



***Another dimension of the One Health Model:***  
**Investigating factors that influence human-wolf coexistence in Washington State**

**Q&A** | with Carol Bogezi (2016 recipient of the Bullitt Foundation's Environmental Leadership Award) and Heather Fowler (Center for One Health Research's Associate Director – Animal Health)

**Q: I assume there's lots of data from meat inspection / slaughterhouses. Has anyone inspected parasites here?**

**A:** [HF] Yes, and a parasitologist in [the Center for One Health Research] is looking at some of the slaughter data, they do inspections at slaughter, like you said, and they look at some of those organs and so they would look for cysts though we don't necessarily...

[CB] Also the challenge is that, in the beef industry, it's not that easy. People raise animals and send them off to Nebraska to be finished, so the animals you get at slaughter may not be from here and so you just follow up with only people who finish their cows.

[HF] There is a tracking system through the USDA so you do know where the cows are and what cows are being slaughtered and what farms they're coming from and that's primarily for food safety reasons. But yes, you are right that there is—especially with beef—you generally have a cow-calf operation in one spot and then you send them off to be finished on another farm, whether it's owned by the same group or in a different location.

**Q: You mentioned that one of the possible strategies for prevention of livestock predation was by supplementing the wild ungulate population? Has that been practically applied anywhere and have they looked at whether there is a preference in terms of preying on livestock over deer?**

**A:** [CB] Well mostly wolves prey on ungulates because they are more abundant, and they are also smaller, like a deer is not as big as a cow so it is easier for them to feed on a baby deer or a subadult one than a full grown cow. But I don't think there is any place that has supplemented the ungulate population to take care of wolves. It's just something that they felt was a concern, like maybe if we have –and I think in the state of Washington it'd just be like showing [the ranchers] the ungulate numbers and their distribution and be like it's happening we know that there are enough ungulates. Because they sometimes just feel like, what I see is—I go out to hunt for elk, I don't see elk anymore, elk is gone. Sometimes it's just about having the information.

**Q: Is WDFW discussing "performance payment plans" for ranchers? –Darin Collins, DVM (via Facebook Live)**

**A:** [HF] Yeah, because I thought that was a really innovative idea, to focus more on-- instead of paying back for what you lost, kind of encouraging...

[CB] ...what is on the land.

[HF] Yeah, and then you're still kind of, you're encouraged to maintain those populations but then protect your own, I think that's, yeah it's a different way of spinning it.

[CB] Yeah and I don't know if I discussed about, I spoke to the Department of Fish and Wildlife, we haven't spoken in a while, I haven't yet shared my results with them, so it'll be interesting to be able to discuss with them what is happening in other countries where they have livestock and wolves and they do [performance payment plans] because then everyone wants the money but they also want their livestock. So tell Dr. Darin that I will surely discuss it with the Department of Fish and Wildlife.

**Q: So you talked a lot about human impacts and eco-environmental impacts but what about the flip side of this? What about the impacts of the wolves themselves? Is anybody out there studying how wolves interact with cattle or how being put into contact with them is changing their lifestyles?**

**A:** [CB] Yes, they are, there is a carnivore lab in Washington State University, their focus is on the wolves themselves so you study: "how are wolves behaving differently in areas where there is grazing as opposed to in —compared to the data, say, in Alaska or Canada where there're large spaces of land without livestock?" and I'm looking forward to hearing their results because they will be interesting. I have a colleague who is in another lab, the carnivore lab, here at University of Washington, who was looking at "how are deer impacted by having wolves in their lives?" he was looking at in the National Forest and so far he hasn't seen any impact but maybe it's because there is still a lot of deer that they haven't yet started to feel the stress and the increased need to be vigilant. So there is, like I said, there are more people studying wolves than there are wolves in the state right now.

[HF] And let's not forget the prey in this situation here. Again, as a veterinarian, I'll jump in and speak on behalf of these poor cows that are being predated. So in veterinary medicine it's becoming more and more common for veterinarians and other animal researchers really to focus on animal welfare. So this can provide an animal welfare issue, even that kind of "performance-based initiative" it really, again, you want to think of that animal in protecting—you know, how do we protect the wolf and the wolf population and again this is what One Health is all about is addressing some of these complex issues, addressing the wolf population / conservation, but also maintaining animal welfare of these cows that are being predated upon, as well as food safety issues and human health issues because again having these animals nearby, that could be a One Health / human safety issue / infectious disease issue / etc. So I always try to throw in "don't forget this, and don't forget that" but there're so many things so that's a great question.

[CB] It's interesting, some of the ranchers actually felt like because they care for the animals and they care for all animals, they don't want to kill the wolves and so they did some practices to keep the cows safe from wolves.

[HF] And then the wolves need to eat to so how do we—how do we protect everyone?

**Q: If you protect the cows when you're going to kill them anyway is it actually animal welfare?**

**A:** [HF] So yeah that's a good question but in terms of how we slaughter them, we slaughter them in a very humane way in that they're not suffering or we minimize suffering. So as a veterinarian, I participate in what's called euthanasia, which means "good death." So whether I'm euthanizing a cat or dog with a barbiturate or exsanguination is a form of euthanasia if done appropriately, it can be done very quickly and to minimize stress. We don't actually want animals to be stressed at time of slaughter because it mobilized cortisol and that can actually cause a number of physiologic changes and it changes the flavor of the meat. So we do not want to stress them. That's a good question in terms of, at the end they're going to be slaughtered anyway, especially beef cattle, but again, we don't want them to be stressed at that time.

[CB] And really animals, even if you're going to slaughter them they are your animals and you love them. I grew up on a farm and we had animals which had names and we knew we were going to sell them to pay for our tuition fees and the person we sold them to, it was going to be killed but it didn't stop us from giving the cows names and loving them.

[HF] In veterinary medicine and large animal medicine specifically, we believe in “happy life, happy death.” It sounds very strange to some. I am an omnivore, I am a meat-eater, but I do believe that, no, I’m not going to make these animals suffer during their life and I’m going to make sure that they have as peaceful and minimally painful death as possible.

**Q: How many documented incidents of wolves preying on livestock have there been?**

**A:** [CB] Well so the three that I highlighted in northeastern Washington have kind of hit the headlines. So way up, the one I can’t reach was the Wedge Pack, there were about 7 animals which were killed by the Wedge Pack and then the department went and removed the wolves which was another site on conflict because some people didn’t want the wolves to go away. So in that pack, we don’t know whether there were 7 animals or 70 animals, depending on who you ask. In this one there were 27 sheep which were killed, sheep are easy to kill so 27 sheep could be easy to lose, over cows. And then recently, the Profanity Pack, there were 15 cows, and mostly young ones.

[HF] Is that one incident, one night or...

[CB] No not one night, it’s been since July to September. But also, you can see the concentration in that area, there have to be some sort of practices that we’ll have to prevent [livestock] from being killed. Especially if the land is contiguous with public land where you have wolves, [the wolves] have some right to be [there].