

FORESTRY

Forest Lands Threatened

A recent and vital surge in urban planning and the demands of expanding industries are threatening major forests and the forest products industry, Michael J. Walker reports.

► **THE MUSHROOMING POPULATION**, the rush of people to the suburbs and the massive building and construction programs being carried out are robbing the United States of more than a million acres of commercial forests each year—and government, industry, labor and conservation leaders are alarmed.

Land is being taken over for highways, power lines, pipelines, airports, dams, factories, military reservations and urban sprawl. The present Federal-state highway program, to be completed within 10 years, for example, is eating up 60 acres of land for each mile of highway. When completed, the program will have consumed 5.5 million acres—half of it commercial forest land.

Forest Land Decreasing

In 1900, there were 571 million acres of commercial forest land and only slightly more than 76 million persons in this country, more than seven acres per person. Now there are only 535 million acres and the population has reached 186 million. Foresters and the statisticians believe that by the year 2000 there will be only slightly more than one acre per person in the United States.

Public agencies are often to blame for needless losses of productive lands. Armed with the right of eminent domain, public agencies often take highly productive commercial timberlands for projects when less valuable lands are available in the same area.

These agencies also ignore other sanctuaries such as beautiful buildings, irreplaceable parks, scenic preserves and archaeological treasures. The most storied trout stream in America, the Beaverkill in New York, is presently undergoing a "face lifting" with a superhighway ribboning along its banks, despite the anguished cries of anglers and conservationists.

Dean George A. Garratt, head of the School of Forestry at Yale University, estimates we have lost 36 million acres of commercial forests since 1900. By the year 2000 we may lose an additional 50 million acres to the various nonforest uses—this taking place while our population and our demands for wood products are rising.

Foresters are understandably alarmed. The inescapable fact is that we have only a limited amount of land in this country. Each time land is taken out of timber production, foresters have that much less land to work with.

Economists are alarmed because from our forests flows timber for more than 5,000 different kinds of forest products valued, according to the U.S. Census Bureau, at \$23 billion.

Each of the items is produced in staggering quantities. People must have homes to live in, doors to close, beds to sleep on, tables to eat from, papers, magazines and books to read, paper to write on, bags and containers for food, chemicals for paints and fibers, and a host of other wood products.

We enjoy a high standard of living because the timber for such things is grown in this country. Economists doubt we can cheaply devise suitable substitutes for timber to make such things.

Forest industries also create many other jobs by buying a variety of heavy machinery and plant facilities from other industries.

Many industries generate goods and jobs using forest products. The publishing indus-

try, for example, produces goods valued at \$4.4 billion and employs 864,000 workers, but is wholly dependent on paper.

Conservationists are alarmed because forests are vitally important for soil and water conservation, wildlife habitat and outdoor recreation. Were it not for the forests, many of our lakes and rivers and streams would dry up, much of our valuable top soil would wash into the sea, and the land would become a mass of gullies and ditches.

At present there are only 535 million acres of commercial forest lands—land capable and available for growing trees as crops. Of this total, 358 million acres are privately owned and produce 85% of the wood we use. Local, state, and Federal governments own the rest of the commercial forest lands.

If enough commercial forest land is available, sound multiple-use management can fulfill future needs because forests are a renewable natural resource. Foresters plan for future harvests as they harvest each crop. Mature trees are cut, giving the young trees a better chance to grow.

We are currently growing 25% more wood than we are harvesting, but our demand for wood products is expected to rise tremendously in the near future. By the year 1985, says Dean Garratt, we probably will need more wood than we are growing. Paper use alone is expected to rise 23% in the next four years.

What Is the Solution?

Is there a solution to the dilemma of rising population and rising demand for wood but shrinking area available for growing timber? Are we doomed to become dependent on foreign countries for timber supplies—assuming there will be timber abroad for sale to us and to the rest of the world—and suffer a loss in our standard of living as well as the loss of precious wildlife, clean water, and recreation areas?

The more pessimistic economists and foresters say yes—we are so doomed, but others point out we can preserve much of our self-sufficiency by guarding our commercial forests.

"If Americans want to maintain the flow of wood products and continue to enjoy the other benefits of the commercial forests despite the rising population, they must quit squandering commercial forest land," C. A. Gillett, managing director of American Forest Products Industries in Washington, D. C., warns.

"We in the forest industries realize our people must have new roads and other improvements requiring land. But I think these improvements can be made by using more of the land unsuited for tree farming. In other words, let's take a long hard look at our commercial forest land before we send in the bulldozer."

