, and steelhead.

We first sampled a small tributary to the reservoir with a dipnet, finding Sacramento perch, Klamath speckled dace (cover, top photo), redband trout (Fig. 5), fathead minnows, and a juvenile Klamath smallscale sucker or Klamath largescale sucker. A myriad of colorful dragonflies and mountain bluebirds entertained us as we collected under the hot July sun.

We then traveled the short distance to the swift and shallow Spencer Creek, where, using a seine and dipnet, we collected redband trout, Klamath lampreys, speckled dace, and fathead minnows. We found the lamprey and dace by seining the swiftest riffles; the trout and fathead minnows were collected in slower, deeper water, and near undercut banks. Dan accidentally demonstrated the effectiveness of a lamprey's mouth parts with the tip of his finger as he tried to position the uncooperative fish for a photo (Fig. 6). Ouch! We found fathead minnows almost everywhere we went during our travels. They are a relative newcomer to the basin, and were certainly introduced through the release of fishing bait.

Site 2. Lost River

"About 10 miles from Klamath Falls we came upon Lost River which we followed up to Olene. It is a considerable stream having its source in Clear Lake and, after flowing about 80 mi. loses itself in Tule Lake. At Olene it is about 30 feet wide and two to six feet deep. Most of the water in it now really comes from larger springs at Bonanza, 12 miles from Olene. The water is blueish and had a temp. of 67° at 7 P.M. The bottom is of mud and rocks and a good deal of Anacharis grows in the shallows. Mr. Hay and I reached Olene at 3 P.M. and seined some until the other wagon came up. Got the following: Chub Rutilus - common, Agosia - not so, Cottus - common. The blobs were particularly fine. The trout here are said to be very fine. Fished with spinner quite a while for trout but got none." (B.W. Evermann, July 18, 1897)

As we drove to the Lost River we passed through a complex canal system in the agricultural area east of the lake. Farmers use

Fig. 6. Klamath lamprey, *Lampetra similis*. Photograph by Jay DeLong.

the water flowing through their canal section to flood their fields, an irrigation method used since the early 1900s. They simply stop the flow in their canal section until the water breaches the banks and flows into their fields. This method is preferred by many farmers because they claim spray irrigation is wasteful. One problem with flood irrigation occurs when the fields are over-irrigated and the runoff returns sediment and chemicals to the canal, and subsequently to the lake or its tributaries.

We used fishing gear to sample the muddy, sluggish Lost River. In a river once known for its fine trout, we caught yellow perch, largemouth bass, pumpkinseed sunfish, and tui chub (Evermann's "Chub Rutilus"). We didn't collect any of Evermann's "Agosia" (Klamath speckled dace), "blobs" (sculpins), or trout. The river's flow was very slow, the bottom sediments were mud and silt, and there was an abundance of aquatic vegetation and floating algal mats. The introduced exotic fishes like the perch and sunfishes are thought to contribute to the basin's declining sucker populations through competition with, or predation upon, suckers and their larvae. In addition, the piscivorous channel catfish was discovered in Upper Klamath Lake the same year we visited.

We fished under the starry sky until well after dark and were fortunate to watch a barn owl fly over our heads. Earlier, we had listened to the owl calling in a large oak for an hour without knowing what it was. Also fishing nearby were a great heron and a black-crowned night heron. We returned to our motel in time to enjoy a 4th of July fireworks display over the waters of Upper Klamath Lake.

Site 3. Upper Klamath Lake

". . . we drove on 4 1/2 miles to Klamath Falls which we reached at 4 P.M. The road here is nearly north and south to the east. Klamath River is in view and when we neared town the little lake (or widening of the river) was in view. Captain O. Applegate says this is properly called Ewauna Lake, meaning the 'bend' or 'elbow.' On it we saw several white pelicans. Crossed the river in the town just above L. Ewauna and made camp . . ."

(B.W. Evermann, July 17, 1897)

Ewauna Lake, a wide spot on the Klamath River at the edge of Klamath Falls, was located near our motel. From here we could see white pelicans on the lake. We began our second day of exploration at the lake itself and visited several springs where suckers and chubs spawn in the spring. We tried to visualize the lake as it appeared 100 years ago, before the wetlands were drained and filled. In 1879, E.D. Cope noted that the Lost River sucker "ascends the streams in thousands in the spring, and is taken and dried in great numbers by the Klamath and Modoc Indians"; in 1884, he noted that Upper Klamath Lake sustained "a great population of fishes." C.H. Gilbert wrote in 1897 that the Lost River sucker was "the most important food-fish of the Klamath Lake region," and that spring sucker runs occurred "in incredible numbers." Sucker runs were so numerous that a cannery was established on the Lost River. Several other commercial operations processed suckers into oil, dried fish, and other products. Early settlers ate the suckers and also used them for hog feed and fertilizer.

