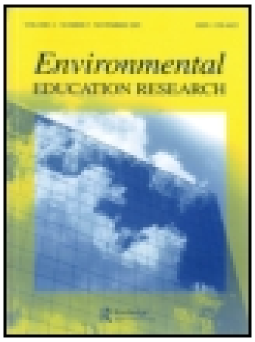

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Sharing a world with wolves: perspectives of educators working in wolf-focussed education

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ABSTRACT
This paper outlines a qualitative investigation where wolf-focussed education was examined from the perspective of educators who work at programmes/centres around North America. Using a phenomenological methodology and a critical lens, methods involved semi-structured interviews with 17 educators from 15 different wolf centres, a brief content analysis of the centres' websites, observations at two sites, and photographs. When it came to the experience of being a wolf educator certain motifs or essences emerged and these are discussed in light of the academic literature and their relevance to environmental education and research and include: the significance of personal, political, regional and cultural contexts; the key role that scientific knowledge and learning has for many wolf educators, the importance of ethics to the educators when teaching about and working with wolves, the significance of direct experiences with wolves, and engagement with conservation issues. This research highlights the importance of education as one strategy for wolf conservation, especially if it does not shy away from the messiness of controversial conservation issues and helps people grapple with the social, ethical, regional and cultural aspects of knowing wolves and our relationships as humans with them.

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Introduction: why study the experiences of wolf educators?

In North America today, the conservation of wolves is a contentious and sometimes polarizing issue (Morell 2008). European colonizers arrived in North America with negative attitudes about wolves that led to organized efforts to eradicate them, including government-initiated ones (Boitani 2003). These extermination efforts were tremendously successful. For example, by the 1930s, wolves had been removed from 95% of their former range in the contiguous United States (Morell 2008). With a shift in perceptions towards wolves in the 1970s came protective legislation that had at least two results: Wolves started returning to some areas and they were reintroduced to other areas through government programmes (Boitani 2003; Ripple et al. 2014). Education efforts arose with the wolves' return, aimed at improving attitudes towards wolves and teaching the public how to share their landscape with these animals (Fritts et al. 2003; Troxell et al. 2009). Many wolf education programmes now exist both inside and outside of North America (Fritts et al. 2003; Troxell et al. 2009). Even though some of these educational efforts were introduced over 50 years ago, little research has been dedicated to exploring them. Indeed, my investigation of the literature only unearthed three studies that examined wolf

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education in any capacity (i.e. Black and Rutberg 2007; Samuelson 2012; Willard 2008). In response to this paucity of research, in 2014 I set out to explore wolf education as part of my doctoral work. I was specifically interested in the experiences of wolf educators. My research question was: *What are the experiences of educators who work at programmes that feature wolves; in particular, what do these educators learn through both working with and teaching about wolves?*

My rationale for the importance of this research is threefold. First, my work is situated within the field of environmental education (EE) where substantial research indicates that first-hand experiences in the natural world may lead to greater environmental awareness, pro-environmental attitudes and behaviour and/or environmental knowledge (Liddicoat and Krasny 2013), albeit not necessarily in straightforward ways (Lloro-Bidart and Russell 2017; Russell 1999). While research on the educational ramifications of human relationships *specifically* with animal–others remains marginal (Fawcett 2013; Spannring 2017), research focussing on human–animal relations and the 'question of the animal' has been garnering greater consideration within EE in the last decade (Oakley et al. 2010; Spannring 2017). Some EE scholars are attempting to disrupt anthropocentrism and the human/animal divide through their research by engaging with critical pedagogy and critical animal studies, ecofeminism and feminism, and/or posthumanism (see Spannring 2017 for a recent review). For example, investigating the possibilities for interspecies learning in early childhood education, Taylor and Pacini-Ketchabaw (2015) used multispecies ethnography to explore interactions and encounters between children and other animals (ants, worms) in both Canada and Australia. Their study considered how educators and researchers could reposition our work so that 'we might learn with, rather than about, other animals' (509). Gannon (2017) too described research where interspecies encounters and relations (between year nine students in Australia and three animals – an eel, swamphen and turtle) are considered in light of critical, feminist and posthuman perspectives that 'reject the anthropocentric human/nature binary that positions the human as ascendant and separate to nature' (93). Similarly, Lloro-Bidart (2014, 2015), Lloro-Bidart and Russell (2017) and Warkentin (2011) took critical approaches to investigate human-wildlife encounters at various conservation/'edutainment' sites (aquariums, whale watching and swim-with-dolphin programmes); they unpacked some of the hidden curricula and considered the experiences of the non-human animals involved. Like these EE researchers and a few others (e.g. Fawcett 2002, 2014; Kuhl 2011a; Pacini-Ketchabaw and Nxumalo 2015; Pedersen 2010; Watson 2006), I wanted to contribute to this body of work by taking a critical approach to animal-focused EE by researching wolf educators' experiences and, importantly, in an effort to disrupt anthropocentrism, explore the possibility for interspecies learning that might emerge from educator-wolf relations where *both* species were prefaced as contributing sentient beings.

