

VOLUME 43 | ISSUE 2 | SUMMER 2019

TRIBUTARY

Western Division of the American Fisheries Society

In this issue

President's Hook

Cutthroat Genetic Conservation

Idaho Coldwater Fish Culture

and more

President: Jackie Watson **Vice President:** Todd Pearson

Sec.-Treasurer: Tracy Wendt **Past-President:** Brian Missildine **President-Elect:** Daniel Dauwalter
Student Representative: Britta Baechler **Tributary Editors:** Niall Clancy & Tim D'Amico

PRESIDENT'S HOOK**Top 10 Reasons Y'all Should Come to Reno****Rob Titus** (President-Elect, AFS Cal-Neva Chapter)

Last year's Annual Meeting of the American Fisheries Society (AFS) was cool—Atlantic City, the Boardwalk, the shore, and the Atlantic Ocean right there! For us westerners, it took a few days before we got used to the idea of the sun rising over the ocean, instead of setting over the ocean. But we mastered that, along with all the new scientific knowledge, organizational training, professional networking, and motivational inspiration that we could possibly absorb during that eventful week. For those of us in officer positions in the California-Nevada Chapter and Western Division of AFS, we came home with a clear bead on a fuzzy target of what planning a meeting of that magnitude really involved. Times two... Times two, in that this year, AFS is teaming up with The Wildlife Society (TWS) to host the first-ever joint conference of the two societies in Reno, Nevada, September 28–October 3. Imagine, up to 5,000 attendees, representing the single greatest assemblage of fish and wildlife professionals in the history of mankind! That statement may sound too sensationalistic to be true, but given that Nevada is a gambling state, we'll bet you that it's true! Go west, young man, woman, child, and all, whether ye be clad in neoprene Simms waders, camo fleece, Patagonia puffer, or just good ol' scientist garb, we welcome y'all to the Silver State for this once-in-a-generation gathering to partake in all that the Wild West environment of Reno has to offer! The conference program is going to be one of the most diverse programs you can imagine, given the combined purviews 264 Fisheries | Vol. 44 • No. 6 • June 2019 of the two societies. This year, AFS alone has accepted over 90 symposia (available: <https://afs.confex.com/afs/2019/webprogram/preliminary/SYMP.html>), many of which are fisheries-wildlife crossover sessions, and there are another 50 symposia with invited speaker lineups on the TWS side. Discuss your work with colleagues conducting similar work, meet fellow students, network with professionals, see old friends and meet new ones, to mentor and be mentored, and simply experience all the unexpected enrichment that will come your way through chance encounters with diverse attendees at this meeting. Take your scientific curiosity outside of the meeting rooms, and into the singular Great Basin environment within which Reno is contained. If you fly into Reno, you will quickly see what we mean. Even from a jackalope's view on the ground, the setting is dramatic, with the eastern escarpment of the Sierra Nevada rising abruptly from the desert floor, giving way to the basin-and-range landscape of sagebrush

and pinyon pine that stretches all the way into neighboring Utah. Still longing for the shore? No problem. Remnants of Lake Lahontan, a massive pluvial waterbody that filled much of northwestern Nevada during the last ice age, still remain in the form of Pyramid and Walker lakes. Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi*—the largest of the Cutthroat Trouts, historically ranging up to 40 lbs—swim in Pyramid Lake, 35 mi northeast of Reno. As luck would have it, fishing season at Pyramid opens during the conference on October 1! Come to Reno to partake in this momentous event! This is a perfect time of year to visit Reno, with daily temperatures ranging up to about 75°F. The fall foliage in the surrounding mountains will be at its peak of showy fall colors, with the yellows, oranges, and reds of the quaking aspens standing out brilliantly against the gray-green background of sagebrush and pinyon pine. Reno itself still features gaming and entertainment that are the hallmark of Nevada, but is also a city undergoing a cultural and civic makeover with an eclectic and interesting diversity of restaurants, museums, art, and music that reflect the interface of the region's western heritage with cosmopolitan influences. Outside magazine voted Reno as one of the 25 best towns of 2017, noting it as "best low-key hideout" for outdoor enthusiasts using the town as basecamp for their adventures. Blocks of rooms are available for meeting attendees to reserve at the Peppermill and Atlantis resorts, the latter of which is connected by way of a skybridge to the Reno-Sparks Convention Center, where the majority of meeting proceedings will be conducted. Book early, as this meeting promises to be a big draw! And so finally, here are our top 10 reasons y'all should come to Reno:

1. Did we mention that this meeting—the single greatest assemblage of fish and wildlife professionals in the history of mankind!—is a once-in-a-generation opportunity to expand your professional network? Yep, it's true. You simply do not want to miss the opportunity to be a part of this sweet piece of fish and wildlife history!
2. For your inner history buff, visit Berlin-Ichthyosaur State Park to tour a true western ghost town and the most abundant concentration of ichthyosaur fossils in North America. Or, drive 26 mi southeast of Reno to Virginia City and transport yourself back in time to the Wild, Wild West and home of the Comstock Lode. Don't forget to sidle up onto a stool at the Bucket of Blood Saloon for a cold one!

