

*What Population Dynamics, Food
Chains, and Survival of the Fittest
Indicate About*

LIFE IN THE WILD



*Why animal activists should
reconsider their environmental
ethics.*

Predation

Though it is just one of an array of causes of misery, predation is the most well recognized cause of suffering in the wild. The violence of the predator-prey relationship has drawn the attention of theologians, ethicists, and philosophers. In contemporary times, philosophers such as Jeff McMahan of Rutgers have written about the horrific end that countless millions of animals face each day. "Viewed from a distance, the natural world often presents a vista of sublime, majestic placidity. Yet beneath the foliage and hidden from the distant eye, a vast, unceasing slaughter rages. Wherever there is animal life, predators are stalking, chasing, capturing, killing, and devouring their prey. Agonized suffering and violent death are ubiquitous and continuous. This hidden carnage provided one ground for the philosophical pessimism of Schopenhauer, who contended that one simple test of the claim that the pleasure in the world outweighs the pain...is to compare the feelings of an animal that is devouring another with those of the animal being devoured."¹

¹ McMahan, Jeff. *The Meat Eaters*. *The New York Times*. 19 September 2010. <http://opinionator.blogs.nytimes.com/2010/09/19/the-meat-eaters/?scp=2&sq=eating%20.html>



**Jurvetson, S. Red Tailed Hawk decapitating a California Meadow Vole.
15 December 2006. www.flickr.com/photos/jurvetson/226587515.htm**

In *The Importance of Wild Animal Suffering*,² Alan Dawrst provides an example of a lion's attack on a zebra: "The lioness sinks her scimitar talons into the zebra's rump. They rip through the tough hide and anchor deep into the muscle. The startled animal lets out a loud bellow as its body hits the ground. An instant later the lioness releases her claws from its buttocks and sinks her teeth into the zebra's throat choking off the sound of . Her canine teeth are long and sharp, but an animal as large as a zebra has a massive neck, with a thick layer of muscle beneath the skin, so although the teeth puncture the hide they are too short to reach any major blood vessels. She must therefore kill the zebra by asphyxiation,

² Dawrst, Alan. *The Importance of Wild Animal Suffering*.
<http://www.utiitarian-essays.com/suffering-nature.html>

clamping her powerful jaws around its trachea, cutting off the air to its lung. It is a slow death. If this had been a small animal, say a Thompson's gazelle the size of a large dog, she would have bitten it through the neck; her canine teeth would then have probably crushed the vertebrae or the base of the skull, causing instant death. As it is, the zebra will last five or six minutes."³

Dawrst continues, "Some predators kill their victims rather quickly, such as constrictor snakes that cut off their victims' air flow and induce unconsciousness within a minute or two, while others impose a more protracted death, such as hyenas that tear off chunks of ungulate flesh one bite at a time,⁴ wild dogs disembowel their prey, venomous snakes cause internal bleeding and paralysis over the course of several minutes, and crocodiles drown large animals in their jaws."⁵

The unimaginable suffering of being suffocated to death, ripped apart while fully conscious, or injected with toxic venom occurs after a life that is often comprised of far more misery than happiness. Many if not most animals are frequently malnourished and dehydrated, witness the death of

³ McGowan, Christopher. *The Raptor and the Lamb: Predators and Prey in the Living World*. New York: Henry Holt and Company. Pp 12-13 1997.

⁴ Kruuk, H. *The Spotted Hyena*. Chicago: University of Chicago Press, 1972.

⁵ Dawrst, Alan. *The Importance of Wild Animal Suffering*. Pg 12 citing McGowan, Pp. 22, 49, 43.

their young, and get stalked numerous times prior to a fatal attack.

