

## Neocolonial Thinking and Respect for Nature: Do Indigenous People have Different Relationships with Wildlife than Europeans?

Raymond Pierotti<sup>1\*</sup> and Brandy Raelene Fogg<sup>2</sup>

<sup>1</sup>Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, USA. <sup>2</sup>Indigenous Nations Studies Program, University of Kansas, Lawrence, USA.

\* pierotti@ku.edu

**Abstract** We respond to Mech (2019) “Do Indigenous American Peoples’ Stories Inform the Study of Dog Domestication” and point out a number of errors and omissions in Mech’s essay. These include: 1) assuming that the behavior of all wild wolves is the same, and can be characterized according only to Mech’s personal experience; 2) assuming that the domestication of wolves took place in only a single location at one time (14,000 yrs BP); 3) misrepresenting the statements and findings of other scholars; 4) assuming that all wolves that have ever encountered humans have experienced persecution; and 5) dismissing all accounts of interactions with wolves by Indigenous Americans. The last of these is particularly egregious and seems to represent a form of neocolonial thinking, in which only accounts and findings by Europeans are considered to be acceptable evidence. Mech’s own work on Ellesmere Island seems to support the idea that wolves can be curious and unthreatening to humans. We suggest that this might be the only actual time Mech interacted with true *Canis lupus*. In addition, Mech’s statements on wolf attacks and the significance of rabies are shown to be misleading. As a result, Mech’s work, especially his questioning of the validity of Indigenous knowledge, which often provides crucial insights into some aspects of ethnobiological research, represents a critique of methods employed by scholars within the discipline of ethnobiology, whereas, as a wildlife biologist, Mech seems to lack knowledge of the principles of ethnobiology.

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### Introduction

Although David Mech is a scholar with 60 years of experience investigating the behavior and ecology of wolves; however, he seems to employ a typological, essentialist vision of wolves as the basic logic for his arguments about our work (Mech 2019). To Mech, it seems that attribution of any potentially negative behavior (aggressive behavior directed at humans) by a wolf, whether it lives in India, Europe, or North America, means that the potential for such behavior exists in every individual wolf and that this dynamic defines the human/wolf relationship. In addition, Mech (2019) seems to argue that there is a sharp division between dogs and wolves with little or no overlap, ignoring the basic premise stated in our book *The First Domestication* (Pierotti and Fogg 2017) that “all dogs are wolves, but not all wolves are dogs.”

This premise derives from the fact that all dogs and wolves are considered to be members of the same species, *Canis lupus*, including dingoes, Siberian Laiki, and many other forms that bear little resemblance to the unequivocally domestic dogs found in numerous contemporary human societies (Wilson and Reeder 1993).

One point emphasized by Mech (2019:69) is that we fail to “point out important information not considered by the authors about wolf attacks on humans ... in the wolf-human relationship.” This is simply not true, as in our introduction (Pierotti and Fogg 2017:23), we make the following series of statements:

A crucial point is that the social bond between humans and wolves that changed

into domestic dogs is the source of both major pleasures and major conflicts between humans and their canid companions. Large domestic dogs have the anatomy of serious predators, combined with a confidence in their interactions with humans that can lead to aggression and serious conflict. ... We discuss the 'danger' presented by various breeds, including wolves and wolf-dogs and challenge a number of points of received thinking, including the notion of the equivalency of 'wild' and 'dangerous'. A major aspect of the danger from a canid is associated with size above all else, which is to be expected in dealing with large predatory animals ... the great enigma of the first domestication (is that) wolves and dogs are so affectionate and seem willing, if not driven, to create strong and persistent social bonds that it becomes easy for humans to anthropomorphize and idealize these four-leggeds that share our lives so easily. Yet they remain predators, highly evolved carnivores, and they know how to kill.