PRESIDENT'S HOOK, *continued*

3. Great fishing! As luck would have it, Lahontan Cutthroat Trout fishing season opens October 1. One of the field trip offerings for the meeting is a semi-guided fishing trip to Pyramid Lake (will be available outside regular registration—watch for online postings). This is an extremely unique opportunity to fish for the Nevada State Fish. The lake is also home to a large, endemic sucker, the federally endangered Cui-ui Chasmistes cujus (looks like it rhymes with Huey, Dewey, and Louie, but is actually pronounced KWEE-wee from the native Paiute language). The Cui-ui co-evolved with Lahontan Cutthroat Trout and is part of the reason the latter reach such large sizes. Pyramid Lake also features interesting geologic formations, and incredible tribal culture and history. The Paiute tribe operates the Pyramid Lake Museum and Visitors Center in Nixon, Nevada, near the lake, where Pyramid Lake fishing permits may be purchased.
4. Two other field trips are also in the works for meeting attendees who want to experience the great outdoors that is so defining for Reno. The Truckee River runs right through the center of downtown Reno and is the ecological lifeline between Lake Tahoe, a large alpine lake straddling the California–Nevada border just southwest of town, and Pyramid Lake. Take advantage of the opportunity to visit these national treasures with knowledgeable local guides. Look at how restoration actions are reconnecting Lahontan Cutthroat Trout and Cui-ui with their historic spawning grounds in a tour of the lower Truckee River. How about a day trip to the high-mountain setting of Lake Tahoe for a tour of limnological and fisheries work being conducted there? You'll find more information and the opportunity to sign up for these field trips when you register for the meeting.
5. Get Smart... through Continuing Education, of course! No conference would be worth its weight—even in fool's gold—if it didn't have a solid lineup of Continuing Education (CE) offerings. Peruse the listing of courses at registration to figure out what best suits your needs, interests, and schedule. Need to figure out what to do with all of those messy fisheries data? No sweat! Just put a little bit of R in your life with a CE course at the beginning or intermediate level. Feeling lost in your study area? How about some GIS training to get you back on track? If you want to tap into a major ecological data sharing network, then brighten your prospects with a shot of NEON! Whether you need to freshen up your beginning stats skills, want to figure out your chances of winning big at the tables in Reno with some Bayesian probability analysis, need to get over that negotiations hump with stakeholders through enhanced conflict resolution skills, or simply desire to be a more effective leader in AFS, the lineup of 15 or so CE courses that AFS staff and CE chairs are working on will help meet your professional development needs.
6. Lace up your running shoes and join us for the annual Spawning Run at Bartley Ranch Regional Park. Get out and smell the sagebrush with a little workout before another busy day of meetings and talks!
7. Take the kids over to Terry Lee Wells Nevada Discovery Museum. There are more than 120 hands-on exhibits including Truckee Connects and Inside Out: an Anatomy Experience (<https://nvdm.org/>)
8. With over 2,000 oral and poster presentations, we know you will find exactly what you're looking for to keep yourself engaged and up-to-date with the latest fisheries techniques and scientific takeaways. Take some time to explore new topics "Just for the Halibut!" All TWS and AFS presentations are open to all meeting attendees, so the choices will be enticingly vast and diverse. [Fisheries | www.fisheries.org](http://www.fisheries.org) 265
9. Rent a kayak or standup paddleboard and explore Lake Tahoe on your own. Tahoe is the largest alpine lake and second deepest lake in North America. You don't want to miss Tahoe Blue!
10. Reconnect with old friends, but, more importantly, make some new ones at seven different meeting social and networking events, ranging from an all-inclusive Welcome Social on Sunday evening, to the Tradeshow and Poster Networking Event on Monday, the Student–Professional Mixer on Tuesday, and an evening of Affiliated Networking Events on Wednesday. Plan on getting out to mingle and make those connections that can help shape or inspire your work or even serve as a game changer in how you pursue your educational and career pathway. Many folks will be attending their first Society meeting in Reno. Make sure to show off our inclusive and welcoming spirit by branching out and introducing new people into your circle of colleagues!



