



Uncharismatic Invasives

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ABSTRACT Although philosophers have examined the ethics of invasive species management, there has been little research approaching this topic from a descriptive, ethnographic perspective. In this article I examine how invasive species managers think about the moral status of the animals they seek to manage. I do so through a case study of Oregon's efforts to manage the invasive species that are rafting across the Pacific attached to tsunami debris in the wake of the Japanese tsunami of 2011. Focusing on the state's response to a dock that washed ashore on Agate Beach with various marine invertebrates attached to it, I argue that these animals' position on two intersecting scales of moral worth—the sociozoologic scale and the phylogenetic scale—rendered them unworthy of moral consideration.

Late on 4 June or early on 5 June, 2012, some 15 months after a devastating tsunami struck Japan, a commercial fisheries dock washed ashore on Agate Beach, a popular tourist destination on the Oregon coast. The dock was quickly traced to the coastal city of Misawa, Japan, where the tsunami had dislodged it, along with three identical docks, and then dragged them out to sea. This was no tiny wooden boat dock; used for offloading fishing boats, the massive steel and concrete structure weighed 188 tons and measured 66 feet long, 19 feet wide, and seven feet tall. Filled with styrofoam, it was designed to float, which is what enabled it to make the long journey across the Pacific, nudged along by both the current and the wind.¹

The dock landed just a few miles north of Oregon State University's (OSU's) Hatfield Marine Science Center, in Newport, Oregon. Hatfield is home to scientists from the university and from several federal and state agencies, including the Oregon Department of Fish and Wildlife (ODFW), the state's lead agency in charge of managing invasive species. For the OSU and ODFW biologists who made their way down to Agate Beach, what was even more surprising than the dock itself were the passengers who had come along for the ride. The surface of the dock was quite simply teeming with marine life, including seaweeds, barnacles, mussels, sea urchins, anemones, amphipods, worms, oysters, clams, snails, and tiny shore crabs. The painstaking taxonomic work of identifying the species continued long after the dock washed ashore. The most recent count, published on 13 April, 2013, lists 130 species in all—thirty species of seaweeds; ten species of protists; one species of blue green algae; and 89

¹ Bonnie Henderson, "Big Wave, Small World," *Oregon Quarterly* Spring (2013): 34-39.

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species of animals, all invertebrates. Of the 130 total species, 119 have been classified as native to Japan; four have been classified as open-ocean, pelagic species; and four have been classified as native to the Eastern Pacific.² Most of the Japanese species are thought to have “fouled” the dock while it was still moored in Misawa.



Figure 1. *The Agate Beach tsunami dock. Photo: Oregon Parks and Recreation Department.*

While walking on Agate Beach, it is not uncommon to find marine debris with organisms attached to it. Typically, however, these are gooseneck barnacles or other pelagic organisms who hitched a ride while the debris was floating out at sea. The dock was something altogether different. Alongside your run-of-the-mill pelagic hitchhikers was a more-or-less intact subtidal community of near-shore organisms from the Japanese Coast. It was as if the ocean had lifted an ecosystem up from one coast and deposited it on another, some 5,000 miles away.

² Oregon State University, “February 2013 Update of Agate Beach Tsunami Dock Species List,” accessed 15 February 2015, <http://blogs.oregonstate.edu/floatingdock/2013/01/07/january-2013-update-of-agate-beach-tsunami-dock-species-list/>.



Figure 2. A close-up of organisms on the dock. Photo: Hatfield Marine Science Center, Oregon State University.

Upon seeing the dock, the OSU and ODFW biologists became concerned that some of the organisms might establish themselves as invasive species on the Oregon coast. Oregon law defines invasive species as “nonnative organisms that cause economic or environmental harm and are capable of spreading to new areas of the state.”³ In the eyes of the law, all invasive species are nonnative, but not all nonnative species are invasive; to be classified as invasive a nonnative species must be capable of spreading and causing what the law defines as harm. By 6 June, the biologists had identified four potentially invasive species on the dock: wakame (*Undaria pinnatifida*),⁴ a seaweed used in miso soup, but which also happens to be listed as one of the world’s 100 worst invasive species;⁵ the Northern Pacific seastar (*Asterias amurensis*),⁶ another member of the top-100 list;⁷ the European blue mussel (*Mytilus*

³ Oregon Revised Statutes § 570.755, <http://www.oregonlaws.org/ors/570.755>.

⁴ Invasive Species Specialist Group, “*Undaria pinnatifida* (aquatic plant, alga),” accessed 15 February 2015, <http://www.issg.org/database/species/ecology.asp?si=68>.

⁵ Invasive Species Specialist Group, “100 of the World’s Worst Invasive Alien Species: A Selection from the Global Invasive Species Database,” accessed 15 February 2015, http://www.issg.org/database/species/reference_files/100English.pdf.

⁶ Invasive Species Specialist Group, “*Asterias amurensis* (sea star),” accessed 15 February 2015, <http://www.issg.org/database/species/ecology.asp?si=82>.

⁷ Invasive Species Specialist Group, “100 of the World’s Worst Invasive Alien Species.”

galloprovincialis),⁸ which has been described as an invader of Japan itself; and the Japanese shore crab, also known as the Asian shore crab (*Hemigrapsus sanguineus*),⁹ whose importance for our story will become apparent soon.



Figure 3. A Japanese shore crab removed from the dock.
Photo: Hatfield Marine Science Center, Oregon State University.

In the wake of the tsunami, ODFW had expected disaster debris to wash ashore all along the Oregon coast. It had also expected to find harmless pelagic hitchhikers attached to some of this debris. But the agency had not anticipated that tsunami debris would become a vector for the introduction of invasive species from Japan. The ODFW and OSU biologists with whom I spoke were especially surprised that near-shore organisms, like the ones on the dock, had been able to survive and reproduce for so long out in the open ocean. This just was not supposed to happen, and the agency had no protocols in place to deal with this unexpected event. Operating in rapid response mode, ODFW officials had to improvise.

Based at ODFW's headquarters in Salem, Oregon, Rick Boatner is the department's Invasive Species Wildlife Integrity Coordinator. Boatner was in Portland, Oregon, at a meeting on the threat posed to freshwater ecosystems by invasive quagga and zebra mussels, when he

⁸ Invasive Species Specialist Group, "*Mytilus galloprovincialis* (mollusc)," accessed 15 February 2015, <http://www.issg.org/database/species/ecology.asp?si=102&fr=1&sts=sss&lang=EN>.

⁹ Invasive Species Specialist Group, "*Hemigrapsus sanguineus* (crustacean)," accessed 15 February 2015, <http://www.issg.org/database/species/ecology.asp?si=756>.

received a call from Newport about the dock. On the other end of the line was Steve Rumrill, ODFW's Shellfish Program Leader, who was organizing ODFW's response on the ground. Over the phone Boatner and Rumrill agreed on a plan to decontaminate the dock. The plan was approved by Rumrill's supervisors and by the Oregon Invasive Species Council. The goal was to kill all of the organisms, with the exception of those taken as samples for taxonomic work, though these, too, would ultimately be killed. "I want[ed] everything dead," Boatner told me. "That's my job—kill everything."¹⁰

In theory, ODFW could have managed the organisms on a species-by-species basis, killing only those with the potential to become invasive. For example, the agency could have spared the pelagic organisms and those native to both coasts, neither of which met the legal definition of an invasive species. In practice, however, this would have been both logistically challenging and ecologically risky. Given how tangled together the organisms were, and given the small size of many of them, separating them by species would have been challenging, to put it mildly. Moreover, it simply was not possible to identify all the species on the spot. As I have already mentioned, it took nearly a year of taxonomic work to arrive at a reasonably complete count. It is also important to realize that, in practice, as opposed to in legal theory, invasive species management is about more than just separating the "natives" from the "nonnatives," and the potentially invasive nonnatives from those unlikely to cause harm—assuming, that is, that it is even possible to predict which nonnatives are likely to cause harm. It is also about issues like hybridization and disease. Several ODFW biologists told me that, even in the case of a species that is native to both coasts, there might be separate genetic populations on each coast, and hybridization, they explained, can be every bit as problematic as the introduction of an entirely new species. Organisms introduced from the Japanese coast might also harbor pathogens to which organisms on the Oregon coast have no defenses. For these reasons, and because time was of the essence, Rumrill and Boatner decided to take a precautionary approach. For purposes of management, they lumped all of the organisms together as an undifferentiated ecological threat, and they set out to kill them all.¹¹

Rumrill quickly organized the ODFW Marine Resources Japanese Tsunami Marine Debris Non-Native Species Eradication Team. The team consisted of 11 ODFW employees, including Rumrill himself, all of whom were based in Newport at the time. One was a public relations person, and the other ten were biologists, most of whom dealt with fish or shellfish in their day-to-day work at the agency. The members of the team did not typically work in the area of invasive species management. Most got involved with the dock simply because they had the time. Rumrill's supervisors laid down some ground rules for the job: do not get anyone hurt, do not use volunteers, use only as many people as you can manage, do not spend more than \$3,000 dollars, and have the work wrapped up by the weekend.

