

**\$20 Million Albacore Studied**

# Water Tunnel Tests Submarine Model

A model of the world's fastest submarine, the USS Albacore, is being tested in the Garfield Thomas Water Tunnel.

Dr. George F. Wislicenus, director of the Tunnel, explained the results of the tests are expected to provide information needed to conduct tests in the Tunnel on other large models. The Tunnel is a testing facility for the Ordnance Research Laboratory at the University.

The \$20,000,000 Albacore was designed for speed under water, whereas earlier submarines were built with more emphasis on surface speed. She has a fish-shaped body and a blimp-like tail and is driven by a single five-bladed

propeller rather than the conventional twin screws.

**Coning Tower Changed**

Even the bulky coning tower, common to the submarine, is greatly changed on the Albacore. The Albacore's tower resembles the fin of a fish.

After a submarine of this type was suggested in 1948, nearly 25 models were built and extensive tests were conducted in air tunnels, in tanks at the David Taylor Model Basin, and in open water before the final design was selected.

It is the results of these tests, as well as tests on the submarine itself, that make the studies now underway at the University valuable. Results of these tests can be compared with the detailed information available from the other

tests on the Albacore to evaluate testing in studies of other large models.

**Flow Corrected**

Because the cross section of the Albacore model is much greater than the cross section of bodies previously tested in the tunnel, special attention had to be given to correcting the tunnel flow to duplicate the flow about the same body when moving within the open sea.

For this purpose, the shape of the water tunnel's test section, which is 14 feet in length and 48 feet in diameter, was changed by installing a wooden liner that simulates a free-stream surface. Twenty-four staves of wood, carefully fitted, were installed, then sanded to a smooth finish, so that the interior of the section gives

the appearance of the interior of wooden barrel.

**Built to Test**

The University water tunnel was built to make possible the testing of marine propellers, body shapes, and other underwater devices through the use of powered models. Engineers were especially concerned with the study of the design of propellers on torpedoes as related to the design of the body of the torpedo.

While size of the tunnel limits objects that can be tested, the tunnel offers certain advantages over testing in open water or in a towing basin. In the tunnel, complete observation, both visual and acoustic, is possible, water pressure and speed can be carefully controlled, and the power output from the model under test can be regulated.

## Marines to Screen Officer Candidates

A Marine Corps Officer Procurement Team will be on campus Thursday and Friday to interview students interested in becoming officers after graduation.

Five basic officer training programs are offered, four for male applicants and one for women.

Under this program freshmen, sophomores and juniors enrolled in the Platoon Leaders Class will attend six weeks of training during two summer vacations at Quantico, Va. Seniors and graduates will attend a ten-week Officer Candidate Course after graduation.

Under this program no drills, meetings, or other military activity will be held during the school year.

**Women in Dramatics**

Fifty years ago University men still frowned on feminine participation in dramatic productions.

## Foresters To Mark 50th Year

The 50th anniversary of professional forestry instruction at the University will be observed next spring.

The program, scheduled for May 27 and 28, is sponsored by the Mont Alto Forestry Alumni Association, which represents 1900 living forestry graduates of the University and the old State Forestry School at Mont Alto, which was merged with the University in 1929.

**Leader May Attend**

Among those expected to participate in the program are Governor George M. Leader, President Eric A. Walker, Dr. Milton S. Eisenhower, former president of the University and now president of Johns Hopkins University, and representatives of education and the forestry profession.

E. O. Ehrhart, president of Armstrong Forest Co., Johnsonburg, is general chairman for the golden anniversary meeting.

**Book to Be Published**

One of the features of the celebration will be the publication of a book, "Forestry Education in Pennsylvania," which is being compiled by Henry Clepper, executive secretary of the Society of American Foresters, Washington, D.C.

The School of Forestry will be represented in the celebration by Maurice K. Goddard, director of the school, who is on leave serving as Secretary of Forests and Waters in Pennsylvania, and by Dr. William C. Bramble, acting director of the school.

## Magazine Accepts Series by Hicks

Scholastic Editor, a national magazine for student publications, is publishing a series of four articles on newspaper advertising by Dr. Roland R. Hicks, assistant professor of journalism.

The fifth article, an introduction to newspaper advertising work, appeared in the October issue.

The other articles entitled "How to Write an Ad," "How to Draw an Ad," and "How to Sell an Ad," will appear in subsequent issues of the magazine.

## Minerals Staff Officer To Address Engineers

Lewis E. Hoffman, minerals staff officer with the U.S. Bureau of Land Management, will address the University chapter of the American Institute of Mining Engineers at 7:30 p.m. tomorrow in the Mineral Sciences Auditorium.