Fig. 7. Blue chub juveniles, *Gila coerulea*. These fish grow to 16 in (41 cm). Photograph by Jay DeLong.

One historically-significant spring-fed wetland on the east side of the lake is now Hagelstein Park. Its water outflow has been reduced to a small channel. We watched yellow-bellied marmots scampering over dry ground where suckers once spawned by the thousands. Further north, we visited Sucker Springs, now reduced to a 50-foot long creek emerging from a culvert. Its short trip to the water was over rip rap and boulders, not the gravel that suckers need to spawn. Amazingly, some suckers, as well as blue chubs, still spawn there, but in low numbers, and their offspring survive poorly.

We sampled a spot on the shore of the lake called Modoc Point with a seine, collecting tui chubs (cover, bottom photo), blue chubs (Fig. 7), marbled sculpins, yellow perch, and fathead minnows. The water was full of suspended blue-green algae that looked like grass clippings, and it clogged our seine and made dragging the seine rather arduous. We tried fishing for trout or large chubs with fishing gear, but quickly gave up because the wind was strong and the water surface was quite choppy. Western grebes and white pelicans fished in the lake along with us, and Norm saw a grebe capture a lamprey.

We found a dead juvenile shortnose sucker floating against the shore. Dan explained that occasional massive kills of this endangered fish occur due to poor water quality. Water quality degradation in the Upper Klamath Lake watershed has led to large-scale fish kills related to algal bloom cycles in the lake. This has probably always been a problem, even prior to farming and ranching in the area. The source of the lake's nutrients was the basin's volcanic soils. Heavy spring runoffs increased sediment loads in the lake, and wind blowing across its surface created water quality problems by stirring up the sediments that had settled to the bottom. Many people believe that the lake's demise has been accelerated by farming and ranching practices. Studies that examined return flows from pastures along the heavily ranched Wood River Valley revealed phosphorous levels seven to ten times higher than the river's water.

Site 4. Williamson River

"Williamson River, the principal stream flowing into Upper Klamath Lake, is of considerable size and much importance in its relations to the fishes of the lake . . .It flows before entering the lake through a low, flat, marshy plain covered with tules and swamp grass. On the banks of the river is a rich growth of willows. The current is very moderate. We rowed about 2 miles or more up the

river and noticed no important change in it. The water in the river was very dark, evidently stained to some extent by vegetation."

(Evermann and Meek, 1897)

"Good camping place on creek inside an Indian's fenced field between his deserted house and creek. Creek a fine stream 25 to 35 feet wide, 4 to 5 foot depth and 1 1/2 foot current. Said to have plenty fine trout. Some people we saw called this the Williamson River, which it may be." (B.W. Evermann, August 8, 1897)

Water manipulations in the Williamson drainage are representative of those that threaten Lost River and shortnose suckers with extinction throughout the Klamath Basin. The upper basin is agricultural land. The lower river is channelized, which negatively affects larval survival by reducing rearing and refuge habitat. The construction in 1914-1918 of the Sprague River Dam on the Williamson's largest tributary eliminated 95 percent of potential spawning areas for Lost River suckers and shortnose suckers in the Sprague River drainage. Throughout the Klamath Basin, historic ranges of Lost River and shortnose suckers have been fragmented by such dams, instream diversion structures, and irrigation canals. Because habitat fragmentation limits or prevents genetic interchange among populations, extinction can result as genetic diversity decreases and populations become more susceptible to environmental change. Significant losses to the gene pool of the Lost River sucker may have already occurred with the disappearance of entire stocks and drastic reductions in other populations. In addition, extensive hybridization between Lost River, shortnose, and Klamath largescale suckers has been documented.

We walked a mile along the slow, dark river to a site called Kirk's Canyon, where we found one of the most idyllic spots any of us had ever seen. Though we knew of the river's altered state, we felt fthat we were seeing the area as Evermann and Meek had seen it a century before. Steep rock walls paralleled the meandering river's 300-foot wide valley. The dusty sagebrush desert was gone and we found ourselves in a lush, green valley colored by a multitude of wildflowers. The river in the canyon was shallow and easily sampled with dipnets and seines. The water was tannin-stained, and the substrate was as dark as it had appeared to Meek those many years before. The speckled dace we collected were dark-colored as well. We also collected slender sculpin, tui chub, redband trout and the ubiquitous fathead minnow.

The only unpleasant aspect of this site was the mosquito assault. Before hiking in to the canyon area we all applied insect repellent, but it was so hot that we perspired it off. After a painful mile-long trek back to our cars, and back into the desert, we heard the howls of coyotes. We stood listening to them as the sun set on another eventful day and the air turned suddenly chilly.