Work began on the morning of Thursday, June 7th, at low tide. The team had to work quickly before the high tide came rolling back in, enabling organisms to escape or release gametes into the water. (They were also concerned that hungry birds looking for an easy meal,

¹⁰ Rick Boatner, Personal Interview, 14 November 2013.

¹¹ In this article I do not critically examine the legal definition of invasive species in Oregon. Nor do I examine the basis for ODFW's decision to classify the organisms on the dock as potentially invasive. My focus, instead, is on the consequences that followed from ODFW's decision to classify the organisms this way.

or curious tourists looking for a souvenir, might become unwitting vectors for the spread of invasive species.) Equipped with shovels and lawn edgers, the team scraped organisms from the top and sides of the dock into plastic totes. They used propane torches to kill organisms tucked away inside of cracks and crevices, including pockets of exposed rebar where the concrete had been damaged. After the scraping was done, the team emptied the totes into black plastic trash bags. All told, an estimated 4,260 pounds of biomass was removed from the dock. A truck hauled the bags above the high tide line, where they were stored while an excavator hired by the Oregon Parks and Recreation Department (OPRD) dug a 10-12 feet deep hole in the sand. OPRD workers then emptied the bags into the hole. (For environmental reasons, the bags themselves were not buried.) For good measure, one of the OPRD workers sprayed the organisms with bleach. Once all the bags had been emptied into the hole, the excavator filled it back in with sand, presumably burying many animals alive, who then died as a result of the bleach or by means of hypoxia, desiccation, or other causes. Others had probably already died earlier, during the scraping, as a result of being crushed or torn apart. The eradication team had most of the work done by the end of the day, though a few of them did have to return the following day to finish sterilizing the dock with torches.



Figure 4. A member of the eradication team scrapes organisms off the dock. Photo: Oregon Department of Fish and Wildlife.



Figure 5. A member of the eradication team uses a propane torch to sterilize the dock. Photo: Oregon Parks and Recreation Department.



Figure 6. An Oregon Parks and Recreation Department worker empties a bag of organisms into the hole. Photo: Oregon Parks and Recreation Department.



Figure 7. The excavator fills the hole back in with sand. Photo: Oregon Parks and Recreation Department.

Descriptive Ethics

I interviewed all but two members of the eradication team, and the most striking finding to emerge from these interviews was that the issue of animal welfare never came up during the decontamination of the dock. In fact, my bringing it up during the interviews was the first time it had come up. As Rumrill recalled, “We didn’t talk about [killing] from the ethical perspective, I don’t think. I think we were only dealing with logistics.”¹² Drawing on these interviews, along with other sources of data, I attempt to make sense of this finding.¹³ In so doing, I also aim to contribute to an emerging body of scholarship, at the intersection of animal studies and the environmental humanities, that offers a descriptive, ethnographic approach to the ethics of invasive species management.¹⁴

Operating from the perspective of prescriptive (or normative) ethics, philosophers have examined the question of whether classifying animals as invasive ought to strip them of any moral status they would otherwise have.¹⁵ But from the more empirically oriented perspective of descriptive ethics, the question is what, if anything, those involved in managing invasive species think about these kinds of normative questions.¹⁶ To date, there has been little research on how invasive species managers think about the moral status of the organisms they seek to manage.¹⁷ Although it would be possible to study managers’ views by surveying a representative sample of them outside the context of any particular case, in this article I opt for a more grounded, case study-based approach. I do so because I am most interested in how ethical questions get addressed—or not—on the ground, in the actual practice of managing invasive species.¹⁸

¹² Steve Rumrill, Personal Interview, 18 November 2013.

¹³ I spent a little more than a year in total living on the Oregon coast, in or near Newport, between October 2012 and September 2014. Participant observation was not possible because I learned about the dock long after the events had already unfolded. To attempt to recreate what had happened, I examined press coverage, websites, documents, and photographs, along with videos I found online. (Unfortunately, the videos I found show the dock after most of the organisms had already been removed.) Between November 2013 and March 2014, I also interviewed most of the people who had been directly involved in decontaminating the dock, including nine members of the eleven-member eradication team. Although in this article I draw mainly on my interviews with these eradication team members—and with Boatner, ODFW’s lead person on invasive species management—the findings I report here are consistent with what I learned from interviewing other people as well, including OSU biologists and OPRD officials. In addition to these social science methods, I also used my legal training to examine the federal, state, and local laws that applied to this case.

¹⁴ See, for example, Thom van Dooren, “A Day with Crows: Rarity, Nativity and the Violent-Care of Conservation,” paper in progress; “Invasive Species in Penguin Worlds: An Ethical Taxonomy of Killing for Conservation,” *Conservation and Society* 9, no. 4 (2011): 286-298; Emily Mannix Wanderer, “Biologies of Betrayal: Judas Goats and Sacrificial Mice on the Margins of Mexico,” *BioSocieties* 10, no. 1 (2015): 1-23.

¹⁵ See, for example, Joseph A. Tuminello, “Invasive Species Management: An Animal Ethics Perspective” (M.A. Thesis, Colorado State University, 2012).

¹⁶ For a discussion of descriptive ethics, see Harold Herzog, “Ethical Aspects of Relationships Between Humans and Research Animals,” *ILAR Journal* 43, no. 1 (2002): 27-32.

¹⁷ But see Wanderer, “Biologies of Betrayal.”

¹⁸ For a similar approach, see *Ibid.*

My study builds on Thom van Dooren's examination of the ethical implications of invasive species discourse.¹⁹ Focusing on efforts to eradicate red foxes from Australia, van Dooren argues that classifying animals as invasive performs a deadly kind of "'ethical' work," particularly when this label is combined with other "vilifying" terms such as pest and vermin.²⁰ The label provides a kind of ethical shortcut; there is no need to discuss whether any particular member of an invasive species ought to be killed because the label has already settled this question for us, rendering all invasive animals "killable" without further debate.²¹ The label can also provide an unwarranted degree of "moral comfort," van Dooren argues, relieving managers and others of the burden of having to grapple with the moral complexities associated with killing some organisms in the hopes that other organisms and ecosystems will flourish.²² And this moral comfort can extend to how, not just whether, "invasive" animals are killed. Indeed, in Australia, van Dooren argues, the discourse of invasive species has too often made "unacceptable deaths [seem] somehow acceptable."²³

When I asked the eradication team members whether animal welfare would have come up had the animals on the dock been vertebrates, all of them said that it would have. This suggests that the lack of attention to animal welfare in this case had more to do with the nature of the taxa at issue—or, more precisely, with how the members of the eradication team thought about these taxa—than with the fact that the animals had been classified as invasive. These were, after all, marine invertebrates, and not "honorary vertebrates" like cephalopods.²⁴ The "highest" species on the phylogenetic scale, a moral ranking I will return to shortly, was the Japanese shore crab I mentioned above. In short, these were not the kinds of "charismatic invasive species," like red foxes, who typically figure in ethical clashes between animal rights activists and wildlife managers.²⁵ In fact, as far as I can tell, there was no significant public opposition to ODFW's work on the grounds of animal welfare or rights. What we are dealing with in this case, then, are decidedly uncharismatic invasives, and to understand how the eradication team members thought about the moral status of these animals we need to keep this crucial fact in mind.²⁶ What the case of the Agate Beach tsunami dock reminds us, then, is

¹⁹ van Dooren, "Invasive Species in Penguin Worlds."

