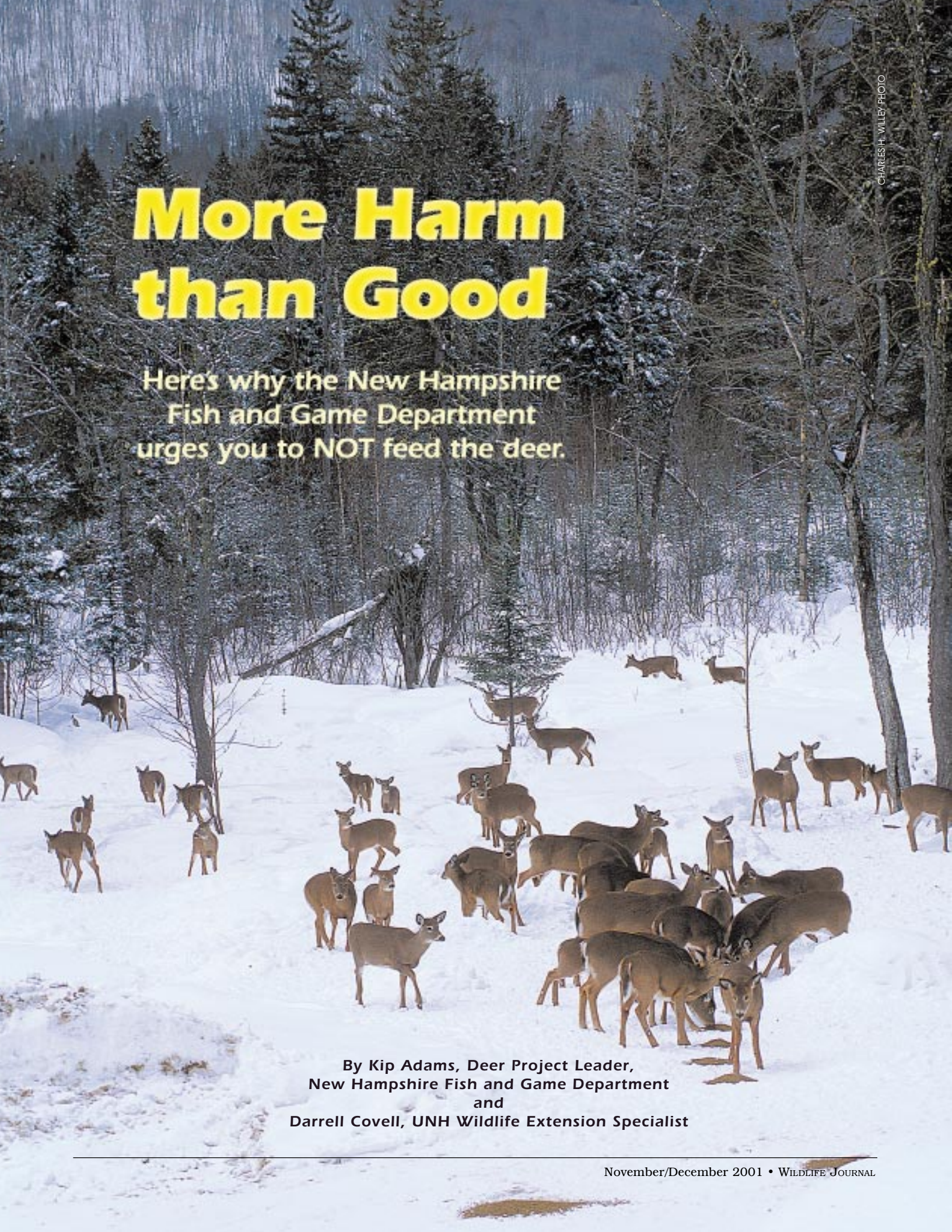


More Harm than Good

Here's why the New Hampshire
Fish and Game Department
urges you to NOT feed the deer.



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FEEDING DEER IN THE WINTER has become an increasingly popular activity here in New Hampshire and throughout the Northeast. For the most part, folks who feed deer care deeply about wildlife, enjoy watching deer in their backyards, and sincerely think they're helping the deer by supplying food in the winter.

Problem is, in most cases they're probably not helping them in any measurable way. In fact, they may be harming deer in many ways. Ironically, this activity often makes deer more vulnerable to starvation, predation, disease, and vehicle collisions, among other things.

Although the New Hampshire Fish and Game Department has long held serious reservations about feeding deer, the harsh winter of 2000-2001 made it clear that the activity was making a bad situation even worse.

A Little Deer Biology

White-tailed deer in New Hampshire are at the northern limit of their geographic range. In this environment, deer have several natural adaptations that help them survive the winter. These include a thick winter coat of hollow hairs and the storage of fat in fall for later use during winter.