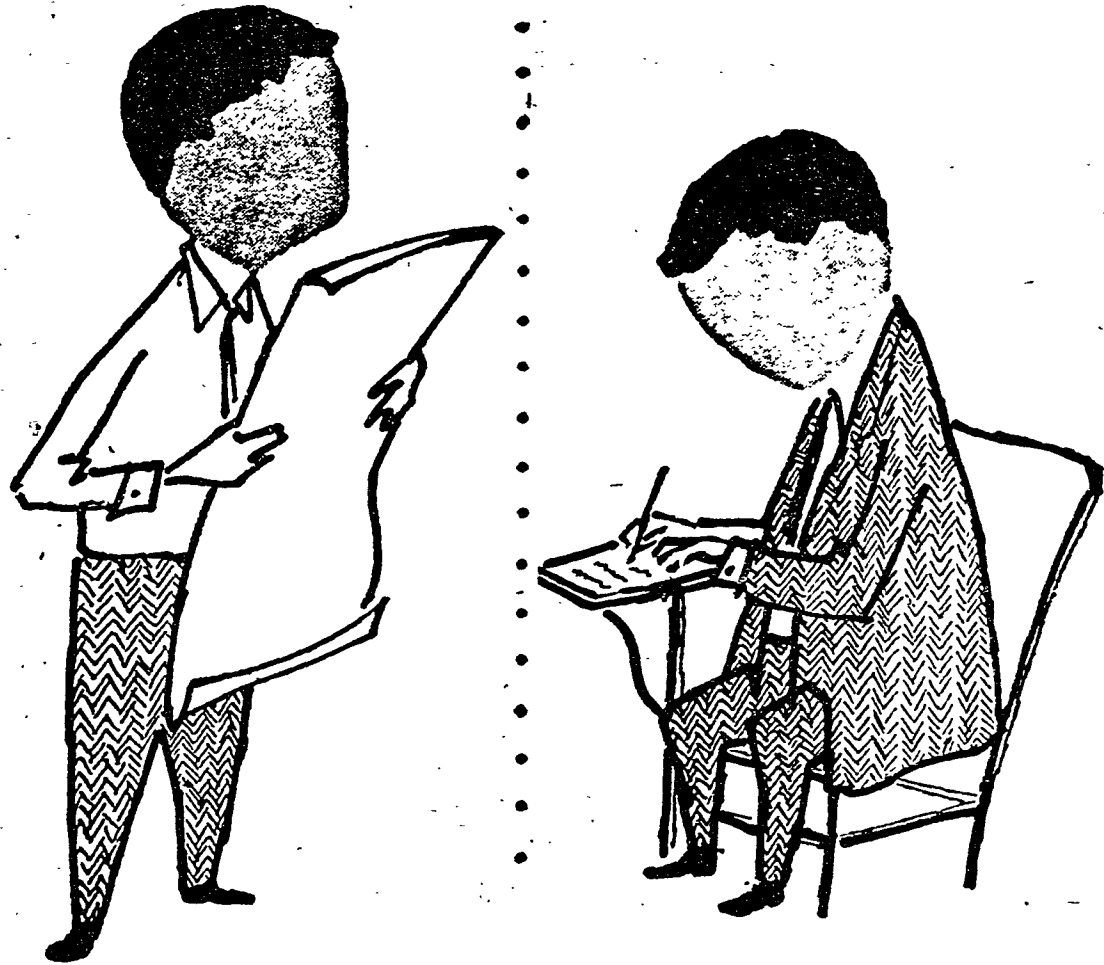
His subject will be "Federal Mineral Lands and Our Present Minerals Program."

## Graduate Wins Award In National Competition

Glenn Bush, graduate student in metallurgy from Bellwood, has been awarded a \$4200 graduate fellowship by the American Society for Metals on the basis of a national competition.

He is now working for his master of science degree under the supervision of Dr. Robert Lindsay, professor of metallurgy.

# What's doing...at Pratt & Whitney Aircraft



Working engineers . . . may continue study to earn Master's degree

Ambitious young engineering graduates today want to be in two places at the same time. They want to be employed as quickly as possible, working daily at a job that offers promise of a rewarding career. They also want to be in the classroom, pursuing advanced studies they know to be so essential to real professional achievement.

Recognizing the many significant benefits to be gained by that two-fold ambition — benefits that accrue both to the individuals, personally, and to the company employing them — Pratt & Whitney Aircraft has developed an extensive graduate fellowship program. Within easy commuting distance of P & W A facilities, working arrangements have been established with graduate schools at Rensselaer Polytechnic Institute, University of

Connecticut, Trinity College, Yale University, Northeastern University and New York University. Similar arrangements with several other universities are pending final approval.

At each school, the qualified Pratt & Whitney Aircraft employee is able to take courses — within specified areas — leading to a Master's degree. A tuition-refund plan makes it possible for successful degree candidates to obtain this advanced education tuition-free.

In this era of advancing technology, the world's foremost designer and builder of aircraft engines has taken a far-reaching step to assure its engineers and scientists of the opportunity for personal growth . . . growth that is so beneficial to employee and company alike.



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