Predator	Examples of Prey	Means of killing	Duration of killing (minutes)
lions	wildebeest, zebra, ungulates	suffocation (1)	5-6 [50, p. 13]
cheetahs	gazelles	suffocation (occasionally 2-3 times)	often 5-15, sometimes 25
spotted hyenas	ungulates	biting off chunks of flesh	1 to 13
wild dogs	ungulates	disembowelment (2)	
coyotes	rabbits, rodents, reptiles, amphibians, fish	may stalk prey for 20-30 minutes until prey is exhausted	
heron	fish	swallow whole	≤ 2 to swallow
piranha	fish, cattle, "anything"	tear apart while alive	
constrictor snakes	rodents (3), mammals	prevent prey from inhaling (4)	1 [86]
small snakes	fish, frogs	swallow and digest alive (5)	
venomous snakes	rodents, birds, reptiles	internal bleeding, paralysis (6)	a few minutes
crocodiles	birds, fish, reptiles, ungulates	grabbing in jaws, drowning (7)	

Persistent Hunger and Starvation

Starvation is responsible for the deaths of billions of animals annually. Unlike a predatory attack which can lead to a violent but quick death, death by starvation can drag on for months. During the winter, food is hard to come by. Edible vegetation is often nonexistent or buried beneath snow packs. Many young, weak, and sickly animals cannot endure the lack of food and starve to death. A Michigan Department of Natural Resources study noted, "the number of species diagnosed at the laboratory as dying from malnutrition and starvation are second only to those dying of traumatic injuries."⁶ When food is so scarce that billions starve, those that do survive are often chronically hungry and malnourished.



Indian Bison dead of dehydration. 30 September 2009. Source: Tamil, Nadu.

⁶ "Malnutrition and Starvation" Michigan Department of Natural Resources. 11 July 2010.

Persistent Thirst and Dehydration

During droughts, millions of animals die of dehydration. Dehydration kills more quickly than starvation, but causes considerable pain as vital organs ⁷cannot operate properly without adequate hydration. It impairs cellular function and prevents animals from excreting waste products as the body attempts to conserve water. These waste products are toxic and further exacerbate the effects of dehydration. "Though it is death of elephants that has triggered public concern, other species of wildlife have also died in the dry spell which began in January this year." ⁸ Droughts and water shortages are not infrequent occurrences. They occur in most habitable locations leaving animals in a panic as they search for water.

⁷ Source: Sevi, L. *Monterrey National Park. Nuevo Leon, Mexico.* 22 March 2008.

⁸ Nair, Madhaven. "*Hunger and Thirst Haunt Wildlife.*" *The Hindu-India's National Newspaper.* 26 March 2004.



***Salmonellosis.* Michigan Department of Natural Resources and the Environment. 8 July 2010.**

Those dying from dehydration are indicative of a far greater amount of misery. Consider being confined to a room with 9 other people where little or no liquid is available. All must remain in the room until one person dehydrates to death. Though only one of the ten dies, most in the room are likely to be suffering due to the lack of water.



An emaciated deer with ribcage visible. Deer that are emaciated during the summer, a time when food is more readily available, will usually succumb to starvation during the food-scarce winter months. Miller, M. Colorado Division of Wildlife.

Bacterial and Parasitic Infections

Unlike most Americans who receive medication to treat bacterial and parasitic infections, animals in the wild suffer untreated infections. Infections destroy central nervous systems, cause inflammation of tissues and joints making movement painful, and weaken immune systems resulting in secondary illnesses. Mammals and birds are afflicted with infections ranging from a host of bacteria such as *E. coli*. and *Salmonella*.⁹ Infections are found throughout the body including the urinary tract, gastrointestinal tract, and the circulatory system.

