

The Human Causes of "Too Many Deer": What Decision-Makers and Residents Should Know about Organized Deer Kills

For decades, land-use practices in many parts of the United States that involve destroying forest and creating edge lands with abundant low-growing vegetation have naturally brought increases in deer populations. Deer eat low-growing plants, and food supply is a key factor determining animals' populations. Suburban sprawl is a form of edge land that has spread rapidly, occupies far more land than our species needs, has far-reaching impacts on natural ecosystems, and entails far more car driving than is good for people, wildlife, or ecosystems.

Farms, another form of edge land that maintains large deer populations, occupies much more land than necessary to feed the human population, because more than 60 percent of the major grain crops and soybeans grown in the U.S. are fed to animals being raised for food. Since deer populations grow and flourish on farm crops, over-farming the land, like suburban sprawl, produces many more deer than used to live in human-inhabited areas. Large deer populations are common where wooded areas abut sprawl or farms.

Even though human land-use choices that harm people and ecosystems in many ways are the main cause of large deer populations, some people complain of a "deer problem." Officials, conservationists, land managers, and others demonize deer and organize deer kills rather than change the harmful human practices and attitudes that give rise to such complaints.

Despite the countless deer kills that have taken place in parks and neighborhoods, the cry still goes up: "There are too many deer!" "We've got to do something about the deer!" Yet, government wildlife managers have understood for a century or more that killing a significant portion of a deer population helps ensure more deer will be present for hunting in the near future. Rather than solve problems, deer kills have become a big problem. Deer kills have made *de facto* gamelands of neighborhoods where discharging weapons is illegal and parks were designed to be safe for wildlife.

Rather than continue to "do something about the deer," it is way past time to do something about poor land use and the human, ecosystem, and wildlife destruction it causes. No matter what method is used, it is never humane to kill an animal short of his or her natural lifespan, except to end irremediable suffering. A vote for a deer kill is always a vote for inhumane treatment of animals, for excuses rather than responsible action, and against sound environmental stewardship.

The best solutions to problems often blamed on deer involve mitigating the effects of poor land use in the short term and ending sprawl and over-farming and restoring natural ecosystems in the long term -- not attacking deer. Responsible Policies for Animals recommends approaching each type of complaint based on a clear understanding the options. Acting rationally and avoiding the anti-deer emotional frenzy that has been whipped up in some communities can help people take the most effective and humane steps. Our society needs to show more, not less, compassion for animals and to make real environmental improvements. We hope this information will help.

☞ Roadside reflectors dramatically reduce car collisions with deer. The Federal Highway Administration's Hazard Elimination Program can cover 80 percent of costs. Funding is also available under Transportation Equity Act - 21.

"The objective of this study was to test whether the installation of the Strieter-Lite reflectors reduced accidents at the sites where the reflectors are installed. Before and after data from 53 sites were analyzed statistically. Since the data were reported for different time periods for sites of different lengths, the reported data were "normalized" by converting to accidents per mile per year

(A/M/Y). This facilitated the comparison of results from the different sites. The sample data conclusively supported the hypothesis that the installation of Strieter-Lite reflectors reduced accidents, involving collisions between vehicles and deer, by 78 - 90%."

-- Robert H. Grenier, "A Study of the Effectiveness of Strieter-Lite Wild Animal Highway Warning Reflector Systems," June 28, 2002

A vast amount of information is available on the Strieter-Lite Wild Animal Highway Warning Reflector System, reports on the System's effectiveness, available financial support for the System, and more. Strieter Corporation, 2100 18th Avenue, Rock Island, IL 61201-3611; 309-794-9800; fax 788-5646; info@strieter-lite.com; www.strieter-lite.com.

Automobiles are not a natural part of any ecosystem. No animal species evolved over millions of years developing car-avoidance behavior the way many are good at avoiding other animals who may pose a danger. A Humane Society of the United States study estimated that on average one million animals per day are killed by automobiles in the U.S. alone. Though deer are larger than most and therefore more dangerous and costly to hit, collisions are much more harmful to deer than to people. And environmental damage from cars threatens all animals, some of them hundreds or thousands of miles from the nearest vehicle.