²⁰ Ibid., 287, 294. For a similar analysis, see Katherine Wright, "Bunnies, Bilbies and the Ethic of Ecological Remembrance," *M/C Journal*, 15, no. 3 (2012): n.p.

²¹ Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 80. For discussions of making invasive species killable in Haraway's sense of the term, see Etienne Benson, "Wildlife Conservation and Animal Rights," accessed 17 February 2015, <http://etiennebenson.com/2011/10/01/wildlife-conservation-and-animal-rights/>; Franklin Ginn, "Extension, Subversion, Containment: Eco-Nationalism and Post(colonial) nature in Aotearoa New Zealand," *Transactions of the Institute of British Geographers* 33, no. 3 (2008): 335-353.

²² van Dooren, "Invasive Species in Penguin Worlds," 290.

²³ Ibid.

²⁴ Mike Lisieski, "Honorary Vertebrates: The Protection of Cephalopods in Research under EU Law," accessed 17 February 2015, <http://cephalove.southernfriedscience.com/?p=626>.

²⁵ Martha M. Ellis and Chris S. Elphick, "Using a Stochastic Model to Examine the Ecological, Economic and Ethical Consequences of Population Control in a Charismatic Invasive Species: Mute Swans in North America," *Journal of Applied Ecology* 44 (2007): 312-322.

²⁶ For discussions of nonhuman charisma, see Jamie Lorimer, "Natures, Charismatic," in *International Encyclopedia of Human Geography*, ed. Rob Kitchin and Nigel Thrift (London: Elsevier, 2009), 324-

that in order to understand how invasive species managers think about the moral status of the animals they seek to manage, we need to examine how the category invasive species intersects with other ways of classifying animals in moral terms.

Invertebrate Welfare?

Before turning to the interviews, I want to address a potential objection to the argument I have been developing. Suggesting, as I am, that animal welfare was ignored in this case implies that it was a potentially meaningful concept in this context. Yet the question of whether invertebrates feel pain, a key consideration when it comes to animal welfare, has yet to be settled. Scientists who study pain distinguish it from nociception. Nociception is the involuntary reflex that tells my hand to remove itself from a hot burner without my having to think about it. Pain is the negative feeling I experience whenever I get burned. Not all animals equipped with nociception experience pain. As for invertebrates, biologist Robert Elwood believes that the case for pain is strong enough for cephalopods (e.g., octopi, squid, and cuttlefish) and for decapod crustaceans (e.g., lobsters, shrimp, and, most importantly for our purposes, crabs) that we ought to give them the benefit of the doubt, but he is less certain about the rest of the invertebrates.²⁷ In its most recent euthanasia guidelines, published in 2013, the American Veterinary Medical Association (AVMA) goes even further than Elwood, giving all invertebrates—indeed, all animals—the benefit of the doubt.²⁸ Defining euthanasia as killing with minimal pain and distress, the AVMA guidelines include methods for euthanizing invertebrates.

My legal research turned up no law requiring ODFW to follow euthanasia guidelines when killing invasive animals, whether vertebrates or invertebrates. But when asked whether the agency does so in practice, Rick Boatner told me that it depends upon the animal. For vertebrates, he explained, ODFW follows euthanasia guidelines that were published in 2006 by the American Association of Zoo Veterinarians (AAZV).²⁹ But Boater was unaware of any euthanasia guidelines for the kinds of invertebrates that were found on the dock. Yet when I obtained a copy of the AAZV guidelines, I was surprised to discover that they actually include a chapter on invertebrate euthanasia.³⁰ Written by Michael J. Murray, a veterinarian at the

330; "Nonhuman Charisma," *Environment and Planning D* 25 (2007): 911-932; Tim Low, "The Charisma Stakes," *Wildlife Australia* Winter (2014): 4-7. For discussions of invertebrate charisma in particular, see Stephen R. Kellert, "Values and Perceptions of Invertebrates," *Conservation Biology* 7, no. 4 (1993): 845-855; Elizabeth Leane and Steve Nicol, "Charismatic Krill? Size and Conservation in the Ocean," *Anthrozoös* 24, no. 2 (2011): 135-146; Steve Nash, "Desperately Seeking Charisma: Improving the Status of Invertebrates," *BioScience* 54, no. 6 (2004): 487-494.

²⁷ Robert W. Elwood, "Evidence for Pain in Decapod Crustaceans," *Animal Welfare* 21, no. S2 (2012): 23-27; "Pain and Suffering in Invertebrates?" *ILAR Journal* 52, no. 2 (2011): 175-184; Barry Magee and Robert W. Elwood, "Shock Avoidance by Discrimination Learning in the Shore Crab (*Carcinus maenas*) is Consistent with a Key Criterion for Pain," *The Journal of Experimental Biology* 216 (2013): 353-358.

²⁸ American Veterinary Medical Association, *AVMA Guidelines for Euthanasia of Animals: 2013 Edition* (Schaumburg, IL: American Veterinary Medical Association, 2013), 13.

²⁹ American Association of Zoo Veterinarians, *Guidelines for Euthanasia of Nondomestic Animals* (Yulee, FL: American Association of Zoo Veterinarians, 2006).

³⁰ *Ibid.*, 25-27.

Monterey Bay Aquarium, the chapter even focuses on marine invertebrates, including some of the taxa that were present on the dock.

Why Animal Welfare Didn't Come Up

During the interviews, members of the eradication team offered a range of explanations for why animal welfare had not come up during the decontamination of the dock. For one thing, they had been caught up in the moment, absorbed with the immediate task of neutralizing the ecological threat as quickly as possible. Protecting native ecosystems and species had been the main ethical issue on their minds; this had also been ODFW's official, legal charge. The labeling of the animals as invasive also seems to have contributed to the neglect of animal welfare. "There was ... this invasion kind of mindset," eradication team member Wolfe Wagman recalled. "Maybe they were already set up as the enemy, if you will."³¹ The culture at ODFW may have also played a role. I got the impression that the agency tended to regard marine invertebrates either as economic resources or, in van Dooren's words, as "interchangeable cogs in an ecosystem machine," not as individuals whose lives (and deaths) matter beyond whatever economic or ecological services they may provide.³² One member of the eradication team also admitted to having become somewhat desensitized to killing animals, including vertebrates like fish, as a result of his day-to-day work at the agency. Finally, while they were decontaminating the dock, several members of the team saw the animals as seafood. The mussels had looked especially tasty, I was told, and several team members had joked about cooking them with the torches. But although all of these factors, and more, were certainly important, it was the classification of the animals as invertebrates, more than any other factor, that explains why animal welfare did not come up. As Rumrill put it, "I think if it had been, you know, a group of vertebrates hanging on to that [dock], we would have had a whole different discussion."³³

Several interviewees elaborated on this point by drawing a distinction between higher and lower animals. According to Rick Boatner, animal welfare had not come up mainly because the animals on the dock had been "lower species."³⁴ Now if "a seal [had] jumped on there," he explained, "that would have been a ... different story ..."³⁵ Boatner cited fellow mammals as examples of higher animals. "[T]hey're something I can relate to; they have heart, brain, big brain, everything like that."³⁶ Lower animals, by contrast, "don't have the same, I guess, connection," he said.³⁷ For Boatner, barnacles, in particular, were the kinds of animals "you walk across ... at low-tide."³⁸ He did not have "the same feeling towards them" that he had toward fellow mammals like squirrels, for whom, he said, "you just have a connection somehow ..."³⁹ For eradication team member Jason Kirchner, sessile invertebrates like

³¹ Wolfe Wagman, Personal Interview, 19 November 2013.

³² Thom van Dooren, "Pain of Extinction: The Death of a Vulture," *Cultural Studies Review* 16, no. 2 (2010): 271-289, 273.

³³ Rumrill, Personal Interview.

³⁴ Boatner, Personal Interview.

