# History of the *Salvelinus confluentus* Curiosity Society



Photo taken by Shana Bernall at the 2008 ScCS Metolius River Conference

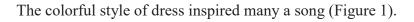
Prepared by a cadre of Dedicated ScCS Members

## The Origins of ScCS 1989-1993 by Frank Shrier

*Salvelinus confluentus* – it has such a nice ring to it. Kinda rolls off your tongue when you say it as smoothly as the fish moves through water. Such an incredible fish inspired the formation of this Society. So you might ask yourself, "What is the *Salvelinus confluentus* Curiosity Society (ScCS) and where did ScCS get its beginnings?" Maybe you don't really care but a few of us old moss-backs felt compelled to pass on the history of this great (albeit loosely run) organization.

I guess you could say that this all really started with Cavender (1978) where the official cord was cut thereby separating bull trout and Dolly Varden. This paper caused quite a stir and is reflected in an opinion paper by Morton (1980). Morton also spent some time in his opinion paper on the origin of the name 'Dolly Varden'. He quoted Wales (1959) who interviewed a niece of the Soda Springs Resort Proprietor (Idaho) as follows:

Young Elda, then a girl of about 15 was one of the group inspecting the catch; and when someone complained that "bull trout" was a poor name for such an attractive fish, she suggested "Dolly Varden." At the time a popular dress material was called Dolly Varden; and the similarity of the material and the color pattern of the fish was striking. It would take a dull person with no sense of romance to be unmoved by this name. Presumably this was the feeling of a wise cloth manufacturer casting around for an attractive name to be used for his new creation.



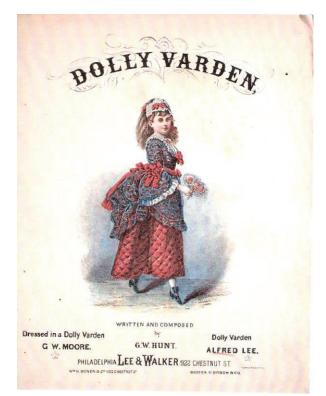


Figure 1. Cover page for sheet music containing the song 'Dolly Varden' *circa* 1872 to 1875.

One can certainly see that bull trout and Dolly Varden share a similar taste in clothing! Morton goes on to share other names used for bull trout including the Siberian name "Goltra" or "Goletz" which means 'the ugly one' – though I do not concur. "Malma" was another name chosen by Walbaum in 1972 which means 'the naked one' - hmmm. At any rate, our wonderful native bull trout is definitely a fish of mystery and without a doubt "The Fish for Me". The following is a record of the various ScCS meetings that have occurred over the past twenty-one years. I was able to attend many of them so I've provided information from my viewpoint. I am happy to add more if anyone else has some interesting notes to share. Oddly, none of those I have talked with can remember the 1994 and 1995 meetings. Those are two that I definitely missed so I can't blame the alcohol. If any of you can shed some light on those two years we would all be very grateful! So, I have provided the information I was able to find in my files up through 1995. After that the meeting descriptions are provided by the hosts for their respective ScCS gatherings or by one of the attendees that retained their faculties enough to take notes. Enjoy the reading and please keep this document alive as long as the ScCS exists.

## <u> 1989 – Parkdale, OR and Gearhart Mountain</u>

The origins of ScCS can mostly be attributed to a small group led by Del Skeesick, then with the US Forest Service. Del along with Ken MacDonald arranged for a 'Bull Trout Workshop' at the Hood River Ranger District Office in Parkdale, Oregon on May 18 and 19, 1989. The objectives (according to my notes) were:

- 1) Formalize the Salvelinus confluentus Curiosity Society;
- 2) Get to know other bull trout enthusiasts;
- 3) Find out who knows what;
- 4) Find out who's doing what;
- 5) Find out what everyone's goals are for bull trout and priority steps to get there;
- 6) Find out who can help us get there;
- 7) Collectively invent "one wheel"; and,
- 8) Establish bull trout inventory needs.

The goal of the ScCS: To share our knowledge and energies to develop rational management of wild bull trout stocks and habitat in the Northwest.

The agenda included a discussion of genetics and stock differentiation, a field visit and planning for the first working effort at Gearhart Mountain. A list of attendees is included as Attachment 1.

As most of us know, the Gearhart Mountain Bull trout workshop followed in August 1989. This is where the tradition of camping/working/sharing really started. Presentation summaries and other information are included in Howell and Buchanan (1992). It was at this location that Joe Tomelleri photographed and created the Sun Creek bull trout print. It was also probably the coldest and wettest mid-August weather that has ever occurred in the Gearhart so the meeting is etched firmly in the minds of those who attended (Figure 2). I might also add that Del was the only one with enough foresight to bring a motor home. Needless to say, he and the Bonds were the only dry ones in the crowd.



Figure 2. Most of the original 1989 ScCS Workshop attendees at Gearhart Mountain (courtesy Phil Howell).

## <u> 1990 – Metolius River, OR</u>

The second annual workshop of the ScCS occurred on the Metolius River and was hosted by Portland General Electric on May 10<sup>th</sup> and 11th. The workshop took place at the Pioneer Ford Campground on the Metolius River downstream of Wizard Falls. Led by Don Ratliff, the group sampled Jefferson, Candle, Jack and Roaring creeks looking for juvenile bull trout in "righteous bull trout habitat". This is the workshop where Joe Tomelleri got his specimen for the bull trout print we are all familiar with (Figure 3). That specimen is being held at the Oregon State ?? Habitat enhancement projects were visited and several daytime and one night time snorkel occurred. Don also displayed his trapping and tagging skills and even led an early morning fly fishing expedition. Tall tales were abundant following that outing! Del Skeesick provided notes and an attendee list (Attachment 2).

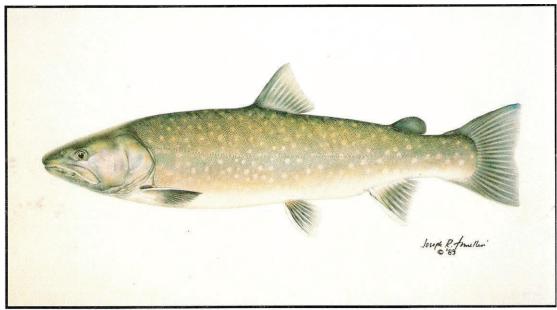


Figure 3. Joe Tomelleri's Metolius River bull trout.

## <u> 1991 – Lewis River, WA</u>

ScCS members were contacted to attend a workshop on the Lewis River hosted by the Gifford Pinchot NF on May 8<sup>th</sup> through the 10<sup>th</sup>. The workshop met at the Swift Forest Campground to assist with capturing adult bull trout for radio-tagging aimed at identifying spawning timing and location. Oregon Public Broadcasting filmed a radio-tag implant surgery and aired a special on bull trout later that year. Del declared that Rush Creek "redefined righteous bull trout habitat". Much discussion over possible ESA listing and the basis for such listing occurred intermixed with "serious chili" and other consumable flammable liquids. Several adult bull trout were radio-tagged and/or floy tagged. Notes are provided (Attachment 3). Mike Riehle was named **President** of ScCS.

## <u> 1992 – Sun Creek, OR</u>

ScCS **Director** Mike Riehle [I'm not sure who was determining the titles ;)] sent out a call for help which ended up being the 1992 edition of the annual workshop (Attachment 4). This meeting took place at the Mazama Campground on August 17-21. The efforts at this meeting were to remove brook trout from Sun Creek. The group assisted with removal efforts and installed barriers to prevent brook trout return to upper Sun Creek.

## 1993 – Catherine Creek, OR

ScCS **Chairman** Mike Riehle [I know, I know but we hadn't really settled on who we were as the ScCS so it was the annual leader's right to call it as he saw it!] issued a meeting announcement for the annual ScCS Bull trout Workshop at Catherine Creek – a tributary to the Grande Ronde River (Attachment 5). The meeting was held on July 28-30 at the Catherine Creek campground. The focus of this workshop was to learn sampling techniques to insure consistency and to hear

presentations on efforts that occurred in the previous year. Since this had been primarily an Oregon and Washington effort, Riehle asked for more involvement from Idaho and Montana.

## <u>1994</u>

This seems to be a lost year because no one can remember anything about the meeting location or the events that occurred. That must have been on heck of a local brew to instill that much memory loss.

## <u>1995</u>

Same situation as 1994. Those must have been the years that were. This concludes my rendition of the years prior to 1996. The remaining history is provided by the hosts, et al. from each workshop.

## <u> 1996 – McKenzie River, OR – by James Capurso and David Bickford</u>

James Capurso, the McKenzie River Zone Fisheries Biologist for the Willamette National Forest from 1990 to 1997, was the ScCS Chair in 1996. Under his leadership, the annual meeting occurred at McKenzie Bridge, Oregon and the first ScCS Website was developed.

