

Who Do We Study? Us or Them or Maybe Both?

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It was 65 years ago on Isle Royale where famed wolf biologist L. David Mech snuck into a fish house along the frozen shoreline to get a better look at a wolf pack. Mech and pilot Don Murray had been aerially tracking the pack and knew their route. Murray quietly and expertly landed the plane out of sight of the traveling wolves and Mech crept into the hiding place unseen and unknown. The wolves stayed true to their route and the rest is history. Mech clicked his best photos yet of the wary beasts, a mere fifteen feet away - close looks adding to his groundbreaking study of wolves at a time when little was known about them. This and many other encounters by Mech defined his career. He went on to study wolves, bust myths, and learn about wolves in a way no one had before. Ultimately this helped wolves and humans coexist, leading to conservation action that rippled across the northern hemisphere. This was the start to what would become one of the best studied mammals in the world. Mech dedicated his life to the biological study of wolves. Could such a thing happen today?

Probably not. At that time little was known about the wolf. Basic knowledge about their packs and territories, social structure, ecology and the most controversial of all, wolf impacts on prey and livestock, were hardly studied. Myths abounded, and early research by Adolph Murie in Alaska was an outlier. American President Theodore Roosevelt, known as an enthusiastic naturalist and avid conservationist, set the stage when he called wolves the 'beasts of waste and desolation'. After Murie, Mech was a true pioneer, helped and followed by others like Canadian Douglas Pimlott, Italian Luigi Boitani, Finnish Erkki Pulliainen, Swedish Anders Bjarvall, German Erik Zimen and Russian Dmitry Bibikov, all collectively putting wolves on the map world-wide by gathering basic information. With charm and charisma – a necessary quality it seems nowadays to capture the public's attention – they put wolves in the public eye and helped save them everywhere. Add Canadian Farley Mowat: although a writer and not really a biologist, and decried as fiction, his book *Never Cry Wolf* sold over a million copies, a staggering figure then and now, and really reshaped the wolf image being especially impactful in Russia. These people, their work, and writers like Mowat, kicked off an era that we are in the tail end of now.

What's next? Despite these tremendous scientific gains, wolves are as controversial as ever. Are more data and biology not enough?

Unfortunately, yes. The next step in wolf research has to be greater investigation of wolves and humans – and to be clear and respectful, this is well acknowledged and underway, but this is the opportunity that the above-mentioned people, the long list of them, had facing them so many decades ago: a new frontier. We need to race to it now. It took everyone and more to understand the elusive and mysterious wolf, and now the task is to understand the elusive and mysterious human. Former US Fish and Wildlife Wolf Recovery Coordinator Ed Bangs used to say 'wolves are boring, but people are fascinating' - and he was charged with recovering wolves across the western US; people were the biggest challenge. The trouble is wolves have been used as political pawns for a long time. Breaking free of this will not be easy.

First, a quick review. Why are wolves so controversial in the first place? We call them the big three, and they are age-old. Wolves are perceived as a human safety threat, they kill livestock, and at times, compete with us for big game. We might add too, that they are not backyard wildlife – they have trouble living on human dominated landscapes so still need large expanses of sparsely populated landscapes away from people, something that the ever-burgeoning human population is loath to give up. Some would argue we belabor an obvious point – wolves and humans don't mix; the solution is simple: just keep them apart. The issue here is that we are running out of places where they can exist apart from us. North America is a great example. Canada and Alaska never lost their wolves (despite trying); the continental US did, save for northern Minnesota. The solution to the former is separation, in the later coexistence. The same goes for Europe and some parts of Asia. Coexistence is harder, which makes an important point – let's preserve the unpeopled areas we have left, but that is a subject for another essay. All of these stated problems, however, are solvable.

