# CORRIDORS THAT STREAK ACROSS THE LAND[1]

**by Donald A. Spencer**

The U.S. Forest Service (1) states that, "There are over 50 million acres of rights-of-way in the United States—an area the size of the six New England States." While commercial and economic considerations fully justify such use of the land, associated values have largely gone unrecognized and unexploited. We have already reached a period in the development of our country when it is no longer justifiable to ignore the potential productivity of a single acre.

In the course of travel, transport, and transmission along these corriders, little intentional use has been made of the uncommitted surface area. Its maintenance in some acceptable condition has been a drain on our available manpower and finances. We are alluding to the shoulders of canals, railroads, and highways, and the entire expanse of the right-of-way over pipelines and under powerlines.

Our relatively affluent society, long relieved of the concern of where the next meal is coming from, now focuses its attention on the recreational and aesthetic values of the land about them. Unfortunately, aesthetic consideration of the environment quite commonly ignores reality as it pertains to natural resources and to the wildlife we are endeavoring to perpetuate. Equally disconcerting in environmental matters is the failure to comprehend that change or recycling of a renewable resource is not necessarily degradation. Further, in the course of building a better habitat for ourselves and for wildlife, the final product must not be judged by transient conditions at the start. It is impossible to prepare a banquet without soiling some cooking and serving dishes.

Every new corridor, road, or transmission right-of-way must under Federal regulations prepare an environmental impact statement before authorization for construction is granted. Whatever can be achieved in minimizing aesthetic impairment of the environment without sacrificing other important values must be spelled out. Thus on an electric transmission line a screen of trees can be left (or provided) where the corridor crosses a highway or stream. Likewise, on a rising slope where the straight line of the corridor becomes so obvious from the ground, the route can be angled, or broken by intermittant plant screens. In the manipulation or replacement of the general plant cover of the right-of-way, values other than aesthetic generally take precedence.

The great majority of pipeline and electric transmission rights-of-way are just that, the right to install and service the line on property that is not purchased from the owner. The individual property owner retains the right to employ the surface area as he sees fit continuing to farm the area, use it for grazing, grow Christmas trees, control trespass, etc. In developed areas the owner, having no immediate plans, may relegate the responsibility of suppressing height growth of recovering vegetation to the transmission company. On the other hand, the land owner may stipulate as part of the right-of-way lease or license that only tall-growing species of trees be removed and that native shrubs be damaged as little as practical in constructing the line. Since ground cover must be promptly replaced to avoid erosion, some transmission companies have provided the land owner a voice in the type of vegetation to be re-established. Thus the transmission company is far from a free agent in the decision on management of the different parcels of land crossed by the corridor.

Despite all the objections made when each new right-of-way is proposed, the corridor so formed is often of tremendous value to wildlife—both game and nongame species. This is particularly true when rights-of-way cross forested country. Corridors, whether they be 50 or 300 feet wide, create openings where sunlight stimulates the production of ground and shrub vegeta-

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A talk presented at the Northeast Weed Society meeting in New York City, January 6, 1972.

tion. The closed canopy of a woodlot or forest is an excellent retreat and cover but is essentially lacking in food and browse plants. The declining number of small farms, the maturing forests, and the current reluctance to recognize that wooded tracts are a renewable resource requiring intelligent harvesting is resulting in the loss of openings within the forest. Birds and mammals are the products of the "edge" between food supplies in the open and shelter in the timber. Fifty million acres in narrow linear corridors provide "edge effect" far beyond most other land management practices. In many parts of this country, developing these rights-of-way as open corridors with a plant cover favoring wildlife is not only compatible with their primary purpose (transmission) but will give the highest environmental return.

The state conservation department journals are beginning to sparkle with success stories in cooperative wildlife programs on transmission and pipeline corridors. For example, the Department of Fish and Wildlife Resources in Kentucky (2) just recently worked-out a cooperative plan with Columbia Gulf to seed sections of their 150-feet-wide, 240-mile-long pipeline with upland gamebird plant covers which include Sericea lespedeza, crown vetch, buckwheat, etc. Georgia Power Company (Atlanta) actively promotes "Attract and Conserve Wildlife in your area: with help from the Georgia Power Company", and the Georgia Game and Fish Department pays them tribute (3). The Wisconsin Power and Light Company has been practicing selective vegetative management on their power line rights-of-way since 1955 and found it to be not only of public benefit but at a savings in maintenance costs to themselves(1). All this requires management and not just happenstance vegetative recovery and periodic knockdown. It calls for selective removal of undesirable trees, selective use of herbicides (such as stump treatments), use of growth-regulating chemicals, and cooperative programs with habitat management groups in vegetative programming.