In making such statements, we assumed that anyone reading the book, and paying attention, would recognize that we are fully aware that conflicts arise regularly between humans and canids. Cesar Milan's television show *The Dog Whisperer* is based entirely on behavioral conflicts between *Homo sapiens* and *Canis lupus* in the contemporary world. This raises another issue with Mech's paper. He writes as if only wolves have been known to show aggression, and even predatory attacks, towards humans. It is well established that dogs, especially large aggressive breeds, are much more dangerous to humans than are wolves (Pierotti and Fogg 2017:225–226; Sacks et al. 2000). As we pointed out (Pierotti and Fogg 2017:237, emphasis added):

Europeans (and Euro-Americans) are easily convinced that wolves are vicious, destructive killers, especially of human children, despite the fact that *no wild—or even purebred captive—wolf has ever been implicated in the death of a child in North America*. We have shown how such language creeps into accounts by scholars involved in studies of domestication. Domestic dogs, especially the Molosser breeds, kill orders of magnitude more children than wolf-dogs have ever been

accused of doing (Sacks et al. 2000).

In this response, we begin by laying out what we perceive as the main issue—what is a dog—and discuss why our work places emphasis on captive and pet wolves, and wolf x dog crosses. The term hybrids, used by Mech (2019), is inaccurate, because hybrids involve crosses between species, and we study crosses between members of the same species, and wolf-like dogs. We then examine a number of the arguments made by Mech and show that although he makes a few solid points, much of his argument relies upon unjustified speculation, colored by an attitude that at best represents a neocolonial way of thinking.

### What is a Dog?

As we argued in *The First Domestication*, the real question in looking at co-evolution between humans and wolves is trying to establish the point at which the transformation occurs and humans cease thinking of their canid companions as wolves and start thinking of them as dogs—a domestic form under human control (Pierotti and Fogg 2017). If the definition of a dog is simply a wolf that lives with humans, we have a conundrum, because different cultures define their canid companions according to their own experiences, and the question becomes, who gets to make this distinction? We argue that Indigenous peoples around the world, including Indigenous North Americans, Australians, Siberians, and the Ainu of Japan, probably did not make this distinction until they encountered Europeans who imposed their cultural norms. Because they were writing the books, Europeans chose their terminology, rather than that of Indigenous peoples. As a consequence, today most people seem to operate under the assumption that a canid that lives with humans is a dog, regardless of how the people with whom it lives regard its identity.

One of us (Pierotti) has spent the last 30 years traveling around North America as an expert witness and conducting public outreach, trying to explain this conundrum whenever local authorities decide that a canid possessed by some person or family is a wolf and, therefore, represents a danger to the community. Chapters 9–11 in *The First Domestication* (Pierotti and Fogg 2017) represent our attempt to evaluate this situation and propose a possible resolution. In every case, Pierotti was able to identify the animals as obvious dogs, even though in most cases, alleged wolf experts had identified the animals in question as wolves.

An obvious case of such a conflict arose in Alberta, Canada in the early 1990s. The animal in question was a 150-pound male dog that superficially resembled a wolf and had been identified as a pure wolf by Alberta's Provincial wolf biologist (a Canadian equivalent of the position that Mech has held; details of the case can be found in Pierotti and Fogg 2017:210–212). In the enclosure next to the male was his full sibling, a female who the Provincial biologist readily dismissed as a dog, primarily because her tail curled above her back, whereas the male's tail was straight (see Pierotti and Fogg 2017:Figure 9.3). This case was easily resolved by pointing out the dog features of the male, and everyone, including the Provincial biologist, seemed to be satisfied with the outcome.

In almost every case in which Pierotti has participated, people who consider themselves to be experts in wolf identification seem to base their idea of what a wolf looks like on images from the media, in which obvious dogs are generally used to portray wolves. This should not be an issue with Mech, who clearly is expert at knowing what wolves look like from many years of observation and handling animals. Mech seems to have little experience, however, with the boundary zone, where animals can live as both wolves and dogs (in the sense that they hunt with and sometimes live with humans). As one example, the Ainu of Japan (Walker 2005:85–86, cited in Pierotti and Fogg 2017:141)

tried to reproduce or encourage “wolf traits in their own dogs ... through both accidental and intentional breeding.” ... In at least one Ainu village they “tried domesticating wolves,” which involved Ainu caring for wolf pups in their village for about two years (until adulthood). Once the wolves had become accustomed to people, the Ainu “allowed them ... into the mountains alone to hunt and kill deer, after which the wolves returned to the villages.”