³⁵ *Ibid.*

³⁶ *Ibid.*

³⁷ *Ibid.*

³⁸ *Ibid.*

³⁹ *Ibid.*

barnacles were barely even animals at all. “I mean the barnacles and stuff are more like a plant, in a way, to me. You know, they [were] kind of growing on the dock ...”⁴⁰ This helps explain why Kirchner expressed no “concerns with ... harvesting them or taking them off of things ...”⁴¹

Wolfe Wagman, too, invoked the distinction between higher and lower animals to explain why animal welfare had not come up. Describing himself, jokingly, as “a higher animal snob,” he explained the distinction between higher and lower animals as follows:

Well, I mean, I’m a highly trained biologist, and so I could go into that, but I think that the emotional state is, “Does it kind of look like us?” [A]nd, “Does it look like your dog in a sense?” People love dogs, love cats, so any organism that can possibly be fitted into those kinds of categories—you know, the eyes, the expressions ... —we give ... a much higher, what do I want to say, ... meaning to their life.⁴²

Despite having eyes, and even a face, crabs “don’t cross the line” for Wagman.⁴³ As many people do, he cooks them by boiling them alive, even though he described this as “a pretty nasty way to go.”⁴⁴ Crabs just “don’t elicit the emotional bond that I have with other animals,” he explained.⁴⁵ Yet this did not stop him from condemning as “criminally cruel” the apparently common practice of ripping off crabs’ heads and carapaces (the top shell), while they are still alive, in order to save space in the pot.⁴⁶

Several members of the eradication team invoked nonhuman charisma—or, more to the point, the lack thereof—to explain why animal welfare had not come up. Chris Eardley contrasted the invertebrates on the dock with what he described as the kinds of “charismatic megafauna that people glom onto.”⁴⁷ According to Eardley, these more charismatic animals are “generally larger, they have faces, [and] there’s something about them that’s really, you know, cute, so to speak.”⁴⁸ Brandon Ford, who had served as the public relations person for the eradication team, made a connection between charisma and pain. Animal welfare had not come up, he said, “because there was nothing cute with brown eyes living on [the dock]. It was all ... creatures that we don’t associate with ... experiencing pain like we do, I guess.”⁴⁹

Ford told me that he was troubled by how nonhuman charisma tends to distort conservation policy. Citing marine mammals as an example, he criticized what he regarded as the inordinate legal protection afforded to certain animals “simply because they’re cute.”⁵⁰ There is no valid biological reason for this special treatment, he argued. Of course, there may also be no valid biological reason for failing to address the potential for pain in decidedly

⁴⁰ Jason Kirchner, Personal Interview, 13 March 2014.

⁴¹ *Ibid.*

⁴² Wagman, Personal Interview.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ *Ibid.*

⁴⁶ *Ibid.*

⁴⁷ Chris Eardley, Personal Interview, 12 March 2014.

⁴⁸ *Ibid.*

⁴⁹ Brandon Ford, Personal Interview, 13 March 2014.

⁵⁰ *Ibid.*

uncharismatic marine invertebrates like crabs. Ford acknowledged that crabs probably do feel pain, but he suggested that many people try to avoid this conclusion. This is “probably because we eat them,” he said.⁵¹

When I asked them whether invertebrates are capable of feeling pain, most of the eradication team members were unsure. Some thought they were, and all were at least open to the possibility after I mentioned Elwood’s work. Yet whatever they may have thought about this question at the time of the interviews, the possibility of invertebrate pain never crossed their minds while they were decontaminating the dock. According to Kirchner, this may have been because the kinds of animals that were present on the dock “don’t show obvious signs [of pain].”⁵² Had the team been dealing with animals who, say, vocalize when they are in pain, the issue of animal welfare may well have come up.

The sheer scale of the situation may have also contributed to the neglect of animal welfare in this case. Recall that more than two tons of organisms were ultimately removed from the dock. With a few notable exceptions, one of which I will discuss in a moment, the eradication team was dealing with biomass, not with individual animals. And the bulk of the visible biomass consisted of marine algae, mussels, and barnacles, not crabs, who were not only tiny but also, apparently, relatively few in number. So although the dock may have been teeming with animals, it was not teeming with the kinds of animals that scientists believe are most likely to be able to feel pain.

In the midst of removing all this biomass, however, members of the eradication team did occasionally encounter individual animals, including crabs. One such encounter was caught on video.⁵³ In the video, a team member picks up a shore crab who is trying to scuttle away. With one of his or her tiny front claws, the crab latches on to the tip of the team member’s (gloved) right index finger. There were kids around, the team member would later tell me, so he went for a laugh. Presenting his finger to the camera, he smiles and jokingly apologizes to the crab: “I’m just trying to do my job, man.”

At the time of our interview, the team member did not know what had become of the crab. “[P]resumably he was bagged, or thrown in a bucket, and that was the end of him ...”⁵⁴ He acknowledged that it would have been possible to set the crab aside for special treatment. “I guess I could have said, ‘This crab gets a presidential pardon and I’m going to put you in this bucket and I’m going, you know, to find a humane way to deal with you or take you home and make you my pet or something.’”⁵⁵ But prior to our interview, the thought of killing the crab humanely had never crossed his mind.

This incident is significant. Here was someone who was no longer just shoveling biomass. He had come face-to-face with an individual animal, whom he held in his hand. Yet despite the intimate nature of this encounter, the animal still failed to elicit the team member’s ethical concern. During our interview, the team member offered an explanation that, as I will discuss in greater detail in a moment, helps explain why all of the animals on the dock, not just this particular crab, were deemed unworthy of moral consideration:

⁵¹ Ford, Personal Interview.

⁵² Kirchner, Personal Interview.

⁵³ The team member who appears in the video asked to remain anonymous.

⁵⁴ Anonymous eradication team member, Personal Interview.

⁵⁵ *Ibid.*

It seems to me that mammals and birds often get ... more moral consideration than ... fish ... and invertebrates because ... there's this pervasive idea that [fish and invertebrates don't feel pain]. And, as folks that are in charge of managing marine resources and marine ecosystems, our priority was to protect the native system and deal rapidly and efficiently with this threat that had washed ashore. And ... because these animals are invasive they're kind of the enemy. And, I think maybe even ... in some minds they were ... even less likely to receive this kind of consideration ... than if they were native—but I still think that, ... in a lot of cases, invertebrates ... and fish just don't receive that kind of consideration at all.⁵⁶

In short, two ways of classifying animals—invasive species and lower species—combined in such a way as to render the animals on the dock unworthy of moral consideration, though according to this team member's statement, along with the other evidence I have presented, the second way of classifying animals was the more important of the two.

Logistics

If the issue of animal welfare had come up, the eradication team still would have faced the logistical challenge of killing the animals on the dock “humanely.” The AAZV guidelines define euthanasia as “the act of inducing humane death in an animal with minimal pain and distress.”⁵⁷ As with many veterinary definitions of euthanasia, this one focuses on how, not why, an animal is killed. The term is not reserved for putting animals out of their misery; rather, even perfectly healthy animals are said to be euthanized so long as they are killed in what the guidelines define as a humane manner.⁵⁸ In some cases, particularly out in the field, as opposed to in the controlled conditions of a laboratory, “euthanasia is not truly possible,” the AAZV guidelines concede.⁵⁹ Under these circumstances, the guidelines explain, it is sometimes necessary to kill animals in ways that cause more than minimal pain or distress. But so long as one uses “the most humane” method under the circumstances, the guidelines classify this as “humane killing.”⁶⁰

In the case of the dock, the logistical challenge would have been separating the animals by taxa. Methods of euthanizing invertebrates are taxon-specific, and not all the taxa that were present on the dock were covered by the AAZV guidelines. Nor was there a single method that would have been considered acceptable, either as a preferred or a provisional method, for all the taxa that were covered. As a result, the eradication team would have had to either sacrifice the welfare of some animals for others or sort the animals by taxa.

Sorting would have been difficult, though the main challenge would not have been taxonomic. Although, as I have mentioned, taxonomic work continued long after the dock landed, this involved identifying animals at the level of the species. Presumably, the OSU and ODFW biologists on the scene would have been able to identify the animals using the higher-

⁵⁶ Anonymous eradication team member, Personal Interview.

⁵⁷ *Guidelines for Euthanasia of Nondomestic Animals*, 1.

⁵⁸ For a critique of this way of defining euthanasia, see Jonathan L. Clark, “Killing the Enviropigs,” *Journal of Animal Ethics* 5, no. 1 (2015): 20-30.

⁵⁹ *Guidelines for Euthanasia of Nondomestic Animals*, 21.