Second, those involved in wolf conservation continue to recommend education and public outreach (albeit often with caveats) as necessary to improving human–wolf relations (e.g. Andersone and Ozolins 2004; Fritts et al. 2003; Troxell et al. 2009). While research investigating wolf education remains minimal, there is a substantive body of work that considers human attitudes towards wolves. These studies indicate that attitudes towards wolves are difficult to unravel. The multifarious factors affecting attitudes include: gender, culture, class, age, level of education, group membership (e.g. hunter, naturalist, environmental), place (e.g. rural/urban), region, country, distance from wolf territory, political beliefs, attitudes towards nature generally, relationship to nature and the land, values, issues of power and control, and trust in government authority and/or science (Dressel, Sandström, and Ericsson 2014; Houston, Bruskotter, and Fan 2010; Skogen and Thrane 2008; Skogen, Mauz, and Krange 2008; Shelley, Treves, and Naughton 2014; Sponarski et al. 2013; Williams, Ericsson, and Heberlein 2002).

Further complicating the matter, EE researchers are increasingly recognizing that experience in/with nature and other animals does not automatically equate to improved attitudes or environmental action. Instead, they posit that a complex amalgam of factors is involved in determining the outcomes of EE experiences (Lloro-Bidart and Russell 2017; Kollmuss and Agyeman 2002;

Liddicoat and Krasny 2013; Russell 1999). Taking into account conservationists' recommendations for education as a means to improve attitudes/support for wolf survival, I hoped my research might unravel some of the complicated factors playing into the matter. As such, I was dedicated to taking an in-depth approach to investigating wolf education programmes through the eyes of educators.

Third, if humans accept the premise that wolves have the right to exist, we have an obligation to determine how to co-exist in order to avoid further extirpations and extinctions (Ripple et al. 2014). Morals and ethics drive beliefs about nature and human–nature relationships, including human–wolf ones. Consequently, wolf recovery and co-existence are as much about human values and ethics as they are about biology and/or conservation science (Fox and Bekoff 2009; Jickling and Paquet 2005; Lynn 2010). This became clear to Willard (2008) who, having researched wolf education and outreach efforts in the western United States, concluded that educators involved in controversial issues 'must step beyond the comfort zone of science and rationality and acknowledge the values and social issues at the heart of the conflict' (58). Accordingly, my research investigated whether wolf educators are attempting to confront—and/or help participants grapple with—some of the important moral, ethical and value-laden aspects of sharing a world with wolves.

Methods

Since my research aimed to understand being a wolf educator in all its complexity, phenomenology seemed a good fit. Phenomenology as a methodology has been adopted from philosophy by social scientists in order to 'gain access to the pre-reflective experiences as they occur in the taken-for-granted spheres of our everyday lifeworld' (Van Manen 2014, 215). I drew heavily from both Van Manen's (2014) guide to employing hermeneutic phenomenology and Seidman's (2012) text on phenomenological interviewing as I designed my research question and methods. Hermeneutic phenomenology seeks not only participants' descriptive accounts of the phenomenon being studied, but also 'the interpretation or meaning of the experience' (Eddles-Hirsch 2015, 253). Consequently, Seidman's (2012) interview approach where the goal is to understand participants' subjective lived experiences and the meaning ascribed to these experiences within contexts seemed appropriate. Likewise, there is precedent among human–animal relations researchers for employing phenomenology, partly because within this framework, researchers can study non-human animals as experiencing subjects with whom we share our 'life world' (e.g. Abram 1996; Rossmanith 2014; Russell and Hodson 2002; Shapiro 1997; Warkentin 2007; Watson 2006). This is in stark opposition to many research frameworks where, especially historically, non-human animals have been 'othered' and/or studied as objects (Spannring 2017; Russell 2005).

