

Rights for Parasites?

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When looking at the beauty of nature, it comes easy to understand why environmental ethics proponents are concerned with examining the relationship between humans and their habitat. A Golden Eagle soaring in the sky instills values of grace and freedom in us. The chaotically complex but perfectly harmonious ecosystem of the rainforest makes us wonder what powers brought such a system to be. However, our fascination and awe are mostly shattered when looking at another less peaceful side of nature. We are terrified of invisible parasites living in our beds, or the spreading of infectious diseases through viruses. Even worse, the World Health Organization recognizes five out of the top six major diseases of humans as parasites (Bennett 1). When faced with such a threat, can our noble view of nature still hold up, or do we have to succumb to our self-centered need for preservation? In order to examine this problem I would like to discuss an ecocentric defense for parasites.

Ecocentrism is a relatively new and radical view in environmental ethics. In his book *An Introduction to Environmental Philosophy*, Des Jardins explains that “... some philosophers began to argue that we have direct ethical responsibilities to nature, responsibilities that do not depend on the consequences to humans” (Des Jardins 95). He calls this “a shift from anthropocentric to nonanthropocentric theories of ethics” (Des Jardins 95). This means that the basis for ethical evaluation shifts from a human-centered to an environment-centered focus. Man is no longer the centerpiece of the eco-puzzle, but he is just one part like all the others. Holmes Rolston III, speaking from his essay *Values In and Duties to the Natural World*, quickly points out that “environmental ethics stretches classical ethics to a breaking point” because “[it] needs to be more biologically objective” (Rolston 1). This neutral objectivity is important if we wish to equally

consider everything alive. Rolston's Ecocentrism is far-reaching: "If we are to respect all life, we have still another boundary to cross, from zoology to botany, from sentient to insentient life" (Rolston 5). An ecocentric view clearly covers our much-feared parasites as well. Even Aldo Leopold, one of the most influential developers of Ecocentrism, doesn't exclude parasites from his Land Pyramid – the system in which he argues for the value of our ecosystem. While parasites are not specifically mentioned in the text, his summary in *The Land Ethic* states that "[a] thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community" (Pojman 125). Therefore it can be said that a parasite infestation, or a viral outbreak, has a stabilizing effect on the biotic community by culling weak members and ensuring a healthy species population. Holmes Rolston III agrees with me and explains that "an 'enemy' may even be good for the 'victimized' species ... as when predation keeps the deer herd healthy" (Rolston 7). He also documents a microbial outbreak in Yellowstone National Park, which killed over half the herd of Bighorn sheep, but enabled the Golden Eagle population to thrive because they fed on the sheep carcasses (Rolston 4,7). Ted Mosquin willingly agrees with us in his essay *The Roles of Biodiversity in Creating and Maintaining the Ecosphere*. He identifies 18 ecospheric functions, one of which is Population Moderation. He writes "parasites often are major factors in controlling population... . The cyclical dynamics of ... diseases of humans provide example of this function" (Mosquin 10). Rolston adds, "in spontaneous nature any species that preys upon, parasitizes, competes with, or crowds another will be a bad kind from the narrow perspective of its victim or competitor" (Rolston 7). This is a good case of ecocentric analysis. For one species, the victim, being hunted is always bad. However, if we focus on the ecosystem as a whole, we are

able to understand the consequences and dynamics of the predator-prey relationship better. The both have their species-specific interests, but together they form an important link. To review, so far we have established an ecological benefit of parasites and demonstrated their appliance within an ecocentric view. To summarize in Rolston's words: "A really vital ethic respects all life, not just animal pains and pleasures, much less just human preferences" (Rolston 8).

Now that we have granted parasites ethical considerations, we will move on to the most troubling aspect of parasites. The functional value of population control is acceptable in a wilderness area such as a National Park, but it is completely unacceptable for our domestic habitat. To give up our interests of health and self-preservation seems absolutely illogical. In fact, none of the readings take such a position. However, we also need to take into consideration that parasites, such as viruses for example, may harm our immune system, but strengthen it at the same time. Therefore, I believe we are witnessing evolution in progress. A competing cycle between humans and parasites for a better development. This evolutionary cycle is of course well known. In her *essay Infectious Diseases: An Ecological Perspective* Dr. Mary E. Wilson reports that the "widespread use of antimicrobial agents and chemicals produces selective pressure for the survival and persistence of more resistant populations of microbes, and also of more resilient insect vectors" (Wilson 7). In addition, "drug resistance is increasingly reported not only in bacteria, but also in viruses, fungi, protozoa, and helminths". She also indicates that "mosquitoes, lice, and ticks are becoming more resistant to pesticides" (Wilson 7). It is obvious that parasite are not a static life form. They pursue their species-specific interests and will adapt to their changing environment to survive. While her findings support