Capurso recognized the significance of the ScCS through regular discussions with Del Skeesick, the Willamette Forest Fisheries Biologist, who was one of the original organizers of the group and was at the Gearhart Mountain workshop. Capurso and Dave Bickford, the Assistant Zone Fisheries Biologist, were implementing some innovative bull trout conservation actions in the McKenzie Subbasin and they wanted to share and provide a forum for communication. We held the meeting October 15-17 at St. Benedict Catholic Monastery near McKenzie Bridge. The first and last days of the conference were half days to allow participants travel time. We had approximately 80 biologists participating in the conference. Some were from as far away as Nevada and California.

In the true spirit of the ScCS meetings of the past, there was an emphasis on field work. We split into groups for different field assignments. One assignment was to perform one of the first Roaring River bull trout redd counts. Roaring River was a spring-fed, high gradient, high flow, extremely cold, wood-choked tributary to the South Fork McKenzie River. The Roaring River crew included Jason Dunham and Amy Unthank. Upon their return to the monastery, we learned about the treacherous conditions they experienced and everyone realized why Roaring River was seldom visited for redd counts.

Although we had some innovative bull trout restoration projects throughout the upper McKenzie River to share, we also wanted to get input from other bull trout biologists on bull trout issues of the day. We worked both approaches into our conference. Some bull trout restoration projects we visited included the Sweetwater and Ollalie fish passage projects. The Sweetwater Creek passage project was at Trailbridge Reservoir in the upper McKenzie River. With the help of Don Porior, the National Fish Passage Expert from BLM, we designed a passage facility to allow adfluvial bull trout to migrate upstream from the reservoir to Sweetwater Creek, where they had been extirpated from pristine habitat by a perched culvert under State Highway 126. A passage pipe was designed to account for the peaking conditions of the reservoir and effectively excluded the brook trout that occurred in the reservoir. Newly emergent bull trout fry were collected from a neighboring stream and transplanted into Sweetwater Creek to jumpstart the population there. Since then, a bull trout migration was initiated from those transplants. Ollalie Creek was another migration barrier crossing under State Highway 126. We replaced it with a fish passage facility and documented bull trout migration through the passage facility the fall of the same year. No transplants were needed to jumpstart that population because spawning had occurred in the past downstream of the crossing.

In addition to sharing some of the fisheries program's effective restoration activities, Capurso wanted to have structured forums for communication and interaction. In the evenings, discussion stations were set up in the monastery meeting room. One discussion topic was the acceptance of transplanting bull trout between river drainages for reintroductions. A reintroduction of bull trout to the Middle Fork of the Willamette with McKenzie River fish was being considered at the time by ODFW and the Willamette National Forest and they were interested in others' thoughts on the subject. Since then, ODFW successfully conducted the transplant.

Capurso developed and maintained the first ScCS Website for a couple years. Looking back at it, Capurso described the experience: "I was just getting into the digital age in a big way in the mid-1990's, you know, with Pentium PC systems and all, and wanted to try to publish a webpage while performing an additional service for the ScCS. I developed the website and posted it through AOL. It was pretty simple, but it was multipage and animated. I remember inserting animated fish throughout the website. I posted ScCS activities, notes, recent papers, and bull trout news. I also remember the impressive power the website provided in communicating the bull trout message. I would get emails from Canada frequently. I also received many emails from students in search of a worthy school assignment project. There was even an email from Sweden complimenting us on our informative website. When I moved on after a couple of years, I informed the group I wouldn't have time to maintain the site anymore and it went into dormancy. I remember a year or so later getting an excited email from a past professor from U of I expressing concern the site was not being maintained during that dormancy period. It seems like there's an opportunity for the organization to start a webpage up again, if someone has time and interest in maintaining it."

Capurso adds: "Being the ScCS Chair was a great experience. I'd encourage anyone to not only participate in the group but volunteer to chair it. I made career-long connections and friendships by taking on the responsibility and hope I contributed in some way to the conservation of the species."

#### **Musings from Jason Dunham:**

This was the first ScCS meeting that I attended. I was involved with redd counts on Roaring River, a tributary to the South Fork McKenzie upstream of Cougar Reservoir. Another event I recall at this meeting was the evening discussion/debate about the possible reintroduction of bull trout from the McKenzie into the upper Middle Fork Willamette River. According to Jeff this meeting was the one that helped him form a plan for that effort which is ongoing today and just beginning to produce some adult bull trout in the upper Middle Fork.

## <u> 1997 – Rock Creek, MT – by Shelley Spalding</u>

At Rock Creek, we surveyed for juvenile bull trout and got the first information ever collected on distribution for that age class. The workshop was held at an old FS work camp with no electricity. We used a generator for the slide projector and Russ Thurow assisted by manipulating a wall tent to work for slide shows - projector and images inside the tent; spectators sitting outside looking in. I had purchased two kegs for the two nights - both were consumed the first night during a long

bonfire chat - with Mike Gilpin holding forth on bull trout and the "extinction vortex." During the surveys, a finicky electroshocker was repaired by the saw shop in Phillipsburg. The Missoulian carried a story on the workshop titled "Bull trout live in the most beautiful places."

## <u> 1998 – Jarbidge Creek, NV – by Jason Dunham</u>

I was involved in the early days of the Jarbidge bull trout controversy and it was a very heated affair to say the least. This meeting was held while the wounds were still fresh and controversy still simmering. It was a great move I think by Gary Johnson, NDOW, who was the main organizer of this meeting. The talks were presented in a wall tent up on Canyon Creek, a tributary to Salmon Falls Creek – one of the streams in the upper Snake River that may also have supported bull trout historically. For the field day we focused mostly on the Jarbidge basin with crews deployed throughout the watershed to survey for fish presence and collect tissues for genetic analysis. My trip included Ted Koch (now USFWS bull trout coordinator), Paul Spruell (now a professor with Southern Utah University), and Sam Brenkman (now a lead fishery biologist at Olympic National Park). We began the trip with a discussion of who should pack a water filter since all four of us had a personal filter. Ted agreed to pack his vintage "first-need" on the trip. We proceeded to hike in about 6 miles into the rugged East Fork of the Jarbidge River into Fall Creek to make a fish collection. Once at the creek, we badly needed to pump water to re-hydrate after a long sweaty hike in. I grabbed Ted's filter and just started pumping when the whole thing blew up in my face! We all laughed, but our expressions changed when we realized we didn't have water for the rest of the day. Not so good. Since we were there anyway we proceeded with electrofishing and collecting some very nice bull trout in an improbable desert canyon. We didn't catch as many fish as we would have liked, but the canyon shadows started creeping in and it was time to hike out – uphill. This proved to be considerably more taxing than the hike in. We arrived at the car after about two hours of strenuous hiking and a moderate degree of hallucination. Back at camp we finally found some water, although I suffered a moderate amount of gastrointestinal stress before fully recovering. Thankfully the ScCS crew left some food for us, as we arrived well past dinner time. It was a great experience and bonding experience for four of us who would come to have a strong common future working on bull trout.

## <u> 1999 – Lake Pend Oreille, ID –by Bruce Rieman and Jason Dunham</u>

This meeting was organized by George Labar and Bruce Rieman. The primary discussion centered around bull trout survey methods and pitfalls. Field activities consisted mostly of redd counts on tributaries to Lake Pend Oreille.

Jason adds the follow story titled: Redd counts - faith, reality, denial, reconciliation

Back in the late 1990s Bruce Rieman and I did a lot of work on bull trout in northern Idaho in Lake Pend Oreille, home to the 32-lb. world-record bull trout. At the time, redd counts were the main long-term source of information on population trends in bull trout and we were interested to learn more about their reliability. We followed in the footsteps of work by researchers such as Phil Howell, Joe Bonneau, and others to evaluate the reliability of redd counts. We learned that what you see is not necessarily what you get. This was borne out by direct experience by many participants in the 1999 ScCS as well. Seeing (or not) is believing (or not). Many additional contributions to this work have greatly expanded our appreciation of the utility of redd counts.

## 2000 - Forks, WA -by Shelley Spalding

The Forks workshop was held at the FS Solduc work station. I invited Ted Cavender because we were going to survey the Solduc Dolly Varden and, to my surprise, he flew out from Ohio because he wanted to see how the little population in the Olympic National Park was doing. Bull trout were documented in a few new locations and the first snorkel survey for bull trout in the Elwha was done. For this workshop I also ordered two kegs of beer and one was Moose Drool (as at the Rock Creek workshop). At the end of this workshop we still had almost half of the Moose Drool left!!! [Shrier – "A shameful display of sobriety!"]. Note there were no sitings of vampires, werewolves or Sasquatch.