In addition, parasitic infections routinely occur in birds, reptiles,

and mammals. A common parasite are stomach worms such as *Dispharynx nasuta*. "Large numbers of worms (over 200 worms per bird) may be present in grouse by fall...In grouse, lesions severe enough to warrant consideration as a primary pathogen have been found in 33% of the birds examined from certain areas."¹⁰ Waterfowl are commonly infected by *Sphaeridiotrema globulus* which causes verminous hemorrhagic ulcerative enteritis. "The fluke feeds on the blood, leading to severe blood loss and anemia in the bird."¹¹

Though most of the examples provided thus far (as well as the estimates of the number of animals starving, dehydrating, etc.) have not included insects, the potential of suffering in the insect world must be considered. In *The Predominance of Wild Animal Suffering over Happiness*, Dawrst cites Stephen Gould's *Nonmoral Nature*: "Consider the parasitic relationship between the ichneumon wasp and host caterpillars. The ichneumon are a group of wasps, not flies, that include more species than all the vertebrates combined [hundreds of thousands of species]. The free-flying females locate an appropriate host and then convert it into a food factory for their own young.

¹⁰ *Proventricular or Stomach Worm*. Michigan Department of Natural Resources and the Environment. 16 October 2010.

¹¹ *Verminous Hemorrhagic Ulcerative Enteritis*. Michigan Department of Natural Resources and the Environment. 16 October 2010.



Zebra killed by *Bacillus Anthracis* Infection. 3 May 2010. Elaine We. Etosha National Park, Namibia.

Parasitologists speak of ectoparasitism when the uninvited guest lives on the surface of its host, and endoparasitism when the parasite dwells within. Among endoparasitic ichneumonids, adult females pierce the host with their ovipositor and deposit eggs within. Usually, the host is not otherwise inconvenienced for the moment, at least until the eggs hatch and the ichneumon larvae begin their grim work of interior excavation.

Among ectoparasites, however, many females lay their eggs directly upon the host's body. Since an active host would easily dislodge the eggs, the ichneumon mother often simultaneously injects a toxin that paralyzes the caterpillar or

other victim. The paralysis may be permanent, and the caterpillar lies, alive but immobile, with the agent of its future destruction secure on its belly. The eggs hatch, the helpless caterpillar twitches, the wasp larvae pierces and begins its grizzly feast. Since a dead and decaying caterpillar will do the wasp larvae no good,...the ichneumon larvae eat fat bodies and digestive organs first, keeping the caterpillar alive by preserving intact the essential heart and central nervous system. Finally, the larvae completes its work and kills its victim, leaving behind the caterpillar's empty shell." ¹²



A wasp injecting eggs into a caterpillar. When the eggs hatch, the larvae will eat the caterpillar while it is alive and conscious over a period of days. Source: Bauer, Scott. United States Department of Agriculture. <http://www.ars.usda.gov/is/graphics/photos/k7659-1.htm>

¹² Gould, Stephen. *Nonmoral Nature: Hen's Teeth and Horses Toes: Further Reflection in Natural History*. New York: W.W. Norton. (1994) Pp.32-34.

There are hundreds of thousands of species of parasitic ichneomonoidea with conservatively tens of millions of individual members of each species. Even using unrealistically conservative estimates, there are over 10 trillion caterpillars and other hosts each year that are eaten alive while their nervous system remains functioning. In other words, there are 27.3 billion hosts that meet this fate daily, or 1100 million each hour, or 19 million each minute.



CONCLUSION

For every one animal that experiences a miserable life at the hands of humans, there are millions that experience miserable lives at the hands of nature. The numbers are so extreme that they are difficult to contemplate.

As animal rights activists, we have spent our time fighting against human mistreatment of animals. We have focused on extending the basic rights to not be assaulted, mutilated, and slaughtered to all sentient beings. Treating similar groups dissimilarly is the hallmark of an unjust legal and ethical system. It is inconsistent to provide these rights to humans, cats, and dogs, but withhold them from cows, chickens, and pigs given that these groups share similar nervous systems and similar aversions to pain. Providing consistent rights to those that share similar characteristics is crucial to any equitable legal system, but focusing solely on these issues does a disservice to the trillions enduring wretched lives at the hands of nature.