Foresters and the Federal Government are also striving to preserve our self-sufficiency in timber by applying research aimed at growing better quality, faster-



REFORESTED LANDS—Despite reforestation and reversion of some agricultural lands to forests, foresters fear we are heading toward a shortage of commercial forest lands because they are being diverted to nonforest uses. The boy shown here was born when these pines were knee high.

growing trees; at controlling losses of trees to fire, insects, and diseases; and at using more of each tree in the mills. They are also attempting to speed up reforestation of idle, burned-over, and harvested areas by planting trees.

Research efforts are already paying off. For example, forest fires in the past few years have been declining sharply. We now have hybrid trees that mature and are ready

for harvest in one-third the usual time. Most modern mills use 80% of the tree whereas older mills used less than 50%.

No matter how successful this research becomes, however, we must never lose sight of the fact that foresters must have a given amount of commercial forest land available to work with. We must guard our commercial forest lands.

• Science News Letter, 82:210 September 29, 1962

MEDICINE

Doctors Are Reading—

Early Cancer Detection

► A SIMPLE TEST for kidney and bladder cancer in the early stages offers a chance for cure, physicians will be reading in the *Journal of the American Medical Association*, 181:972, 1962.

Nearly one-half of such cases are now recognized when it is too late for attempting curative treatment, according to the leading editorial of the medical journal (p. 990).

Healthy persons undergoing their annual physical check-up could have this new screening test as a routine part of their examination, Drs. Warren E. C. Wacker and Lionel W. Dorfman of the Harvard Medical School reported.

The test involves the measurement of the increase and activity of a zinc enzyme, lactic dehydrogenase (LDH), in the urine. LDH is a large protein molecule that oxidizes lactic acid and affects the carbohydrate metabolism of the body.

Eye Loss in Childhood

A study of 402 children under 15 years of age who had an eye removed showed that 222, or 55%, resulted from an injury (p. 948). The greatest number occurred between the ages of five and eight, at the time the children begin going to school, Drs. Leonard Apt and L. K. Sarin found from studies at the Wills Eye Hospital, Philadelphia.

A rubber band and a toy airplane were among the objects causing loss of an eye, but more lethal agents included an arrow, knife, bullet, dynamite and pieces of glass and stone.

The atom and space age will probably contribute additional hazards with manufacture of toy missiles, rockets and atom pistols, an editorial pointed out. It said there is need for frequent campaigns of safety education directed at parents, teachers and baby sitters as well as toy manufacturers (p. 991).

Disease Blamed on Pillow

Chicken feathers in a 30-year-old pillow brought from Hungary 13 years ago were blamed for a case of histoplasmosis in a three-month-old boy (p. 999). Histoplasmosis, a serious disease that often ends fatally, is caused by the fungus, *Histoplasma capsulatum*. The only source investigated that yielded this fungus was the pillow feathers.

Usually it is soil that is contaminated by the fungus which causes the disease in older persons, but cultures of 10 soil samples from the family yard and flower pots in the house were negative.

Drs. Hugh E. Evans and John P. Utz of the National Institutes of Health, Bethesda, Md., assisted by Charlotte C. Campbell of the Walter Reed Army Medical Center, Washington, D. C., reported the study. The investigators also made skin and blood tests on eight family members and skin tests on the family pet dog, all of which were negative.

They said the intimate and prolonged exposure to the pillow indicated that this was the mode of infection, and they suggested that further studies be made of feather pillows and other similar material in cases where the source of infection was unknown.

Body Image Is Disturbing

The relationship between obesity and mental health was investigated among 1,660 New York inhabitants, showing not only a disturbance over the "body image" because of exaggerated self-consciousness, but also suspiciousness (p. 962).

The prevalence of obesity was seven times higher among women reared in the lowest social class as compared with those of the highest category.

Drs. Mary E. Moore and Albert Stunkard of the University of Pennsylvania, Philadelphia, and Dr. Leo Srole of the State University of New York, Downstate Medical Center, Brooklyn, reported the findings.

• Science News Letter, 82:211 September 29, 1962

Questions

FORESTRY—Is the United States now growing more wood than it is harvesting? p. 210.

GENERAL SCIENCE—How many students were selected for honors by state science talent searches in 1961-62? p. 213.

MEDICINE—How many amino acids are essential to life? p. 203.

PHYSICS—What is a "Regge pole?" p. 207.

Photographs: Cover and p. 207, National Aeronautics and Space Administration; p. 203, U. S. Air Force; p. 205, McDonnell Aircraft Corporation; p. 206, Ryan Aeronautical Company; p. 210, American Forest Products Industries; p. 214 (top), Siouxland Trade; p. 214 (bottom), George A. Smith.

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