⁶⁰ *Ibid.*, 20.

level taxa, such as phyla, that the euthanasia guidelines utilize. The real problem would have been physical, not intellectual. “The different species that made up the communities occurred together in a complex heterogeneous mix,” Rumrill explained to me in an email, “with snails and chitons attached to mussels[,] which were attached to each other and gooseneck barnacles, which were attached to acorn barnacles and seaweeds and microalgae, all attached to bryozoans and hydroids and the cement surface of the dock.”⁶¹ Given how tangled together the organisms were, and given the need to remove them from the dock as quickly as possible, removing them one-by-one, or even, say, phylum-by-phylum, would not have been practical, Rumrill argued. Moreover, some of the animals would have been “torn apart by the separation process,” he explained.⁶² In Rumrill’s view, then, this method would have been neither humane nor ecologically effective. The only plausible option, he argued, would have been to scrape the organisms off the dock before attempting to euthanize them, or at least those who managed to survive the scraping.

Specializing in fish and marine invertebrates, OSU aquatic veterinarian Tim Miller-Morgan cares for the animals exhibited at Hatfield’s visitor center and at the nearby Oregon Coast Aquarium. When, as part of his job, he must kill marine invertebrates, he follows the AAZV guidelines, a copy of which he had on hand in his office at Hatfield when I interviewed him there. Although Miller-Morgan works at Hatfield, nobody consulted him about the dock. If someone had, he told me, he would have helped the eradication team develop a management approach. “I can’t say what I would have recommended,” he said, “but if they had asked me we could have probably come up with something that would have been conditionally acceptable” under AVMA or AAZV guidelines.⁶³ In other words, he would have helped the team develop the most humane approach possible under the circumstances.

Shortly after the dock landed, Miller-Morgan went to see it. He didn’t go in his official capacity. Like the thousands of curious tourists and locals who would eventually beat a path in the sand down to the dock, he just wanted to see this unexpected visitor from Japan. The organisms were still attached when Miller-Morgan arrived on Agate Beach. Yet despite his working knowledge of invertebrate euthanasia, the issue of animal welfare never crossed his mind. Before becoming a veterinarian, he studied wildlife management, so it is easy for him to “flip the switch,” he said.⁶⁴ As he stood there on Agate Beach that day, Miller-Morgan, like the eradication team members, was looking at the animals primarily through an ecological lens.

Intersecting Scales of Moral Worth

The moral consideration an animal receives depends at least partly on the social category to which that animal has been assigned.⁶⁵ Two ways of classifying living things—the sociozoologic scale and the phylogenetic scale—can help us understand the case of the dock. In thinking about this case, however, we need to avoid fixating on each scale in isolation. What we need to focus on, instead, is how these two scales intersect.

⁶¹ Steve Rumrill, e-mail message to author, 24 March 2014.

⁶² *Ibid.*

⁶³ Tim Miller-Morgan, Personal Interview, 14 March 2014.

⁶⁴ *Ibid.*

⁶⁵ See, for example, Hal Herzog, *Some We Love, Some We Hate, Some We Eat: Why It’s So Hard to Think Straight about Animals* (New York: Harper Perennial, 2011), 46-50, 205-235.

Although each scale ranks animals on what Arnold Arluke and Clinton Sanders call “a ladder of worth,” the scales differ with respect to the basis for the ranking.⁶⁶ The phylogenetic scale is essentially a scientific-sounding version of the Great Chain of Being. It ranks organisms from higher to lower on the basis of how “evolutionarily developed” they are said to be.⁶⁷ It was this scale that Paul Andrews had in mind when he suggested that “[i]nvertebrates are clearly considered by many to be at the ‘lower end’ of a scale of creatures that puts humans at the extreme ‘upper end.’”⁶⁸ When Boatner and other ODFW biologists characterized the animals on the dock as “lower” species, it was the phylogenetic scale that they were invoking.⁶⁹

The sociozoologic scale operates according to a different logic. “While phylogenetic systems of classification rank animals on the basis of biological distinctions,” Arluke and Sanders explain, “sociozoologic systems rank them according to how well they seem to ‘fit in’ and play the roles they are expected to play in society.”⁷⁰ On the sociozoologic scale, Arluke and Sanders go on to explain, animals are classified as either good or bad. Good animals perform their assigned social roles (think pets), while bad animals threaten the social order (think pests). As animals who “stray from their place, cross human-drawn boundaries, and threaten to contaminate individuals or the environment,” invasive species are ranked alongside vermin as bad animals.⁷¹ They are animals-out-of-place, a kind of living pollution in Mary Douglas’s sense of the term.⁷² This helps explain the use of terms like decontamination to describe the killing of the organisms on the dock. These organisms were contaminants in two senses: not only had they contaminated the dock by “fouling” it while it was still moored in Misawa, or by colonizing it while it floated out at sea, but they had also strayed from what was said to be their proper geographical location.⁷³

⁶⁶ Arnold Arluke and Clinton R. Sanders, *Regarding Animals* (Philadelphia, PA: Temple University Press, 1996), 168; see also Herzog, *Some We Love*, 46-50, 205-235; Lori Marino, “The *Scala Naturae*,” in *Encyclopedia of Human-Animal Relationships, Volume One*, ed. Marc Bekoff (Westport, CT: Greenwood Press, 2007), 220-225.

⁶⁷ Marino, “The *Scala Naturae*,” 221.

⁶⁸ Paul L.R. Andrews, “Laboratory Invertebrates? Only Spineless, or Spineless and Painless?” *ILAR Journal* 52, no. 2 (2011): 121-125, 121.

⁶⁹ It is important to recognize that ethical distinctions can be made among organisms that occupy a similar position on the phylogenetic scale. Take insects. Given particular ideas about nonhuman charisma, butterflies may be attributed greater moral status than, say, mosquitos or moths. For a discussion of these issues, see Low, “The Charisma Stakes.”

⁷⁰ Arluke and Sanders, *Regarding Animals*, 169.

⁷¹ *Ibid.*, 178.

⁷² Kay Milton, “Ducks out of Water: Nature Conservation as Boundary Maintenance,” in *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*, ed. John Knight (London: Routledge, 2000), 229-246.

⁷³ I echo Astrida Neimanis’s call for additional research on the ethical work performed by concepts like biofouling. See Astrida Neimanis, “‘Strange Kinship’ and Ascidian Life: 13 Repetitions,” *Journal for Critical Animal Studies* 9, no. 1-2 (2011): 117-143, 122 n.8.

To understand why animal welfare did not come up in the case of the dock, we need to examine how these two “scale[s] of [moral] worth” intersected.⁷⁴ Although two members of the same species occupy the same position on the phylogenetic scale, they can occupy different positions on the sociozoologic scale depending upon whether they are classified as native or invasive. Likewise, two individuals who occupy the same position on the sociozoologic scale—say an invasive crab and an invasive feral pig—may receive different treatment depending upon their position on the phylogenetic scale. What made the animals on the dock unworthy of moral consideration was not simply that they had been classified as bad animals on the sociozoologic scale. Nor was it just that they had been classified as lower animals on the phylogenetic scale. What made them unworthy of moral consideration was that they had been assigned to the lower rung on both these “ladder[s] of [moral] worth.”⁷⁵ Of course, other factors were also at play, some of which I described above. But it was their position on these two intersecting scales of moral worth, more than any other factor, that explains why the animals on the dock failed to elicit the ethical concern of those involved in the decontamination process.⁷⁶

The case of the Agate Beach tsunami dock offers a crucial lesson for those of us interested in developing a descriptive, ethnographic understanding of the ethics of invasive species management. Although it is important to examine the ethical work performed by the category invasive species, it is equally important to recognize that this category may not be the only one to which an “invasive” animal has been assigned. In order to understand how invasive species managers think about the moral status of the animals they seek to manage, we need to explore the ethical work performed by these other categories, too. But we also need to take an additional step. Instead of examining each category in isolation, focusing on the particular ethical work it does, we need to understand the ethical work that gets done when multiple categories intersect. A central lesson of this case, then, is that an animal’s moral status is determined by the intersection of the various social categories to which that animal has been assigned.⁷⁷

Moral Considerability

The concept of “moral considerability” can help us think about what was at stake in the case of the dock.⁷⁸ As Thomas Birch explained, “[t]o give moral consideration to X is to consider X (to attend to, to look at, to think about, where appropriate to sympathize or empathize with X, etc.) with the goal of discovering what, if any, direct ethical obligations one has to X.”⁷⁹ Kenneth

⁷⁴ Marino, “The *Scala Naturae*,” 221.