Adult deer routinely lose as much as 20 percent of their body weight during winter, regardless of the amount or quality of food present. Adult deer get as much as 40 percent of their daily energy during winter from their fat reserves. Adult deer don't eat enough forage to maintain body weight during winter even in captivity and physiologically cannot eat enough in the wild. This natural system of fat use and weight loss cannot be overcome by supplemental winter feeding and is why fall fat levels are so important to winter survival.

During winter, cover – not forage – becomes the key to survival. Deer



MARGUIS WALSH PHOTO

Feed sites tend to concentrate deer into small areas (more than 40 at the site on the right) where they can become more vulnerable to coyotes and domestic dogs. In these concentrations, deer also tend to over-browse surrounding vegetation and, feed sites can lure deer away from natural food and cover.

reduce activity levels and use wintering areas (deer yards) where snow depths are reduced and temperatures and wind conditions are less severe. These areas consist of mature softwoods (like spruce, fir and hemlock) that reduce the amount of energy a deer uses for traveling and maintaining body temperature. In these areas, deer collectively develop and maintain trails through the snow, where travel is easier and escape from predators is enhanced. Wintering deer naturally tend to disperse over large enough areas to reduce competition for food resources and risk of predation. Deer routinely travel more than 10 miles to reach these wintering areas.

Despite these adaptations, some deer enter winter destined to die. This will occur regardless of available food or winter conditions because of a deer's small body size or low fat reserves. The key to winter survival is to expend as little energy as possible on a daily basis, thereby slowing the loss of fat reserves. If winter ends before the fat reserves are expended, the deer survives. If fat reserves are gone before winter ends, the deer

dies. Therefore, any activity that causes increased energy demands has the potential to harm individual deer and ultimately deer populations.

Further, it is the length of winter, particularly as it extends into spring, that most influences deer survival, rather than short periods of severe weather.

How Supplemental Feeding Affects Deer

Deer move less and rest more during winter than any other season. This strategy saves precious fat reserves and aids winter survival. Activities that increase energy demands (thus, the use of fat reserves) can harm the deer in winter.

Here are a few examples of how feed sites can negatively affect deer:

Predation and Disease

Feed sites congregate deer into unnaturally high densities. These high densities attract predators and increase the potential that they'll be taken by coyotes or will be pursued

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by domestic dogs at feed sites near homes and camps.

Just avoiding predators – increasing energy demands in an attempt to avoid attack – can be lethal for deer in the winter. Predation – not starvation – is a major cause of winter mortality.

Large congregations also make it easier for disease to spread among deer. One such disease is tuberculosis, which has become a major problem for deer and agriculture in Michigan, a state with high levels of winter feeding.

Aggression and Starvation

Deer behavior plays a significant role at feed sites. Deer have a well-established social hierarchy. In general, adult animals are dominant over yearlings, yearlings are dominant over fawns, and fawns are “low man on the totem pole.”



MARQUIS WALSH PHOTO

At feed sites, older and dominant deer often deny fawns or yearlings access to feed. In natural wintering areas, deer and their browsing opportunities are more dispersed.

The expression of dominance generally takes the form of varying degrees of aggressive behavior among individuals. Such aggression occurs when deer are congregated at feed sites and resources are in short supply. This aggression can result in injury or death and wastes precious energy reserves.

It also often results in the denial of feeding privileges to subordinate deer, despite the fact that subordinate deer



MARQUIS WALSH PHOTO

Despite deep snow, deer can reduce their energy usage by hunkering down in natural wintering areas. Travel to feed sites can increase their energy costs and put them in risky situations.

continue to expend their limited energy reserves traveling to and from feed sites with other herd members. Because of this, it's not uncommon to document deer starvation at large feed sites.

Increased Stress

High deer densities at feed sites also increase social stress among deer. In humans, stress weakens our immune systems, increases the possibility of contracting diseases and lowers our overall health. The effects are similar in deer herds. Increased stress from crowding and aggressive behaviors places additional energy demands on animals at the most critical time of the year.

Over-browsing

Deer continue to browse on natural vegetation at feed sites. Artificially high deer densities at feed sites often result in over-browsing of local vegetation (and ornamental plants). In some cases, the habitat can be severely degraded.

Deer require a variety of foods and will browse vegetation surrounding a feed site. It is physically impossible to provide enough supplemental food to stop deer from browsing. Over-

browsing is most detrimental to fawns since their small body size prevents them from storing as much fat as adults – thus they need to obtain more food on a daily basis.

Deer browse on the way to and from feed sites. When the snow is deep and deer are confined to trails, over-browsing removes available food and fawns are the first to go without. Over-browsing is far less common when deer are naturally dispersed.