Although epoché (or bracketing) and reduction are fundamental to phenomenology (Van Manen 2014), some phenomenological researchers have moved away from the idea of bracketing, at least in so far as it was originally conceptualized (Lichtman 2013; Vagle 2014). Prior to my study I was concerned that it was impossible to truly set aside, or bracket, one's ideas and experiences before investigating the phenomenon in question. Nevertheless, in an effort to adopt a phenomenological attitude, I considered and wrote about my positioning and thoughts on wolves, along with environmental and wolf education, before conducting my research so that I could be 'swept up in a spell of wonder' and take on a phenomenological attitude (Van Manen 2014, 26).

My data collection methods included conducting long distance (Skype or telephone), semi-structured, in-depth interviews with 17 educators from 15 programmes around North America. I supplemented the interviews with observations at two sites, a content analysis of the 15 programmes' websites, and through collecting photographs from willing participants adding an aesthetic component (Barone and Eisner 2012; Kuhl 2011b; Van Manen 2014).

Phenomenological sampling necessitates gathering enough participants that the researcher has adequate rich descriptions, anecdotes and stories to 'help make contact with life as it is lived' (Van Manen 2014, 353). To gain participants for my study, I used a convenience sampling technique—a type of purposeful sampling common in phenomenological interview research (Seidman 2013)—followed by snowball sampling. I ended up interviewing 17 educators, 9 men and 8 women who worked at programs and centres in 13 regionally diverse states and provinces, including the east coast (e.g. New York), the west coast (e.g. California), the Rocky Mountains (e.g. Colorado, British Columbia), the southwest (e.g. New Mexico) and the Great Lakes region (e.g. Indiana, Ontario). The majority (16) worked or volunteered at centres that housed wolves and 4 individuals worked at programs where visitors were offered an experience to hear wild wolves in the area howl.

I created written transcripts from the recorded interviews. I then embarked on an inductive approach where the researcher 'come[s] to the transcripts with an open attitude, seeking what emerges as important and of interest from the text' (Seidman 2013 119). Having listened to and transcribed all of the interviews, I coded them to create categories (Seidman 2013). While usually categories represented common ideas amongst educators, other times they symbolized unique or especially salient aspects of the educator experience (Van Manen 2014). Finally, I grouped similar categories together, creating subthemes and eventually key themes.

The experience of being a wolf educator

While no one universal experience of being a wolf educator emerged from the participants' interviews, there were some commonalities amongst the 17 participants that led to four overarching themes: the complexities of educating for change; understanding wolves; working with wolves; and engaging in the controversy of wolf conservation. While a detailed overview of the findings is beyond the purview of this article, I do explore the essence of the educator experience (a key aim of phenomenology) as I was able to come to 'an intuitive or inspirited grasp' of the 'commitments and practices' of participating wolf educators (Van Manen 2014, 356). Below, I discuss five motifs/essences of the experience in light of the key themes and academic literature.

The importance of context

The wolf educator experience cannot be understood outside the personal, regional, cultural and political contexts in which the participants were living and educating. For instance, personal contexts influenced participants' choices to become wolf educators in the first place, with many discussing an interest in or passion for animals when they were growing up. Regional contexts were also key; for example, all seven educators who cited an educational practice of sharing *only* scientific facts about wolves with visitors rather than advocacy messages worked in regional contexts where wolves are controversial and, not coincidentally, reside on the local landscape. One of these seven participants, Monique[1], stated this 'science only' philosophy succinctly:

> There's a facet of people who are pro-wolf, who want the centre to take a stand on issues such as hunting, as using dogs with wolf hunts, trapping season, … all the issues that face wolves. But … [o]ur philosophy is to try to present all the information that is available, the current science as we know it, and allow people to make their own decisions.

The western cultural context within which the educators were immersed was also influential. Gwen explained:

> In North America, that European influence, I think definitely gets very deeply into our psyche, with the Big Bad Wolf and Little Red Riding Hood and the fear of the wild places, and the unknown, and the idea that wild places need to be tamed.

Like Gwen, 11 of the 17 educators argued that culture was vital to understanding why many people in North America continue to feel fearful of and/or negative towards wolves, a common topic in the literature as well (Fritts et al. 2003; Prokop et al. 2011; Shelley et al. 2014). For instance, the belief originating in the western Enlightenment 'that humans are somehow exceptional to and hyperseparated from nature and can modify, 'improve', or exploit it with impunity' still affects people's beliefs about, and interactions with, other animals (Pacini-Ketchabaw and Nxumalo 2015, 153).