⁷⁵ Arluke and Sanders, *Regarding Animals*, 168.

⁷⁶ To be clear, I am not suggesting that anyone invoked these scales intentionally during the decontamination of the dock. To the contrary, these were tacit moral frameworks that became apparent to those involved only after I started asking questions in the interviews. I thank an anonymous reviewer for encouraging me to clarify this point.

⁷⁷ Here I am building on Herzog, *Some We Love*, 48-50; James A. Serpell, “Factors Influencing Human Attitudes to Animals and Their Welfare,” *Animal Welfare* 13 (2004): S145-151.

⁷⁸ Kenneth E. Goodpaster, “On Being Morally Considerable,” *The Journal of Philosophy* 75, no. 6 (1978): 308-325, 311, emphasis omitted.

⁷⁹ Thomas H. Birch, “Moral Considerability and Universal Consideration,” *Environmental Ethics* 15 (1993): 313-332, 315, footnote omitted.

Goodpaster offered a useful distinction between the question of “moral considerability” and the question of “moral significance.”⁸⁰ While the former concerns whether a particular entity is entitled to any moral consideration at all, the latter “aims at governing *comparative* judgments of moral ‘weight’ in cases of conflict.”⁸¹ Goodpaster used the example of a tree to illustrate this crucial distinction. “Whether a tree ... deserves any moral consideration,” he wrote, “is a question that must be kept separate from the question of whether trees deserve more or less consideration than dogs, or dogs than human persons.”⁸²

One can imagine an invasive species manager weighing the lives of “invasive” organisms against, say, the lives of “native” organisms, the survival of “native” populations or species, or the desire to maintain (or produce) an ecosystem in a particular state. During the decontamination of the dock, however, no such weighing of the interests took place. It simply never occurred to anyone that the organisms on the dock might have interests that deserved to be weighed in the moral balance. In other words, because the organisms were deemed to be unworthy of moral consideration, the question of moral significance never came up.

Several of the eradication team members told me that nobody had been deliberately cruel to the animals on the dock. This might suggest that the team did in fact regard these animals as worthy of moral consideration. But the absence of cruelty does not demonstrate the presence of the kind of moral curiosity that the concept of moral consideration is meant to convey. Back on Agate Beach, nobody reflected on what, if any, ethical obligations they may have had to the animals on the dock. Indeed, to suggest, as I did in the previous paragraph, that the team *deemed* the animals to be unworthy of moral consideration is actually to overstate the degree of moral reflection that took place. Nobody decided, after reflecting on the matter, that the animals and other organisms on the dock were unworthy of moral consideration. Rather, the question of moral considerability simply never came up.

Uncharismatic Invasives and the Law

In an article on the moral significance of pain, van Dooren reminds us that an animal’s pain, or capacity to feel it, is not always recognized, let alone recognized as “demanding response and responsibility[.]”⁸³ “[I]t is more difficult to be called [upon for ethical response],” van Dooren writes, “when we cannot recognise or empathise with the pain of another.”⁸⁴ For some people, it is especially challenging to empathize with animals whose bodies differ significantly from their own. Although a sense of one’s shared bodily vulnerability with other animals can foster ethical thinking about one’s relations with them,⁸⁵ some people are able to develop this kind of

⁸⁰ Goodpaster, “On Being Morally Considerable,” 311, emphasis omitted.

⁸¹ *Ibid.*, 311, emphasis in original.

⁸² *Ibid.*

⁸³ van Dooren, “Pain of Extinction,” 276.

⁸⁴ *Ibid.*, 287-288, n. 17.

⁸⁵ See, for example, Chlöe Taylor, “The Precarious Lives of Animals: Butler, Coetzee, and Animal Ethics,” *Philosophy Today* 52, no. 1 (2008): 60-72; Stephen Thierman, “The Vulnerability of Other Animals,” *Journal for Critical Animal Studies* 9, no. 1-2 (2011): 182-208; Cary Wolfe, “Exposures,” in *Philosophy & Animal Life* (New York: Columbia University Press, 2008), 1-41.

empathy only for animals whose bodies are like their own.⁸⁶ Take marine invertebrates. As Eva Hayward explains, these animals are so “radically different from us” that it can be difficult for us to “map our bodies onto” theirs.⁸⁷ And for some people, but by no means all,⁸⁸ this can make it difficult to empathize with them. This appears to have been at least part of what was going on in the case of the dock.

A reasonably straightforward way of addressing this lack of empathy would be to require invasive species managers to follow euthanasia guidelines when killing “invasive” animals, including invertebrates. For example, Oregon could require ODFW to follow the AAZV guidelines. Although this might be seen as an improvement over the current situation, there are at least two potential shortcomings with this approach. First, by focusing exclusively on the question of how “invasive” animals ought to be killed, the approach ignores the question of whether they ought to be killed in the first place. We are thus right back to the problem of allowing labels like invasive to settle the question of moral significance for us, telling us who should live and who should die in the name of some particular conception of what the environment ought to be. Second, like the term invasive, terms and phrases like euthanasia and humane killing perform their own deadly ethical work.⁸⁹ Consider the AAZV guidelines, which, as I have already mentioned, define euthanasia strictly in terms of how, not why, an animal is killed. So long as an animal is killed in what the guidelines regard as a humane manner, that animal is said to have been euthanized, no matter why the animal was killed. By suggesting that an animal’s death was good, the term euthanasia may end up further obscuring the crucial question of whether that animal should have been killed in the first place, particularly if the animal was classified as invasive as well.

My criticisms of this particular policy option reflect my more general ambivalence about the use of animal welfare regulations to ensure that “invasive” animals are treated as worthy of moral consideration. To be clear, I am not suggesting that killing “invasive” animals is always unethical, and that regulating it would only serve to legitimize what I take to be an inherently unethical practice. Like van Dooren, I am open to the possibility that killing such animals may be the most ethically defensible option in a particular case.⁹⁰ My main concern with animal welfare regulations in this context is that, particularly when coupled with the discourses of invasiveness, euthanasia, and humane killing, they run the risk of providing managers and others with an unwarranted degree of “moral comfort.”⁹¹ Instead of having to grapple with the ethical issues, a process that van Dooren, borrowing a phrase from Donna

⁸⁶ Lori Gruen, *Entangled Empathy: An Alternative Ethic for Our Relationships with Animals* (New York: Lantern Books, 2014), 61-80.

⁸⁷ Eva Hayward, “Sensational Jellyfish: Aquarium Affects and the Matter of Immersion,” *Differences* 23, no. 3 (2012): 161-196, 177; see also Neimanis, “‘Strange Kinship’ and Ascidian Life.”

⁸⁸ See, for example, S. Eben Kirksey, Nicholas Shapiro, and Maria Brodine, “Hope in Blasted Landscapes,” *Social Science Information* 52, no. 2 (2013): 228-256; Kristoffer Whitney, “Tangled up in Knots: An Emotional Ecology of Field Science,” *Emotion, Space and Society* 6 (2013): 100-107; Franklin Ginn, “Sticky Lives: Slugs, Detachment and More-than-Human Ethics in the Garden,” *Transactions of the Institute of British Geographers* 39 no. 4 (2014): 532-544.

⁸⁹ Clark, “Killing the Enviropigs.”

⁹⁰ van Dooren, “Invasive Species in Penguin Worlds.”

⁹¹ Haraway, *When Species Meet*, 75; see also Thom van Dooren, *Flight Ways: Life and Loss at the Edge of Extinction* (New York: Columbia University Press, 2014), 117; “Invasive Species in Penguin Worlds.”