#### **Musings from Jason Dunham:**

Again here I recall the field day most vividly from this meeting. At that time Sam Brenkman, Steve Corbett and others in the park were documenting some amazing migratory life histories in bull trout on the west side of the Olympic Peninsula. The extensive marine migrations and use of diverse nearshore habitats seemed to fly in the face of our simplified classifications of bull trout migration behavior, such as "fluvial," "adfluvial," or "anadromous." They seem to do it all, and I decided "migratory" was about as precise as I needed to be. But, back to the field day, I was assigned a trip to a remote tributary of the Queets River, Sam's River. I brought a couple of bull trout newbies with me. One of the greatest things about ScCS is that attendees often see this fish for the first time. There are a surprising number of people who work on this fish, yet have never seen one. We started snorkeling in a downstream direction in Sam's River, headed down to the Queets - a known bull trout haven. Hours went by with lots of other interesting fish, but no bull trout. The daylight started to fade and the canyon walls grew considerably taller around us as we worked our way through boulder fields and cascades. At last we arrived at a steep cascade with a large deep bedrock pool below it. With the difficult cascade and large holding pool we thought this would be our last best chance to see a bull trout. We scoured the pool in the shadowy evening light and found a couple of summer steelhead, but no bull trout. Then when we were just about to give up, a large (~300mm) bull trout came gliding right in front of all three of us! A first for the Sam's River and first for two of the three snorkelers. An exhilarating experience with high-fives all around. After the initial excitement wore off we realized we needed to get out and back to the car. This required a gravity-defying hike out of the canyon and somehow locating the road and hiking back to the car. Once again we arrived back at ScCS long past dinner time, but our friends there had saved us some dinner in exchange for our story.

## 2001 – Leavenworth, WA – by Barb Kelly-Ringel And Jason Dunham

Judy DelaVergne and Barb Kelly-Ringel organized this event. The presentations were held in a local fire hall and camping was at Chiwaukum Creek Campground, near Lake Wenatchee. There were 61 people who attended, including founding member Del Skeesick. He and a few others were featured in an interview by a local radio station. I (Jason) frankly don't recall what field trip I participated in for this meeting - must have been non-eventful. At the time of this meeting we had work going on in the Wenatchee basin (Chiwawa River) and were just starting to experiment with using archival temperature tags on bull trout to track thermal habitat use by migratory fish. There were 5 field projects and 15 field crews. Field trips included snorkel surveys and the first bull trout spawning ground survey of Chiwaukum Creek, tracking and snorkeling to see radio-tagged bull trout in the upper Chiwawa River, bull trout catchability and tagging in Lake Wenatchee.

Unfortunately no bull trout were caught, and snorkeling and angling occurred together in two streams with bull and brook trout. I (Jason) remember an evening workshop/discussion on the utility of redd counts for bull trout surveys. At the time work by me and Phil Howell was starting to reveal some of the limitations of this approach. The evening discussion was co-hosted with Chris Jordan, NOAA-Fisheries to provide an anadromous perspective. While many at the time were skeptical of the limitations of redd counts, it was a good discussion and opened up a lot of thinking about redd counts, which I'd like to think are much better these days for it!

## <u>2002 – Wallowa Lake, OR – by Jason Dunham (with editorial rights</u> exercised by Gretchen Sausen) -

Gretchen Sausen (currently USFWS, with USFS at the time of the meeting) and Mary Hanson (ODFW) were the main organizers of this meeting. This meeting was held near the Wallowa Lake faux-Bavarian village (good follow-up to Leavenworth) and the river was full of smaller size kokanee spawners originating from the lake. This trip was very exciting for me as one of the field trips was focused on recapturing migratory bull trout tagged the prior year by Phil Howell and Paul Sankvich. Phil and Paul had attached both a radio and an archival temperature tag on these fish. We managed to capture two of these fish in a dramatic series of events in the Lostine River canyon (I can provide the photo sequence if you need). We were able to assemble the photos from the field trip and the temperature data from the bull trout for an evening presentation. Another evening discussion at this meeting involved the bull trout telemetry synthesis, initiated by Matt Dare. This effort was launched to try to find some common patterns among the scores of telemetry studies conducted on bull trout. Matt completed his report on the telemetry synthesis in 2006, and Phil, Paul, and I have a paper forthcoming in Ecology of Freshwater Fish on the archival tag/telemetry work in Lostine. Nothing is fast in science but we got it done! Thanks in large part to ScCS, as well as a considerable degree of perseverance. Other field trips included snorkeling Hurricane Creek (a tributary to the Wallowa River in the Grande Ronde basin) to access relative abundance of this resident bull trout population. This crew hiked 3 miles up to Slick rock (a beautiful riffle and cascade/waterfall area) and surveyed a 1/4 to 1/2 mile section of stream area for bull trout. Adult brook trout and bull trout were observed in this area. An irrigation canal near Big Sheep Creek (in the Imnaha basin) that contains bull trout was snorkeled to get an estimate of numbers of bull trout for future restoration efforts in this system. Goat Creek a tributary to Bear Creek (in the Grande Ronde Basin) and approximately 6 miles up the Bear Creek trail was snorkeled above a waterfall to determine fish species presence above this barrier. Approximately 600 bull trout were salvaged out of a decommissioned hydro canal in Little Sheep in 1997 and reintroduced into Wallowa Lake. One of the field projects was to snorkel for bull trout above Wallowa Lake to get an estimate of bull trout presence as a result of this reintroduction. This attempt to snorkel for bull trout failed as the stream was very turbid due to an excavator in the river upstream of the meeting and snorkel site rechanneling the stream, post a recent debris flow that wiped out part of the boy-scout camp along the river (just upstream of the meeting site). This field crew decided to go sight-seeing instead and headed to the Blue Hole along the Imnaha River, about a 1.5 hour drive from the camp to observe large fluvial bull trout.

## 2003 - Boise River, ID - by Jason Dunham

This meeting was organized by me, Matt Dare, and Tammy Hoem (then Salow). The site was a semi-rustic resort in remote Atlanta, Idaho. It's a beautiful historical mining village on the west side of Idaho's Sawtooth Range. We received a few complaints about how nice the resort was, with a few hotel style rooms and the large swimming pool fed by hot springs, but then again I noticed

almost everyone at the meeting was in the hot pool after hours. It was sort of a hot-tub mixer. Another benefit was that we attracted some attendees from higher up the administrative food chain who were more than happy to stay in the hotel-style accommodations. The meeting itself was nearly cancelled by the 2003 Hot Creek Fire, which started just a few weeks in advance of this meeting. It was started during a string of 40+ degree days (we'll be metric here, but that's >100 for you English folks) and rapidly burned through vast tracts of forest, threatening the town of Atlanta itself, which became a base camp for a huge fire-fighting operation involving hundreds of fire fighters. The fire was finally controlled to a manageable level by a series of rainstorms, just a few days before the meeting. Our relief was only temporary as these storms on the freshly burned landscape produced massive debris flows that completely blocked the only road into Atlanta - even temporarily damming the mainstem Boise River itself. With \$11,000 in the bank and a major meeting on the line, we were biting our fingernails until literally hours before people were beginning travel to the meeting and the roads were finally safe and passable! Thankfully everyone was able to make it and the meeting was great fun. Holding the meeting on the edge of the Hot Creek fire was a great opportunity to highlight the importance of this natural process for bull trout. It was a truly unique experience. Major field themes at this meeting included touring the Hot Creek fire, the telemetry and reservoir work lead by Tammy Hoem, Matt Dare, and Lauri Monnot, and sampling some of the original Boise "patches" for fish, including discovery of bull trout in the large upper Middle Fork Boise patch upstream of Kirby Dam (then being adapted to allow passage).

### <u> 2004 – Skagit River, WA – by Ed Connor</u>

The Skagit River meeting was organized by myself with help from Curt Kraemer, Mark Downen, and several other Skagit bull trout enthusiasts. The meeting was held at historic Currier Hall in the town of Newhalem, Washington. Almost 100 people attended the meeting, with notable attendance from both sides of the Washington cascades, Oregon, and British Columbia, as well as the usual hard core bull trout enthusiasts from Montana, Idaho, and Nevada. About half of us stayed in old bunkhouses owned by Seattle City Light, and the other half camped across the river in North Cascades National Park.