Western Division
American Fisheries Society

EDITORIAL

Genetic Conservation of Westslope Cutthroat Trout

Jimmy Dunnigan (Montana Fish, Wildlife & Parks)

In the summer of 2018 16,000 Westslope Cutthroat Trout (WCT) were air dropped into Sunburst Lake in the Bob Marshall Wilderness of northwest Montana, becoming the last lake to be sequentially stocked in a decade long effort to restore WCT in 21 lakes within the South Fork of the Flathead River drainage — a drainage which currently represents the largest intact, genetically unaltered metapopulation for this species in the state. The WCT fingerlings that were stocked into Sunburst Lake, and several other lakes, aren't your average hatchery reared trout. These fish, raised at Montana FWP's Sekokini Springs Hatchery, come from stocks made up of wild, locally adapted, genetically pure parents that inhabit the headwater streams of the South Fork, above Hungry Horse Reservoir. Sekokini Springs Hatchery and Research Facility is used to help conserve the genetic integrity of westslope cutthroat trout in the Flathead Subbasin. In Montana, WCT are designated a "species of special concern" whose range has dwindled down to less than 10% of its historical distribution in the United States. For the last several years, field crews have collected wild juvenile WCT from these headwater streams to be used as donor stocks for re-establishing pure WCT populations in lakes that have been treated to remove non-native trout, preventing the downstream expansion of hybridization in the South Fork drainage. Once collected, the juveniles are transported to Sekokini Springs where they are held in isolation until genetic and disease analyses ensures they are genetically pure and free of all reportable pathogens. At the hatchery, the fish are raised until sexually mature and viable.

Each individual, identifiable by a unique PIT tag, is monitored from the time of its arrival at the hatchery and spawned only once so that the fry used for restocking the lakes are genetically representative of the donor population, and most fit for their new environment. Using this "nearest neighbor" stocking approach allows us to provide these restored mountain lakes with evolution to proceed with minimal human impact as possible. In addition to our indoor raceways, the hatchery is equipped with 4 outdoor rearing ponds, allowing us to raise fish in a more natural environment, while also providing research opportunities on post-stocking fitness and survival of the different hatchery environments. Working directly with FWP's Mountain Lakes program, post-stocking monitoring is currently in progress to assess the relative performance of these unique populations over time, and the knowledge gained will be beneficial with future conservation efforts. As we approach the 2019 field season, FWP is collaborating with the National Park Service to conserve WCT in the Camas drainage, above Arrow Lake. Using similar approaches to those used in the South Fork, Lake Evangeline, Camas Lake and Camas Creek will be treated to remove non-native Yellowstone Cutthroat and restocked with local WCT donor strains to reestablish native fish assemblage. We're looking forward to this project.



Oncorhynchus clarkii lewisi © Joseph R. Tomelleri

LOOKING FOR A WAY TO NETWORK AND CONTRIBUTE AT THE 2019 AFS/TWS JOINT MEETING IN RENO?

Be a moderator for a contributed paper session.

One of the best ways to develop your professional network is to act as a session moderator at a conference in your field. Not only does this associate your name with a topic area, but you'll also have the opportunity to connect with your peers and meet top researchers in your field.

The Program Committee is seeking moderators for over 20 Contributed Paper Sessions. There are a variety of sessions covering topics from Fish Health to Marine Fish Ecology and sessions are available throughout the week. If interested in volunteering please contact Laurie Earley (laurieearley@outlook.com) and Steve Brumbaugh (smbrumbaugh@gmail.com) ASAP.

Moderating is a great skill to hone. Don't worry if you have not moderated before – we'll provide tips and guidelines. Plus it's rewarding to contribute to a well-run session. We couldn't have a successful meeting without our volunteer moderators. Thank you!



Lake Tahoe

GRANT UPDATE**WDAFS Funds Idaho Coldwater Fish Culture Course**

Eric Pankau

The University of Idaho is offering an intense 5-day course this July geared toward young professionals working with salmonids in culture facilities within State, Tribal, Federal, and Private entities. This course will focus on cold water aquaculture and will include anatomy and physiology, fish health and reproduction, biosecurity, genetics, nutrition, and much more. The course will also be a great opportunity to refresh on aquaculture techniques and learn about new methods and technologies. Daily lectures will be followed up with labs and practical hands-on activities. There will also be a full day of Hagerman area farm/hatchery tours.



The Idaho Chapter of the American Fisheries Society Aquaculture Committee is sponsoring fully paid attendance for two Idaho college students in this training. The students chosen for this opportunity, through a competitive application process, are Merissa Lemons and Alex Moyes (both of Brigham Young University Idaho). This is a great educational opportunity for these students to expand their understanding of aquaculture as an industry and management tool in Idaho. Funding includes course registration, lodging and per diem. The funding for this project is provided jointly by the Western Division and Idaho Chapter of the American Fisheries Society.