Political contexts were also key and were intertwined with educational, regional and cultural contexts. For example, politics shape how wild wolves are protected in various regions (Bruskotter et al. 2014; Eisenberg 2014), which in turn impacted the experience of the educators who cared about and were invested in the protection and conservation of wild wolves. As well, the political controversy around wolf conservation influenced to what degree the educators and the centres where they worked were comfortable with engaging in education that explicitly advocated for wolves.

While the finding that the participants' experiences were shaped by both their own contexts and the contexts in which they worked may not be new or surprising, it is nonetheless worth highlighting because it reinforces the findings of researchers who have discussed the importance of context in EE (Liddicoat and Krasny 2013; Stevenson et al. 2013). For example, Stevenson et al. (2013) wrote: 'Approaches to environmental learning processes now recognize that worldviews and belief systems shape individuals' understanding and interpretation of environmental issues and mediate their environmental behaviours' (513). Others have made similar points about the importance of regional (Bath 2009; Chapron et al. 2014; Williams et al. 2002), personal and socio-cultural contexts (Nie 2002; Skogen and Thrane 2008) to understanding peoples' attitudes and beliefs about wolves. It is clearly important, then, to take into account educator and visitor worldviews when considering the content and potential impacts of educational efforts for wolves.

A lens of western science

That educators understand, interpret and teach about wolves and wolf issues through the lens of western science could be considered a contextual factor, but I have separated it on account of the complexity of the finding. This lens manifested itself in a number of ways: Most of the educators had educational backgrounds in science or natural resources (12 out of the 14 who discussed it); knowing and sharing the science of wolves was a priority for most of them, so much so that seven of them felt that wolf education should be predominantly limited to sharing science-based information; the content of two talks I observed at one centre focused almost exclusively on science or ecology-based information about wolves; at least six of the educators had been involved in scientific research on wolves; and some felt that conservation management decisions about wild wolves should be based in scientific research rather than on public opinion or politics. For example, when discussing how best to educate those visiting the centre at which she worked, Gwen argued it was by 'meeting the visitor where they're at, giving them scientific information in a way that they can understand it, and then encouraging them to form their own viewpoints from that information'. Likewise, many educators discussed their frustration that public opinion and politics hold more sway than scientific evidence on the subject of wolf conservation and management. For instance, Erik stated: 'Unfortunately, so many decisions today on wolves are based on emotional, are based on politics, you know, so little on science. So many of the decisions are not based on science. It's so frustrating.'

Even though the experience of being a wolf educator commonly meant understanding and educating about wolves through a scientific lens, this lens was not used exclusively. For example, while some educators talked extensively about wolf biology and ecology during the interviews, the same educators also discussed the importance of creating emotionally meaningful experiences for programme visitors, or they described how their own interactions with wolves offered different learning and insights from what they had gained in their science-based education. Rick explained:

> Our program isn't about telling people everything about wolves, but what if we could make an emotional connection with them? What if we could get them to care because they had this incredible emotional experience? Like hearing wild wolves howling? Because if you can have that hook, then maybe for the rest of their life, they're going to go, 'You know what? I'm interested in this animal.'

Likewise, while fact- or concept-based transmission approaches are still common at many informal EE sites (Lloro-Bidart and Russell 2017; Mony and Heimlich 2008), within the larger field of science education, there has been an effort to move beyond relying on traditional approaches when educating about complex issues. For example, educators do not solely focus on scientific concepts, but instead also include discussions about the social, economic and political aspects of controversial issues (Oulton, Dillon, and Grace 2004; Hodson 2010). What sometimes goes unacknowledged in a 'share only science' approach that some of the participants advocated is that knowledge (e.g. about wolves) gained through science is never completely objective or value-free; instead, it is developed and understood from specific worldviews and paradigms (Fox and Bekoff 2009; Jickling and Paquet 2005; Lynn 2010). When it comes to wolves, the dominance of western science often remains 'taken for granted, transparent, and uncontested' (Jickling and Paquet 2005, 118).

Oulton et al. (2004) contended that rather than fact- or concept-based pedagogical strategies, science education could help students understand the nature of controversy itself. It should underscore varying worldviews, the limitations of science and the influence of politics and power on science. Such an approach is foundational to STSE (Science-Technology-Society-Environment) education, a field that is now over 40 years old (Pedretti and Nazir 2011) yet still remains somewhat liminal even though, as Hodson (2010) wrote, such an approach is vitally needed to meet 'the demands, issues, and problems of contemporary life. A much more politicized approach [to science education] is advocated, with major emphasis on social critique, values clarification, and sociopolitical action' (197). For an issue as complex as the wolf one, education that moves beyond the western scientific lens and facts-based approaches and incorporates more diversified techniques may prove necessary.

