

2021 AAFV Scholarship Program

My name is Jake Veilleux, and I am a 4th year student at NC State University College of Veterinary Medicine. This past September, I participated in the Pacific Northwest Salmonid Veterinary Externship Program (PNSVEP) as one of my clinical year rotations. Thanks to the generous scholarship I received from the AAFV Student Scholarship Program, I was able to gain incredible experience in the hatchery medicine world. As most of you know, aquatic medicine is not the largest part of a veterinary school curriculum, so I am certain that being able to partake in a program like this will be incredibly beneficial to my future career.

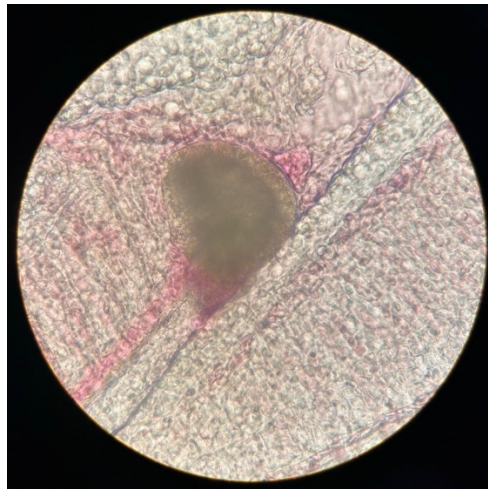
The PNSVEP is a student externship program supervised by several amazing fish veterinarians based in Washington, Oregon, and Idaho. With a focus on salmonid hatcheries (and some sturgeon), I had the opportunity to rotate between the Northwest Indian Fisheries Commission, Douglas County P.U.D, Washington Animal Disease Diagnostic Laboratory, Oregon Department of Fish and Wildlife, and Idaho Fish and Game. This afforded me the chance to build career connections in the field, find invaluable mentorship, and observe different styles of fish health medicine. I found one of the most interesting aspects of the rotating externship to be the regional differences in disease prevalence. The pathogens you were most concerned about were often determined by factors such as source water origin, temperature/elevation, and distance from the coast.



As you would expect in a hands-on program like this, I gained a ton of experience in fish diagnostic methods and techniques. That all starts with getting a good history from the hatchery managers and staff, whether it be a routine health check or potential outbreak. Asking about water quality, changes in feed/appetite, recent transport/movement, or observed predation are all relevant. Next was getting some eyes on both healthy and sick fish, plus the facility in general. For example, in a raceway set-up, we walked the entire length of the set-up, watching how the fish were swimming and behaving. I learned to take note of sick fish signs like flashing or gathering near the outflow of a system. Now with a better understanding of what was going at a hatchery, it was time to sample some fish. My supervisors did a phenomenal job of demonstrating fish necropsies and teaching me sterile technique when sampling for bacterial

culture and virus isolation. I also got plenty of practice with skin scrapes and gill biopsies and saw pathogens like *Ichthyophthirius multifiliis* and *Flavobacterium psychrophilum*.

In addition to all this clinical field work, the PNSVEP provided me with diagnostic laboratory experience through the Washington Animal Disease Diagnostic Laboratory and Eagle Fish Health Lab. After spending multiple weeks collecting kidney and liver samples, it was fascinating to see what happens at the place you send them. Thanks again to some great teachers, I became familiar with ELISA testing for Bacterial Kidney Disease, whirling disease sample processing and *Myxobolus cerebralis* identification, and cell culture and virus isolation techniques. I even got to work on my histopathological interpretation, something any veterinary student can attest to needing more practice with.



My four weeks in the Pacific Northwest were one of the most educationally informative experiences I have had to date. It allowed me to gain a plethora of practical experience in fisheries and aquaculture medicine, a field I soon hope to work in. Though my veterinary school curriculum at NC State is absolutely world class, the PNSVEP gave me a crash course in fish health medicine I could not have gained on any other rotation. The funding from this award went a great length in alleviating my concerns about finances and allowed me to focus entirely on the learning opportunity at hand. I highly encourage any fish-focused students to consider the Pacific Northwest Salmonid Veterinary Externship Program, and to apply for the AAFV Student Scholarship.