Most people have been incorrectly conditioned to view nature in what can best be described as an ignorant reverence. They mistakenly believe that the unhappy periods of most animals' lives are more than balanced out by the good times. This view of life in the wild is naïve. .

Though many animal activists understand the fundamentals of evolution and natural selection, they fail to

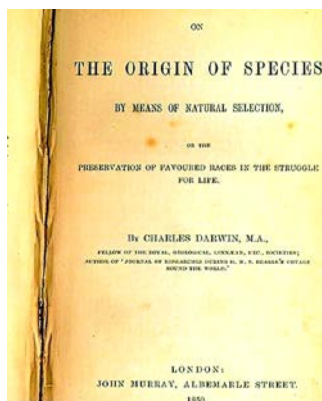
realize the ramifications of this process on the quality of animals' lives. Nature is indifferent as to whether animals experience overall painful, net-negative lives so long as it enhances their rates of survival and reproduction. In an environment where far more individuals are born than could ever be sustained in a stable population, the struggle to survive is fierce.

The issue becomes: At what point is a life sufficiently bad that non-existence is in an animal's best interest? Non-existence is not optimal, but it is far superior to a life comprised of substantially more misery than happiness.



Animal activists apply this standard to animals who are intensely confined. These activists realize that it is absurd to promote veganism because it "saves animals' lives." The

animals currently on factory farms will never be let free to graze in a luscious meadow. Rather, veganism reduces the demand for animal products, and therefore will prevent the future existence of some animals on factory farms. This is a fundamental of economic supply and demand curves: Reduce the demand for a product, and in the future the supplier will produce less of the product. Veganism prevents both rights violations and animals from existing in lives comprised of more misery than happiness.



The difficult transition for most animal activists is to apply this standard consistently to animals in the wild. Why is preservation of the natural environment intrinsically good if the vast majority of animals in the wild experience lives comprised of substantially more pain than pleasure? It is an irrational conclusion if one analyzes the facts about the quality of most lives in the wild, and prioritizes preventing horrendous lives

above all else. This is a position that is neither glamorous nor easy for most to accept, but it is correct.

We, as ethical individuals, have a responsibility to do all that we can to alleviate the misery of sentient beings. In most instances, we can achieve this objective by providing food, medical care, housing, etc. However, the natural environment is not one of these cases. Given the processes of population dynamics, food chains, and natural selection, a gruesome struggle to survive is endemic to life in the wild. If the options are to leave trillions to endure torturous lives or promote policies that result in less sentient beings in the wild, the choice is clear. Environmental preservation results in trillions of animals enduring net-negative lives each year, and is incompatible with an ethic focused on preventing animal misery. The more land that is converted from highly populated ecosystems to drastically less populated land such as farmlands or deserts, the fewer animals that will endure net-negative lives. Since over 99% of horrific lives occur in nature rather than at the hands of humans, this must be a priority for those who devote their lives to promoting the best interests of animals.

Comments and Frequently Asked Questions

"If animals' lives in the wild are so bad, why do they try to survive?"

Animals have not chosen to exist in the harsh conditions of nature. They exist because of random chance, and are genetically programmed to struggle to survive no matter how painful and unhappy their lives are. This survival instinct should not be confused with a life that is worth living. Animals tortured in labs also struggle to survive, but most would agree that it would be foolish to equate this with a net-positive life.

"Who are you to intervene in nature? Let them be! Let's focus on human mistreatment of animals."

The processes of nature are not sacred and ought not be revered by anyone who feels an ethical obligation to mitigating animal misery. They are random amoral processes. Just because suffering in the wild is natural does not mean it is acceptable to let it occur. Many human behaviors such as rape, theft, and murder may be natural under certain circumstances, but in no way is this an ethical defense of the behaviors. Intervention in nature is morally urgent since that is where most net-negative lives are occurring.