Engaging in ethics

Regardless of the lens they were employing, all the wolf educators in my study had engaged ethically with the subject of wolf education or wolf conservation. Given the controversy surrounding wolves and the history of complicated human–wolf relationships, this is no surprise. As Taylor and Pacini-Ketchabaw (2015) wrote, 'Multispecies pedagogies are filled with difficult decisions, unanswered questions and ethical conundrums' (518). Indeed, educators' ethical considerations and concerns were an undercurrent across all the key themes, whether those considerations and concerns respected: educators' beliefs about wolf rights as individuals and species; their concern for the care and treatment of live wolves at educational facilities; or their unease about inhumane wild wolf management practices. For instance, 10 educators worked at centres where the wolves on site were socialized with humans (often only staff). They felt this added to the comfort of the wolves on display. Shelley explained: 'So we lessen their fear of humans so they're not pace-y and apprehensive and nervous all the time. So that they don't mind people visiting them.' However, at those centres where the display wolves were not socialized, educators also explained the choice on ethical grounds. For example, Gwen argued that having the wolves on site kept as wild as possible shows 'respect [for] the inherent wildness of the animals that we have here. And allow that to be part of the education and the display of the animals.'

Another topic where the educators weighed in ethically was conservation. Most educators felt humans should make adjustments in order to share the landscape with wolves, for instance, explaining how ranchers and farmers might modify their husbandry techniques. Some educators, like Monique, justified the need for these adjustments based on wolves' intrinsic or inherent worth. She remarked: 'I mean, who are we to say that any species who's been extirpated, when that habitat exists, doesn't have the right to live there, you know?' In the same vein, some participants expressed concerns about certain conservation management techniques being inhumane. They offered a number of examples, including: an entire wolf pack being destroyed when only one wolf was preying on livestock; the sterilization and re-release of wolves; and a wolf-hunting contest, with awards for capturing the smallest/youngest wolf. In another example, Jeremy detailed:

> [R]ight now it's completely legal in Idaho to shoot a pregnant female … Yeah, and animal humane groups are, like, what? When do we do that with any other species? We can actually shoot a lactating female right now that has puppies … and what's happening to those puppies? Of course they're starving to death.

In some cases, there was evidence that at the heart of why the educators engaged ethically was their care and experience with actual wolves. Likewise, Jickling and Paquet (2005) argued that 'ethics is largely about care, what entities warrant our care and consideration, and how we should behave toward those entities that demand this care' (129). Similarly, Martin (2007) discussed care in the context of EE, arguing that it is difficult for educators to foster a concern for environmental issues in their students when they strictly focus on factual information. Martin and others (e.g. Kelsey and Armstrong 2012; MacPherson 2011; Russell and Bell 1996) stressed the importance of specific subjective relationships with both the land and non-human animals for fostering this care and concern. These subjective experiences include emotional and conceptual learning and, worryingly, in today's world they are becoming increasingly endangered alongside wild animals themselves (Fawcett 2002, 2014).

Despite the importance of ethics to the participating educators, some ethical considerations infrequently came up in my interviews. These include that wolves were kept captive at some of the centres and the implicit pedagogical implications of that practice (Lloro-Bidart and Russell 2017; Spannring 2017). Likewise there was little discussion of the hidden curriculum when wolves or other animals are commodified and politically deployed when the public pays to view them as a form of edutainment (e.g. Lloro-Bidart 2014; Lloro-Bidart and Russell 2017). De Giorgio and De Giorgio-Schoorl (2016) and Warkentin (2011) both argued that ethical encounters necessitate the other animal having some degree of choice in the experience, and Lloro-Bidart (2014) contended that in a genuine authentic interspecies encounter, the other animal's body should not be regulated. As De Giorgio and De Giorgio-Schoorl (2016) wrote, other animals need to be 'free to express themselves, make calm decisions, take initiative, and choose whether or not to be involved' (112). Further complexifying the question of whether there was potential for ethical human-wolf encounters for the educators working at sites where wolves were kept captive, the wolves at these centres were born in captivity and many were rescued (from other facilities or homes where they were kept as pets) and could never survive in the wild. Thus, like Warkentin (2011), I suggest some 'degree' of ethical affordances between wolves and their human caretakers can be found at many of the wolf education centres in my study.