We must accept full responsibility for the high rate of car use, poor driving, and other factors in car-deer collisions. And we must understand that killing deer to prevent car-deer collisions is inhumane and futile. Killing deer does not prevent collisions with surviving deer or with those yet unborn or those soon to immigrate to an area where deer have been destroyed.

☛ Hunting increases car-deer collisions, as illustrated in these studies over two consecutive years in Pennsylvania, the state with the second-highest percentage of hunters.

"Not surprising, the daily number of deer claims increases during mating season in late October to early November and with hunting season in late November to early December. During the 10-day period from November 4-13 of last year, Erie Insurance received over 1,300 deer claims. Erie Insurance received an average of 39 deer claims a day during 1999. That number rose nearly four times on the first day of buck season and doe season to 147 and 123 deer losses, respectively."

-- "Car-Deer Collisions Carry High Price Tag," news release, Erie Insurance Group, March 18, 2000.

"Not surprising, the daily number of deer claims increases during mating season in late October to early November and with hunting season in late November to early December. Last year, Erie Insurance received an average of 34 deer claims a day. That number rose nearly five times on the first day of buck season and doe season for 157 and 160 deer losses, respectively."

-- "Deer-Car Collisions Carry High Price Tag," news release, Erie Insurance Group, March 18, 1999.

☛ The American Lyme Disease Foundation (ALDF) does not recommend killing deer to control Lyme disease.

Lyme disease has persisted in some places where deer have been completely eliminated. Many animals other than deer carry and spread the black-legged ticks that cause Lyme disease -- even some migratory birds. White-footed mice are the main carriers of the Lyme disease bacterium the ticks spread to humans and other animals, some of whom do and some of whom do not suffer from Lyme disease. Poor land-use choices boost mouse populations and the incidence of Lyme disease while driving out foxes, weasels, and other carnivores who prey on mice.

“In recent years, urban sprawl has forced the animals to live in carved patches of forest land. As a result, biologists have found that ticks, known to be a culprit in the spread of Lyme disease, are on the rise in smaller forest patches, increasing people’s chances of exposure. ...

“Scientists have long suspected that tampering with nature increases a person’s risk to some diseases due to a shift in animal population, but few studies have made a direct link. The Bard study [in the February 2003 issue of *Conservation Biology*] found that the density of infected ticks, a good indicator of Lyme disease cases, were higher in [forest] plots of five acres or less

“Federal health officials have said that people who live or work in residential areas surrounded by tick-infested woods are at a higher risk of getting Lyme disease. ...

“People can avoid contact with infected ticks by wearing long sleeves and cinching pant cuffs around the ankles when entering tick-infested woods, quickly removing attached ticks and performing daily tick checks.”

-- Alicia Chang, “Study: Risk of Lyme Disease Increases as Forests Shrink,” Associated Press, February 23, 2003.

Developed at Harvard, small cardboard Damminix tubes placed in brush, stone walls, woodpiles, and other mouse habitat use the natural behavior of mice to prevent the spread of Lyme disease to humans. Mice remove permethrin-laden cotton from the tubes and use it as nesting material. When ticks attempt to feed on the mice, the permethrin kills them on contact.

An individual mouse can feed more than 100 ticks in peak tick season. Available at hardware stores, lawn & garden retailers, and from EcoHealth at 800-234-8425, Damminix is approved by the Environmental Protection Agency and is not believed to harm the mice who come in contact with it. It should be used only according to directions and should not be accessible to children or companion animals.

Black-legged ticks are easier to spot on light-colored clothing. Since they are very small, when checking for ticks after outdoor activities it can help to wear a pair of inexpensive magnifying eyeglasses sold at drug stores for reading.

Preventing companion cats and dogs from roaming freely can help prevent them from bringing ticks home with them, and this also protects wildlife from domestic animals who are not part of natural ecosystems.

