

# Strip Mines Beautified By Foresters' Planting

Mother Nature is getting a face-lifting job thanks to forestry researchers at the University.

Lands left raw and ugly by strip mining operations are now being dressed up and beautified through experiments being conducted by the School of Forestry.

In cooperation with the Northeastern Forest Experiment Station of the United States Forest Service and the Pennsylvania Department of Forests and Waters, they are giving

old "Mom Nature" a helping hand in restoring vegetation on land denuded by strip mining operations.

The experiments, in the bituminous coal fields of central and western Pennsylvania, are located as close as Snow Shoe and Philipsburg and as far away as Pittsburgh.

They were begun more than 10 years ago under the direction of Dr. W. C. Bramble, then acting director of the School of Forestry. When he resigned this summer to become head of the Department of Forestry at Purdue University, his job was taken over by William R. Brynes, instructor in forestry, who had been associated with the project since 1952.

The experiments consist mostly of planting different species of tree and shrubs on the spoil piles (piles of dirt and rocks left through strip mining operations), and checking their growth periodically.

The problem of waste land left by strip mining has been around since the Civil War, but before World War I strip mining did not expose tremendous amounts of land. There were plantings on some of these areas and some trees just grew again of their own accord.

World War II, however, brought a great demand for coal. Strip mining expanded, and with new and bigger machinery available more and more land was torn up and denuded.

University research, which began in 1946, received its impetus from the Bituminous Coal Open Pit Mining Conservation Act passed by the state legislature in 1945. The law requires coal operators to level the strip mine sites and to revegetate with trees, shrubs or grasses.

In 1946 and 1947 a series of 23 test plantings were begun. Researchers first went out into the fields and classified spoil bank material from geological findings. They wanted to know the actual soil content of the piles. The big question was—was there any soil?

They measured the moisture content of the piles, the acidity, the water relations, the temperatures of the surface, the evaporation and the wind movement. There's more than meets the eye to planting a tree.

They found that the newer areas of strip mining operations were suitable for plant and tree growth and then moved on to older areas. Here they investigated what was growing already to gain hints as to what would grow in the future.

Once plantings had been established, the big question was—what season was the best for planting—spring or fall?

"In general," said Brynes, "the spring plantings were more successful. However, certain species had better survival when planted in the fall."

At first the trees were evaluated every three years to determine early survival and

growth. A more complete evaluation was made after five years, and this summer a 10-year evaluation will be begun.

Results of these evaluations have shown that the best kind of soft wood for trees for spoil bank cover seems to be Banks pine, pitch pine, white pine, red pine and Japanese larch.

Promising hardwoods include black locust, white ash and red oak.

In 1949 and 1950 a study was started to see how quickly nature alone would revegetate the stripped areas. A few of the early invaders were aspen, red maple, fire cherry, poverty grass and dewberry.

In the course of their studies, researchers also found that some of the stripped areas can be reclaimed for farm lands. With proper fertilization and care the usual crop rotation of corn, oats, etc., can be grown again. Some areas have already been reclaimed for farm land.

The researchers now plan to extend operations to cover large scale commercial plantings. They will evaluate the success of these plantings and make recommendations to industry. Additional hydrological studies and studies of the nutrient status of the spoil material are also planned.

## Graduates Will Help Handicapped

Thirteen graduate students at the University are enrolled in a 15-month program in rehabilitation counselor work with the physically, emotionally and mentally handicapped.

This program was made possible through a \$41,740 grant from the Office of Vocational Rehabilitation of the U.S. Department of Health, Education and Welfare.

The program at the University, directed by Dr. Kenneth W. Hybert, began in 1956.

The jobs are awarded to the students on the basis of high academic ability, related experience and interest in this field of work.

Institutes for the training of rehabilitation counselors are held on campus under the auspices of the project.

For the fall semester the following Pennsylvania students have been given grants of \$200 or more a month:

Cornelis Adamchak, James Bealer, Alan Deibler, Brooke Dillard, Ronald Faris, Malcolm Hanon, William Herbein, Rhet McGriff, Donald Nair, John Saylor, Ross Steadman, Ernest Tamburri and Frank Williams.

## Young GOP Offers Work In Politics

The Young Republicans of Centre County offer students the opportunity to learn the ins and outs of political campaigning.

It is a national organization which attempts to prepare its members for political work on a national, state or local level.

The group takes an active part in the political campaigns of its party.

The members plan their own campaigns, which include everything from helping at the polls to attending dinners and conventions. They usually work in close connection with the senior organization.

The individual groups are not always composed entirely of students. The members' ages range from 18 to 36.

The Centre County delegation to the state convention in Erie this past summer was the only all-college group.

National and state conventions are held in alternate years. The national convention for 1959 will be held in Denver, Colo. next summer.

David West, chairman of the Young Republicans of Centre County and of the University chapter, said the downtown campaign headquarters would be opening around Oct. 1.

## Chapel Vesper Services Will Begin Thursday

Vesper services of worship will be held in the Helen Eakin Eisenhower chapel at 4:15 p.m. each Monday and Thursday beginning this week.

The liturgies of the various religious traditions will provide the framework of worship. Organ and choral music of each tradition will be provided.

## Community Living--

(Continued from page five) first floor. Undergraduate students are not allowed in the stacks. Any books they may need from the stacks can be secured by filling out a call card and giving it to a librarian.

For students who cannot find sufficient material in the reading rooms, a reference department is located on the second floor of the library. A periodicals reading room is also located on this floor.

In addition to its regular features, the library also maintains an audio-visual aids collection on the ground floor. Here students can see and hear educational films, tape recordings and language and speech records.

On the third floor of the library is the Penn State collection where the history of the University is chronicled through clippings, paintings and local museum pieces.

The services of the Pattee Library are supplemented by several smaller libraries on campus, each pertaining to a

special school. This year the library will receive aid in the purchase of books and manuscripts from the newly established James Milholland Memorial Fund. The fund was established in honor of a former member and president of the Board of Trustees.

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