cloidal picture. While the Army combed Germany for variable pitch propellers, the Navy constructed two fixed pitch cycloidal propellers, with the aid of Dr. Kirsten.

Strange actions of the Navy landing ship 458 in recent tests of the fixed pitch model at Puget Sound finally aroused the interest of shipbuilders. During the test the LSM 458 saved a powerful tug from disaster when wind and tide conditions in Puget Sound were at their worst. Had the craft been equipped with screw propellers instead of the cycloidals, maneuvering limitations would have left both ships high and dry on the beach.

Superiority Proved

Once again cycloidal propellers proved superior to screw installations—this time for the Army. An Army 46-foot tug, equipped with a 110 horsepower gas engine and cycloidal propellers, in a tug of war with a 165 horsepower diesel tug, actually pulled the opposing ship backwards—even when handicapped by the conventional ship's head start.

In an attempt to duplicate the advantage of the German wheel at less cost and in a design more suitable for mass production in this country, the Army, with the aid of Dr. Kirsten, is installing variable pitch propellers on a 125-foot experimental mine planter. Tests have not yet been run on the mine planter, but by the time it is ready, the Army plans to have completed three or four additional cycloidal designs better than the German model.

Inland waters, crowded with harbor tugs, floating cranes, river towboats, buoy tenders, landing craft, and fishing boats, will see fewer traffic jams once cycloidal propellers take over. It won't be long before small craft, equipped with rotating blades, will move freely in and out of docks.

Cycloidal propellers for the largest—perhaps atomic powered—ships may be farther in the future. So far only smaller craft have been built for experimental tests. But to Dr. Kirsten and the many marine men who have adopted his invention, cycloidal propulsion is not to be limited to river and harbor boats.

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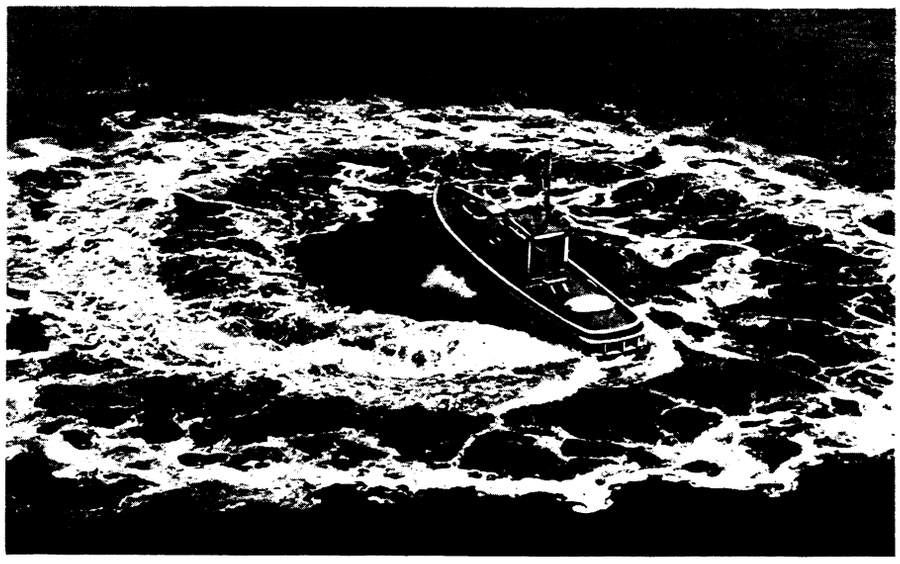
Canadian *birds,* that winter in the United States, eat the dark, gritty-looking fruits of the sumac and the pallid, gray-white berries of poison ivy; by digesting the pulp and not the seeds of these plants, the birds spread the seed far and wide.



CRABLIKE—Navy landing ship, equipped with rotating propellers, turns in its tracks.

GENERAL SCIENCE

Boys See Aircraft Shows

➤ TWO HUNDRED teen-age boys aiming for careers in science, especially aeronautics, from Detroit, Columbus, Cincinnati, Buffalo, Indianapolis and Cleveland are guests of the Navy at the National Aircraft Shows in Cleveland Nov. 15-24.

Each day for five days 20 boys, Navy Science Cruisers, will be flown by the Navy from their home cities to join their 20 fellow Cruiser-hosts in Cleveland. The 40 boys will be special guests of the Navy at the National Aircraft Shows and on a guided tour through the Cleveland laboratories of the National Advisory Committee for Aeronautics, seldom seen by the public. The visitors to Cleveland will be returned to their home cities by Navy planes at the end of the day of science sightseeing.

The 200 boys have been nominated as Cruisers for excellence in science as indicated by their school records and their science accomplishments. Many of them plan careers in aeronautics and scientific research. All of them are juniors and seniors in high school.

'The Navy is making a contribution to stimulating science among secondary school students," explained Vice Adm. Harold G. Bowen of the Navy's Office of Naval Research.

"We are concerned with increasing the number and improving the quality of scientists in this country. Scientific research and development has reached a point in our lives where to ignore it or even be casual about it would be folly of the highest order."

This is the second Navy Science Cruiser program. (See SNL, Oct. 19, 1946.)

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ASTRONOMY

Eleventh Magnitude Comet Is Spotted in Columba

➤ A FAINT comet has been located in the southern constellation of Columba, the dove. When spotted on Nov. 1, it was of the eleventh magnitude, far too faint to be seen with the naked eye or binoculars, according to a cablegram received at Harvard Observatory from Dr. J. S. Paraskevopoulos, superintendent of Harvard's Southern Astronomical Station.

Located by M. J. Bester of Bloemfontain, South Africa, the comet will be named after its discoverer. Mr. Bester also spotted a faint comet early in October, but this was later identified as the recurrent Comet Temple 2.

The new comet had moved into the constellation of Caelum, the graving tool, when sighted on Nov. 5 by Dr. G. Van Biesbroeck of the Yerkes and McDonald Observatories of the Universities of Chicago and Texas.

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