

***Lords of Nature: Life in a Land of Great Predators***

Green Fire Productions, DVD, 60 minutes

Humans have mythologized large predators since time immemorial, but our scientific understanding of their importance has been slower to come than our appreciation of their formidable adaptations to their niche. Darwin chose wolves and deer as the first “textbook example” of natural selection. Indeed, many students have an intuitive grasp of predation’s role as a major driver of the evolution of life’s diversity because our current examples (Kettlewell’s peppered moths, Endler’s guppies) feature predation as the selective pressure.

It is perhaps more challenging to get students to appreciate the role of large predators as regulators of the overall health of ecosystems. As the film *Lords of Nature* points out, before Aldo Leopold “lifted the veil” to reveal the complexities of species interactions, such questions held little meaning for biologists. In a world without ecology as a scientific discipline, humans had all but eliminated large predators from the inhabited parts of the globe – a move that was hailed as progress, as it made cattle ranching quite a bit easier.

*Lords of Nature* follows Professors Bill Ripple and Robert Beschta (both of Oregon

State University) as they gather data to investigate the mysterious deaths of aspen trees in Yellowstone National Park. They realize that the plight of the aspens is caused by overbrowsing by an excessively large elk herd – a herd that wildlife officials had tried and failed to control by trapping and shooting. In 1995, wolves were reintroduced to Yellowstone, and Ripple and Beschta found evidence that aspens were recovering in the areas where the reintroduced population had become established. The recovery wasn’t limited to aspen; a time-lapse film shows coyotes, foxes, grizzly bears, black bears, eagles, vultures, and insects feasting on wolf kill leftovers, and other populations (beavers, pronghorns, fish, frogs) were also thriving. *Lords of Nature* documents a similar effect in Zion National Park, where the reintroduction of cougars has helped check the deer population. Overbrowsing by deer had even affected a river in the park; since overbrowsing removed plants from the banks of the stream, the stream bed eroded, causing problems for aquatic species.

The second half of the film explores the ongoing relationship between people who raise sheep and cattle and the wolves that occasionally prey on the animals. A number of nonlethal depredation-prevention practices are illustrated, including

the use of guard dogs, electric fences, rotational grazing, nighttime feedings, alarm systems, and federal compensation for ranchers suffering losses.

At 60 minutes, *Lords of Nature* is too long for a single class period, but the middle offers a natural stopping point for teachers who are focusing on community ecology but not necessarily covering wildlife management. *Lords of Nature* is an excellent resource for teaching middle school and high school students a range of ecology concepts, including interdependence in nature, food webs, keystone species, hypothesis testing, and conservation biology.

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