Understanding wolves through experience

For the wolf educators I interviewed, coming to understand wolves was facilitated by actual encounters (observations or interactions) with them. Like other researchers who do the same, I propose that the insights the educators gained through experiences with wolves are equally as real and relevant as the facts generated about them from scientific research which flies in the

Figure 1. Educators frequently discussed the social nature of wolves. © Monty Sloan.

face of a general tendency, in western society at least, to privilege certain ways of knowing over others (Bell and Russell 2000; Evernden 1985). Evernden (1985), an environmental philosopher, challenged the prevailing hierarchy of knowing, asking: 'How can we permit this reversal of the primary and the secondary, our own direct experience of the world and an abstraction about it which for most of us really amounts to secondhand information?' (78). In the case of this research, the educators' direct experience, in the form of observations and/or interactions with wolves, provided them with opportunities to learn about the animals' individualities and personalities. They also observed wolves' social nature (see Figure 1), capacities for communication, and incredible abilities and senses, as well as their similarities to and differences from dogs, and their likenesses to humans.

Some educators' experiences with wolves led them to ponder the ways in which wild animals are socially constructed. On the subject of their uniqueness, Christina said:

> You know a lot of people, when dealing with wild animals in particular, for some reason, kind of see them all as the same. But working with the wolves that we have here, it's so easy to see that every single one is very different from each other.

Similarly, for Ashley, being on site with wolves led her to better understanding their social nature and the ways in which they communicate. These recognitions resulted in greater empathy:

> Picaron is one of our wolves that was on that site, and he was with his mate, Tanamara for a long time. When she wasn't in the enclosure anymore, he howled for so long and so hard that he permanently damaged his vocal chords and he couldn't howl anymore. So just knowing that they have that feeling, like if we lost a spouse or a mate, that we would feel that loss forever and they … [can feel] the same way. (see Figure 2.)

While not all of the participant educators interacted directly with wolves, the 11 participants involved in interactive wolf education, wolf care, and/or training had formed particular interspecies relationships. The findings revealed that the nature of these relations depended on both the

Figure 2. Picaron. © Endangered Wolf Center.

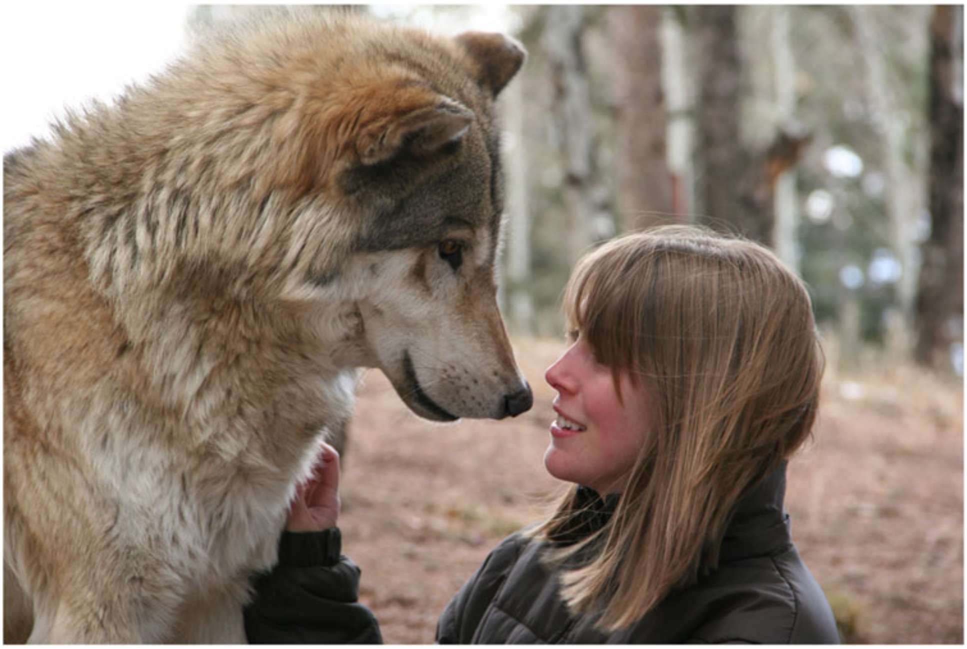

Figure 3. Educators had developed relationships that were reciprocal and unique to the individuals involved. © Michelle Smith.

wolf and the person (see Figure 3). The relationships involved forming bonds and were grounded in nurturing and sometimes in trust. Rachel, for instance, said:

> The staff members find an animal that speaks to them, whether it's one of the shy animals, or one of the more outgoing animals, or one with a troubled past. They all, you know, wolves are a lot like people, they've all got different personalities, they have different stories, different backgrounds … , sometimes, you know, you just kind of click, like your personalities match with one of the animals.