Site 5. Klamath Marsh

"Cold night, nearly froze. Got started at 8:30 drove down a creek to Billy Balls' (about 3 miles) then across his meadow to a yellow pine ridge and to Kellogg's (Indian) about 8 miles (Indian said 2 1/2!!) where took lunch, then across his meadow and into a yellow pine forest, partially along edge of Klamath Marsh, then through woods and down to the marsh again where we camped. Across the marsh we saw Mt. Scott and Mt. Theilson though the air was very hazy. Mt. Scott has good deal snow. Mt. Theilson none—too sharp. Klamath Marsh is a wonderful one, large, full of reeds, water-lilies, tules, etc. Waterbirds common . . .Our camp tonight is a splendid one in all regards except the swamp water."

(B.W. Evermann, August 9, 1897)

Klamath Marsh, located 20 miles north of the lake, was our last stop. In his diary, Evermann sketched (literally) a marsh that no longer exists. The size of the marsh has been reduced over 80 percent, and the only evidence that a marsh once existed in places is the absence of trees. Up to 80 percent of Pacific Flyway birds use the area during their migrations, and at one time the Klamath Basin provided vital nesting habitat for the six million waterfowl that gathered there in the spring, as well as habitat for colonial nesting pelicans, cormorants, egrets, and herons. There were so many birds that the Klamath Indians made blankets from the feathers. In 1908, the marsh's importance was officially recognized when President Theodore Roosevelt established the Lower Klamath National Wildlife Refuge in southern Oregon and northern California as the nation's first wildlife refuge established specifically for waterfowl.

Six national wildlife refuges now protect some of the most critical wildlife habitats still found in the Klamath Lake Basin. The remnants of Klamath Marsh are now protected as the Klamath Forest National Wildlife Refuge. These six refuges have been degraded by poor water quality, greatly reduced water quantity, and thousands of acres of fertilizer- and pesticide-intensive commercial agriculture within their borders. More than 11,000 acres of the Lower Klamath National Wildlife Refuge are planted in potatoes, onions, sugar beets, alfalfa, and other crops. The U.S. Fish and