Lyme disease vaccines exist but are not universally recommended – people should consult with physicians about them.

Killing deer can cause people to forego more reliable, practical Lyme-disease prevention methods. Ticks carrying Lyme disease are common from Maryland to Maine and in Wisconsin, Minnesota, California and Oregon and are more common and more likely to be infected in areas of fragmented forest. People concerned about Lyme disease may consider it a factor in choosing where to live and engage in recreation.

Anyone bitten by a tick should be checked for Lyme disease immediately and if told he or she is not infected, seek additional opinions. Lyme disease can be difficult to diagnose, and early treatment is crucial for avoiding advanced stages of the disease.

☞ **Hunting is an ineffective method for reducing deer populations.**

“The most visible weakness in the assertion that hunting is necessary to control deer populations is that it has largely failed to do so over the last two decades. ... Just because deer are being killed doesn’t mean that deer populations are being controlled.”

-- Allen T. Rutberg, Ph.D., “The Science of Deer Management: An Animal Welfare Perspective,” in *The Science of Overabundance: Deer Ecology and Population Management*, William J. McShea,

H. Brian Underwood, and John H. Rappole, eds. Washington & London: Smithsonian Institution Press, 1997.

“As we have seen, wildlife biologists have been nurtured on the hunting philosophy and have been taught that ecosystems can be improved by manipulation. Unfortunately, the more man tampers with Nature, the more he must rely upon ‘management’ activities to maintain a semblance of ecological balance; and these activities are harmful to established ecosystems.

“Hunting, whether in the presence or absence of large predators, is no guaranteed annual ‘check’ on deer populations.”

-- Ron Baker, *The American Hunting Myth*. Vantage Press, New York, 1985.

“A quick surge in a deer population can occur if hunting is implemented where it hasn’t been before. In any event, if hunting is started, it’ll have to continue.”

-- Thomas Eveland, Ph.D., “Why Killing Deer Makes Poor Park Management,” public presentation, Philadelphia, Pennsylvania, June 15, 1998.

☞ **Wildlife managers claim hunting is effective when it is not.**

“In my experience with wildlife managers, a hunt that is followed by a reduction in deer population size is considered effective; a hunt that is followed by a stabilization in deer population size is considered effective; and a hunt that is followed by a rise in the deer population size is considered effective because, the rationalization continues, without the hunt the population would have grown even more. Under these rules, failure is impossible.”

-- Thomas Eveland, Ph.D., “Why Killing Deer Makes Poor Park Management,” public presentation, Philadelphia, Pennsylvania, June 15, 1998.

☞ **Bowhunting is ineffective for reducing deer populations.**

“[A]rchery has never been a valid control measure for animal populations. It’s a recreational offshoot of gun hunting, and as such, they can’t really sell it as a control measure ..., so what is often done — and this is done wrongly ... -- is that people will come in and they will often use what I call the ‘D’ words — ‘devastation,’ ‘destruction,’ ‘disaster’ ... -- to talk about these particular animals. ... And ... what they do is they steer the public into thinking these animals need to be killed. And many times these people will say, We understand archery is *not* going to control the deer herd, but, gosh, we gotta do something, these things are big rascals, we gotta kill some of ‘em, just stick a few of ‘em, anything.”

-- Thomas Eveland, Ph.D., “Why Killing Deer Makes Poor Park Management,” public presentation, Philadelphia, Pennsylvania, June 15, 1998.

☞ **Bowhunting wounds and cripples a large percentage of deer.**

“For a variety of reasons — the arrow’s inherent rainbow-shaped trajectory, an animal’s ability to hear the snap of the string and react (referred to as ‘jumping the string’), and a hunter’s excitement and nervousness when seeing an animal (‘buck fever’) — even experienced archers fail to retrieve approximately half of the animals they shoot.”

-- Mike Markarian, “Bowhunting: Culling or Crippling?” *The Animals’ Agenda*, Vol. 16, No. 1.