These findings about wolves' agency, sociality, individuality and capacity for interspecies relations are not unique. Increasingly over the last few decades, significant empirical evidence has emerged that underscores the idea that non-human animals are individual subjects with personalities, agency and rich social emotional lives (e.g. Bekoff and Pierce 2009; Fawcett 2013, 2014; Irvine 2004; Kuhl 2011a). Bekoff and Pierce (2009) reviewed a substantial portion of this research and summarized that 'recent research is demonstrating that animals not only act altruistically, but also have the capacity for empathy, forgiveness, trust, reciprocity, and much more' (3). There are important insights to draw from this finding.

First, having direct experiences with other animals can lead to understanding their abilities, capabilities, and complexity. For the educators in my study, experiences with actual wolves provided them with a better opportunity to consider ethical questions about wolf conservation. Similarly, EE researchers have found that encounters/experiences with non-human animals can act as 'pivot points for young people's affective and creative engagement with the site and emerging issues of environmental responsibility, sustainability' (Gannon 2017, 9). Fawcett too (2014) discovered that an actual experience with a wild animal was significant; it meant children 'were much more likely to attribute subjectivity and agency to the animals in their stories' (67). Likewise, research into 'common world' interspecies relations between children and other animals (Taylor and Pacini-Ketchabaw 2015) suggests that these experiences can work to 'reposition children within the full, heterogeneous and interdependent multispecies common worlds in which we all live' (507). Here, learners can better understand interdependencies; they can ponder 'the ethical and political implications of entangled human and non human lives' (516). Finally, some research suggests that direct experiences can facilitate the development of cross-species empathy (e.g. Daly and Suggs 2010; McPherson 2011). Doing so has obvious benefits, especially if this empathy and care lead to actions that benefit the welfare of animal–others, and the ethical aspects of these types of educational encounters are taken into account (e.g. Lloro-Bidart and Russell 2017; Warkentin 2011).

Second, if experiences and relations with wolves can be rich and complex and lead people to seeing them as having agency as happened with the educators in this study, it raises questions about how we humans treat them. As some participants discussed, insights based on direct experience could help inform how conservationists manage wild wolves, a subject inextricably linked with ethical considerations about human–wolf relations (e.g. Fox and Bekoff 2009; Jickling and Parquet 2005; Lynn 2007). For example, Fox and Bekoff (2009) contended that understanding the rich complexity of the lives of wolves should lead us:

> to consider their needs and interests as individuals, as families, and as members of a community. Because the wolf is a species with complex social structures and tight family bonds, we must consider the ethical implications of our actions when we disrupt family packs through management and control programs. (125)

Third, some environmental and humane educators propose that the learning that emerges from direct experiences with individual animals as subjects may broaden our ethical scope to take into consideration how we treat other animals more generally in, for example, factory farming, the food industry and research (e.g. Fawcett 2013; Lloro-Bidart and Russell 2017; Oakley et al. 2010; Weil 2004). This was certainly the case for three key environmentalists (Ernest Seton, Aldo Leopold and Félix Rodriguez de la Fuente) described in Puig and Echarri's (2018) work; they argued that the impact of a single direct experience between each man and a wolf became a 'significant life experience' (SLE) that ultimately prompted their later influential environmentalism. They proposed that 'it is possible to learn how to improve our role in nature from a trigger that elicits an appreciation of nature – and in more depth than apparent at first sight' (688).

Wolf education for wolf conservation

A final conclusion based on this research is how, for the participants, being a wolf educator meant engaging in the interplay between conservation and education. This was so whether the engagement pertained to developing their own understanding of wolf conservation science, teaching people about wolf conservation or weighing in on issues of wild wolf conservation and management. Indeed, all 17 educators believed that a key purpose of wolf education was improved wolf and/or wildland conservation. Matthew, for one, explained:

> I think what we need to do is, we need to place predators in the context of the larger ecosystem. Basically saying, 'Here's where they fit in, here's the role they play, here's the effect that they have when they're removed from the ecosystem.' And let people understand that ecosystems are healthier with a full complement of component species.