**Western Division
American Fisheries Society**

Save the Date!

Join us for the AFS Western Division Meeting
Hosted by the WA-BC Chapter in 2020
April 12-16, 2020
Pinnacle Harbourfront Hotel, Vancouver, BC

Photo by Max Pixel credited for use under the Creative Commons License

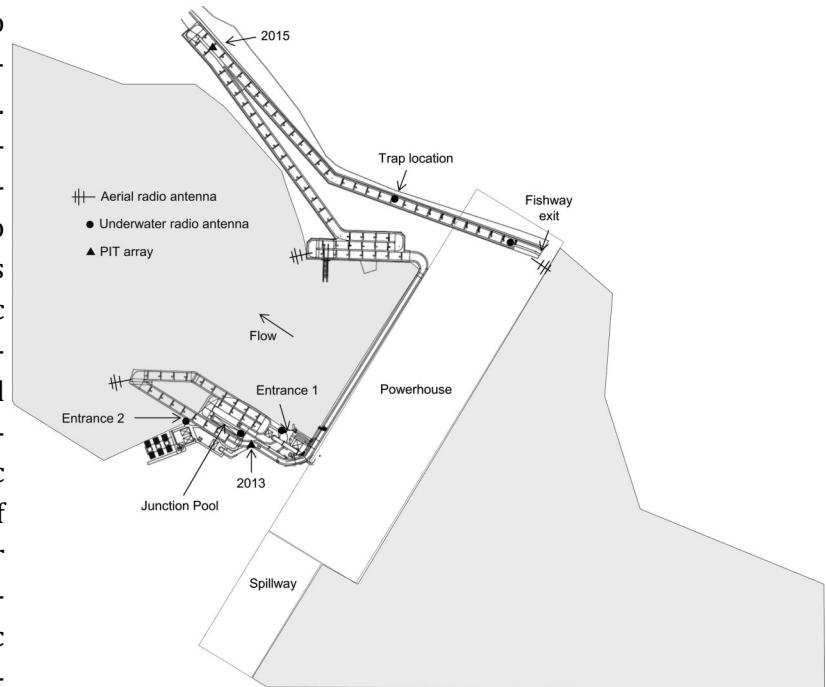
JOURNAL FEATURE

Passage Effectiveness at a Pool-and-Weir Fishway Designed to Accommodate Pacific Lamprey

Nicklaus K. Ackerman, Brian J. Pyper, Margaret M. David, Garth J. Wyatt, Dan P. Cramer, and Timothy M. Shibahara

Abstract:

Providing passage at man-made barriers is important to preserving migratory fish species. Fishways used to bypass barriers have historically been designed to provide passage for economically important species, with little regard given to nontarget species. Consequently, native fish species whose swimming behaviors are not well suited to these fishways have suffered from restricted access to habitat. For example, poor passage at dams has contributed to declines in populations of Pacific Lamprey *Entosphenus tridentatus* in the Columbia River basin. Pool-and-weir fishways typical of Columbia basin dams are well suited to salmonids but not to anguilliforms like the Pacific Lamprey. We evaluated the passage efficiency of Pacific Lampreys through a new pool-and-weir fishway at River Mill Dam on the Clackamas River, Oregon, that was designed to facilitate Pacific Lamprey passage. Rounded corners at the fishway entrances, flush-mounted weir gates, chamfered corners on orifices and weir walls, and orifices flush with the floor were all included in the fishway design specifically for Pacific Lampreys. In 2013 and 2015, Pacific Lampreys were radio-tagged and PIT-tagged to assess passage success. Dam passage efficiency estimates ranged from 84% to 98%, roughly 10–50% higher than Pacific Lamprey passage efficiency estimates at other dams in the Pacific Northwest. The median passage time through the fishway was 0.87 d in 2013 and 0.71 d in 2015. The high passage efficiency of Pacific Lampreys at River Mill Dam is likely due to the design elements incorporated specifically for Pacific Lampreys. These features could inform future fishway designs and modifications at locations where Pacific Lamprey passage is a consideration.