A former bowhunter and author noted “the impossibility of accurately placing shots with archery equipment” and concluded that “broadhead [arrows] are absolutely inadequate” for killing animals humanely.

-- Adrien Benke, *The Bowhunting Alternative*, B. Todd Press, San Antonio, Texas, 1989.

A large number of studies published by wildlife agencies and in wildlife journals from 1947 to 1989 revealed crippling rates of 38 to 68 percent, with an average of 50 percent. This is far higher than the wound rate from rifle hunting, which itself is too high. Some of the studies:

R.L. Croft, 1963: 44 percent wounded

G.A. Boydston & H.G. Gore, 1987: 50 percent wounded

J.D. Cada, 1988: 51 percent wounded

L.P. Hansen & G.S. Olson, 1989: 52 percent wounded

L.E. Garland, 1972: 63 percent wounded

M.K. Causey *et al.*, 1978: 50 percent wounded

A.N. Moen, 1989: 68 percent wounded

R.W. Aho, 1984: 58 percent wounded

☞ **Elimination of predators does not account for large deer populations – suburban sprawl, and over-farming the land, and deer management for hunting do.**

“Scientists believe that the increased density and the shift in distribution are attributable to large-scale changes in land use. For example, logging and the conversion of forested lands into agricultural, suburban, and other types of developed landscapes created favorable deer habitat with year-round, reliable food sources that allow deer populations to flourish.”

-- Michael A. Coffey, Wildlife Biologist, Natural Resources Management Division, National Park Service, *White-tailed Deer in National Parks (National Park Service factsheet)*.

“We often think predators control prey, but that is rarely the case.” Prey controls predators; predators diminish as prey declines. It is not the case that removing wolves, cougars, and other predators causes deer to increase.

-- Thomas Eveland, Ph.D., “Why Killing Deer Makes Poor Park Management,” public presentation, Philadelphia, Pennsylvania, June 15, 1998.

“[G]ame managers rely on a few specious ecological arguments to justify hunts and other lethal [deer] reductions. Probably the most widely used of these myths is that presettlement populations of deer were controlled by predators, removal of predators ended natural control, and, consequently, hunters are needed to control deer populations. ... [Deer] populations are regulated through a complex interaction of food availability, predators, and other variables.”

-- Allen T. Rutberg, Ph.D., “The Science of Deer Management: An Animal Welfare Perspective,” in *The Science of Overabundance: Deer Ecology and Population Management*, William J. McShea, H. Brian Underwood, and John H. Rappole, eds. Washington & London: Smithsonian Institution Press, 1997.

“[W]ildlife managers who promote deer abundance through the creation of edge habitat are responsible for the effects of these animals on the landscape.”

-- William S. Alverson, Ph.D., Donald M. Waller, Ph.D., Walter Kuhlman, J.D., *Wild Forests: Conservation Biology and Public Policy*. Washington: Island Press, 1994.

☞ **To protect vegetation from deer, keep deer away from vegetation and work to restore natural ecosystems and reverse suburban sprawl and over-farming.**

Deer kills rarely if ever destroy all of the deer in an area. Surviving animals continue to reproduce. More immigrate from outside of a territory where a population has been significantly reduced. The most killing deer can do to protect vegetation is to reduce for a short time the number of deer feeding in an area. That does not protect any particular plant, group of garden, farm, wildflower patch, or plant species.

Durable, long-lasting deer fencing of many kinds is available. Fencing can be installed in all terrains and over areas large or small. Driveway guards and gate systems designed to keep

deer out are also available. A few reliable and knowledgeable nationwide vendors with extensive catalogs:

- ♦ **Benner's Gardens: 800-753-4660 / www.bennergardens.com;**
- ♦ **Wildlife Control Technology: 800-235-0262 / www.wildlife-control.com;**
- ♦ **Master Gardening: 301-694-1238 / www.mastergardening.com.**

Books on fencing and other methods include:

- ♦ R.M. Hart, *Deer Proofing Your Yard and Garden*. Pownal, Vermont: Storey Publishing, 1997;
- ♦ P.D. Curtiss & M.E. Richmond, *Reducing Deer Damage to Home Gardens and Landscape Plantings*, Department of Natural Resources, Cornell University;
- ♦ J.B. McAninch, M.R. Ellingwood & R.J. Winchcombe, *Deer Damage Control in New York Agriculture*, New York State Department of Agriculture and Markets;

Deer prefer to eat some plant species over others. Their preferences vary over geographical regions and can be affected by drought and other environmental conditions. Some plant nurseries and landscapers are glad to recommend garden and landscape plantings less preferred by deer. Some offer printed lists.

Vast portions of our country consisted of mature forest and would over time naturally revert to forest ecosystems if allowed to. Turf grass is non-native, ecologically unsound in many ways, and covers many millions of acres of U.S. land – it is often called “green concrete.” Grass lawns are a popular but misguided fad whose time has come and gone. Trees are just about the only landscaping item that appreciate in value over time. So the crucial steps we must take as a society are obvious:

- ♦ create landscapes that increasingly come to resemble forest;
- ♦ avoid occupying more land than we need;
- ♦ plant and nurture trees and avoid removing trees wherever possible;
- ♦ avoid removing trees or establishing turf-grass expanses when building homes and other structures;
- ♦ establish incentives to reverse suburban sprawl and over-farming;
- ♦ support and promote the New Urbanism architecture and urban-planning movement to ensure that most people live where most needs can be met within a 15 minute walk of home;
- ♦ support efforts that help people switch from automobile driving to mass transportation;
- ♦ oppose efforts to widen roads or build new roads;
- ♦ support efforts to protect natural ecosystems;
- ♦ support efforts to minimize or eliminate mineral, oil, gas, timber, and other “resource” extraction;
- ♦ support efforts to reuse, recycle, and otherwise conserve materials rather than further disrupt ecosystems to produce or extract more materials;
- ♦ teach and practice minimal use of materials in all activities, including foods that involve the least land, water, and energy use – plant foods – since we must eat every day and have no need of animal-derived foods that cause poor land use that ensures large deer populations.
- ♦ work to reform the 1937 Federal Aid in Wildlife Restoration Act (Pittman-Robertson Act), which increases deer populations by ensuring state wildlife agencies manage deer for hunting and provides incentives for increasing the number of hunters demanding deer to hunt.

The more rapidly we learn to take these constructive steps rather than attack deer or members of other species for engaging in their natural behavior, the sooner the war cry of the frenzied deer hater – “We’ve got to do something!” – will vanish from the landscape, the sooner the constant roar of engines, air pollution, and car-deer collisions will go, and instead we can hear the birds and other wildlife who used to exist in our regions in far greater number and variety.

☞ **Deer kills harm efforts to protect forest and other natural ecosystems, reverse suburban sprawl, and develop humane ways to live with wildlife. So when it comes to preventing deer kills, animal activists are the true environmentalists and conservationists.**

People concerned about propensities of large human-generated deer populations to eat large amounts of vegetation, potentially affecting low-nesting birds, forest regeneration, groundwater, and other aspects of ecosystems should make common cause with animal activists. Promoting deer kills is contrary to conservation and environmental values. Every deer kill is another green light for people to keep harming the environment by destroying forest, expanding sprawl, and over-farming the land. Most people think protecting and restoring natural ecosystems are the objectives of conservationists, environmentalists, and open-space activists. Opposing deer kills and insisting on true environmental approaches will show that that is correct.

☞ **Responsible Policies for Animals is glad to provide additional information or referrals on these and other animal-related matters and to recommend additional organizations working constructively to prevent deer kills.**

Solving problems wrongly blamed on deer, resolving other disputes concerning wildlife, restoring natural ecosystems, and living in harmony with other species and natural ecosystems involve long-term struggle. Attempted short cuts like killing deer will never work. Education at every level must contribute. So should every major institution of our society. Working together, we can make these struggles the local, county, state, national, and international priorities they deserve to be.

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