

Pacific Northwest Native Freshwater Mussel Workgroup Minutes

September 16, 2019; 1:00 – 3:00 Pacific Time

Meeting Agenda

1. Emilie Blevins, Xerces Society— welcome and introductions
2. Patty Morrison, USFWS retired; Teal Waterstrat, USFWS; Kevin Aitkin, USFWS; Emilie Blevins, Xerces Society— discussion of FMCS 2021 symposium [recurring agenda item]
3. Al Smith, retired ODFW— Rattlesnake Creek survey results
4. Travis Williams, Willamette Riverkeeper— Middle Fork Willamette mussel study results
5. Ann Gray and Courtney Newlon, USFWS OR— Calapooia survey update
6. Doug Nemeth, USFWS— ID mussel work update
7. Emilie Blevins, Xerces Society— Owyhee River mussel survey on Instagram
8. Other notes: workgroup minutes at pnwmussels.org, Cynthia Tait retirement on Sept 30, share location data, anyone attending AFS in Reno?

Meeting Minutes

Attendees: Kevin Aitkin, USFWS; Emilie Blevins, Xerces Society; Patty Morrison, retired USFWS; Miranda Plumb, USFWS; Celeste Searles Mazzacano, CASM Environmental; Al Smith, retired ODFW; Cynthia Tait, USFS; Teal Waterstrat, USFWS; Michele Weaver, ODFW; Ann Gray, USFWS; Courtney Newlon, USFWS; Ann Gannam, USFWS; Kate Holcomb, UDWR; Douglas Nemeth, USFWS; Emily Davis, NWIFC; Ted Parker, Snohomish County.

Call Notes

Emilie Blevins— Update on status of meeting planning for the regional PNW mussel meeting (2020) and FMCS national meeting (2021): Meeting planning has been stalled during the summer field season. However, a venue has been identified in Vancouver, WA for the regional meeting, the Vancouver Water Resources Center. The planning committee is meeting later this month to begin work on meeting details and will have more information soon. Similarly, the group will be discussing planning for the 2021 FMCS meeting in Portland, OR. They are coordinating with FMCS board members.

Al Smith— Al presented information on a survey effort he led this summer. Al coordinated with Steve Stampfli on mussel surveys in Rattlesnake Creek, a tributary to the White Salmon River. Steve lined up volunteers (17) from at least 8 agencies from eastern WA and the Yakama tribe. Together, they conducted a survey. Beforehand, Al gave a 45-minute presentation, handed out mussel guides and literature, and demonstrated how to use Aquascopes and what to look for. In total they found 40 western pearlshell of all sizes, including a number of juveniles. Al noted that most of the biologists were a bit younger. Cynthia asked about what species of fish are in the creek. Al only saw cottids and possibly winter steelhead.

Celeste Searles Mazzacano— Travis Williams was not able to be present, and Celeste filled the group in on the Middle Fork Willamette River study. For the study, the group surveyed right below Dexter dam for 2 days in the end of July and early August, including workgroup members such as Patty Morrison, members of Willamette Riverkeeper, and some fish biologists from the Grande Ronde tribe.

Unfortunately, another water release from the dam happened right when surveys were beginning. The group surveyed one area close to the dam, which Celeste described as having a very large number of western pearlshell mussels over maybe a couple of hundred meters. They conducted transect surveys, which were divided into segments from the shore out to the middle of the river until depth and flow were too much. They found more than 12,000 mussels in transects. Sixty quadrats excavated, and more than 2,000 mussels were counted. Many were buried (170 or more were below the ones on the surface). They were in good condition, with very few dead. There were many smaller mussels, especially compared to the Norwood channel population. Juveniles were present, with most mussels <10cm. Even though the mussels did not get very big, they are probably older. Possibly other mussel populations were found near Albany during Paddle Oregon.

Ann Gray— Ann and Courtney collaborated this summer with Brian Bangs of ODFW on mussel surveys in the Calapooia, a tributary of the Willamette River. The search was targeting western ridged mussels, so they chose several places to conduct wading surveys. There was some snorkeling in the upper basin. They targeted about 20 locations, some of which were scrapped onsite after seeing the habitat. They surveyed from the mouth up to Weyerhaeuser property and found evidence of western pearlshell at multiple sites, including a small one at the uppermost site. They found about 6 western ridged mussels at one site but nowhere else. All western pearlshell beds were fairly small, possibly 20 individuals, usually upstream of the bridge abutments.

Doug Nemeth— Doug has been working with mussels since 2017 in preparation for statewide mussel surveys that began this year. He wanted to develop an index of abundance across 1m-wide swaths. Survey work started in the ID panhandle, with 20 streams surveyed at 31 locations. Next year he will also add demographic surveys with quadrats, record sizes, and make use of PIT tags. He is also planning to conduct some behavioral experiments related to burrowing. He is also interested in spatial distribution, and in developing an index of relative abundance in the Lolo Creek watershed. This year his team walked 73 km looking for mussels and will use their work to develop a population estimate for the Lolo Creek watershed.

He has continued to track PIT tagged mussels in Lolo Creek. Ninety mussels have been revisited 4 times. This year they found 3-4 mussels not found at other times. The detector appears to be good only good up to 13 inches, but other mussels could be below that depth. He also tagged other mussels this year from the Crooked River.

Statewide surveys will continue in southeast Idaho next year. Cynthia asked about sharing location maps. Doug said that he needs to write a narrative.

Al will be visiting Idaho and wondered if the data will be available (yes). Teal also asked about testing the depth of the reader. Doug tested up to 17 inches and up to 13 worked. Doug will possibly be refurbishing a wet lab at Dworshak and is interested in studying burrowing activity and temperature. Previous surveys indicated that 4 degrees C is the coldest that mussels will be visible. Al mentioned how great it is to open up another mussel lab in the PNW. Ann Gannam at Abernathy is also working with mussels. Her lab was able to collect gravid mussels and have infected steelhead. They are looking for juveniles now. Ann will also be looking at temperature stress and mussel physiology. The original plan was for ID and Abernathy to share mussels for a joint project, but they had difficulty in getting mussels from ID to WA because of the potential for invasive, so they are having to work independently.

Emilie Blevins— Emilie updated the group on her week of mussel surveys on the Owyhee River in August with ODFW's Dave Banks and crew. They surveyed 49 miles via inflatable kayak from the bridge at Rome, OR, downstream to Birch Creek. They found numerous western ridged mussel shells in the river and in otter middens, including many shells of smaller age classes. They also found many live mussels but they were more sparsely distributed than she has seen at Three Forks. She also found many sick-looking mussels on the riverbed. She collected several and sent for testing to the USFWS and UW Madison partners studying mussel die-offs in the U.S. The survey effort made it onto the ODFW Instagram page, with several posts of videos and pictures of mussels, surveying, and navigating the river. Thanks to Tim Akimoff of ODFW for doing that.

Cynthia noted that she had review archeological information on mussels in the Owyhee. There are archeological artifacts from caves on the Owyhee, from 1970s excavation of rock shelves. Most shells were Margaritifera, half were Gonidea. Margaritifera are alive in the North Fork, which Emilie said she had also observed at Three Forks. Cynthia said there is data published on the studies. Emilie mentioned Christine O'Brien's survey work. Cynthia gave a presentation at the Oregon Archeological Society on this. She is also going to write up the findings during her retirement. The next topic of conversation was that she will be retiring this month! She said she will stay active with the workgroup. Al commented that Cynthia was one of the first biologists to get into mussels in Oregon!