The first day of the meeting provided a headwaters to ocean overview of bull trout research and life history diversity in the Skagit River, starting off with the resident and adfluvial populations in the headwaters of the Skagit River in British Columbia and in Ross Lake, then to fluvial and anadromous populations inhabiting the middle Skagit, and finally to bull trout habitat use in the estuary and marine nearshore areas of the lower Skagit. Curt Kraemer of WDFW gave a 30-year retrospective of his bull trout experiences (including lots of hook-and-line sampling) in the Skagit. The first of two kegs of microbrew from the Skagit Brewery were opened on the first night. The meeting was preceded by several days of heavy rain, so many of the streams we were intending to survey during the field day were running high and pretty murky. Never-the-less, the field day turned out to be a beautiful one in the heart of the "American Alps", with crews heading off to Ross Lake to implant sonic tags in bull trout, to determine if bull trout spawners were present in Stettatle Creek and Ruby Creek, and to census adfluvial and anadromous bull trout in the upper Cascade River, Bacon Creek, and Goodell Creek. The Ruby Creek crew saw a large tree fall and nearly hit three locals illegally fishing for bull trout, confirming that Mother Nature watches out for native char. The Goodell Creek crew found that bull trout were abundant in an area that had been cut off by a major landslide in the National Park. The Stettatle Creek crew not only found bull trout spawning for the first time in this stream, but also confirmed through photographic evidence provided that sasquatch was present in this drainage as well (bigfoot and bull trout: a ScCS first).

This memorable day turned into a memorable night, with Jason leading a discussion on various bull trout topics, followed by a presentation on presence-absence statistics called "the meaning of O" (or was that "oh"?). The second keg was quickly opened, and the discussion rapidly degenerated into a presentation of photographs taken during the day by the field crews that was converted into comedy routine by the ad-libbing of Jim Shannon. This may have been the start of the "field trip slide show" tradition that is now the highlight of the second night of a ScCS meeting. The night became even more memorable, especially after the second keg was moved across a narrow footbridge over the Skagit to the NPS campground, where the "bull session" continued around a roaring fire until 3 or 4 am. Presentations and discussions during the final morning of the meeting were led by Jason Dunham (bull trout translocations), Matt Dare (synthesis of telemetry data), and Shelly Spalding (genetic inventory update).

## 2005 - Glacier National Park, MT - by Wade Fredenberg

### **Musings from Jason Dunham:**

This meeting was a special one for me as we had also organized a workshop on Pacific Rim charrs at Flathead Biological Station the week prior. In attendance were a host of Japanese, Americans, and a Russian charr biologist. We published the results of this workshop in Fisheries last year (2009). Two of the Japanese charr biologists (Itsuro Koizumi and Satoshi Kitano) stayed on for ScCS and gave some great presentations to the group on Japanese charrs. They seemed to fit right in to the ScCS crowd with the long field days and late night social gatherings. Some of the footage from Jeremy Monroe's "Riverwebs" documentary on the late Shigeru Nakano featured this meeting. Nakano and Kitano worked on bull trout in Montana long before most Americans had turned their focus to bull trout. True charr-devotees! The meeting organized by Wade was a terrific experience and the international exchange was icing on the cake.

#### **Musings from Frank Shrier:**

The world premier of the theme song "The Fish for Me" was rolled out and performed by Ken Bevis (see attachment). This song has become the requisite theme song for the ScCS and we thank Ken for his bravery to perform it, then teach the attendees. Later Ken made a video for all of us to enjoy at a future meeting.

## 2006 - Lewis River, WA - by Frank Shrier

This annual workshop took place on the Lewis River and tributaries. I was quite inspired by the logos from some of the past ScCS workshops (see Attachment) so I set out to pursue Ray Troll to produce a T-shirt logo for the Lewis River meeting. He kindly declined stating his busy schedule and referred me to Karen Lybrand – a graphic artist in Maine who had helped Ray with the art work and T-shirt for the AFS Parent Society meeting in Anchorage. We corresponded by email and talked once or twice and she produced a beautiful logo that included Mt. St. Helens, the Lewis River and a large school of bull trout. I had the logo placed on stainless steel mugs. However, I now regret that and wish I had followed Karen's suggestion to print shirts or sweatshirts instead because the detail of the logo is lost (see attached logo).

The meeting venue was the Anderson Lodge and the workshop was held on August 30 to Sept. 1. Sponsors for this meeting were PacifiCorp, Meridian Environmental and Smith-Root, Inc.

Discussion at the meeting portion (and over a few local brews) focused on two main topics: Patchmodeling and verification and the Clackamas River reintroduction feasibility analysis. Field work included several multi-person teams to verify bull trout habitat patches identified by Mike Hudson and Tim Whitesel. One of the objectives of upper Lewis River snorkel crews was to identify presence in tributaries other than the known locations. That effort was successful in finding three adults in Swift Creek which is glacial-fed rather than spring-fed like the other known creeks. This was a first-time find and very important for the bull trout recovery effort in terms of potentially adding an additional local population. Some of the field crew traveled to the Hood River drainage to count bull trout spawners.

## <u> 2007 – Sawtooth Valley, ID – by Dan Kenny</u>

The workshop was organized by biologists on the Sawtooth National Forest and was held August 22-24 at Camp Perkins on Perkins Lake, a minor representative of the morainal lakes at the head of the Salmon River on the Sawtooth National Recreation Area. Field work included electrofishing and snorkeling intended to fill out the Forest's bull trout patch inventory, but unfortunately many of the sites turned out to be brook trout-infested former bull trout habitat. Idaho Fish and Game-attendees, however, organized redd surveys and plenty of migratory bullies were spotted in several Salmon River tributaries including Fourth of July Creek, Fishhook Creek, and Alpine Creek. The workshop took place during the Castle Rock fire a few dozen miles south, near Ketchum, which reduced visibility and participation by SNF biologists, but otherwise didn't interfere with the gathering. Ken Bevis appeared in DVD format to perform "The Fish for Me" and much evening discussion was dedicated to of the origins and desired bitterness of IPAs. An excellent turnout, with attendance by about 70 charrophiles.

## <u>2008 – Metolius River, OR – by Don Ratliff</u>

I organized the technical sessions at this event and for a change I didn't even give a talk, except for trying to spur on the so-called "food fight" at the end of the first day of presentations. The topic was meant to discuss some of the controversies in the Metolius basin related to the large population of bull trout and questions about biological impacts of bull trout in the context of recovery of this threatened species. We also had a special ceremony during the night of the field day to celebrate some of our older ScCS devotees, awarding them "*Salvelinus confluentus* emeritus" – the distinguished winners included Shelley Spalding ("Queen confluentus"), Larry Ogg (world-champion extreme bull trout snorkeler), Phil Howell (bull trout before bull trout were cool), and Del Skeesick (one of the bull trout originals). For me it was a moment when I started to realize that this ScCS thing has been going on for a good long run and that we needed to seriously consider passing the collective field knowledge and experience on to the next generations – thus this document!

## 2009 – Upper Bow River, Alberta, CN – by Mike Rodtka

A milestone in the history of ScCS was marked when the meeting came to Canada for the first time ever in 2009. To commemorate the grand occasion the 2009 memento was a venerable symbol of Canadiana, a toque. Unfortunately the meeting also coincided with one of the deepest recessions in living memory, travel budgets were slashed, and international travel was particularly hard to justify. Despite this, we still had folks attend from 4 states and 3 provinces, many funding the trip out of their own pockets. Field day activities focused on the Elbow River drainage and supplemented existing studies conducted by the Alberta Conservation Association and the Fisheries Management Branch of Alberta Sustainable Resource Development. The highlight of the meeting for me was the exchange of ideas I observed between managers and researchers in Canada and the US. Geopolitical borders don't mean much to bull trout but all too often put roadblocks in the way of crossborder collaboration. Kevin Fitzsimmons and Chad Judd helped out with organization of the meeting, Alberta Conservation Association and Alberta Sustainable Resource Development were meeting sponsors. See attached article from the Alberta Conservation Magazine.

### <u>2010 – Upper Klamath Basin, Collier State Park – by Jason Dunham</u>

## <u>2011 – Lower Clark Fork River, MT and Lake Pend Oreille, ID – by</u> <u>Shana Bernall</u>

## "The Rise of the Beer Trailer"

The 2011 meeting was held in Heron, Montana and was hosted by biologists from Avista, Idaho Fish and Game and the U.S. Fish and Wildlife Service. Biologists from Idaho, Washington, Oregon, Montana, Nevada and Alberta, Canada attended the meeting. The original goal was to center talks around two main themes "bull trout passage" and "bull trout interactions with non-natives". The majority of talks centered on these themes with additional research presented related to climate change, bull trout habitat use and bull trout reintroductions. Attendees participated in a variety of field trips including: gill netting on Lake Pend Oreille to help remove lake trout, a redd count training exercise, helping to check tributary weir traps, efforts to capture adult bull trout below Cabinet Gorge Dam and a tributary wide survey of Vermilion River looking for floy tagged bull trout that had been transported upstream from below Cabinet Gorge Dam.