The practice of living with individual *Canis lupus* that are free to come and go from an Indigenous community is also found among Indigenous Australians (*Canis lupus dingo*, see Chapter 6 in Pierotti and Fogg 2017:125–142) and is also known from accounts provided by various Native American peoples (Pierotti and Fogg 2017:143–165). Exactly how canids behaving in this manner should be classified is pretty much an open question; it seems,

however, that Indigenous peoples seem to regard them as wolves when they live on their own and dogs when they live with people, as in this Ainu poem (Walker 2005:90):

Therefore,  
simply put  
a dog,  
even if you kill one,  
should not be sent in the direction of the ocean.  
Its ancestors are wolves.  
It should be sent in the direction of the  
mountains. That's the lesson of this story.

Mech seems to struggle with the concept of an animal which is both a dog and a wolf, depending upon its socioecological context. This is clear in his statement that “dog domestication did not take place in North America, however, so whatever these Native American stories actually portrayed would not have applied to the Eurasian cultures within which dogs were domesticated” (Mech 2019:70). This statement reveals typological thinking, as well as ignorance of the history of American dogs. The Salish people of the Pacific Northwest had wool dogs and camp dogs, both of which were morphologically distinct from wolves millennia before Europeans arrived in North America (Barsh 2016; Crockford 1997). There are dog breeds created by Indigenous peoples in both North and South America, even if these lines appear to be extinct in the present (Leathlobhair et al. 2018). *Chichimec*, the actual name of the Aztecs, literally means *people of the dog* (Brinton 1868). Many tribes on the American plains had large wolf-like dogs, which may or may not have been tamed wolves (Fogg et al. 2015; Pierotti and Fogg 2017:143–165). These results show that dogs have been domesticated several times in various parts of the world and Native Americans and their ancestors participated in such traditions. Humans are still creating new breeds of dog from wolves, although Mech states that this event happened only once 14,500 years ago. Mech seems to think that because contemporary genetic work suggests that contemporary domestic dog breeds originated in Eurasia, no Indigenous Americans were capable of carrying out domestication, which ignores a considerable literature on Native Americans and their canid companions.

In our thinking, the boundary between wolf and dog is fluid and ever-changing, a process that began around 40,000 years ago (see also Shipman 2015) and continued in North America until the last few



hundred years. This is why we focus our work on canids that straddle this boundary, e.g., tamed wolves, socialized wolves, crosses between wolves and dogs that resemble wolves, and the various breeds of wolf-like dog. This is where evolution is happening and where we can see the changes that living with humans induces in *Canis lupus*.

### Neocolonial Perceptions

One major subtheme of Mech's essay is his tendency to dismiss any knowledge or information that comes from Indigenous Americans. He argues that "reasons to conclude that the stories related by Fogg et al. (2015) do not reflect reality is found by comparing the stories' details with what is known about basic wolf biology" (Mech 2019:71). As an example, Mech (2019:72) states, in reference to a wolf that helped a group of Cheyenne women and children,

including the communication between the woman and the wolf, the behavior of this single wolf fits nothing we know about such wolves. If this animal were an individual pack member, it would have returned within a few days to its pack... If it were a true lone wolf, it would have been traveling far and wide seeking a mate.

Despite this claim, in 22 accounts that discuss results from radio-tagging wolves around the world described by wolf biologists (Thiel et al. 2015), almost all describe wolves that wandered alone for months or even years at a time. More to the point, Cheyenne women and children fled the Sand Creek Massacre on November 29, 1864, which is a time of year when wolves are not breeding and more likely to be wandering. This is not a myth thousands of years old, but a recent account provided by these women in recent historical time (contemporaneous with the American Civil War).

