

important, tumbleweeds cut the legs of horses working in infested fields. "Because the horse was the basic source of power for preparing fields and harvesting and transporting grain on prairie farms, any threat to the horses was a threat to the existence of homestead agriculture," Young notes. As the obnoxious weed tumbled across the Plains in the 1880s and '90s, the agricultural threat it presented was so serious that many worried farmers abandoned their houses and fields.

Tumbleweed first arrived in the West about 1877, on a farm in South Dakota. It was an accidental import from southern Russia. Seeds of the plant had apparently been mixed in with flax seed brought over from Europe. Once here, the Russian thistle (as U.S. Agriculture Department botanists called it) thrived on the open plains.

The tumbleweed could not have competed successfully with the Plains' native tall prairie grasses. But during the last decades of the 19th century, wheat farming

spread rapidly across the eastern part of the northern Great Plains, encouraged by railroad expansion and the development of portable, steam-powered grain threshers. "The destruction of the native prairie grasses enabled the thistle to exploit an ecological niche," Young notes.

Farmers themselves also helped the wind witch to spread. They often unwittingly sowed Russian thistle seeds along with their crop seeds, and grain shipments by railroad were contaminated. "In addition," Young writes, "the same steam threshermen who so disliked the spiny weed frequently did not thoroughly clean their machines and so dispersed the seeds as they traveled from farm to farm."

By about the turn of the century, the weed had tumbled all the way to the Pacific coast. Early eradication efforts failed—the infestation was too extensive. Not until World War II did scientists develop herbicides that finally ended the wind witch's pesky career.

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## RESOURCES & ENVIRONMENT

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### *Environmental Security?*

"Environment and Security: Muddled Thinking" by Daniel Deudney, in *The Bulletin of the Atomic Scientists* (Apr. 1991), Educational Foundation for Nuclear Science, 6042 S. Kimbark Ave., Chicago, Ill. 60637.

Iraq's intentional oil spills and bombing of Kuwait's oil wells during the Persian Gulf War dramatized the destructive impact warfare can have on the environment. Jessica Tuchman Mathews, vice president of the World Resources Institute, and other analysts have suggested broadening the concept of U.S. "national security" to take into account such environmental hazards. Deudney, a Fellow at Princeton's Center for Energy and Environmental Studies, strongly objects.

Despite what happened in the Persian Gulf, he points out, "most environmental degradation is not caused by war [or] preparation for war." Threats to environmental well-being and threats to national security from violence are very different,

he argues. "Both may kill people and may reduce human well-being, but not all threats to life and property are threats to security . . . . If everything that causes a decline in human well-being is labeled a security threat, the term loses any analytical usefulness."

Most environmental degradation, Deudney observes, is "largely unintentional, the side effect of many other activities." And nothing about the environmental problem is particularly "national" in character. "Few environmental threats afflict just one nation, and many altogether ignore national borders." Nor are most environmental threats simply "international," since there are perpetrators and victims in the same country. With respect to environ-

mental degradation, then, there just "is nothing distinctively national about the causes, harms, or solutions."

Attempts to link environmental threats with national security, Deudney notes, may partly stem from a desire to have people respond to those threats with a sense of urgency. And it is true, he says, that "the national security mentality engenders an enviable sense of urgency, and a corresponding willingness to accept great personal sacrifice. Unfortunately, these emotions may be difficult to sustain." Cycles of alarm and complacency are not likely "to establish permanent patterns of

environmentally sound behavior, and 'crash' solutions are often bad ones." For example, he says, the energy crisis of the 1970s "spawned such white elephants as the proposed synfuels program, the 'energy mobilization board,' and a Byzantine system of price controls."

"Intense nationalism" Deudney maintains, directly conflicts with a sensible environmental outlook. "Thinking of the environment as a national security problem risks undercutting the sense of world community and common fate that may be necessary to solve the [environmental] problem."

## Swamp Monster

"The Swamp Thing" by Rick Henderson, in *Reason* (Apr. 1991), Reason Foundation, 2716 Ocean Park Blvd., Ste. 1062, Santa Monica, Calif. 90405.

When the Carter administration set out in 1977 to combat destruction of U.S. wetlands, there was not much question about what lands were to be protected. *Wetlands* were areas so often flooded or saturated with ground water that they would normally support "vegetation typically adapted for life in saturated soil conditions." Only "aquatic areas"—swamps, marshes, and bogs—qualified. And they deserved protection. Wetlands are home to about one-third of the animals on the endangered species list, and they also reduce flood damage, act as natural filters for ground water, and check soil erosion. But during the 1980s, the federal government vastly expanded its definition. Now, says Henderson, assistant managing editor of *Reason*, most of the eastern United States and two-fifths of drought-stricken California qualify as "wetlands."

The definition's enlargement occurred when guidelines developed by the Army Corps of Engineers to help distinguish between plants that grow in wet soils and those that grow in dry soils, evolved into the 126-page *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. Instead of being defined by the functions they performed, wetlands came to be defined by "technical factors": the soil's wetness, its chemical properties, and the

varieties of plants that grow in it. "Theoretically, land is supposed to meet... three criteria before it's declared a wetland," Henderson notes, "but the burden of proof is on the landowner. And the parameters are extremely elastic." Land that is inundated for just one week a year, for example, is now deemed a wetland.

Bernard Goode, who helped develop the wetlands manual, told Henderson that each agency involved in developing the new definition made it as broad as possible. The U.S. Soil Conservation Service, for instance, included soils moist enough to impede crop growth—but not necessarily saturated or flooded—as wetland soils. And the U.S. Environmental Protection Agency, Henderson says, "insisted that facultative vegetation—plant life which by definition appears in uplands as often as in wetlands—be included as a wetland-defining parameter."

The broad definition of wetlands makes the job of environmental regulators easier. But if the definition is strictly followed, Henderson warns, it "will make millions of acres of private property unusable and require huge tax-dollar payouts to compensate property owners." One real-estate developer whose property was designated a wetland was awarded \$2.6 million in compensation last year.