On a lighter note, I hate to think the 2011 meeting will be remembered by the first encounter of the beer trailer, but I heard a lot of talk of hauling it back to Washington for next year's meeting. During the first social night a biologist that works for the Confederated Salish and Kootenai Tribe gave a presentation on an interactive bull trout DVD that was developed for educational purposes. The second evening concluded with an impressive picture slide show with the winner's picture (Mike Heck, USGS) attached below. The camping group had the pleasure of listening to the elk bugle all night and the event ended with a bang when "Barney the Beagle" tried to rustle us up on the last morning with some relentless howling.



Mike Heck (2011 ScCS Meeting) Granite Creek, ID

Well, that brings us up to date on this venerable society. We hope that you enjoyed perusing this document and will continue to add to the meeting accounts every year. Long Live Bull Trout!

# <u>2012 – Lake Crescent, Olympic National Park, Washington – by Sam Brenkman & Yuki Reiss</u>

The 2012 meeting (Aug. 15-17) was held at Naturebridge on Lake Crescent in Olympic National Park and was organized and hosted by Olympic National Park, Yakima Basin Fish and Wildlife Recovery Board, and U.S. Fish and Wildlife Service (Lacey). The park is home to all life history forms of bull trout and resident Dolly Varden occur in upper portions of three watersheds. The Naturebridge campus allowed for indoor sleeping in bunkhouses, a dining hall, and conference room.

Ninety biologists attended from Quebec, British Columbia, Nevada, Montana, Idaho, Oregon, and Washington. A total of 6 federal agencies, 6 universities, 5 Power Companies, 4 State agencies, 3 non-profits, 3 consulting firms, and 2 tribes were represented and two attendees (Shelley Spalding and Larry Ogg) were brought out of retirement.

The timing of the conference at this location allowed us to be part of a historic occasion with the removal of Elwha Dam and ongoing removal of Glines Canyon Dam. Eight anadromous salmonids including bull trout will regain access to 70 miles of protected habitat within Olympic National Park by Spring 2013. The week after the ScCS conference, adult Chinook salmon were observed upstream of Elwha Dam for the first time in 100 years! Many ScCS attendees (54 biologists) chose to spend the field day on the Elwha River, touring the largest dam removal in U.S. history. Other field trips included snorkel trips to the North Fork Skokomish, Dungeness, Greywolf, Elwha, South Fork Hoh, and North Fork Quinault Rivers. Additionally, one team collected fin tissue samples of Dolly Varden upstream of Sol Duc falls to address possible hybridization with brook trout.

As with most ScCS conferences through the years, there was a half day of talks on the first and third days including a keynote presentation by Eric Taylor on char biodiversity (see complete agenda below). In addition, there were two excellent evening presentations (John McMillan of NOAA Fisheries and Jeremy Monroe of Freshwaters Illustrated) that highlighted the power of using underwater images and video to promote aquatic awareness and conservation.

Biologists were treated to unusually hot weather for the Olympic Peninsula (upper 80's) that was tempered by the draining of four Port Townsend Brewery kegs around the campfire in the evenings and a late night group swim in the lake. Jam sessions on guitars, mandolin, fiddle and harmonica provided music late into the night. Some ScCS firsts: belt buckle souvenirs and a newly created a ScCS Facebook page photo (albeit a bit hard to swallow for the diehard traditionalists, but a great organization tool) to share conference information and presentations. There was also a Fish Fashion Show featuring live music from Ken Bevis and the BT Lovers, with Pat DeHaan as our fabulous MC. Conference goers strutted their best fish clothing, and we were introduced to the new ScCS mascot (see photo below). The performance ended with the now traditional sing-along to a "Fish for Me" by Ken.

The conference closed with ScCS Achievement Awards for Best Picture (Sculpin choking on Sculpin by Josh Geffre and Yuki Reiss), Long Haul Award National (Elko, Nevada, Gary Johnson), Long Haul Award International (Montreal, Quebec, Fabien Hugue), Old Timer Award (2012 attendee at earliest ScCS meeting, Fred Goetz, Phil Howell, and Don Ratliff), and Site Fidelity Award (attendee with most ScCS meetings attended, 15, Don Ratliff).



Pictured above: Heidi Hugunin, William Meyer, Ashton Bunce, Karen Chang, Jeff Thomas, Yuki Reiss, Ken Bevis, Judy Neibauer and Bianca Streif (Wade Fredenburg and ScCS mascot in back).

### References

Cavender, T.M. 1978. Taxonomy and distribution of the bull trout, *Salvelinus confluentus* (Suckey) from the American Northwest. California Fish and Game 64(3):139-174.

Howell, P.J. and D.V. Buchanan. 1992. Proceedings of the Gearhart Mountain bull trout workshop. Oregon Chapter of the American Fisheries Society. Corvallis, OR.

Morton, W.M. 1980. Goodbye Dolly. Fisheries 5(3):17-21.

Wales, J.H. 1959. Dolly Varden of the McCloud. The Siskyou Pioneer 3(2):59-60.

Attachments

Attachment 1 – List of attendees (in order of sign-in) for the first ScCS meeting on May 18, 1989.

Don Ratliff – PGE Jeff Ziller – ODFW Brian Jonasson - ODFW Jim Newton - ODFW Jim Griggs - ODFW Craig Burns – USFS Mike Faler – USFS Shawn McKinney – USFS Frank Roberts - USFS Ken Wieman – USFS Dean Longrie - USFS Thom Johnson - WDW Doug Markle - OSU Rick Ragan – USFS Jennie Butts – USFS Tom Felando – USFS Walt Weber - ODFW Phil Howell - ODFW Dan Bottom - ODFW David Buchanan – ODFW Lee Hillwig – USFS Mark Shaw – USFS Kathy Anderson – USFS Dave Heller – USFS Peggy Busby - USFS Frank Shrier – PP&L Fred Goetz - OSU

Note: Del Skeesick did not sign the attendee list but he was present and led the meeting and discussion.

SCCA MEETING

NOTES:

The SCCA met May 10th and 11th, 1990, at Pioneer Fort Campground on the Metolius River.

Thirty-five interested biologists attended the two day session to look at juvenile bull trout rearing areas, bull trout spawning areas, and to see the trapping and tagging program that is currently underway at the head of Lake Billy Chinook.

Don Ratliff and Mike Riehle organized a full schedule for the afternoon, evening and morning sessions of the meeting.

After introductions the group organized into four survey teams and split up to inventory juvenile bull trout area on tributaries of the Metolius River. The streams included Jack, Jefferson, Candle, and Roaring Fork Creeks. These streams are standard inventory areas where the Oregon Department of Fish and Wildlife, PG&E, and U.S Forest Service have done juvenile inventories previously. this training was particularly appropriate to a number of the participants who will be doing bull trout inventories this year.

The group then reassembled and visited typical bull trout spawning area on Jefferson Creek and visited the huge springs that create Jack Creek and the head of the Metolius River.

After dinner, the group assembled around the campfire and held several discussions one of which was to agree, as an interim measure, to the categorization of bull trout populations that Don Ratliff had developed in cooperation with local biologists last winter.

PROBABLY EXTINCT CLACKAMAS NO.SANTIAM SO.SANTIAM M.F.WILLAMETTE UPPER DESCHUTES

NEARLY EXTINCT BOULDER CREEK LONG CREEK SUN CREEK ODELL LAKE

PRECARIOUS DEMING CREEK BROWNSWORTH CREEK LEONARD CREEK MCKENZIE M.F.MALHEUR HOOD R.

OF CONCERN UPPER MAIN JOHN DAY M.F.JOHN DAY TRIBS GRANDE RONDE WALLAWA N.F.MALHEUR

STABLE METOLIUS SHITIKE CR. WARM SPRINGS R.

Fred Goetz and Doug Markle gave presentations on their research that they have been doing on bull trout and bull trout hybreds. Jeff Dambacher gave us an update on the inventory of bull trout and bull trout habitat on Sun Creek in Crater Lake National Park. Mike Falor gave us a report and showed a video of his project inserting radio tags into the abdominal cavities of bull trout on Swift Reservoir in the Lewis River basin in southwestern Washington. After a 11:30 P.M. breakup of the meeting, a few hearty souls hung around the campfire to chat some more about bull trout and to finish off what refreshments were available.

After breaking camp Friday morning the group reassembled and discussed the appropriateness of bull trout reintroductions into previous habitat or new habitat that could be created for their benefit and also determined that the group would like to see some of the bull trout habitat and bull trout populations in Washington. Consequently there was a consensus decision that Mike Falor of the Gifford Pinchot National Forest would become Chairman of the SCCA and would develop the program for next year.