It is unclear to us why Mech misrepresents this fundamental fact of wolf behavior, other than to try and denigrate an account reported by Cheyenne people, which is linked to a major historical, traumatic event and explains how some women and children were able to escape a genocidal massacre. Wolves are social animals and were familiar with the Cheyenne, who were one tribe that showed great respect for wolves (Fogg et al. 2015 and references therein). It hardly seems surprising that a lone animal might join a group of humans for several weeks. The male wolf, Romeo, around Juneau, Alaska, returned alone yearly

for almost a decade, interacting with humans and their dogs, and not seeking a mate, rather than returning to a pack (Jans 2015). What Mech seems to mean is, based on his rather limited experience of the possible range of wolf behavior, animals do not behave in the way described by the Cheyenne women. Mech also seems to assume that because wolves have been known to occasionally attack humans that this means they are rarely if ever social with humans. Wolves also attack and kill other wolves, yet no one suggests this means that wolves are never social with each other.

Recently, Hansen Wheat and Temrin (2020:1) reported on wolf sociality with humans, particularly the response of wolf pups to humans, which reveals that

three 8-week-old wolf puppies spontaneously respond[ed] to social-communicative behaviors from an unfamiliar person by retrieving a ball. This behavioral expression in wolves has significant implications for our understanding and expectations of the genetic foundations of dog behavior. Importantly, our observations indicate that behavioral responses to human social-communicative cues are not unique to dogs.

We reported similar results: "wolf behavior expert Benson Ginsburg states: 'It is my experience that if you put your hand into a pen with newborn wolves, a certain percentage will come immediately and never want you to leave... As adults, the social ones can become sociable to humans'" (Pierotti and Fogg 2017:224).

Another example Mech (2019: 71) uses is that "some of the accounts in Fogg et al. (2015) involve wolves teaching humans how to hunt." We do indeed report such accounts and stand by our arguments. Mech (2019:71) goes on to state:

The methods that wolves use to hunt vary considerably depending on type of prey, habitat, and season, but most wolf hunts are failures and most successful hunts depend greatly on wolves running down their prey at speeds of up to 56 km/h. ... There is little evidence that wolves employ particular strategies that might be useful to humans.

On this point we beg to differ: humans entering new lands need to learn the available prey and which techniques are most useful depending upon the habitat and season. Who better to learn this from than



the other cooperatively hunting large mammal that is present? To support this point, we examine a well-established knowledge set from a well-studied Indigenous people, the *iinisskimm* knowledge of the Blackfoot (*Nitsitapi*) of the American west.

One important example of a technique that wolves employed that humans needed to learn was how to control bison to herd them over cliffs, or to drive them into deep snow, where they could be easily killed (Pierotti and Fogg 2017:146, 149). The Blackfoot people were known for their skills and long-standing tradition of employing buffalo jumps or *pisskan* (Barsh and Marlor 2003). Barsh and Marlor (2003:581) investigated the close relationship, dismissed by Mech, that “Blackfoot learned to live together and hunt bison in social groups from wolves, and refer to their ancestors as ‘The wolf people’ ... (their) stories ... draw attention to an important ecological fact: wolves drive bison.” Barsh and Marlor (2003:585) spend several pages discussing this ecological relationship and argue that the Blackfoot “observed wolves, recognized the usefulness of wolves’ knowledge, and then imitated wolves’ behavior to insert themselves into the existing bison-wolf relationship without significantly changing it.”

This illustrates the knowledge and science that lies behind the stories that, in Mech’s words, “do not reflect reality” and that there exists “little evidence that wolves employ particular strategies that might be useful to humans” (Mech 2019:71). We find it hard to understand how a scientist can claim that the reality of another culture must be false or nonexistent, because it does not agree with his version of how the world functions, based on studying wolves in the Northern Boreal Forest. This attitude cuts to the core of many issues on which we conduct careful scientific research as ethnobiologists. Mech’s attitude reflects a neocolonial perspective in which, as one Western scientist, Robert Earle Johannes (1989:5), has put it:

Imagine people who confidently assume they can best describe and manage the natural resources of an unfamiliar region alone—ignoring local hunters, who know every cave and waterhole and the movements and behavior of a host of local species. Such, historically, has been the custom of most scientists and natural resource managers working in unfamiliar environments.

The world of Indigenous Americans is a very unfamiliar environment for Mech, however, he plows

through, ignoring Indigenous beliefs and stories, because “the stories related by Fogg et al. (2015) do not reflect reality ... found by comparing the stories’ details with what is known about basic wolf biology” (Mech 2019:71).

