



Thad Box

Weed That I Am

I was taught that a weed is a plant out of place. The same concept applies to animal weeds and other things we think are pests. That seems rather straightforward. On first blush, it isn't likely to cause arguments among land care professionals and those they serve. But it does. Value-laden concepts, such as what offends us, always generate heartfelt differences of opinion.

Range professionals do not agree what is out of place on rangelands. To some range conservationists, bison are acceptable grazers; cattle are weeds. To others, land seeded to exotic wheat grasses and dryland alfalfa are acceptable; invading native brush species are out of place. Both groups may consider invasive and "noxious" species like dyers woad unacceptable. Some citizens call dyers woad beautiful yellow "wildflowers."

In the 19th century, a lovely, hardy, flowering shrub was introduced to brighten gardens throughout the Southwest. Californians found tamarisk an ideal plant to stabilize river banks. It did its job well. Too well. It spread to most desert waterways and irrigation systems. Millions of dollars are spent each year fighting it, dozens of papers have been published in *JRM*, and tamarisk is still winning most expansion battles.

A little over a hundred years ago, coddling moths were ruining apple orchards in Utah. A prominent family imported 200 pairs of English sparrows to eat the moths. Salt Lake City passed an ordinance protecting the bird. Anyone disturbing them was fined. The sparrows crowded out native songbirds.

From where I write, most plants I see are aliens. Coddling moths ruin my apples. English sparrows flit between the trees. Every weed was brought in because someone thought it was good. There are pretty, bright, yellow dandelions in my lawn and a few volunteer pansies. Breeding and introducing grasses for lawns (weeds on rangelands) is a major industry. Dandelions are a weed everywhere; pansies are a noxious weed in Colorado.

Whether something is out of place depends on one's viewpoint and philosophy and society's concerns. Norway maples line my street. Ecologically speaking, they are weeds. The city forester, home owners, and members of the historic district rightly maintain they are a major part of the aesthetic and historic ambience of our neighborhood. They provide beauty and shade along Center Street. Each tree produces a bushel or more of winged seeds. The most common weeds removed from my flower beds are maple seedlings.

Whether my maples are weeds depends on opinion. Its role as an invasive species is determined by its biology, its ability to reproduce and thrive in existing vegetation. Weeds are weeds by definition. Invasive species are biologically programmed to crowd out other species.

European carp occur in most waters in America. Their wide environmental tolerance and expansive reproduction capacity allow them to exist in all kinds of places. They crowd out native fish and change the aquatic habitat. Carp are usually considered a weed. They are also a classic invasive species.

Americans are eating more fish. The pet food industry competes with humans for fish protein. The seas are strained for small fish to remold into faux crab and scallops. Millions of tons of carp await inventors, marketers, and entrepreneurs who can change carp, a weed, into a useful product. Once they do, carp will change from weed to crop. Its role as an invasive species may be slowed by the offtake of thousands of individuals, but the species will still be invasive.

Invasive species are persistent. They dominate habitats and change the environment to suit their kind. Knapweed, leafy spurge, and medusa-head rye are taking over more land each year. Much of the Great Basin has changed from desert shrub to cheatgrass in my lifetime. The list could go on.

Our profession's role is not to decide what is or is not out of place on rangelands. It is even arguable whether our role includes killing weeds and pests. We seek to understand and promote the principles of community dynamics so that rangelands can be managed for whatever purpose society decides.

Society's unwritten goal for survival gives us another role: to ensure that the basic productivity of land is not diminished. Our first responsibility in dealing with weeds and pests is to make sure the community is sustainable—that ecological processes continue to function regardless of what mix of species occupy the land.

Killing weeds a species at a time doesn't work well. Broad-scale treatment with pesticides, mechanical devices, or fire to control one species is often counterproductive. Single-species wars often push the community to a threshold of lower productivity and less stability.

Introducing natural predators works sometimes, but often the predator brought in becomes a pest, altering ecological processes. Changing a weed to a useful product may tame some species. Our role as land care professionals is to ensure long-term sustainability. Functioning ecosystems, rather than ephemeral economic gain, should be our guide.

Maybe our main roles are just to understand the system and to become the best ecologists possible. Managing land to give a competitive advantage to desired species is often the best long-term weed and pest strategy. Ecology, like the free market, allows healthy communities.

Every species is different. On those firmly established, some aggressive weed control may be necessary. But land managed using ecological principles is less likely to be invaded by weeds. And weeds are with us. I look toward the mountain. Two months ago, it was green. Now it is cheatgrass brown, tinderbox dry. Parachute-like seeds of dande-

lion and thistle drift past my window. A starling strolls across my bluegrass lawn.

Back in 1989, I attended a weed control conference at Las Cruces, New Mexico. As I sat and listened, I wrote the following:

WEED

a weed is a plant out of place
an invader following disturbance
or one with virtues
not yet discovered

a tomato plant in the petunia patch
marigolds and chinese elm
wildflowers
on a cattle range

a cowboy speaking for animal rights
accident lawyers, insurance salesmen
women
in the work force

a vegetarian at a barbecue
tin men and siding salesmen
farmers
on a family farm

environmentalist at a loggers ball
sprayers and herbicide salesmen
students
of ecology

an oboe player in a punk rock band
booking agents and t-shirt makers
writers
from the hinterlands

a baptist in a muslim mosque
super studs and battered moms
children
black and brown

put them weeds in their places
spray them, chop them down
all save me
weed that I am