Likewise, all 17 of the participants felt that wolf education is already improving, or can improve, conservation efforts. They suggested that wolf education facilitated, for example, the following: dispelling myths thereby helping people overcome misconceptions and fear of the wolf; creating meaningful experiences that help visitors feel a connection with wolves and nature; and engaging in broader outreach (e.g. to ranchers, farmers, hunters) to implement co-existence strategies (e.g. educating farmers and ranchers about and/or funding non-lethal livestock anti-depredation techniques or having a wolf hotline at the centre that locals can call when they are dealing with a 'problem wolf').

At least some of the educators I interviewed had wrestled with how best to offer visitors information about wolves and wolf conservation without impinging on the visitors' freedom to draw on their personal value systems to make their own decisions. This tension is discussed in the broader field of EE (e.g. Lowan-Trudeau 2015). Indeed, a growing number of EE scholars have discussed how one might approach advocacy specifically related to other animals (Humes 2008; Kopnina and Cherniak 2015; Lloro-Bidart and Russell 2017; Jickling 2005; Pedersen 2010). Wolf educators thus can draw on scholarship in environmental and humane education when looking for ways to advocate for wolves or conservation while still respecting the values and beliefs of visitors and avoiding indoctrination. Ultimately, though, I would argue *all* education, whether implicitly or explicitly, is a political and ethical act and I concur with Lloro-Bidart (2017) who contends that on the whole, the 'political aspects of teaching and learning in zoos, aquariums and museums, particularly those that enrol animals in learning processes' (1183) are undertheorized. On that note, it would be beneficial if wolf educators who are focussing on scientific concepts alone move beyond this strategy and help visitors examine both the roots of their own worldviews and some of the cultural, social, historical and political elements that play into past and present human relations with wolves.

Conclusions and recommendations

Humans will ultimately determine the fate of wild wolves because their survival depends on public support for protective policies and efforts. Around the world where wolves are returning/re-inhabiting, their conservation is a politically and socially charged issue (Bath 2009; Chapron et al. 2014; Musiani and Paquet 2004). The experiences of the North American wolf educators described here illustrate that wolf facilities dedicated to wolf education and those who work there are not immune to the political and controversial nature of wolf survival whether they are comfortable engaging with that openly or not.

Like Lloro-Bidart (2014) discovered when she examined human-lorikeet encounters at an aquarium, captive wolves at educational facilities are in part 'politically deployed' (396) in order to support the fiscal survival of many of the centres and programs in my study, but they also act as ambassadors for conservation education through institutionally designed encounters. Whether that makes them 'martyrs' in the name of conservation (Lloro-Bidart and Russell 2017, 48) is an open question. Like others (De Giorgio and De Giorgio-Schoorl 2016; Lloro-Bidart 2014; Russell and Hodson 2002; Warkentin 2011), I would argue that the specifics of these human-wolf encounters matter in answering that question, and importantly, it also matters to the wolves themselves. Context and the nature of the specific educator-wolf relationships both shape the practices of the educators and, in turn, shape what visitors who learn from them take away.

Russell and Hodson (2002) stated over a decade ago when discussing the educational potential and pitfalls of whalewatching:

> we need a much more overtly politicized form of science [and environmental] education, a central goal of which is to equip students with the capacity and commitment to take appropriate, responsible, and effective action on matters of social, economic, environmental and moral-ethical concern. (448)

I concur. However, like the educators Russell and Hodson described, a portion of the educators in my study did not necessarily feel free to take an advocacy position on behalf of wolves due to the social, economic and political contexts where they worked. Further, many of them worried about impeding visitors' freedom to make up their own minds about wolf issues. Still, like Russell and Hodson (2002), I see radical potential in the stories that can be told by those 'who have the most intimate relationships' (498) like the wolf educators in my study. Many had developed deep intersubjective relationships with wolves, leading them to better understand the wolves' agency, abilities, capabilities and complexity. Indeed, the need to consider wolves as subjects was recognized.

In order to live well in a world with wolves, we need education and stories that 'challenge the prevailing Western binaries that separate nature from culture and animals from humans' (Pacini-Ketchabaw and Nxumalo 2015, 165) because to live successfully in a world with wolves, humans need to engage in decentring exercises that shift our cultural, ethical and pedagogical paradigms. Therefore, we need education that helps people see themselves as members of larger ecosystems and communities, indeed as part of a 'common world' (Taylor and Pacini-Ketchabaw 2015; Pacini-Ketchabaw and Nxumalo 2015)—one where all animals (human and other) have intrinsic value and worth.

Note

1. All participants were offered anonymity, and in cases where they wished to remain anonymous, names have been replaced with pseudonyms.

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