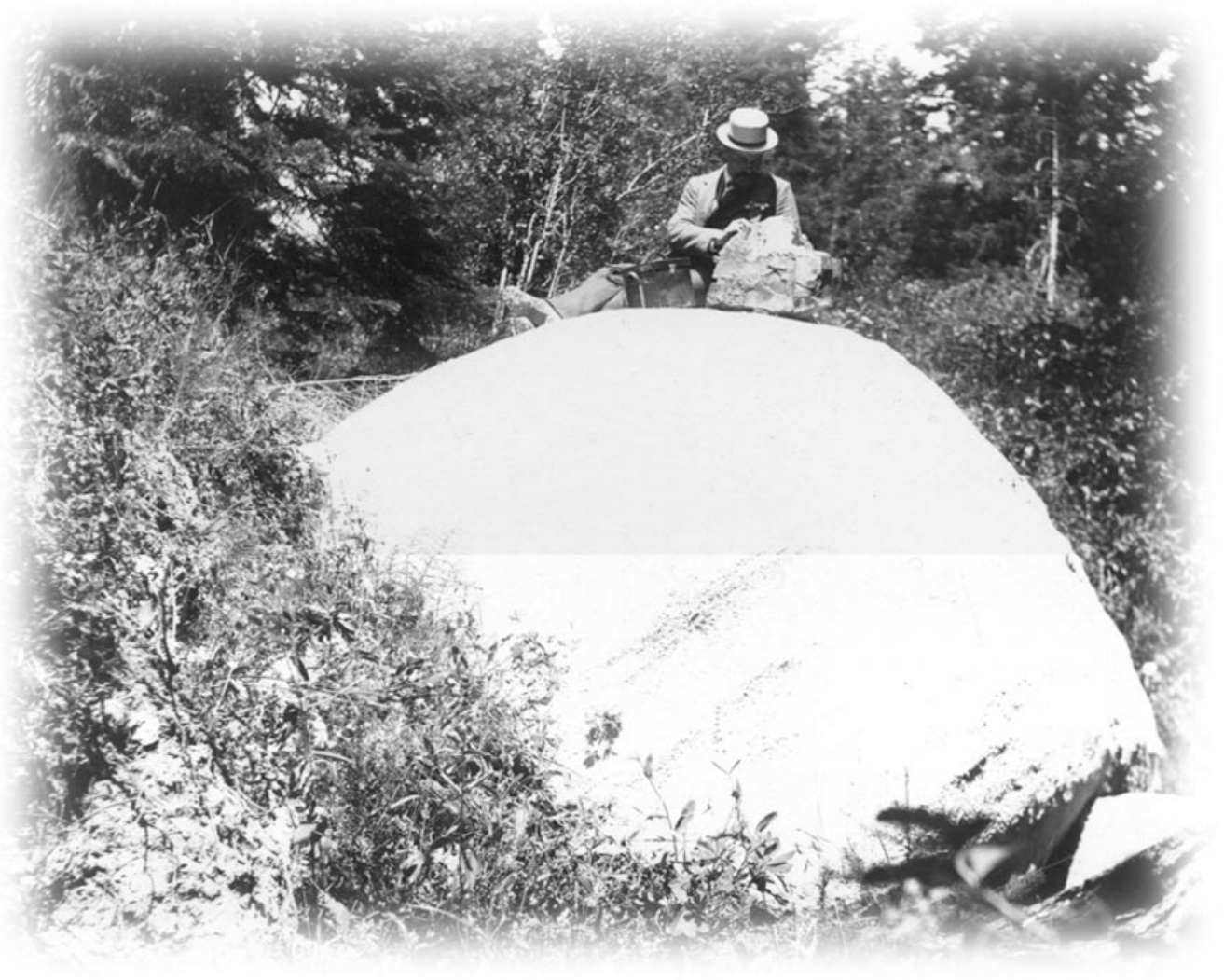

Fig. 7. B.W. Evermann in the field, just outside of Crater Lake, Oregon, 1896. Note the 1890s-style field "uniform"—suit, Panama hat, and hobnailed boots. Courtesy of Evermann Collection, Special Collections, California Academy of Sciences.

Wildlife Service estimates that one million birds use the Lower Klamath Refuge during the fall migration. Such a high concentration of birds in greatly reduced wetland areas is not always healthy, and avian botulism and cholera outbreaks claim 20,000 to 50,000 birds each year.

We didn't look for fish here. Among the "waterbirds" we saw were bald eagles, sandhill cranes, Canada geese, double-crested cormorants, Barrow's goldeneyes, a black-crowned night heron, Caspian terns, and black terns. Mule deer and pronghorn roamed the area.

Here we parted company with Louise. She drove to Eugene to visit friends while the rest of us headed north. We returned to our homes well after dark on the fourth day of our adventure through time in southern Oregon.

Closing Thoughts

I hope you enjoyed my brief account of our trip. I'm sure each of us has our favorite memories. Even the not-so-favorite parts (the constant heat, dust, sunburn, little sleep, truck stop food, and mosquitoes) made the experience a memorable one. We enjoyed other activities there too: digging for fish fossils in the exposed Lake Modoc sediments of a gravel quarry, hunting lizards and snakes in the desert, trout fishing, and visiting a spring gushing from between huge boulders with water much too cold to wade in—even in July in the desert!

Like many, many other areas across the continent, the Klamath Basin is a national treasure that should be preserved. But that wasn't the prevailing view 100 years ago.

Unfortunately, it isn't today, either. According to the June 1999 *Rogue Walker* (Internet newsletter of a local Oregon chapter of the Sierra Club), the business community of Klamath Falls is wooing the Tillimook County Creamery Association to build a $20 million cheese plant in the Klamath Basin. The dairy association's president has stated that "waste would likely become an issue with the addition of 10,000 cows," but believes the animal waste impact would be small because of the low rainfall in the basin. And in an area that already has four golf courses, developers in Klamath Falls, along with professional golfer Arnold Palmer, built a fifth, only 10 miles west of Upper Klamath Lake. It opened shortly after our visit to the area.

However, as I write this in late 1999, more than two years since the trip, I see some optimistic items in the news. In drought years, the Bureau of Reclamation has withheld water from farmers and ranchers to assure minimum lake depth, therefore maintaining an acceptable quality of lake water for endangered fishes. And some people have proposed removing the Sprague River dam for the purpose of re-opening miles of that river to spawning suckers.

These items make me hopeful that another group of NANFA adventurers visiting the area 100 years from now will find healthy native fish populations, and a regional determination to preserve this area's unique environment.

Acknowledgements

I thank Michele Wellck, Archivist for the California Academy of Sciences in San Francisco, for locating the B.W. Evermann photographs and granting permission to use them in this article; and Rollie White of the USFWS in Portland, Oregon, for providing photographs and information on the suckers' recovery plan.

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Two fishes from the Upper Klamath Lake Basin of Oregon. See the unique article on these and other Klamath fishes on pp. 1-10. Photographs by Jay DeLong. Nomenclatural note: The name of the tui chub recently changed from Gila b. bicolor to Siphateles b. bicolor when DNA analysis revealed that the tui chub is not related to other Gila species. Siphateles was previously a subgenus of Gila. See Simons, A. M., and R. L. Mayden. 1998. Phylogenetic relationships of the western North American phoxinins (Actinopterygii: Cyprinidae) as inferred from mitochondrial 12S and 16S ribosomal RNA sequences. Molecular Phylogenetics and Evolution 9 (2): 308-329.

Klamath speckled dace, *Rhinichthys osculus klamathensis*

tui chub, *Siphateles bicolor bicolor*