The assumption under which Mech (2019:71) operates is that

as a biologist who has studied wolf biology, behavior, interactions with humans, and conservation for 60 years, it is hard for me to understand how wolves could have been so unafraid and friendly toward humans and vice versa during the period and in the region covered by Fogg et al. (2015).

Mech may well have 60 years of experience, which we admire and salute, however the Blackfoot have at least 6,000 years of living with and observing wolves, and the Cheyenne have traditions that go back at least 15,000 years (Schlesier 1987).

Western science, as it currently defines itself, is a relatively recent philosophical development and functions best at very small and very large scales (e.g., molecular and planetary levels), where it is possible to transcend the obvious limitations of the human ability to directly observe phenomena and where investigators are most dependent on technology to provide data (Alessa 2009; Lewontin 2001). Indigenous perspectives are most effective in observing and describing wholes (as opposed to parts), because they operate at the level of human perception and concentrate on functional relationships and co-evolutionary processes rather than structure (Alessa 2009; Barsh 2000; Pierotti 2011). As Barsh (2000:162) notes, “when Indigenous people move through a familiar landscape, they augment their ability to monitor ecological processes by observing behavior of species with more acute senses.” Similarly, Alessa (2009:250) remarks that for Indigenous people “the consequences (of failure) are not the ridicule of one’s peers, or the failure to get research grants, they are sickness, suffering, and death.”

Mech seems to assume that his 60 years of research into wolves means that he has seen every possible variation on the theme of being a wolf, and more importantly that any wolf that has encountered humans has experienced persecution by these humans. Mech’s experience consists primarily of studies of wolves in Northern Minnesota and Michigan, and several years of work on Arctic wolves



on Ellesmere Island. In regard to the latter study, Mech (2019:71, emphasis added) states that:

Only where a wolf population *lived without exposure to hominids for centuries* and then was gradually exposed to them, such as in North America's high Arctic during the past few centuries, *could wolves perhaps lose their fear of human ... [for example, on Ellesmere Island] The wolves were curious but did not recognize humans as prey, behavior that attests that the species must have so consistently been harassed by humans that only those that did not recognize humans as prey survived.* However, the more-or-less fearless behavior of this wolf population toward humans has not been documented at any other time or place. Everywhere else, evidence is strong that wolves and humans feared each other.

In contrast to Mech's statements, anthropologists working in the same area state that the first human inhabitants of Ellesmere Island were small bands of Inuit drawn to the area for Peary Caribou, muskox, and marine mammal hunting in approximately 2000–1000 BCE (Schledermann and McCullough 2003). The Ellesmere Inuit were hunting caribou and muskox, activities in which wolves were also engaged, suggesting that these species probably regularly encountered each other over the last two millennia. Mech (2019:71) claims that “the species [Arctic wolves] must have so consistently been harassed by humans that only those that did not recognize humans as prey survived.” Were these wolves consistently harassed, presumably by humans, or had this population “lived without exposure to hominids for centuries” (Mech 2019:71)? These statements are inconsistent with one another.

Based on his twentieth century experiences with persecuted wolves, Mech presumes to tell us how Indigenous Americans might have acted with wolves that had not experienced persecution. This is a crucial point, because for thousands of years wolves and humans were co-inhabitants of much of North America, yet the accounts from these peoples show no fear or hostility of, or inclination towards persecution of, wolves. More to the point, Mech's own experience with wolves he identified as unpersecuted, on Ellesmere Island, shows an experience much more like those we describe, despite his own acknowledged fear. In Mech's own article in Thiel et al. (2015:217, emphasis added), we find the

following description of his reaction to being investigated by the alpha male wolf:

He even frightened me, the *one time in my then forty-six years studying wolves that I had been afraid of one ...* when Brutus ambled around behind me where I could not see him, I had second thoughts ... for a minute or two, *I became truly frightened.* ... “You know Dean, for the first time in my life I am truly afraid of a wolf,” I uttered to my companion. I had thought, that I might jump or whirl around, possibly triggering some predatory move. ... *Each second Brutus stayed behind me seemed endless* until he finally moseyed back around to my side where I could see him. He then strolled some twenty feet from us, lay down and howled. My fear was all for naught and *I ended up feeling foolish.*

