Timber Wolf Alliance

North Lakeland Discovery Center

Why Wolves?

The Role of Wolves in the Landscape

By Timber Wolf Alliance Staff, with editing assistance by Jeff Snowbarger

For many years, our relationship with the gray wolf has been one based on fear and misunderstanding. During the past three centuries wolves were methodically persecuted – shot, trapped, and poisoned with the single purpose of elimination. They were seen as a nuisance, pest, and even a terror to be feared, with no thought to the benefits they might provide in maintaining the ecosystem in which they existed.

Not until the wolf was nearly extinct did scientists and concerned citizens begin to ask the questions: What good are wolves? What will happen to our landscape when the wolves are gone?

Conservationists have long held the premise that all species have intrinsic value. While wolves were not economically valuable, (and in fact were blamed for economic loss through livestock predation) the question of their ecological value was of great debate. A debate which continues today.

The Timber Wolf Alliance (TWA) investigates the issue utilizing a science-based approach. TWA seeks out and shares information and research on the relationship wolves have to not only their prey and pack structures, but to the landscape as a whole. TWA is committed to investigating the facts, and relies on the growing body of research related to wolves' contributions to healthy ecosystems and improved biodiversity. To understand wolves' intricate role, it is important to understand their natural history.

Wolves are *apex predators*—predators with no natural predators of their own. They reside at the top of food chains, where they play a crucial role in maintaining balance within their ecosystem. Furthermore, apex predators are a determining factor in the order and abundance of other species' populations and health.

The importance of apex predators has been the focus of several research projects in the Greater Yellowstone Ecosystem (GYE), where the health of the region's ecosystem has been at the center of much debate. The GYE research looks at the impacts of gray wolf reintroduction in areas where the species had once been extirpated [(1) (2) (3)]. The opportunity to study wolf re-introduction in these areas has revealed the complexity of the relationship between wolves and the landscape.

The years in which GYE were wolf-free led to increases in the populations of elk, coyotes, and other species known to be predated by wolves. As a result, these larger species' populations were hypothesized to have triggered major changes in the landscape through disruptions in grazing patterns and herd behavior—leading to unbalanced pressure on the vegetative community.

Prior to the re-introduction of the wolf to the GYE in 1995-1996, much of the predictions were based on research from Isle Royale (IR), Michigan in the decades prior [(2)]. In IR, wolves had a well-documented affect on maintaining moose and coyote populations which then affected other factors, such as forest growth and

composition. Overabundant ungulate populations were also seen in Yellowstone, and it was assumed wolves would have a similar stabilizing effect on those populations. Less well understood, however, were the potential trophic level consequences, such as how willow, a favorite food of the elk, would respond to reduced pressure by the elk.

The degree and extent to which the landscape has changed since the reintroduction of the gray wolf in the GYE has stunned many. Every trophic level has experienced changes. From regulating wildlife populations, health, distribution, and behavior patterns, to providing food for scavengers and revitalizing entire riparian areas, the wolf indeed has clear ecological value. Douglas Smith, project leader for the Yellowstone Gray Wolf Restoration Project[3] sums it up with his statement, "With the wolf back in place as the top carnivore, biodiversity is greater… Reintroduction of gray wolves to Yellowstone National Park surely ranks, symbolically and ecologically, as one of the most important overt acts of wildlife conservation in the 20th century."

As one of the most charismatic species in the world, often either loved or hated, the presence of wolves in the landscape will continue to be debated well into the future. The question as to "what good are wolves", however, is becoming less debatable. The science is beginning to reflect the inherent understanding that many conservationists have held for years, including famed conservationist and father of modern game management, Aldo Leopold[4]:

> *The last word in ignorance is the man who says of an animal or plant: "What good is it?" If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.*

By advocating for wolves on the landscape, TWA echoes the work of modern researchers and renowned conservationists, and supports the restoration of healthier and more balanced ecosystems.

(1) Weaver, J. 1978. The wolves of Yellowstone. Natural Resources Report No. 14, National -Park Service. 38 pp.
(2) Ripple, *et al.* Wolves, Elk, Bison, and Secondary Trophic Cascades in Yellowstone National Park *The Open Ecology Journal,* 2010, *3,* 31-37
(3) Douglas W. Smith, Rolf O. Peterson, and Douglas B. Houston, Yellowstone After Wolves, April 2003 / Vol. 53 No. 4 • BioScience P. 333
(4) Leopold, Aldo. 1949. A Sand County Almanac. Oxford University Press. P. 204 and Pp. 224-225

Timber Wolf Alliance

The mission of the Timber Wolf Alliance is to use education to promote and maintain a viable population of wolves in the western Great Lakes region. TWA is committed to investigating the facts, and relies on the growing body of scientific research to dispel myths and unfounded fears associated with wolves. TWA provides training in wolf biology and ecology, develops and disseminates educational material on wolves, and supports volunteer coordination for statewide wolf population monitoring efforts. TWA is a part of the North Lakeland Discovery Center.

North Lakeland Discovery Center

The North Lakeland Discovery Center is a nature education center located in Northern Wisconsin. Our mission is to promote stewardship of the cultural and natural resources of our area through research, educational and recreational activities.

Connecting people to nature; promoting stewardship of our beautiful Northwoods resources.
www.DiscoveryCenter.net