After taking care of the business of the day, the group was treated to a trip to Camp Perry South and a boat ride to the head of the reservoir to view the trapping operations being conducted by the Oregon Department of Fish and Wildlife and PGE. A number of bull trout and brown trout were tagged, other fish caught in the trap were rainbows, coarse scale suckers, and bridge lip suckers. By one o'clock the things to be seen in that area were covered so the group adjourned until we meet next year at somewhere in Washington, selected by Mike Falor and his group.

p.s. My thanks to all of you who have participated in our kickoff year. I have no doubts bull trout will receive much more attention in the future, and it is fun to be on the front side of the power curve for a change. Please give Mike Falor all the support and cooperation you have given me this year.

DEL SKEESICK

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	OAKRIDGE OR	97463
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	MCKENZIE BRIDGE OR	97413
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	BLUE RIVER OR	97413
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IOAH ADAMS	WIND RIVER RANGER DIST.	-0-
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	CARSON WA	98610

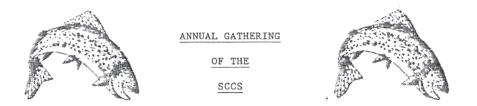
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Joel Walds

## ★★ANNOUNCEMENT★★



Greetings all Ye Bull Trouters! It's that time of year again, when all good SCCS members begin to think about the annual gathering (i.e. where, when, how, what, etc.). At last year's meeting, it was a group consensus that we need to expand our horizons and take a look at some of the bull trout populations that occur in Washington. It is my privilege to inform you that this year's activities will concentrate on the adfluvial populations that occur in the North Fork Lewis River reservoirs. Radio-tracking efforts in the Lewis River system during 1990 revealed some interesting differences in habitat use when this population is compared to the Metolius and Sprague River populations.

This year's gathering is scheduled for May 8,9, and 10, 1991, and will take place at the Pine Creek Visitors Center on the Mt. St. Helens National Volcanic Monument. For those of you who are unfamiliar with the area, the Pine Creek Visitors Center is about an hours drive northeast of the Portland/Vancouver metropolitan area. A detailed map will be sent along with this year's agenda when it is completed.

Due to the hydrograph on west side streams, we typically have poor success electrofishing for juvenile fish until mid to late summer, so stream sampling will most likely not be on the agenda. However, we do plan to visit some of the most important tributaries that produce bull trout in this system to give the group a "feel" for "rightous bull trout habitat" in the Lewis River Drainage. During May, adults seem to be susceptible to sampling in Swift Reservoir, so we would like to schedule one day of the agenda to collect adult bull trout for our radio-tracking program. The group will be able to witness the surgical methods used for transmitter implantation in bull trout.

#### EQUIPMENT NEEDS

Anyone who has a boat and/or lake sampling equipment (i.e trap nets, gill nets, electrofisher, etc.) is strongly urged to bring it along. We currently have 4 boats for the program, but obviously this is not enough to accomodate the entire group. Our most productive method of capture in 1990 was short-term gill net sets, but we think some large trap nets (like those used in Lake Billy Chinook) would be just as efficient.

#### CALL FOR PRESENTATIONS

This is your chance to share information about any bull trout projects you may have started or have planned. We will treat presentations on a first come-first served basis, so let us know ASAP and we'll get you on the agenda.

#### CALL FOR PARTICIPANTS

In order to adequately accomodate the group, we would like to get a "head count" of potential attendees. Anyone with boats, sampling equipment or a potential agenda item may submit the information at the same time. For your convenience, we have enclosed a registration form for you to fill out and return. Please respond by March 27 so we can finalize the agenda, and secure facilities at the Visitor Center.

:	REGISTRATION FORM
NAME	NUMBER OF ATTENDEES
ADDRESS	
CITY	STATE ZIP CODE
SAMPLING EQUIPMENT	
BOAT (YES OR NO)	
	* * * *
PRESENTATION (YES OR NO)	TIME NEEDED
PRESENTATION TITLE:	

Mike Faler Gifford Pinchot National Forest OR DG to M.FALER:R06F03D08A Wind River Ranger District Carson, WA 98610

#### Bull Trout Meeting

The third annual meeting of the <u>Salvelinus confluentus</u> Curiousity Society (SCCS) occurred on May 8-10, 1991 at the Swift Campground on Swift Reservoir, Washington. Opening remarks were presented by current president Mike Faler (USFS). Presentations on local geology (Mt. St. Helens) and local bull trout populations were presented by Bob Lucas (WA Dept. of Wildlife) and Mike Faler. Pat Trotter provided an interesting presentation on mitochondrial DNA analysis for genetic characterization of bull trout the advantages being nonlethal tissue collection and high sensitivity of the procedure. Mike Riehle and Steve Thiesfeld gave an overview of bull trout studies on Lake Billy Chinook and the Metolius River drainage.

Several attempts were made to capture and radio tag adult bull trout for a distribution and spawning study currently going on in Swift reservoir. Discussion(s) occurred over the potential for federal and state listing of bull trout. The group determined the consequences for trying federal listing as:

1) May be shelved for lack of importance;

 May severely limit future actions associated with stock specific work;

May impact endangered species act in positive or negative way;

4) If listed we would still have versatility in managing stocks;

5) Listing would bring alot of attention to bull trout;

 $6) \,$  Listing of stocks may confuse other issues and stock status information; and

7) Attempting to list several stocks may be more labor intensive.

It was determined that state listing may be easier and may or may not provide the needed protection at this time.

Mike Riehle was elected the new president for 1991-92.

Frank Shrier - Co-chair Natural Production Comm. 3RD ANNUAL SCCS MEETING

MAY 8-10, 1991 SWIFT CAMPGROUND SWIFT RESERVOIR, WA

#### 5/8/91

1030 - Meeting called to order by Mike Faler, Introductions stated.

1100 - Mike Faler gave an overview of the SCCS, their activities, goals and meetings to date.

1130 - Ken Weiman presented an overview of the Mt. St. Helens eruption and its effects on the North Fork Lewis Watershed.

1300 - Bob Lucas summarized efforts to delineate bull trout distributions through snorkeling and electrofishing in the North Fork Lewis River.

1315 - Mike Faler presented his radio-telemetry data for bull trout in the North Fork Lewis River.

1345 - Pat Trotter presented his proposal, methodologies and benefits of mitochondrial DNA analysis for genetic characterization of bull trout in the Pacific Northwest. Anyone wishing to collect tissue samples for Pat Trotter should contact Mike Faler (509) 427-5645, and Mike will be more than happy to send you all the Cryovials you need to collect tissue samples.

1415 - 1530 - Mike Riehl and Steve Thiesfeld gave an overview of bull trout studies on Lake Billy Chinook and the Metolious River Drainage. Data presented included growth rates, migration, catch rates, distribution and redd surveys.

1530 - Dan Schill evaluated methods to enumerate bull trout (day/night snorkeling and electrofishing) in addition to the use of otoliths and scales to age bull trout.

1600 - Curt Kraemer utilized the linear discriminate function developed by Haas (1988) in attempt to distinguish between bull trout and dolly varden in the North Puget Sound area. His results showed no difference between these two species using the methods developed by Haas.

1745 - An attempt was made by the group to capture adult bull trout out of Swift Reservoir for radio-tagging. No fish were caught.

#### 5/9/91

0700 - The group met at swift boat ramp for another attempt to capture adult bull trout for radio-tagging. A total of 11 bull trout were captured in the upper quadrant, 5 of which were of appropriate size ( >3 lbs.) to radio tag, and all 5 were successfully tagged. The other 6 fish were marked with floy tags for a multiple mark and recapture estimate. Oregon Public Television arrived in late morning, and was able to film some bull trout surgery. OPB will be televising a special on bull trout in the northwest sometime in October.

1200 - A portion of the group went on a tour of the upper North Fork Lewis to visit some of the bull trout streams in the drainage. Most people were impressed with Rush Creek. Del Skeesick suggested we might want to redefine "rightous bull trout habitat".

1630 - The Mt. St. Helens Ranger District provided the group with some "serious" chili. Thank you Ken Wieman and crew--It was an experience.

1830 - Mike Riehle was appointed the new president of the SCCS effective as soon as Mike Faler sends him the appropriate material. Some of the ideas for Mike to pursue could include the addition of a bull trout subcomittee in oregon AFS, and development of an SCCS newsletter. One suggestion for a title of the newsletter is the "Bull Sheets".

1845 - Tom Macy led a group discussion about bull trout management by genetic stock or race.

The discussion immediately went to potential for listing both federal and state. The following is a summary of criteria for listing:

FEDERAL

- 1. Species must be reproductively isolated.
- 2. Species must be of evolutionary or ecological significance.
- 3. Species must be declining.