Perhaps even more important, the “wolves” studied by Mech in Minnesota and the Upper Midwestern United States are probably wolves admixed with coyotes (Hailer and Leonard 2008; vonHoldt et al. 2011; Wilson et al. 2009). Coyotes are less social than wolves and assuming that admixture may influence behavior, this may explain why the Minnesota wolves studied by Mech are less social and more fearful than the actual wolves he studied on Ellesmere Island. Further evidence supporting this line of thinking comes from Mech himself (Mech 2013), where he reports that a wolf he tracked in Northern Minnesota for eleven years, and relied upon for crucial data, weighed between 56 and 60 pounds, which is very small for a timber wolf, but appropriately sized for a coyote/wolf hybrid.

To us what seems more likely is that the wolves on Ellesmere were curious about humans and respectful, but not fearful, much like the situation that prevailed when humans first came to North America. If humans were not aggressive towards wolves, the wolves had no need to have conflict with them and they would not have been persecuted. Mech makes a great deal of “the wolf's fear of humans, even though the animal is capable of killing them, must have resulted from selection acting on the wolves' enduring competition and negative interactions with humans” (Shipman 2015, cited in Mech 2019:70). The citation of Shipman on this theme says a great deal about Mech's perception and understanding. Shipman's (2015) work is titled *The Invaders: How Humans and their Dogs drove Neanderthals to Extinction*, in



which she makes an argument similar to ours in *The First Domestication*—cooperative alliances formed between modern humans and early dogs (wolves) in Europe and Asia around 40,000 BCE. As do we, Shipman argues for multiple occurrences of the domestication of wolves, and she does not hold to the 14,500 yr BP date like Mech. In fact, her basic premise would be invalidated if early domestication events had not taken place around 40,000 BCE. The point on which Mech (2019:70) cites Shipman, “wolves’ enduring competition and negative interactions with humans” is not part of her argument, which assumes that cooperation between wolves and humans made the combined species superior competitors and allowed them to survive and prosper at a time when many large mammals were going extinct in their shared ecosystem. Of the eight species of large-bodied carnivore (two canids, three felids, one hyena, and two hominids; Shipman 2015:Figure 9.3), wolves and humans are the only species who survived the Pleistocene in Eurasia. Far from supporting Mech’s argument, her work actually refutes it.

This inappropriate and inaccurate citation of Shipman’s work, and carelessness in the documentation of these crucial points, detracts from Mech’s argument. For example, he makes a big deal about the importance of rabies in North America, however, a simple Google search could have revealed to him the work of Velasco Villa et al. (2017:221), where they state that

historical records and phylogenetic analysis of multiple virus isolates indicate that, before the arrival of the first European colonizers, rabies virus was likely present only in bats and skunks. Canine rabies was either rare or absent among domestic dogs of Native Americans, and first arrived when many new dog breeds were imported during the period of European colonization.

This is a serious error on Mech’s part, given his emphasis in the abstract and the text on “important information not considered by the authors about wolf attacks on humans and the importance of rabies in the wolf-human relationship” (Mech 2019:69).

The final issue relates to his insistence that we ignored “important information [concerning] wolf attacks” (Mech 2019:73). Mech cites Linnell et al. 2002 as his primary source. This admirable study summarizes a good deal of information but reports

very little of importance to our work. The basic conclusions of Linnell et al. (2002:5, emphasis in original) are:

*in those extremely rare cases where wolves have killed people, most attacks are by rabid wolves, predatory attacks [in Europe and India] are aimed mainly [at] children, attacks in general are unusual but episodic, and humans are not part of their normal prey.* When the frequency of wolf attacks on people is compared to that from other large carnivores or wildlife in general it is obvious that wolves are among the least dangerous species for their size and predatory potential. ... The risks of wolf attacks in Europe/Scandinavia (and also North America) today appear to be very low, as recent cases are rare, despite increasing numbers of wolves.