Haraway, calls “staying with the trouble,” managers would simply have to utilize a method of killing that the law deems to be humane.⁹² In other words, animal welfare regulations threaten to thoroughly rationalize the ethics of killing in the name of the environment, reducing it to a “purely regulatory” question in which all that really matters is whether one has complied with the law.⁹³

But the reason I am ambivalent about, as opposed to entirely dismissive of, animal welfare regulations is that I also see an important role for them to play in invasive species management, particularly when it comes to uncharismatic invasives. Although we do need to be concerned about the moral comfort that regulations can provide, it is also important to acknowledge, along with Deborah Bird Rose, that “it is socially useful, indeed necessary, to have rules.”⁹⁴ Indeed, regulations may be necessary to force invasive species managers and others to stay with the ethical trouble. After all, before one can *stay* with the trouble, one must first recognize that there is a troubling ethical issue that needs to be grappled with. Yet as Cassandra Burdyshaw reminds us, “not all invasive species are charismatic enough to garner the attention of the public,” or of invasive species managers, for that matter, and it is these uncharismatic invasives who “can remain at risk of inhumane treatment without laws preventing inhumane control methods.”⁹⁵ Unless and until there is a fundamental shift in public attitudes about the moral status of invertebrates,⁹⁶ relatively few managers in places like the United States are likely to be troubled by the ethics of managing “invasive” invertebrates, particularly when it comes to the kinds of taxa that were present on the dock. Nor can the general public be counted on to force managers to pay more attention to invertebrate welfare. In the end, then, it may take the promulgation of animal welfare regulations, among other institutional changes, to elicit more widespread ethical concern for uncharismatic invasives. Hence my ambivalence about the role of animal welfare regulations in this context.⁹⁷

Perhaps what is needed are regulations that encourage ethical thinking without reducing it to a matter of mere legal compliance. Instead of regulations that provide moral comfort, enabling invasive species managers to “know how to keep [their] hands clean,” perhaps what is needed are regulations that require managers to stay with the ethical trouble, to grapple with the ethical complexities without recourse to ethical shortcuts.⁹⁸ Perhaps what is needed, in short, are laws that keep the ethical questions open instead of closing them down. Thinking about what this might mean in practice is a significant challenge not just for

⁹² van Dooren, *Flight Ways*, 117; “Invasive Species in Penguin Worlds,” 294; Donna J. Haraway, “When Species Meet: Staying with the Trouble,” *Environment and Planning D* 28 (2010): 53-55.

⁹³ van Dooren, *Flight Ways*, 117, quoting Haraway, *When Species Meet*, 72. For a discussion of the rationalization of environmental ethics, see Mick Smith, *An Ethics of Place: Radical Ecology, Postmodernity, and Social Theory* (Albany, NY: State University of New York Press, 2001), 23-53.

⁹⁴ Deborah Bird Rose, *Wild Dog Dreaming: Love and Extinction* (Charlottesville: University of Virginia Press, 2011), 142. For a similar analysis, see Haraway, *When Species Meet*, 81.

⁹⁵ Burdyshaw, Cassandra. “Invasive Species and Animal Welfare,” accessed 30 August 2014. <https://www.animallaw.info/intro/invasive-species-and-animal-welfare>.

⁹⁶ For a now dated study, see Kellert, “Values and Perceptions of Invertebrates.”

⁹⁷ For a similar analysis, see Mick Smith, “Dis(appearance): Earth, Ethics and Apparently (In)significant Others,” *Australian Humanities Review* 50 (2011): 23-44.

⁹⁸ Rose, *Wild Dog Dreaming*, 142.

managers and policymakers, but also for those of us working at the intersection of animal studies and the environmental humanities.⁹⁹

Concluding Thoughts

Although this article is mainly a work of descriptive ethics, my decision to raise the issue of animal welfare in the interviews was certainly motivated, on some level at least, by my own ethical concerns. In closing, then, I would like to describe where I currently stand on the normative questions I have raised.

By focusing so much attention on pain, I do not mean to imply that only animals with the capacity to feel it deserve our consideration. I agree with van Dooren that the possession of this capacity ought to be treated as “sufficient, but by no means necessary,” for moral consideration.¹⁰⁰ Similarly, by focusing on animals, to the neglect of the seaweeds, protists, blue green algae, microorganisms, and other living things that (who?) were also on the dock, I do not mean to suggest that only animals are worthy of moral consideration. In fact, like a growing number of philosophers, van Dooren included, I am inclined to question the whole project of dividing the world into those who are worthy of moral consideration and those who are not.¹⁰¹ As these philosophers have argued, dividing the world up in this way tends to shut down moral thinking about whatever (or whomever) fails to make the cut.

Taking a more generous approach to the question of moral considerability, Thomas Birch advocated the concept of “universal consideration,” or the idea that everything is worthy of our moral attention.¹⁰² This does not mean that one has ethical obligations to everything, or that everything has equal moral significance. Moral consideration is a kind of “thoughtful, reflective, meditative attentiveness.”¹⁰³ It means paying attention to something (or someone) long enough to be able to determine what, if anything, one’s ethical obligations to it may be. It means not deciding in advance—on the basis of sentience, being alive, or whatever other criterion one may be tempted to invoke—who or what deserves such attentiveness. When it comes to the practice of killing, whether in the name of the environment or for any other purpose, universal consideration means that “no death is irrelevant,” that there is no category of living things “whose deaths [ought to be] ethically disregarded.”¹⁰⁴ And it means that this applies not just to the charismatic megafauna many of us have come to love, but also to the “unloved others,” including the lowly and uncharismatic creatures who are said to be invading our shores.¹⁰⁵

⁹⁹ For an attempt to think this through in the context of animal experimentation, see Haraway, *When Species Meet*, 69-93.

¹⁰⁰ van Dooren, “Pain of Extinction,” 276.

¹⁰¹ See, for example, Birch, “Moral Considerability and Universal Consideration;” Matthew Calarco, “Toward an Agnostic Animal Ethics,” in *The Death of the Animal*, ed. Paola Cavalieri (New York: Columbia University Press, 2009), 73-84; Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (London: Routledge, 2002), 143-166; Smith, “Dis(appearance);” *An Ethics of Place*, 23-53; “Letting in the Jungle,” *Journal of Applied Philosophy* 8, no. 2 (1991): 145-154.

¹⁰² Birch, “Moral Considerability and Universal Consideration.”

¹⁰³ *Ibid.*, 327.

¹⁰⁴ Deborah Bird Rose and Thom van Dooren “Introduction,” *Australian Humanities Review* 50 (2011): 1.

¹⁰⁵ *Ibid.*; see also Tarsh Bates and Megan Schlipalius, “Necessary Expendability: An Exploration of Nonhuman Death in Public,” in *Animal Death*, eds. Jay Johnston and Fiona Probyn-Rapsey (Sydney: Sydney University Press, 2013), 43-66.

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ACKNOWLEDGEMENTS The research for this article was made possible by a semester leave from Ursinus College and by a Mellon summer travel grant.

Bibliography

- American Association of Zoo Veterinarians. *Guidelines for Euthanasia of Nondomestic Animals*. Yulee, FL: American Association of Zoo Veterinarians, 2006.
- American Veterinary Medical Association. *AVMA Guidelines for Euthanasia of Animals: 2013 Edition*. Schaumburg, IL: American Veterinary Medical Association, 2013.
- Andrews, Paul L.R. "Laboratory Invertebrates? Only Spineless, or Spineless and Painless?" *ILAR Journal* 52, no. 2 (2011): 121-125.
- Arluke, Arnold and Clinton R. Sanders. *Regarding Animals*. Philadelphia: Temple University Press, 1996.
- Bates, Tarsh, and Megan Schlipalius. "Necessary Expendability: An Exploration of Nonhuman Death in Public." In *Animal Death*, edited by Jay Johnston and Fiona Probyn-Rapsey, 43-66. Sydney: Sydney University Press, 2013.
- Benson, Etienne. "Wildlife Conservation and Animal Rights." Accessed 8 July 2014. <http://etiennebenson.com/2011/10/01/wildlife-conservation-and-animal-rights/>.
- Birch, Thomas H. "Moral Considerability and Universal Consideration." *Environmental Ethics* 15 (1993): 313-332.
- Boatner, Rick. Personal Interview, 14 November 2013.
- Burdyshaw, Cassandra. "Invasive Species and Animal Welfare." Accessed 30 August 2014. <https://www.animallaw.info/intro/invasive-species-and-animal-welfare>.
- Calarco, Matthew. "Toward an Agnostic Animal Ethics." In *The Death of the Animal*, edited by Paola Cavalieri, 73-84. New York: Columbia University Press, 2009.
- Clark, Jonathan L. "Killing the Enviropigs." *Journal of Animal Ethics* 5, no. 1 (2015): 20-30.
- Eardley, Chris. Personal Interview, 12 March 2014.
- Ellis, Martha M., and Chris S. Elphick. "Using a Stochastic Model to Examine the Ecological, Economic and Ethical Consequences of Population Control in a Charismatic Invasive Species: Mute Swans in North America." *Journal of Applied Ecology* 44 (2007): 312-322.
- Elwood, Robert W. "Evidence for Pain in Decapod Crustaceans." *Animal Welfare* 21, no. S2 (2012): 23-27.
- _____. "Pain and Suffering in Invertebrates?" *ILAR Journal* 52, no. 2 (2011): 175-184.
- Ford, Brandon. Personal Interview, 13 March 2014.
- Ginn, Franklin. "Sticky Lives: Slugs, Detachment and More-than-Human Ethics in the Garden." *Transactions of the Institute of British Geographers* 39, no. 4 (2014): 532-544.
- _____. "Extension, Subversion, Containment: Eco-Nationalism and Post(colonial) nature in Aotearoa New Zealand." *Transactions of the Institute of British Geographers* 33, no. 3 (2008): 335-353.
- Goodpaster, Kenneth E. "On Being Morally Considerable." *The Journal of Philosophy* 75, no. 6 (1978): 308-325.