STATE

1. Easier to list with the state.

2. different states have different criterion.

Are bull trout truely a distinct species or should they be lumped with dolly varden? Consensus: Distinct species. Limited discussion on this being a stumbling block to listing.

Are bull Trout declining? We all agreed that they were declining throuhout their range, however, the representative from Idaho said that did not have the numbers to show this and they did not think they were coming soon and numbers may not be conclusive. No definitive comment from Washington representatives. Some think that the Lewis river stock might be stable. Oregon, Oregon Trout (Don Ratliff), have prepared a potential listing paper identifying the decline in Oregon and the current status of stocks. Tom Macey had run the idea by Denny Lassuy USFWS Portland, and he said that for federal listing declines and status throughout their range would need to be documented, the Oregon document would be sufficient (to be considered for listing) if duplicated for the rest of the range. While numbers data helps in evaluating stocks it may not be necessary for a good petition for listing, according to Denny Lassuy (this guy sure has a lot of input considering he was not there).

The consequences of trying for federal listing: 1. May be shelved for lack of importance? 2. May severely limit future actions associated with stock specific work. 3. May impact endangered species act in positive or negative way. 4. If listed we would still have versatility in managing stocks. 5. Listing would bring a lot of attention to bull trout. 6. Listing of stocks may confuse other issues and stock status information. 7. Attempting to list several stocks may be more labor intensive.

State listing may be easier and provide needed protection at this time. State listing may not give the protection needed at this time.

#### 5/10/91

0700 - Group met at swift boat ramp to capture adult bull trout in other quadrants of the reservoir. No bull trout were captured.

1030 - Meeting adjourned. Please give Mike Riehle all the support you have given Del Skeesick and Mike Faler in the past two years. Thanks to all who participated in this year's workshop.



Newsletter of the Salvelinus Confluentus Curiosity Society

Vol. 1:1

A CALL FOR ASSISTANCE

CRATER LAKE NATIONAL PARK SUN CREEK, OREGON

Through efforts to learn more about the interactions of bull trout and brook trout, Crater Lake National Park has been studying both species in Sun Creek, a small headwater stream flowing off the southeastern slope of the caldera. The bull trout population, estimated to be less than 150 fish, have been found in only one reach of stream, and is threatened by an abundance of brook trout found both upstream and downstream.

This summer, Crater Lake National Park is implementing a project to remove the exotic brook trout from Sun Creek and build barriers to prevent their return. Planning for the project has been extensive and has involved specialists that have worked with a similar project for the Kern River golden trout in California.

The rehabilitation of Sun Creek is the first attempt of this scale to protect a bull trout population from the encroachment of brook trout, and WE NEED YOUR ASSISTANCE. Brook trout will be removed from the stream by electrofishing and later by chemical treatments in selected sections. Your assistance is needed during the electrofishing stage of the project, during the week of August 17-21, 1992. This will be a chance to be involved and learn the techniques being used. In addition, there will be discussions of the projects design with its planners, as well a review of the status of other sympatric populations.

Please contact Mark Buktenica, Aquatic Biologist, Crater Lake National Park at (503)594-2211 to schedule the days you can help in this effort and answer any questions. Even one day of assistance will help! Biologists that attend are being asked to bring equipment to aid in the effort, including waders or hipboots, block nets, dip nets, and a backpack electroshocker. Overnight camping is available in the nearby Mazama Campground but securing a campsite early in the day is advised. Portions of Sun Creek require hiking for access and appropriate boots will be helpful.

Come and assist us in this important effort to protect the bull trout of Sun Creek. See you there!

MICHAEL RIEHLE SCCS Director (503)549-2111





 Newsletter of the Salvelinus Confluentus Curiosity Society
 Vol. 1:2

 P.O. Box 1735, Sisters, Oregon 97759
 (503)549-2111
 June 6, 1993

The Salvelinus Confluentus Curiosity Society, or SCCS, was formed by concerned biologists to promote the exchange of information concerning bull trout throughout their range and speed the transfer of information gained from ongoing studies. With the current petition before the U.S. Fish and Wildlife Service for a status review of bull trout under the Endangered Species Act, this exchange of new information is even more important.

Last year SCCS requested your assistance in the removal of brook trout from Sun Creek to protect bull trout. That effort was a success! The team, headed by Mark Buktenica of Crater Lake National Park, removed brook trout and installed barriers to prevent their return to native bull trout habitat. Mark will be monitoring the stream to evaluate the success of the work.

I hope the society can meet this summer to not only provide field assistance to learn more about bull trout locally but to exchange recent, cutting-edge information as well. Presentations on current studies and habitat work being done will be valuable as new work is being initiated throughout Bull Trout range.

We invite you to attend a three day workshop at Catherine Creek, a tributary to the Grande Ronde River. The workshop will start with an information exchange by biologists reporting their work in bull trout. The second day and half of the third day we will go to the field, assisting area biologists in sampling streams in the Grande Ronde drainage, defining bull trout present distribution in that system.

The focus of the workshop is sampling techniques. So bring what you've learned and share it with others. Much of the work in bull trout is recent and not yet published. This is a good way to shorten the lag between lessons learned and application to the field.

Please fill out the enclosed registration form and return by June 25, 1993. Registration will help us plan the workshop. We hope to see many more biologist from Idaho and Montana at this session to make the information exchange even more valuable. See you at Catherine Creek!

Sincerely,

Miko, Richle

MICHAEL RIEHLE SCCS Chairman

#### "The Fish for me"

#### Composed and written By Ken Bevis

#### For the 2005 Salvelinus confluentus Curiousity Society Meeting Glacier Park, Montana

#### <u>Chorus</u>

Salvelinus confluentus You are a curious fish If I had to make one up You'd be my wish

You live high in the mountains In the crystal Clear Water With the mountain beaver And my buddy the otter

Confluentus You're the fish for me

#### 1.

They said you were The handsomest trout Then put a bounty on your head and tried to fish you out Wanted you in the skillet, Not swimmin' free And they say you got a thing For your eastern cousin Yeah, they're kind of cute, But they're a dime a dozen Oh, Confluentus Please be true to me.....

(Chorus)

#### 3.

And now you're in A world of hurt From habitat loss, exotics and dirt, But don't worry Darlin' I'll stand by you

As long as there's water Fallin' from the sky You'll be the finny Apple of a my eye,

Oh Confluentus That's no bull....

(Chorus)

#### Confluentus, you're the fish for me

(Chorus)

But now we knows

The ecosystem

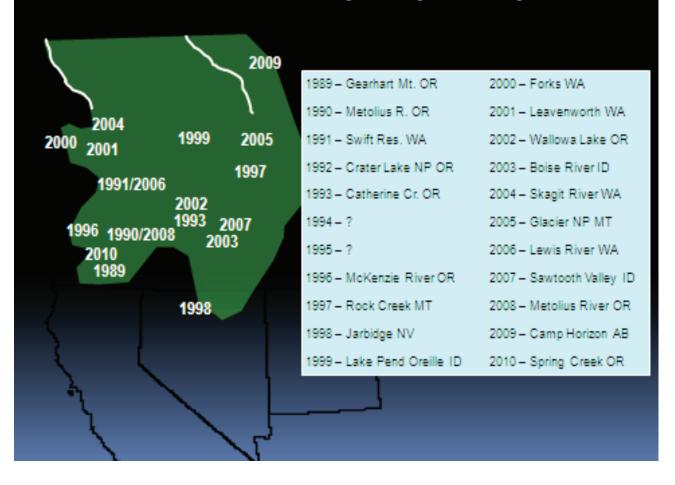
Your finny toes

Rests upon

#### 2.

Well, they say you'll switch to anadromous That don't bother me much I won't make a fuss, But when the run is done, Swim home to me....

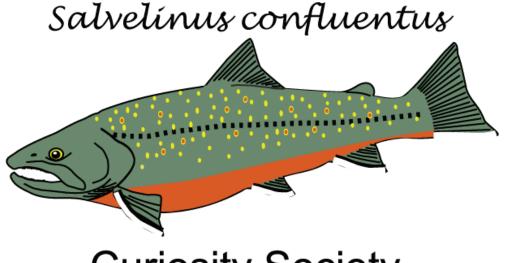
## Salvelinus confluentus Curiosity Society Workshops



Locations of past ScCS Workshops (courtesy of Phil Howell; modified by Frank Shrier)

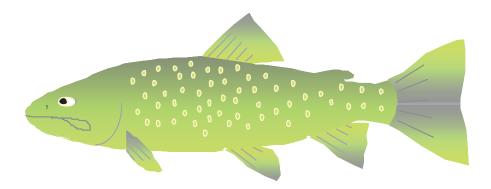
## Logos used in past ScCS Workshops

## 2004



# **Curiosity Society**

2005







None available for 2008



#### Excerpt from: Conservation Magazine. Spring/Summer 2010. Alberta Conservation Association

## Conservation in Action

Canada and the US: Conference puts Alberta on the Map of Bull Trout Conservation ften times the most inspiring part of conservation isn't the achievement so much as it is the passion that motivates people to do something that makes a difference.