While the foregoing discussion has focused on those corridors where rather minor acreage is removed from vegetative production, it does not follow that other types of corridors such as highway and railroad rights-of-way and canal banks have no similar attraction for wildlife. They have. In the Midwest and Great Plains both pheasants and wild ducks make such use of roadside cover for nesting that the first spring mowing of the rights-of-way have to be postponed until after the eggs have hatched. In the arid southwest the roadsides, because of the paved strip and the bordering bar pit, remain green long after the adjoining lands have dried up. In a way this attraction to these corridors is unfortunate for traffic moving at high speeds exacts a serious toll. For example, over 20,000 deer are killed each year on the highways in Pennsylvania. In contrast, pipelines and electric transmission lines, can be relatively disturbance-free.

It would be an error not to mention the important bid man's recreational programs are making for these corridors. In addition to the necessity of establishing cross-country trails for hiking, bicycling, and skiing, the advent of off-road-vehicles has put both public and private agencies under heavy pressure. Motorcycles, trail bikes, snowmobiles, dune and marsh buggies are here to stay, but their potential for damage to the natural environment is recognized. The goal is to get them off the public highways, away from critical wildlife habitat, and on to cross-country trails designed and programmed for their use. Wisconsin, by the fall of 1971, had registered over 127,000 snowmobiles and from these receipts has a program for trail development (4). The average length of trail desired is about 25 miles, with minimum of 10. They now have 550 miles scheduled for construction.

Governor Rockefeller recently requested an inventory of abandoned railroad rights-of-way within New York State, having in mind their conversion to bicycle trails (5). Oregon State legislature is reported to have allocated $1.3 million for bicycle trails. It remained for the Illinois Department of Conservation to come up with one of the most unique trail systems. The state purchased the abandoned Hennepin Canal and converted the majority of its 96.8-mile canal system to a cross-country pleasure boat "trail".

Corridors in the United States are thus headed for multiple purpose use. The competition for

their supplemental use is apt to be keen, for many of these uses are not compatible, one with another.

**Selected References**

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## ABSTRACT

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Soil is an ever-changing, delicately balanced system. The basis of soil is eroded rock—rock broken up into increasingly smaller sizes, including gravel, sand, silt, and clay. This is the inorganic portion of soil. Mixed through the inorganic particles are organic materials; some living—earthworms, nematodes, amoebae, paramecia, bacteria, fungi, and plant roots—and some dead. As mineral nutrients and air become available, the populations of living microorganisms change drastically; and because these creatures digest away organic residues, their increase or decrease is reflected in the organic level of the soil.

Plantsmen have to be concerned with soil texture and fertility; because these factors influence the health and vigor of their plants. Every gardener strives for a friable loam; that is, a soil that is easily worked, well-drained, but somewhat moisture-retentive, aerated, and fertile. Such a soil supports fine turf, thrifty trees and shrubs, and showy display plantings with a minimum of manipulations on the part of the gardener. Often soil texture and soil fertility are misunderstood, and so are the materials used to modify them. Animal manures, peats, composts, leafmold, sawdust, and the like improve soil texture, creating the proper environment for vigorous root systems. These products yield only minor amounts of nutrient elements to the soil. They are texture-improvers, and as such, are very important. Ammonium nitrate, superphosphate, and potash are chemical salts which yield, when dissolved in soil moisture, nutrients essential for healthy plant growth. The point it, you cannot garden effectively without both fertilizers and soil texture amendments.

## ABSTRACT

Smith, Elton. 1975 **Preventing pin oak chlorosis.** Woodlands Magazine Vo. 13, no. 1.

Studies have been conducted at the Ohio State University during the past several years to determine the most effective method of preventing chlorosis of pin oak. Included among the iron source treatments were spraying of the foliage, treating the soil, injecting the trees, and trunk implantations. Although all treatments resulted in increasing the iron levels in the foliage to some degree, the most effective from a visual response and increased foliage iron levels was the trunk implantation treatment of ferric ammonium citrate marketed as Medicap. Spraying the foliage resulted in only temporary effects, soil treatments were slow to react and often failed to result in desired visual response. Trunk injections of ferrous sulfate were effective for one season while the trunk implantations remained effective for three years.