

## MARINE BIOLOGY

# DDT Checks Barnacles

► THE NEW insecticide, DDT, gives promise of eliminating barnacles from ships' bottoms and other marine structures. Barnacles failed to attach themselves in six months' time to wooden panels coated with a paint developed by Prof. R. E. Dimick, of Oregon State College.

This paint contained DDT, chemically dichlorodiphenyltrichloroethane, and no other known toxic substance. Control boards treated with the ordinary antifouling paints were heavily covered with barnacles and other salt-water fouling animals after three months' submersion in marine waters.

The anti-barnacle paint was one of a large group tested at the Yaquina Bay Fisheries Laboratory operated by the Oregon Agricultural Experiment Station. Since DDT is insoluble in water, the expectations are that its antifouling properties may greatly exceed the initial test period of six months. Studies are being continued to determine the efficiency of DDT as antifouling agent for marine

animal forms other than barnacles, as a control for wood-boring marine mollusks and crustaceans, and to ascertain if the insecticide exhibits differences in antifouling properties for the various species of barnacles.

Since barnacles now have to be scraped periodically from ship hulls and marine growths foul ships and reduce speed materially, the successful and practical development of the DDT antifouling paint would undoubtedly save millions of dollars annually.

*Science News Letter, July 14, 1945*

## CHEMISTRY

## Lignin Now Found Useful With Fertilizers

► LIGNIN, a by-product of pulp and paper mills that has long been regarded as "the largest waste in industry", is now found useful with fertilizers to add humus and organic matter to depleted soils, Robert S. Aries, research associate at Yale University, has revealed.

This new use of lignin, he says, is an "extremely important discovery, because of the tonnage involved." Lignin is an organic substance which, with cellulose, forms the chief part of woody tissue.

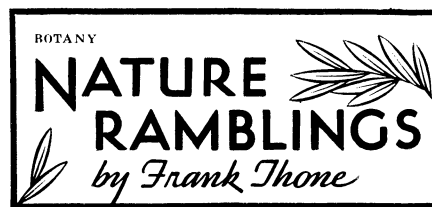
In addition to 2,000,000 tons of lignin now discharged annually by mills into streams and rivers, he asserted, saw-mills and other woodworking plants throughout the country "can readily make available another 10,000,000 tons of wood waste which can readily be incorporated into fertilizers."

"As a result of present day experiments," he continued, "lignin may assume an important part in this nation's soil building and conservation program. It will be a 'wealth from waste' movement, since lignin at present pollutes the nation's rivers; as fertilizer, it will definitely aid in providing higher land values and richer soils."

The part played in soil improvement by using lignin with fertilizers is largely to supply organic matter.

"If lignin is used on presently fertilized soils which need humus and organic matter, it is estimated that the efficiency of these soils would be raised about 20%," he said.

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Growths of Evil

► RAGWEEDS are getting fairly into bloom about now, over the northern part of their range. In a few weeks their waves of windborne pollen will sweep southward to the Gulf, and the sorrowful season of sneezes and bleary eyes will be on for thousands of hayfever sufferers. There will be no real letup until frost, for even though many municipalities now conduct summer weed-mowing campaigns, ragweed pollen grains are so light that they float for miles on the wind, and there are plenty of sources out in the country to keep the air of even the largest cities most dolefully contaminated.

Why ragweeds should bear the responsibility for nine-tenths of summer hayfever cases is still more or less of a mystery. To be sure, there are enormous quantities of both tall and low ragweed, and both species are prolific producers of pollen. However, other windborne pollens, such as pine and spruce, are often much more abundant than ragweed pollen, at least in certain regions, yet these tree species seem to cause few if any cases of hayfever. There simply seems to be some specific malignancy in the ragwood

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pollen itself—some quality in its protein that makes it easier for human mucous membranes to react to it in that still-mysterious chemical behavior known learnedly, but not at all understandingly, as sensitization.

This touchiness of many persons' respiratory tracts to ragweed pollen has made ragweeds a profitable crop for at least a few hardy-nosed individuals. They hand-harvest quantities of it for a few pharmaceutical manufacturing concerns that use the pollen in immunizing preparations—more or less on the hair-of-the-dog-that-bit-you principle. A number of other hayfever-causing pollens are similarly harvested, but the most important by far are the ragweed pollens.

Hayfever is very definitely a disease of civilized communities. So long as our country was in the pioneer stage of development there was far less hayfever than there is now. Ragweeds do not thrive at all in the forest, and did but ill on the unbroken sod of the virgin prairie. They are primarily weeds of disturbed soil, growing most lustily on neglected road-edges and in ill-cultivated field-corners. The low ragweed also springs up in cut-over or burned-over forest areas, and in over-loaded pastures where the sod has been gnawed and trodden thin. So if we complain of these bad neighbors, the ragweeds might readily answer, "Well, it's your party—you invited us!"