But what is the next move? Many are frustrated. Much social science is focused on surveys of human attitudes, which is a key piece of the puzzle, but enough have been done that some cry out for action – after all wolves are dying out there every day. Tracking ever-changing attitudes is important as they fluctuate through time, but one result is clear: people that have to live with wolves, rural people, are generally and consistently *less tolerant* of wolves than people who do not have to live with them – urban people. This result is solid and does not need more research. Yet this finding has rarely been treated as an opportunity. If urban populations are consistently more tolerant of wolves, conservation has been slow to ask anything of them. Conservation has spent decades trying to convert the unconvinced in rural communities – a necessary effort, but a slow and often unrewarding one. Less attention has been paid to activating the already sympathetic: the urban majority who support wolf recovery in the abstract but have no mechanism to express or deepen that support. Science-based public communication, particularly through social media, is one of the few tools that reaches this audience directly, on their own terms, and at volume. Tolerance, it turns out, is not just something to be measured – it can be cultivated, and just as easily eroded.

What cultivation looks like in practice varies, but the most instructive examples share a common thread. They start on the ground, with people, in place. Successful examples of action on the ground are somewhat rare, but one is a community-based project in the northwestern US called the 'Blackfoot Challenge'. The Blackfoot Challenge is driven by people living together in a region of Montana where they have explicitly stated that they want to maintain their rural way of life and identified what actions are necessary to keep this. This includes large carnivores, wolves and grizzly bears, and this is what makes their area unique and wild, so they meet as a community to discuss wolf management options, among other collective issues. This is extraordinary and exemplary and has been held up as a good example across the western US. This example needs to be emulated.

The LIFE WolfAlps EU project is another example. Spanning multiple countries across the Alps with the goal of wolf-human coexistence, elements of this collaboration involved more on-the-

ground actions like livestock protection, cross-border wolf monitoring, threat mitigation, and education and tourism promotion. In densely populated Europe - which has more wolves than the larger, less populated continental US - wolves have increased dramatically over the last two decades, particularly in the Alps. This would not have occurred had safeguards and collaboration such as this not been in place and working with all kinds of people.

Colorado State University formed the *Center for Human-Carnivore Coexistence* (CHCC) specifically to address living with carnivores like wolves but other canids and predators as well. Becky Niemiec, one of the founders, stresses four critical objectives: 1) monitoring and adaptively managing wolves based on social outcomes (e.g., social tolerance), 2) avoiding using wolves as political pawns by ensuring decisions are made based on biological and social metrics (e.g., population data, ecosystem benefits, and public values), 3) public and stakeholder engagement processes designed and evaluated by social scientists explicitly to reduce social conflict over wolves, and 4) 'peace building journalism'.

Adaptive management is an oft pleaded for practice today but for it to work follow-through is key – or when something is done, gathering data on what happens. In this fashion, that data can be used to modify (adapt) decision making. Niemiec points out this isn't done enough for social indicators. For example, lethal removal of wolves is often justified as a way to enhance social tolerance; however, there is insufficient data that killing wolves makes people more tolerant of them. She also emphasized the political nature of most wolf conflicts – greens vs. industry, liberals vs conservatives- which does wolves no favor, making them lightning rods in the worst possible way. Interestingly, wolf research in Yellowstone was supported by donors of all political stripes, suggesting great promise for uniting people of different persuasions around a shared interest. Niemiec also stressed the importance of the media: typically journalism inflames rather than assuages, and she believes it could cool things off if outlets reported more broadly and with greater balance. Headlines are often about the bad, rarely the good -- the one upset rancher rather than the ten trying to coexist. Reaching out to journalists is a tangible and immediately available goal, there is no one better positioned to do it than the experts themselves. Misinformation remains a chronic problem, and responsible journalism is one of the most direct tools for addressing it – a strategy that CHCC leaned on heavily during the reintroduction of wolves in Colorado.

What the Blackfoot Challenge, the LIFE WolfAlps EU project, and Niemiec's CHCC framework share is a commitment to meeting people where they are - in their communities, on their land, inside their concerns. But there is a frontier none of these models fully occupy: the internet, and more specifically, the platforms where most people now form their opinions about the natural world. Science based social media represents something genuinely new in wolf conservation. Not journalism, not outreach, not education in the traditional sense, but a direct and ongoing relationship between the public and the wolves themselves.