To the animals enduring wretched lives, it is irrelevant

whether the suffering is caused by humans or by natural conditions. Since trillions more animals are experiencing net-negative lives in the wild than by the actions of humans, this must be a priority for those concerned with animal suffering. A deer dying of dehydration or a parasitic infection is no less deserving of assistance than a deer that has been wounded by a hunter. To the deer, the source of its pain is irrelevant. The interest of the deer to not languish in pain is imperative in both scenarios.

"Animals in the wild are adapted to the conditions in nature. They are adapted to their ecosystems."

This argument exemplifies a lack of understanding of evolutionary biology and population dynamics. In a biological sense, a species is considered adapted to a certain ecosystem if it is able to maintain a population in that ecosystem. As previously discussed, if a species maintains a stable population in a habitat, this does not indicate that most individuals in that species will have a net-positive life. In reality, the overwhelming majority will likely have harsh lives and will die of an often painful condition prior to successfully reproducing. Though a *species* is adapted to a habitat, this should not be confused with *individuals* in that species generally having good lives.

"How can you judge whether animals are happy or miserable?"

You can judge the happiness or misery of animals in the wild similarly to how you judge the happiness or misery of animals experimented on in medical laboratories or confined in factory farms. Animal activists would consider it foolish to claim that one cannot determine if a rabbit is in pain when the rabbit is twitching as toxic chemicals are poured into its eyes. Similarly, when a pig in a gestation crate cannot turn around and develops lesions, it is obvious to animal activists that the pig is enduring a net-negative life. Alternatively, when a companion dog is wagging its tail as it is being pet or being fed, most would claim that the animal is happy at that time. A similar standard should be applied to animals in the wild. When an animal develops frostbite over 10% of its body, it is painfully cold. When an animal begins digesting its own muscle tissue because of a lack of food, it is starving. When an animal is riddled with bacterial and parasitic infections that result in inflammation throughout the body, the animal is in agony.

"Do you think animals in the wild have some good times in their lives?"

Yes. We are not claiming that animals' lives are comprised of 100% misery. Certainly, animals derive pleasure from some aspects of their life such as eating and sexual

success. Animals may also derive pleasure from galloping, flying, playing with their offspring, etc. We are arguing that for most animals in the wild (but not all), the level of pain and misery easily eclipses the amount of pleasure and happiness. In addition, some animals such as those afflicted by lethal parasitic infections endure a long period of time in conditions that are overwhelmingly atrocious.

"You are correct about unimaginable suffering and net-negative lives in the wild. But what can be done?"

To start, educate other activists about the reality of animal misery in the wild. It is crucial that animal activists reconsider their environmental ethics and put the interests of animals above all else. Be creative. Promote government policies and individual choices that may succeed in reducing the number that endure horrific lives. For every decision you make, prioritize the effect that it has on the environment. For example, why is recycling a beneficial action if it results in environmental preservation and thus more habitat where countless animals experience net-negative lives? The same is true for most forms of eco-friendly behaviors.

This leaflet does not have all the solutions. It should serve as an educational tool and a starting point for individuals to develop their own strategies to mitigate the agony of trillions of animals. Let logic and reason be your guide. Question

everything and challenge commonly held beliefs. We have an obligation to do all we can to make a positive difference in the world.

***PLEASE BE
COMPASSIONATE
AND RECONSIDER
YOUR ASSUMPTIONS
ABOUT THE
ENVIRONMENT. YOU
CAN MAKE A
DIFFERENCE.***

***“IT IS EASY FOR US TO CRITICIZE THE
PREJUDICES OF OUR GRANDFATHERS,
FROM WHICH OUR FATHERS FREED
THEMSELVES. IT IS MORE DIFFICULT TO
DISTANCE OURSELVES FROM OUR OWN
VIEWS, SO THAT WE CAN
DISPASSIONATELY SEARCH FOR
PREJUDICES AMONG THE BELIEFS AND
VALUES WE HOLD.”***

-PETER SINGER