

Why are Deeryards Important?

By Kip Adams

Habitat loss affects deer herds and deer managers throughout North America. If the lost habitat is used by whitetails to fulfill critical needs during a stressful season, then the impact of the loss is magnified. This is especially challenging for northern deer populations when “deeryards” are cut for their timber value or are replaced with homes, roads and shopping malls.

Deeryards are forested areas used by deer for shelter during winter, and deer at the northern extremes of their range are highly dependent on deeryards for survival. Deeryards include a core area composed of mature softwoods and a hardwood browse area that may occur within the core, or more frequently as young openings located around the periphery of the core. Depending on location, the softwood component primarily consists of mature balsam fir, spruce, northern white cedar, pine or eastern hemlock. The canopy species provide many advantages such as reduced snow depth, lower wind velocity, increased temperatures and higher relative humidity at the ground level. On sloped terrain, south-facing deeryards are preferred as they receive more sun and less snow during winter. In some instances, steep south-facing slopes with hardwood species in the canopy can be deeryards. The steep terrain and south-facing “aspect” combine to minimize snow accumulation and wind chill. Understory vegetation within the stand should be dense enough to provide shelter from prevailing winds and browse for deer. To meet these requirements, stands need at least 50 percent crown closure. For small deeryards (less than 50 acres) 70 to 100 percent crown closure is preferred. Softwood species need to be approximately 35 feet tall to be functional, so a stand must be older than 30 to 40 years.

In addition to the thermal advantages, deer migrate to deeryards because the lower snow accumulation combined with packing of snow on trails greatly decreases the energy spent walking and foraging. The improved travel ability also enhances predator avoidance, and these attributes allow deer to slow the loss of their fat reserves and increase their chance of winter survival. When snow depths reach the point where deer sink more than 18 inches, they typically remain on trails within the deeryard and abandon all other areas.

While “deeryard” is the term commonly used, deer wintering area (DWA) is a more accurate description. Steve Weber, chief of wildlife for the New Hampshire Fish and Game Department,

began working with DWAs in 1980. Steve describes DWAs as analogous to “big rubber bands” that expand and contract in size depending on winter severity. That is, deer use a larger or smaller component of the DWA depending on snow depth and temperature. Moderate weather allows deer more mobility and the ability to use larger portions of the DWA, while severe weather may restrict deer to the most dense softwood cover.

Yarding is routinely observed across Canada, New England, upstate New York, the upper Great Lakes region, the upper Midwest and the Northwest. Whitetails may also “yard up” in more southerly regions for short periods during extreme winters or in high elevation areas.

Whitetails may travel considerable distances to reach DWAs. The exact distance depends on temperature and snow depth, elevation of fall range and distance to wintering habitat. In Maine



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Stands of conifers that provide shelter from cold, wind and deep snow in the winter – areas known as “yards” – are critical to winter survival of whitetails in the northern United States and Canada.

and Minnesota, deer travel an average of 6 to 10 miles from summer to winter ranges, but movements of 20 to 30 miles have been documented. Deer travel a little farther in Quebec, as 18- to 36-mile migrations are common. In southern New England, most deer travel less than five miles to reach DWAs because winters are less severe and the DWAs have been reduced to remnants of their original size. They neither draw nor support large numbers of deer. Deer also return to the same wintering areas each year, and there is documented continuous use of some DWAs in Maine for 50 to 100 years. John Ozoga, retired research biologist from Upper Michigan, reported that in the late 1980s approximately 43,000 deer were using a 360-square-mile wintering-area complex in Michigan. He added the yard complex drew deer from 1,400 square miles of summer habitat.

It is important to recognize that seasonal migration to DWAs is different than dispersal movements. Migration occurs during most or all years by animals across all age classes, and it is

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WHITETAIL WISDOM

a seasonal movement in the North to enhance winter survival. Migration occurs during late fall or early winter when snow depths reach 10 to 12 inches and temperatures drop below freezing. Occasionally, extremely low temperatures (below zero) will cause deer to yard even in the absence of snow. Older deer teach migration routes to younger animals, and animals return to their spring ranges when the snow subsides. Deer average 135 days in DWAs in northern Maine and nearly 100 days in southern Maine.

Dispersal movement also occurs annually, but it is predominantly by 12- to 18-month-old bucks. About 25 percent of dispersal occurs during spring and the rest in the fall. This activity is believed to occur to reduce inbreeding within a population. Yearling bucks disperse an average of one to five miles, but distances over 30 miles have been documented. Dispersal occurs across all habitat types and in all deer herds, North and South, as long as the population isn't enclosed.

Unfortunately, DWAs are disappearing at an alarming rate due to development, logging operations, and infestations of spruce budworm and woolly adelgid. According to John Ozoga, the Michigan wintering area mentioned earlier that supported 43,000 deer in the late 1980s only supports about half that many deer today due to poor forest management. In recent years, the deer herd in Michigan's Upper Peninsula has dropped due to loss of winter habitat and increased winter mortality.

To maintain adequate winter habitat, many states and provinces have regulations governing the harvest of softwood species. Some jurisdictions even monitor these habitats. New Brunswick, for example, maintains 862 DWAs encompassing nearly 700,000

acres on public lands and nearly 115,000 acres on private lands. These wintering areas range from less than 20 acres to more than 22,000 acres. The average DWA is 934 acres.

So what does this mean to deer managers in the North? Support of local landowners is critical to provide good winter habitat. If you are in a region where deer migrate to DWAs, it is crucial to recognize the importance of this habitat type since biologists consider quality winter shelter the major limiting factor in sustaining deer populations at the northern limits of their range. If you manage land containing an active DWA, you should have a forest management plan designed to maximize the quality of the habitat. Most state and provincial wildlife agencies have guidelines for forest management practices in or adjacent to DWAs. If you manage land that doesn't contain an active wintering area, you can enhance the habitat through forest management practices to create one. Managers should contact their state wildlife agency, Cooperative Extension Forester or consulting forester for assistance in assessing these habitats and especially before cutting any trees. If you are involved in a QDM Cooperative in the North – a group of neighboring landowners who cooperate to meet QDM goals across large areas – then protecting or enhancing DWAs in the Cooperative is extremely important. When northern deer have access to high-quality DWAs, fewer succumb to malnutrition and predation. This also minimizes fawn losses resulting from does in poor condition the following spring.



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