Wildlife researchers and field biologists who have embraced public communication - not as a distraction from science, but as an extension of it - are reaching audiences that dwarf the readership of any management document, local newspaper, or public meeting combined. And

critically, they are reaching people who were never going to show up to these meetings in the first place. Public meetings, comment periods, and stakeholder panels self-select for the already engaged, and more importantly, often the already opposed. A well-crafted social media post about pack dynamics, territory use, or livestock coexistence tools can reach someone in Chicago, or Atlanta, who has no political stake in wolf management and no preformed opposition, only curiosity. Shaping attitudes before they calcify might just be the most under-leveraged strategy in wolf conservation, and it requires people with both scientific credibility and the fluency to use these platforms effectively.

Some of the most effective examples come from people working directly in the field - technicians and researchers embedded in long term wolf studies who bring firsthand knowledge to public audiences through footage, photography, and real-time observations. The wolves they document are not ideas or political symbols. They are animals with known histories, distinct personalities, and social lives that unfold across seasons, and that specificity is what moves people in ways that data alone cannot. The data doesn't matter if the science cannot be communicated in a way that all can understand. This is, in effect, Niemiec's peace-building journalism at a scale and intimacy that traditional media and public process were never designed to achieve. Yet for all its promise, this approach remains informal, uncoordinated, and largely outside the frameworks that govern wolf management decisions. The question is not whether science-based public communication works, but whether the institutions charged with wolf conservation will recognize and invest in it before the old models fail them entirely.

Our old models of public engagement and outreach just don't work anymore. Famously the wolf reintroductions to Idaho and Yellowstone had unprecedented public outreach traveling widely to public meetings and soliciting comment via an environmental impact study drawing 160,000 comments. At the time, this was cutting edge stuff and government planners felt like they had done all they could with public outreach, yet, wolf reintroduction was still controversial. Subsequent efforts used the same playbook – Mexican and Colorado wolf recovery had major program components dedicated to involving the public. Colorado formed two teams – one comprised of 'stakeholders' and the other a group of experts – all designed to help craft the best way to restore wolves. Both efforts still face stiff opposition from the public. What went wrong?

Susan Clark, a wildlife policy expert from Yale, has dedicated her life to solving people and wildlife problems. Over her fifty-year career she has come to conclude that a command and control or top-down style no longer works. Planning efforts that formulate the options then seek public comment of which option the public prefers – the Idaho/Yellowstone process – is no longer viable. Now, the public has to be part of deriving the options – and that is still controversial. And of course, this method is susceptible to the 'bad apple' operative of the uncooperative team member who secretly sabotages the plan under the guise of supporting wolf recovery but opposes every option. The stalling and hope it goes away strategy.

So, what to do? Preserving places where wolves can live with low conflict is certainly still a key goal. The old command and control management style is outdated and should be replaced by

the public being involved in the planning process, but this still leaves planning susceptible to derailment by non-cooperators, or worse, opposing efforts that spread misinformation, an age-old and chronic problem for wolf conservation. But that approach still argues for community-based decision making like the Blackfoot Challenge and the LIFE WolfAlps EU. And like the early researchers, we need charismatic and good communicators with hands on wolf experience to engage the public themselves and reach-out to journalists too as the information world we live in today is overflowing with bad and incorrect news and there is no one better to engage than the experts themselves. The tools are already there. A smartphone, a field season's worth of observations, and a platform that rewards authenticity over production value. What has been missing is the recognition that this is legitimate conservation work, worthy of the same institutional support as a telemetry study of a stakeholder panel. This may lead to more conservation than anything else – turning the public opinion.

Yes, we want and yearn for the days we hide and wait for the wolves to come by to brush closely with their world and magic. Experiences like that inspire so much and move us to try and save them, but unfortunately, we now need to brush closely with our own kind, tell them about the real wolf and that living with them on human dominated landscapes is not only possible but it doesn't need to be that hard. Maybe that is a slogan – 'Wolves aren't that hard', seemingly today we all need a slogan.