- Gruen, Lori. *Entangled Empathy: An Alternative Ethic for Our Relationships with Animals*. New York: Lantern Books, 2014.
- Haraway, Donna J. *When Species Meet*. Minneapolis: University of Minnesota Press, 2008.
- _____. "When Species Meet: Staying with the Trouble." *Environment and Planning D* 28 (2010): 53-55.
- Hayward, Eva. "Sensational Jellyfish: Aquarium Affects and the Matter of Immersion." *Differences* 23, no. 3 (2012): 161-196.
- Henderson, Bonnie. "Big Wave, Small World." *Oregon Quarterly* Spring (2013): 34-39.
- Herzog, Hal. *Some We Love, Some We Hate, Some We Eat: Why It's So Hard to Think Straight about Animals*. New York: Harper Perennial, 2011.
- _____. "Ethical Aspects of Relationships Between Humans and Research Animals." *ILAR Journal* 43, no. 1 (2002): 27-32.
- Invasive Species Specialist Group. "Asterias amurensis (sea star)." Accessed 15 February 2015. <http://www.issg.org/database/species/ecology.asp?si=82>.
- _____. *Hemigrapsus sanguineus* (crustacean)." Accessed 15 February 2015 <http://www.issg.org/database/species/ecology.asp?si=756>.
- _____. "Mytilus galloprovincialis (mollusc)." Accessed 15 February 2015. <http://www.issg.org/database/species/ecology.asp?si=102&fr=1&sts=sss&lang=EN>.
- _____. "Undaria pinnatifida (aquatic plant, alga)." Accessed 15 February 2015. <http://www.issg.org/database/species/ecology.asp?si=68>.
- _____. "100 of the World's Worst Invasive Alien Species: A Selection from the Global Invasive Species Database." Accessed 15 February 2015. http://www.issg.org/database/species/reference_files/100English.pdf.
- Kellert, Stephen R. "Values and Perceptions of Invertebrates." *Conservation Biology* 7, no. 4 (1993): 845-855.
- Kirchner, Jason. Personal Interview, 13 March 2014.
- Kirksey, S Eben, Nicholas Shapiro, and Maria Brodine. "Hope in Blasted Landscapes." *Social Science Information* 52, no. 2 (2013): 228-256.
- Leane, Elizabeth and Steve Nicol. "Charismatic Krill? Size and Conservation in the Ocean." *Anthrozoös* 24, no. 2 (2011): 135-146.
- Mike Lisieski, "Honorary Vertebrates: The Protection of Cephalopods in Research under EU Law." Accessed 17 February 2015, <http://cephalove.southernfriedscience.com/?p=626>.
- Lorimer, Jamie. "Natures, Charismatic." In *International Encyclopedia of Human Geography*, edited by Rob Kitchin and Nigel Thrift, 324-330. London: Elsevier, 2009.
- _____. "Nonhuman Charisma." *Environment and Planning D* 25 (2007): 911-932.
- Low, Tim. "The Charisma Stakes." *Wildlife Australia* Winter (2014): 4-7.
- Magee, Barry and Robert W. Elwood. "Shock Avoidance by Discrimination Learning in the Shore Crab (*Carcinus maenas*) is Consistent with a Key Criterion for Pain." *The Journal of Experimental Biology* 216 (2013): 353-358.
- Marino, Lori. "The *Scala Naturae*." In *Encyclopedia of Human-Animal Relationships, Volume One*, edited by Marc Bekoff, 220-225. Westport, CT: Greenwood Press, 2007.
- Miller-Morgan, Tim. Personal Interview, 14 March 2014.
- Milton, Kay. "Ducks out of Water: Nature Conservation as Boundary Maintenance." In *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*, edited by John Knight, 229-246. London: Routledge, 2000.
- Nash, Steve. "Desperately Seeking Charisma: Improving the Status of Invertebrates." *BioScience* 54, no. 6 (2004): 487-494.
- Neimanis, Astrida. "'Strange Kinship' and Ascidian Life: 13 Repetitions." *Journal for Critical Animal Studies* 9, no. 1-2 (2011): 117-143.

Oregon State University, "February 2013 Update of Agate Beach Tsunami Dock Species List." Accessed 15 February 2015.

<http://blogs.oregonstate.edu/floatingdock/2013/01/07/january-2013-update-of-agate-beach-tsunami-dock-species-list/>.

Plumwood, Val. *Environmental Culture: The Ecological Crisis of Reason*. London: Routledge, 2002.

Rose, Deborah Bird. *Wild Dog Dreaming: Love and Extinction*. Charlottesville: University of Virginia Press, 2011.

Rose, Deborah Bird and Thom van Dooren. "Introduction." *Australian Humanities Review* 50 (2011): 1-4.

Rumrill, Steve. E-Mail Message to Author, 24 March 2014.

_____. Personal Interview, 18 November 2013.

Serpell, James A. "Factors Influencing Human Attitudes to Animals and Their Welfare." *Animal Welfare* 13 (2004): S145-151.

Smith, Mick. "Dis(appearance): Earth, Ethics and Apparently (In)significant Others." *Australian Humanities Review* 50 (2011): 23-44.

_____. *An Ethics of Place: Radical Ecology, Postmodernity, and Social Theory*. Albany: State University of New York Press, 2001.

_____. "Letting in the Jungle." *Journal of Applied Philosophy* 8, no. 2 (1991): 145-154.

Taylor, Chlöe. "The Precarious Lives of Animals: Butler, Coetzee, and Animal Ethics." *Philosophy Today* 52, no. 1 (2008): 60-72.

Thierman, Stephen. "The Vulnerability of Other Animals." *Journal for Critical Animal Studies* 9, no. 1-2 (2011): 182-208.

Tuminello, Joseph A. "Invasive Species Management: An Animal Ethics Perspective." M.A. Thesis, Colorado State University, 2012.

van Dooren, Thom. "A Day with Crows: Rarity, Nativity and the Violent-Care of Conservation." Paper in progress.

_____. *Flight Ways: Life and Loss at the Edge of Extinction*. New York: Columbia University Press, 2014.

_____. "Invasive Species in Penguin Worlds: An Ethical Taxonomy of Killing for Conservation." *Conservation and Society* 9, no. 4 (2011): 286-298.

_____. "Pain of Extinction: The Death of a Vulture." *Cultural Studies Review* 16, no. 2 (2010): 271-289.

Wagman, Wolfe. Personal Interview, 19 November 2013.

Wanderer, Emily Mannix. "Biologies of Betrayal: Judas Goats and Sacrificial Mice on the Margins of Mexico." *BioSocieties* 10, no. 1 (2015): 1-23.

Whitney, Kristoffer. "Tangled up in Knots: An Emotional Ecology of Field Science." *Emotion, Space and Society* 6 (2013): 100-107.

Wolfe, Cary. "Exposures." In *Philosophy & Animal Life*, 1-41. New York: Columbia University Press, 2008.

Wright, Katherine. "Bunnies, Bilbies and the Ethic of Ecological Remembrance." *M/C Journal* 15, no. 3 (2012): n.p.