This hardly sounds like headline material, despite Mech’s emphasis. In North America, where Mech’s knowledge and experience are located, Linnell et al. (2002) basically show that after eliminating errors—dog bites and attacks mistakenly reported as wolf-caused, flat out false reports (including several cases covered in Chapter 10 of Pierotti and Fogg 2017:221–247)—there is little evidence. One widely cited Russian report is believed to be a fake, cooked up by an anti-wolf activist who managed to get Stalin’s ear. Linnell et al. (2002) report fewer than ten attacks in the United States and Canada combined, of which two resulted in fatalities, one by eastern coyotes (wolf/coyote hybrids) on Cape Breton Island and another in Alaska by wolves. In both cases the victims were small adult women, which although tragic does not represent the epidemic that Mech implies.

Mech places excessive emphasis on fear (including his own as demonstrated above), attacks, competition, and predation, and no emphasis on respect and cooperation. As we argue in *The First Domestication*, cooperation is actually more common than competition and respect is the basis of the way that Indigenous peoples choose to deal with the nonhuman world. Mech ignores this and his article seems to be an effort to reinstall fear in its readers, which we reject. His arguments are counter to the usual approach taken within the discipline of ethnobiology of respect for the views of Indigenous peoples and their accounts.

### Summary

We believe we have refuted all three of the charges

advanced by Mech (2019): 1) arguments and evidence that question the value of Indigenous American stories for drawing conclusions about the relationship between early humans and wolves at 14,500 yrs BP; 2) that Indigenous American stories contradict documented information about wolf biology, behavior, and known interactions with humans that were not known to persecute wolves; and 3) information not considered by the authors about wolf attacks on humans and the importance of rabies in the wolf-human relationship. The first of these points is irrelevant because we were employing the ethnobiological tradition and examining how basically benign relationships between humans in Indigenous cultures and wolves could exist. Mech misrepresents and distorts Pat Shipman's (2015) work on wolves and early modern humans, which supports our arguments. The second point seems to represent a neocolonial and questionable perspective, simply arguing that all evidence presented by Indigenous Americans is false if it presents a view of wolf behavior alternative to Mech's expectations, because he assumes that all interaction between humans and wolves must be hostile, as illustrated to his reaction to being sniffed by a male wolf as quoted above. The third point is misleading because, as we revealed, rabies was not an issue in wolves until Europeans arrived in North America (Velasco-Villa et al. 2017) and wolf attacks in North America are very infrequent and rarely fatal.

One troubling aspect of this entire situation is that Dave Mech is in many ways responsible for the positive image that many Americans now have of wolves. It seems that Mech (2020) has now turned away from wolves and currently advocates for state regulation of wolf populations:

I believe that the way wolves should be managed is which ever way each state decides. Individual citizens have individual opinions about wolf management. State legislatures and Departments of Natural Resources must balance all these many conflicting views while ensuring that their wolf populations survive but conflict minimally with humans. As long as the wolf is no longer endangered in a particular state, I support that state's approach to managing its wolves.

In Idaho and Wyoming, at least, this almost certainly means a return to extermination outside of national

park boundaries.

Ironically, Indigenous peoples such as the Nez Perce in Idaho and the Chippewa in Wisconsin have stepped forward to fill the gap Mech has created (Pierotti and Fogg 2017:289):

all tribes in Wisconsin have requested that no wolf hunts take place and no hunters be allowed to kill wolves on tribal lands. ... Some tribes have gone well beyond simple requests, employing serious leverage. In retaliation for wolf hunts, six bands of Chippewa in northern Wisconsin declared their intention to spear a near-record number of walleyes during the annual spring harvest, terminating a 1997 agreement with the state and effectively shutting down the sport fishing season (Fogg et al. 2015). Such actions resulted because the relationship between the state and tribes has become increasingly strained, primarily because the tribes strongly opposed opening a wolf hunting and trapping season starting in 2012.

We find it encouraging that the very peoples whose cultural legacy and beliefs Mech disparages and dismisses in his paper are the ones who are trying to save the species that Mech dedicated his life to studying and is now condemning to the ministrations of state governments.

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