

ICHTHYOLOGY

Undeveloped Food Supply

Swimming off the shores of the southern states is an abundant supply of fishfood. Artificial oceans are suggested for growing species for market.

➤ **SWIMMING** off the shores of the southern states is an abundant supply of fishfood, now only partially used, that with proper development, could furnish the people of these states with an expensive diet rich in proteins, carbohydrates, fats, minerals and vitamins. It also could furnish the South with needed

chicken feed and fertilizer from wastes, and yield large net incomes from fish and fish products shipped to the North and West.

This is the opinion of Harden F. Taylor, former president of the Atlantic Coast Fisheries Company, expressed at a conference at the University of North Carolina, which just celebrated its fiftieth anniversary. Regional welfare was the general subject of the conference at which he spoke.

The coastline of the southern states stretches about 2,500 miles from the Virginia capes to the Mexican border, but if defined indentations are included, he said, it is about 4,500 miles long.

"While the greater part of the Atlantic ocean is about two miles deep," he continued, "the land does not pitch off suddenly at the shore into the abyss of the ocean. There is an under-water ledge, beginning at the low-tide and gently sloping off-shore to the 100-fathom line which lies about 50 miles to sea along our southern states, and roughly parallel with the shore line."

This ledge area includes roughly 175,000 square miles, and the marine resources of the southern states are mainly on it.

"Considering the large area of sea bottom, and the fact that every square mile of it is a natural food factory," Mr. Taylor added, "the total yield of the fishery has not been and is not now of impressive magnitude, and the South is not making the most effective use of what is produced."

Scientific research is essential if the fishing industry of this area is to be properly developed, he indicated. This must include not only matters having to do with fishing and marketing, but also a biological appraisal of the fundamental productivity of the area.

"Such studies," he said, "might also show that the growth of vegetation in seawater outruns the conversion of that vegetation into animal life, and that vegetarian fishes might be advantageously transplanted from other parts of the world, such as the California or Mediterranean sardine, to increase the total amount of grazing and therefore of fish substance in the sea."

"Many areas of the world," he added, "have valuable species which cannot get here under their own steam, for example the soupfin shark of the Pacific coast, whose livers are the richest known source of vitamin A."

Mr. Taylor mentioned the develop-

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ment of oyster growing in indented bays along the coast.

"A fascinating extension of this general idea," he declared, "is the possibilities of other plankton-consuming marine animal species in enclosed bodies of salt water. If we seal off a salt lake, of, say,

a square mile, and supplied the fertilizers necessary to grow plankton, oyster and other plankton eaters would grow rapidly. Such highly prized species as shad, and possibly pompano, might be land-locked and grown for market."

Science News Letter, May 19, 1945

• Books of the Week •

► A SHORT CUT to navigation is given in **ASTRONOMICAL NAVIGATION WITHOUT MATHEMATICS** by Lt. Col. A. L. Mieville, an engineer formerly in the British Army. It is a popular-technical pamphlet for the thousands of young men who must master the elements of the science and who would have great difficulty in understanding the ordinary technical textbooks. The method described is fast, accurate and simple. One sum of addition is all the mathematics required. (*Macmillan*, 65c.)

Science News Letter, May 19, 1945

► **GUNS AND BOMBS**, the weapons we fight with in the air, are often more vital in combat than the design and performance characteristics of a plane. The average student of modern warfare knows his planes, and will find the history and development of aerial fire power exciting reading as presented in **AIRCRAFT ARMAMENT** by Louis Bruchiss (*Aerosphere*, \$6). From blockbusters to incendiaries and from .30 caliber machine guns to rockets, it presents the Allied flying gun platforms with clarity and completeness that will satisfy both technical and non-technical readers. Not only does it bring you up to date but the discussion of future air warfare, duplex projectiles, radio-controlled robot planes and aerial torpedoes, will start you to thinking. A photograph or drawing on almost every page.

Science News Letter, May 19, 1945

• Just Off the Press •

EBULLIOMETRIC MEASUREMENTS—W. Swietoslawski—*Reinhold*, 228 p., illus., \$4. "A comprehensive description of the ebulliometric method for measuring the boiling and the condensation temperatures of liquids and solutions."

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MATHEMATICS DICTIONARY

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American Library Association's Subscription Books (encyclopedias, dictionaries, etc.) Committee says in Subscription Books Bulletin, Oct. 43: "In its subject field there is no work directly comparable to the Mathematics Dictionary. Because of its usefulness to anyone seriously interested in mathematics, the volume is recommended for personal, school or library purchase. For those already possessing the 1942 edition, purchase of the 1943 edition is suggested only if the dictionary is extensively used or a second copy is desired." Send \$3.00 to Digest Press, Department 3B, Van Nuys, California, or Science News Letter.

and Wiring—D. Walter Van Gieson—*McGraw*, 140 p., illus., \$1.50.

FIRST AID, SURGICAL AND MEDICAL—Warren H. Cole and Charles B. Puestow—*Appleton-Century*, 351 p., illus., \$3, 3rd ed. For medical students and others wishing to make a more serious study of first aid than is included in the usual courses for amateurs.

HAYFEVER PLANTS, Their Appearance, Distribution, Time of Flowering, and Their Role in Hayfever, with special Reference to North America—Roger P. Wodehouse—*Chronica Botanica*, 245 p., illus., \$4.75.

INTRODUCTION TO PRACTICAL RADIO—Durward J. Tucker—*Macmillan*, 322 p., illus., \$3.

POPULATION ROADS TO PEACE OR WAR—Guy Irving Burch and Elmer Pendell—*Population Reference Bureau*, 138 p., paper, \$1; cloth, \$2.

PRACTICAL AND THEORETICAL PHOTOGRAPHY—Julian M. Blair—*Pitman*, 243 p., illus., \$2.50, 2nd ed.

TEXTBOOK OF ORGANIC CHEMISTRY—E. Wertheim—*Blakiston*, 867 p., illus., \$4, 2nd ed.

Science News Letter, May 19, 1945

PHYSIOLOGY

Effect of Sugar on Health To Be Studied

► **MOTHER** will soon have the benefit of new scientific research to guide her when Johnny begs for more cake or candy.

The effect on health, growth and physical condition of children of diets containing lots of sugar and of other diets containing very little sugar is going to be measured by Dr. Pauline B. Mack and associates of the Ellen H. Richards Institute, Pennsylvania State College, under a \$20,000 grant for one year from the Sugar Research Foundation.

Five other grants were announced by the Foundation's scientific director, Dr. Robert C. Hockett. These are:

Dr. Rachmiel Levine, director of metabolic and endocrine research at Michael Reese Hospital in Chicago, \$7,500 for one year, to study the physiological behavior of levulose, a sugar produced by inversion of ordinary sugar.

Prof. I. L. Chaikoff, associate professor

of physiology at the University of California, \$7,400 for two years, to study the protective action of sugar against cirrhosis of the liver.

Natural Resources Research Institute of the University of Wyoming, \$4,000 for one year, to investigate utilization of pectin from the pulp of sugar beets and to study derivatives of beet pectin.

Dr. Dora Stern, literature consultant, \$4,000 for one year, to devise a system for classifying sugar derivatives, and to compile a list of new derivatives discovered since 1930.

Dr. I. M. Rabinowitch of McGill University Medical School, Montreal, \$2,500 for one year, to study further the body's relative rate of absorption of sucrose, dextrose and levulose.

The Foundation members include growers and processors of beet and cane sugar from the continental United States, Hawaii, Puerto Rico, Cuba, Canada and Haiti. Joseph F. Abbott of New York is president.

Science News Letter, May 19, 1945

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