*Science News Letter, July 14, 1945*

## • Books of the Week •

► THE UNITED STATES QUARTERLY BOOK LIST, Vol. 1, No. 1, March 1945 Library of Congress (*Government Printing Office*), 64 p., 35 cents. To carry to the other American republics information about selected U.S.A.-published books, this serial has been established officially with an advisory committee representative of scholarly scientific and library agencies. Of a high order of editorial execution, the notices are informative and usefully critical. One has to search for classifications that might interest a SNL reader, for archaeology is under fine arts, psychology is under social sciences, while medicine, along with hygiene and public health, are tucked away in biological sciences, and engineering is labeled technology. Many books that will be of immense value to our good neighbors are unlisted as presumably must be the case in a selected listing. But a relatively complete listing in 6 point type might be justified.

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complete reconstruction and modernization of Charles E. Plunkett's *ELEMENTS OF MODERN BIOLOGY*.

TELEVISION PROGRAMMING AND PRODUCTION—Richard Hubbell—*Murray Hill*, 207 p., illus., \$3.

TOWARDS FREEDOM IN THE AIR—*United Nations Information Office*, 31 p., paper, 10 cents. The story of the international civil aviation conference.

WHAT IS LIFE? The Physical Aspect of the Living Cell—Erwin Schrodinger—*Macmillan*, 91 p., illus., \$1.75. Based on lectures delivered under the auspices of the Institute at Trinity College, Dublin, in February 1943.

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### PSYCHIATRY

## NP Dischargees Think Service Affected Health

► MEN discharged from the Army because of psychoneurosis in general think their health was impaired by their Army service. They think of their health impairment chiefly in terms of physical disease and in general do not recognize the psychologic aspects.

These are among findings reported by Lt. Col. Norman Q. Brill and Col. William C. Menninger, Army Medical Corps, and Miss Mildred C. Tate, American Red Cross psychiatric social worker, in the *Journal of the American Medical Association*, (June 30).

The findings result from questionnaires answered by 4,178 men of some 5,000 questioned.

The "vast majority" of the men, 85.9%, are working. More are unemployed now, however, than were unemployed at the time of induction. Before induction 93.7% were employed. Those who are not working blame this on their poor health.

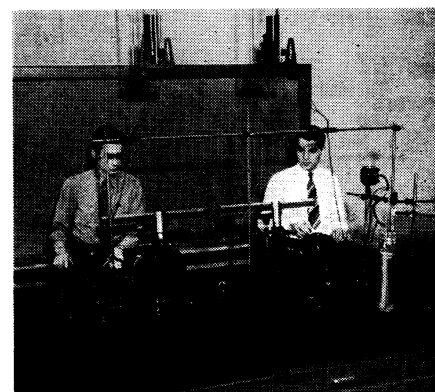
The findings, it is pointed out, reflect only what the men report about their health and may not reflect its true state. Exaggerations may have been made consciously or unconsciously.

The longer the men served in the Army, the more likely they are to think their health was affected. Those who saw overseas service think they are sicker than those who did not. There is a "distinct suggestion" that the men think their ill health is permanent.

"Active measures will have to be taken if this attitude or state of affairs is to be influenced," the report states.

What the future holds cannot be predicted, it is stated. Various conditions may work in opposite directions. Time may bring some improvement in health. The end of the war may cause a change in "intrapsychic tension and need for illness." Employment is easy to secure now. If there is increased competition for fewer jobs after the war, that will influence the adjustment of these men, as will the socioeconomic condition of the postwar world.

*Science News Letter, July 14, 1945*



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## • Just Off the Press •

CALCIUM METALLURGY AND TECHNOLOGY—C. L. Mantell and Charles Hardy—*Reinhold*, 148 p., illus., \$3.50. Amer. Chem. Soc. monograph series.

CANCER OF THE COLON AND RECTUM, Its Diagnosis and Treatment—Fred W. Rankin and A. Stephens Graham—*Thomas*, 358 p., illus., \$5.50. 2nd printing.

DENTAL CHRONOLOGY: A Record of the More Important Historic Events in the Evolution of Dentistry—Hermann Prinz—*Lea*, 189 p., illus., \$3.

GUIDE TO UNITED NATIONS and Allied Agencies—*United Nations Information Office*, paper, 50 cents. Limited to agencies set up as an outcome of the German attack on Poland, September 1, 1939.

HISTORY IN THE WRITING—Gordon Carroll, ed.—*Duell*, 401 p., \$3. Dispatches by the foreign correspondents of *Time*, *Life* and *Fortune*.

PISTOL AND REVOLVER SHOOTING—Walter F. Roper—*Macmillan*, 256 p., illus., \$2.49.

PRINCIPLES OF MODERN BIOLOGY—Douglas Marsland—*Holt*, 774 p., illus., \$3.75. A