So when a handful of researchers in the Pacific Northwest expressed concern to one another about the declining numbers of bull trout in their regions, they decided to get together to talk about it – not in some boardroom with catered lunch, but in tents, in a field, on their own time and their own dime. From these humble, informal, collaborative beginnings the *Salvelinus Conflentus* Curiosity Society (SCCS) was born.

At the time, bull trout conservation wasn't part of anyone's work plan, but it was quickly included following that first fireside 'conference.' Though the bull trout has since become a priority species for many agencies, the ScCS continues to meet for their annual Conference outside of any official

framework. In fact, many delegates still devotedly attend on their own personal time and budget, driving their own vehicles with family in tow.

#### by Nicole Nickel-Lane

ALBERTA CANADA CANADA COMPACTIVIC

'US

# Why this extraordinary level of dedication?

The goal of the ScCS was set during that first Conference in 1989: To share knowledge and energies to develop rational management of wild bull trout stocks and habitat in the northwest. The Society doesn't come up with a universal bull trout management plan since most are already underway at the agency level. Rather, the meetings function as a sounding board, an open

forum in which to share problems, best practices, what can be done and how to move forward. This open exchange of information allows bull trout biologists and agency officials to learn from one another, do more with less staff, use angler dollars more wisely, and generate better reports and data to manage the species most effectively. And this, it seems, has made the biggest difference in the conservation of bull trout throughout western Canada and the northwest USA.

Today, the Conference consists of two and a half days of formal presentations planned around a day of field work where participants assist with ongoing bull trout studies occurring in local watersheds. Typically the meeting is attended by 60-100 people including biologists and agency representatives from across the Pacific Northwest, British Columbia and Alberta. The agenda is relatively informal, which helps foster camaraderie and an atmosphere of collaboration amongst participants.

The highlight of the agenda is the field day, which provides an excellent opportunity for delegates to see bull trout in other habitats and in conjunction with other land use programs. Exposure to the same species in different habitats offers valuable alternate perspectives to common problems.

### An Albertan perspective

ACA was proud to host the 2009 *Salvelinus conflectus* Curiosity Society Conference in Kananaskis Country, Alberta – the first time this meeting has been held outside the USA.

ACA representatives have attended and presented at the ScCS Conference for several years. After volunteering to host the gathering in 2007 and 2008, the Society agreed to come to Kananaskis Country for the 2009 Conference to get a uniquely Albertan perspective on management of the species and its habitat.

Bull trout are classified as *Threatened* in the US, meaning that as a legallyprotected fish, there are far stricter regulations surrounding where they can be angled and how they can be handled – if at all. By contrast, they are classified as a *Species of Special Concern* in Alberta; the regulations are far more relaxed. US biologists attending the Conference in Kananaskis enjoyed angling for the species, handling and observing them in a far more handson manner than permitted in many areas in the US. Add to this that some of Alberta's bull trout haven't experienced the severe declines of many US populations, and there is an even greater opportunity to see relatively healthy populations.

For Albertan delegates, the Conference presents an invaluable opportunity to tap into the wealth of knowledge being generated and shared by our US counterparts. Survey methodologies learned from US programs have been applied with great success here in Alberta as well, the data from which has helped direct our own management of the species. More importantly, though the ScCS began as a US-based conservation effort, our participation in the Conference has firmly put Alberta on the map of bull trout conservation.

The 2010 Salvelinus Conflectus Curiosity Society Conference will be held at Wood River in southern Oregon's Klamath Basin drainage. For more information on bull trout in Alberta or the ScCS 2009 Conference in Kananaskis, please contact ACA's Kevin Fitzsimmons or Mike Rodtka (1-877-969-9091). ■

#### Why do bull trout need active conservation?

AGGRESSIVE EATERS. They are easily angled and therefore easily overfished.

#### SPECIFIC HABITAT REQUIREMENTS.

They need cold water to survive and don't like anything that increases the turbidity of the water (such as industry or road construction), and they like complex, interconnected habitat.

COMPETITION. They compete directly with brown and brook trout for food.

## 2011 ScCS Logos





2012 ScCS Belt Buckle



### Salvelinus confluentus Curiosity Society Lake Crescent, Olympic National Park, Washington August 15-17, 2012

We	dnesday, August 15, 2012 at Storm King Hall
9:00 am to 11:35 am	Registration & check-in to cabins at Naturebridge
12:00 pm to 12:30 pm	Welcome & program overview
12:30 pm to 1:00 pm	Migration across borders: An overview of the Olympic Peninsula & Salvelinus (Sam Brenkman, Olympic National Park)
1:00 pm to 1:45 pm	Why char are like onions: Peeling away the layers of char biodiversity & their implications for conservation with special reference to bull trout north of the 49th parallel (Eric Taylor, University of British Columbia)
1:45 pm to 2:15 pm	<b>Elwha River restoration: Setting the baseline before dam removal</b> (Jeff Duda, USGS Western Fisheries Research Center & George Pess, NOAA Fisheries)
2:15 pm to 2:30 pm	Break
2:30 pm to 2:50 pm	Genetic population structure of Olympic Peninsula bull trout & implications for Elwha Dam removal (Pat DeHaan, USFWS)
2:50 pm to 3:10 pm	Flying fish: Translocation of bull trout before large-scale dam removal (Heidi Hugunin & Anna Torrance, Olympic National Park)
3:10 pm to 3:30 pm	Marine habitat use by anadromous bull trout from the Skagit River, Washington (Fred Goetz, USACOE & Mike Hayes, USGS, Western Fisheries Research Center)
3:30 pm to 4:15 pm	A seven decade sportsman's perspective of Olympic Peninsula rivers & char (Dick Goin, Angler & Observer)
4:15 pm to 4:30 pm	Summary of online bull trout questionnaire (Yuki Reiss, Yakima Basin Fish & Wildlife Recovery Board)
4:30 pm to 4:45 pm	Meet with field teams
4:45 pm to 6:00 pm	Check-in to cabins at Lake Crescent/Evening social
6:00 pm to 7:00 pm	Dinner
7:30 pm to 8:30 pm	<b>Communicating fish conservation &amp; promoting aquatic awareness</b> (John McMillan, NOAA Fisheries & Jeremy Monroe, Freshwaters Illustrated)
	Thursday, August 16, 2012
7:00 am to 8:00 am	Breakfast & prepare boxed lunch
8:00 am to 6:00 pm	Field trips to Peninsula rivers
6:00 pm to 7:00 pm	Dinner
7:00 pm	Evening social, field reports, & special performances
	Friday, August <b>17, 2012 at Storm King Hall</b>

7:00 am to 8:00 am	Breakfast & prepare boxed lunch
8:00 am to 8:20 am	Recruitment & population dynamics of bull trout at Lake Billy Chinook, Oregon (Don Ratliff, Portland General Electric)
8:20 am to 8:40 am	Bull trout-Does one size fit all? (Jim Byrne, WDFW)
8:40 am to 9:00 am	<b>Development &amp; corroboration of a bioenergetics model for bull trout</b> (Matt Mesa, USGS Western Fisheries Research Center)
9:00 am to 9:20 am	Modeling bull trout spawning habitat selection using spatially continuous surveys (James Lamperth, WDFW)
9:20 am to 9:40 am	Potential effects of wildfire on population resilience of bull trout in the Wenatchee River watershed (Becky Flitcroft, USFS, Pacific Northwest Research Station)
9:40 am to 10:00 am	Break
10:00 am to 10:20 am	Using the past as a guide to the future for conserving bull trout in the <b>21</b> <sup>st</sup> century (Clint Muhlfeld, USGS, Northern Rocky Mountain Science Center)
10:00 am to 10:20 am 10:20 am to 10:40 am	
	21 <sup>st</sup> century (Clint Muhlfeld, USGS, Northern Rocky Mountain Science Center) Current knowledge about bull trout life-history & ecology: Time for a gut check & a plan for moving forward
10:20 am to 10:40 am	<ul> <li>21<sup>st</sup> century (Clint Muhlfeld, USGS, Northern Rocky Mountain Science Center)</li> <li>Current knowledge about bull trout life-history &amp; ecology: Time for a gut check &amp; a plan for moving forward (Robert Al-Chokhachy, USGS, Northern Rocky Mountain Science Center)</li> <li>Time, space, &amp; the thermal niche of fluvial bull trout</li> </ul>
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