evidence for individual changes, Holmes Rolston III concludes that ecosystems in general “generate and support life, keep selection pressures high, [and] enrich situated fitness... “ (Rolston 13). Aldo Leopold agrees by saying “when a change occurs in one part of the circuit, many other parts must adjust themselves to it” and notices that “evolution is a long series of self-induced changes...” (Pojman 123). This means that not only do humans and parasites change, but this change is impertinent to the health and benefit of our ecosystem. Our environment is always changing and all life forms are progressing along with the changes. Otherwise they will become extinct. Thus, it can be concluded that parasites are a dangerous and often unwelcome enrichment of our ecosystem, but that they are necessary for our evolution of the human species.

While this conclusion will not let any anthropocentrist cry out in joy, I feel obligated, and saddened, to say that many of our parasitic problems are directly caused by our careless conduct in our environment. Consider the following illustration from Howard and Margery Facklam’s book *Parasites* regarding the bloodsucking sea lamprey parasite:

Sea Lampreys must move into freshwater to lay their eggs. In spawning season, American sea lampreys swim from the Atlantic Ocean, through the St. Lawrence River, and into Lake Ontario. They never used to get into the other Great Lakes because they couldn’t get past the barrier of Niagara Falls. But in 1829, the first Welland Canal was opened between Lake Ontario and Lake Erie. It was only 8 feet (...) deep, but it was large enough to carry the ships in use past the falls, and the lampreys followed. Then in

1912, the canal was extended and deepened to accommodate larger freighters. These conditions made it even easier for lampreys to become established in the other lakes. By the mid-1900s, lampreys had destroyed so many lake trout, whitefish, yellow pike, and blue pike that both sport fishing and the commercial fishing industry in the Great Lakes were just about ruined. (Facklam 19)

This serves as a clear example that we are responsible for many of our parasitic problems. Mary Wilson emphasizes that “migration of people has always played a large part in introducing infections into new populations” (Wilson 8). As evidence she quotes John Snow who wrote in 1849: ”Epidemics of cholera follow major routes of commerce“ (Wilson 8). Snow traced the spread of cholera from seaports towards the inland. In addition, Wilson also observes that climatic effects, settlement patterns, and new technological vulnerabilities combine into Fatal Mixtures. She comments that “in today’s world, socioeconomic, political, environmental, and climatic changes have converged to allow many infectious diseases to flourish” (Wilson 13). It comes to no surprise that many other important environmental philosophers have come to a similar conclusion. Mosquin believes that “agriculture ... is a major and drastic deviation from planetary norms” (Mosquin 4). These examples demonstrate that our human habit plays a vital role in creation and changing of other habitats. In fact, the existence and necessity for environmental ethics seems to be the best evidence that our conduct has given birth to numerous problems.

Of course humans aren't all evil, and it would be lop-sided to say that all human conduct has been problematic. Medical advancements have improved our health and our way of life, and I hope that in a similar fashion we can find a beneficial, and even anthropocentric valuable, coexistence with parasites. For example, Facklam acknowledges that leeches have been used, and are still being used for medical reasons today. "A substance called hematin is extracted ... from giant Amazon leeches ... raised ... for medical purposes. (...) It can actually stop the progress of a heart attack by dissolving the clots ... " (Facklam 23). With such mutual benefits to show, we can feel confident to hopefully utilize viruses and other parasites in the far future. Such utilization is not limited to human beneficiaries. Imagine a flu vaccine transmitted like a virus. Horses, pets, children, and adults would benefit equally. This is of course just one solution that raises many dangers, but our acceptance of parasites would be a lot less stressful.

Having reached the end of my discussion, I can wholeheartedly agree with Rolston's statement that "after environmental ethics, you will no longer be the humanist you once were" (Rolston 1). I demonstrated that parasites have a functional value based on an ecocentric view. While our struggles with them persist, we should respect them for showing us our place in our ecosystem.

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