Vehicle Collisions

Since feed sites are generally near homes, they're usually near well-traveled highways. These locations dramatically increase the potential for deer/vehicle collisions. This is a human safety consideration as well as a deer mortality source. The number of motor vehicle kills near feed sites can be higher than the number of deer that would have succumbed to winter mortality. Substantial deer losses stemming from vehicle collisions around feed sites have been documented in New Hampshire.

Weaker, Less-Wild Deer

Feed sites change the relationship between deer and their environment. Deer become habituated to feed sites and human assistance and no longer depend solely on the natural environment for their survival. This takes some of the “wild” out of wildlife and some of the heartiness out of the deer herd. Winter weather conditions help eliminate genetically inferior indi-



MARQUIS WALSH PHOTO

Watching deer is a real treat, no doubt. But deer at feeding sites lose their wildness, and can become weaker overall and more vulnerable to predators and starvation.

viduals from a herd. This strengthens a herd's ability to produce individuals with superior traits adaptable to stressful environmental conditions.

Transition from Browse to Feed

People who feed deer may have noticed that some deer appear starved. Sometimes, the residents react by offering more feed. In reality, it may be the feed itself that's harming the deer.

Deer are "ruminants" and their ability to digest food depends on the presence of specific microorganisms in their stomachs (rumens). Different foods require different microorganisms for digestion.

It takes deer about two weeks of feeding on a new food source to acquire the necessary microorganisms to obtain nutrition from the food. When deer are feeding on natural winter foods (browse) and they are provided supplemental feed, such as deer pellets or corn, they need to eat the new feed for nearly two weeks before they can benefit from it.

Therefore, many people trying to help deer are actually hurting them because of the time and energy needed to convert the microorganisms. Such deer are better off continuing to browse on natural vegetation.

Inferior Habitat and Traveling Energy

Feed sites lure deer away from natural wintering areas. This attraction can trap deer in inferior winter habitat and increase the chance of malnutrition and predation.

"They're My Deer"

Feed sites change peoples' view of deer, and over the course of several years, those who feed deer often begin to feel ownership of the animals. They may become more involved in land posting and anti-hunting campaigns to protect "their deer." All wildlife is a public resource.



MARGUIUS WALSH PHOTO

Some well-meaning folks put out several tons of deer feed a year. But the cost is greater than that of the feed itself.

Unintended Impacts on Good Winter Cover

Feed sites can affect timber company incentives and cutting practices. Wildlife biologists work hard to inform landowners about the importance of winter cover. Many biologists and foresters work with timber companies to identify and manage wintering areas in a sustainable fashion. But, it becomes a hard sell when wintering areas containing thousands of dollars of uncut timber are not used by deer because they're at feed sites. The devaluing and potential loss of natural wintering areas can be an unintended consequence of feeding deer.

Further, young deer that associate feeding sites with winter habitat may never learn to occupy natural winter habitat. Thus, feeding may produce long-term habitat loss and critical behavioral change.

The Fish and Game Department's Position

The New Hampshire Fish and Game Department is responsible for managing all of New Hampshire's wildlife species. Our guiding principles dictate that we manage these resources within the natural limits of our native habitat. We recognize that variations in abundance, in response to changes in the quality and quantity of habitat and other environmental factors, may occur through time. We also recognize that the long-term viability of the deer herd is not dependent on supplemental winter feeding anywhere in the state. **Therefore, the Fish and Game**

Department does not advocate the supplemental feeding of deer, will not participate in winter feeding efforts, and most importantly, urges landowners to not provide supplemental feed to deer.

How You Can Help Deer

For the long-term health of deer, the best management strategy is to keep deer dependent on their natural food and cover. Maintaining mature softwood wintering areas, regenerating hardwoods, mast-producing trees (like oak and beech) and forest openings are key to sustaining a healthy deer population. Occasional severe winters will continue to take their toll on deer, as they have for centuries. But taking the long view, our deer herd will be healthier if it is not dependent on humans for food and if densities of deer do not exceed the natural capacity of the land.

Landowners can help by developing a management plan that includes wildlife as one management objective. Sustainable timber harvest is compatible with protecting winter deer yards and other deer habitat components. Also, landowners should recognize the role of hunters as the primary tool for wildlife biologists to regulate deer densities. Allowing hunter access to huntable lands is an effective way to maintain a healthy balance between the deer and their habitat. ■


For more information:

- "Feeding Wildlife...Just Say No!" a 34-page booklet by the Wildlife Management Institute, \$3.25; WMI Publications, PO Box 34646, Washington, D.C. 20043.
- "Supplemental Feeding of White-Tailed Deer During Winter." Visit www.state.me.us/ifw/hunt/deerfeed.htm. Also available in print by the Maine Department of Inland Fisheries and Wildlife, 207-287-8000.
- Visit www.dec.state.ny.us/website/dfwmr/wildlife/deerfeed.htm.

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