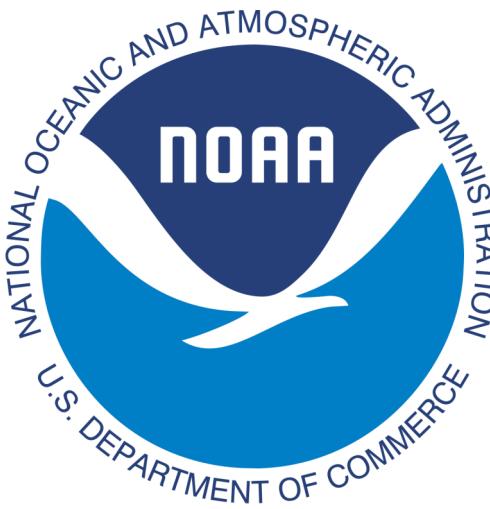


Citation:

Ackerman, N. K., B. J. Pyper, M. M. David, G. J. Wyatt, D. P. Cramer and T. M. Shibahara. 2019. Passage effectiveness at a pool-and-weir fishway designed to accommodate Pacific Lampreys. North American Journal of Fisheries Management 39:EARLY VIEW.

Opportunity

NOAA Launches Honors Program



We are very pleased to announce NOAA's Honors Program (NHP) has launched!

The NHP will help NOAA build a diverse, high-performing workforce by bringing us a multitude of talented recent graduates with different perspectives and viewpoints, and academic excellence. Recruitment for this prestigious program will occur annually.

This first year, NHP focuses on recruiting 19 Biologists, Budget Analysts, and Management and Program Analysts – multiple positions in multiple locations are located in NESDIS, NMFS, NOS, OAR, NWS, AGO, CAO, OCIO, and OHCS.

Each cohort will complete a 1-year developmental program that includes leadership training, rotations, Line Office mission site visits, mentors, and other requirements. Selectees are slated to begin September 16, 2019, first attending a 2-week orientation session in Silver Spring, MD, and then join their respective Line or Staff Office.

The Job Opportunity Announcements are open until July 26, or until the application quota is met. Please see the following links:

Biologist, ZP-0401

(<https://www.usajobs.gov/GetJob/ViewDetails/536128900>)

Budget Analyst, GS-0560

(<https://www.usajobs.gov/GetJob/ViewDetails/536862200>)

Management and Program Analyst, ZA-0343

(<https://www.usajobs.gov/GetJob/ViewDetails/536134100>)

Management and Program Analyst, GS-0343

(<https://www.usajobs.gov/GetJob/ViewDetails/536861300>)

NHP utilizes the Recent Graduates Program, which requires candidates to have graduated from college within the past 2 years (June 2017 or later); Veterans may apply up to 6 years after graduating, if military obligations intervened. Candidates will compete for a limited number of positions and will be selected based on their academic performance, experience, and selected MOSAIC Competencies. A rigorous candidate evaluation process will ensure we select the best and brightest.

COMMON PATHWAYS FOR CONSERVATION

The 2019 Western Division meeting will be held in conjunction with AFS and TWS, and is hosted by the Cal-Neva Chapter of AFS in Reno, Nevada, September 29 – October 3, 2019. This is the first-ever joint meeting of AFS and TWS, and will likely be the largest gathering of fisheries and wildlife professionals and students ever. Proposals for Continuing Education workshops and symposia opened December 14, 2018. Please see the meeting website at <https://afstws2019.org/> for more information.

JOIN US IN RENO!
AFSxTWS JOINT MEETING
SEPT 29 - OCT 3

EARLY REGISTRATION ENDS JULY 5TH

AFS Student Subunits on Twitter

UMontana Student Chapter of AFS
@umontanaAFS

Group photo from our ice-fishing day! Thanks again to [@MontanaFWP](#) for the group ice-fishing permit! Photo by Heather Fraley.
[#AFSStudentSubunit](#)



7:04 PM - 25 Feb 2019 from [Missoula, MT](#)



AFS BC Students
@AFS_BCstudents

Full of pizza and enraptured by Blue Planet II! Thanks to all those that organized the screening and those that came to enjoy it!



1:07 PM - 13 Apr 2018

IMPORTANT DATES

July 5 Early Registration deadline for AFS-TWS Reno Meeting

September 28/29 Continuing Education Classes at AFS-TWS Reno

Sept 29-Oct 3 AFS-TWS First Ever Joint National Meeting

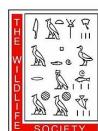
Read the virtual new virtual journal issue celebrating the joint meeting of the **American Fisheries Society and The Wildlife Society**



[afspubs.onlinelibrary.wiley.com](#)

Featuring contributions from *Fisheries*, the *North American Journal of Fisheries Management*, the *Journal of Wildlife Management*, and *Transactions of the AFS*

WILEY AF

**Have a story you'd like to share?**

Submit project updates, opinion letters, photos, and more to

westerndivnewsletter@gmail.com