

ORDNANCE

Improved Subs Ahead

► THE submarine will become the primary instrument of naval attack in wars of the future, it was predicted by Lloyd H. Norman in *ORDNANCE* (Nov.-Dec.), official journal of the American Ordnance Association.

The submarine will remain after the big flattops, the battleships, the cruisers, and most other surface warships have been retired, this wartime naval officer declares. It is the cheapest and most effective naval weapon for its cost, he added, but present day submarines are still in their infancy.

Submarines of today, however, are vastly improved over the recent wartime type. The Navy is now building two new underwater vessels far superior to any now in use. They will cost about \$21,000,000 each and will include much that is new in submarine construction, including advances made by the Germans during the war. They will be equipped with improved diesel engines, but may later be adapted for a new type like the Walter engine—or atomic power if it becomes feasible.

The so-called Walter engine is a German

development which uses hydrogen peroxide. It is said to be extremely efficient, particularly for emergency speeds of 25 knots, but studies made at the Naval laboratories at Annapolis show that it is extremely uneconomical because it requires peroxide of 90% purity.

The efficient German Kreislauf engine is also being adapted for American use. It is a diesel which uses its own exhaust gases supplemented by injections of pure oxygen from oxygen tanks. This engine permits deep underwater operation without use of the schnorkel breathing device. The schnorkel is a tube which can be projected some 50 to 60 feet above a submerged boat into the atmosphere. By this means a submarine may remain under water for many days.

Twenty-four of America's wartime submarines are under conversion with schnorkel installations and other improvements. They are being streamlined by the removal of deck guns and are being given greater battery capacity.

Science News Letter, November 26, 1949

IT'S FUN TO LEARN A LANGUAGE By LINGUAPHONE



You learn through natural everyday conversation . . . with effortless ease and real pleasure. First you LISTEN and in an amazingly short time you SPEAK, with correct accent and the right swing. In your own home you can study alone in privacy or have wife and children or friends join you in a delightful pastime that is an asset in a career, business, profession and for cultural enjoyment. It will take you only 30 minutes a day to master any of 29 important languages the Linguaphone Way.

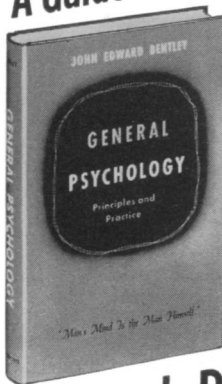
SPANISH FRENCH
PORTUGUESE GERMAN
ITALIAN RUSSIAN

or 23 other languages

Linguaphone courses were made astonishingly simple, easy and practical by more than 150 expert linguists of international fame. Endorsed by educators, used by colleges, schools and the choice of more than one million home-study students.

-----SEND FOR FREE BOOK-----
LINGUAPHONE INSTITUTE,
31 RCA Bldg., New York 20, N. Y.
 Send me the FREE Linguaphone Book.
 I want to learn _____ language.
 Name _____
 Address _____ City _____

A Guide to Human Behavior



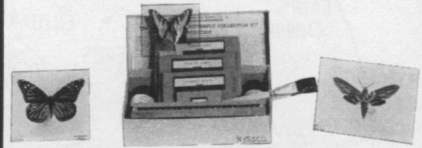
The science of psychology—reliable information on the principles of normal behavior—showing the relationship between sensory perceptions, learning and factors of personality. Interprets clearly and thoroughly the significant elements of social behavior. A foundation for further study of psychology and psychiatry.

General Psychology by John Edward Bentley

389 Pages.
57 Illustrations.
2 Color Plates. **\$3.50**

J.B. LIPPINCOTT COMPANY, Medical Division
 E. Washington Square, Philadelphia 5, Pa.
 I enclose \$3.50.
 Please send me "General Psychology."
 Name _____
 Address _____
 City, Zone, State _____


Solve Your Gift Problems with SCIENTIFIC Christmas Gifts



1. **TRANSPAR PLASTIC SET.** New process for mounting butterflies and moths in plastic. Beautiful, durable preparations. Outfit includes ball-bearing clamp, 20 plastic mounts, brushes, chemicals, and simple directions \$11.75
2. **LIVE COCOONS.** 12 mixed moth cocoons. Thrilling to watch moths emerge. Includes directions for care 3.50
3. **LIVE COCOONS.** 12 moths including Luna 4.00
4. **BIO-SET.** Accessories for making microscope slides, with manual in polished box. (Does not include microscope) 5.00
5. **MICROSCOPE, FEDERAL.** Achromatic lenses, 300-power 59.00
6. **PARSTAINS.** Set of 10 stains 1.75
7. **BIO-KIT.** Combination insect, animal, and plant collecting outfit 18.50
8. **MAGNIFIER, 10X.** Folding doublet. Quality instrument 4.00
9. **FLUORESCENT MINERALS.** Set of 7, including Argon lamp. Gorgeous iridescent colors 7.75
10. **FLUORESCENT PAINTS.** Set of 6 colors, with ultra-violet lamp 6.50



11. **ECONOMIC ROCKS AND MINERALS.** Set of 50, in compartment box, including gold, silver ore, with booklet 6.75
 12. **FOSSILS.** Set of 24, Animal Kingdom, in compartment box 9.75
 13. **CONCRETIONS SET.** Six fossil concretions, exciting to split open, exposing valuable specimens millions of years old 5.00
 14. **LIFE HISTORIES.** Various insect species, beautifully prepared, in exhibition cases state number wanted, each 5.00
 15. **BODYSCOPE.** Know your body for better health. An ingenious device for viewing human body structures, which includes 80 colored plates, 20,000 words of description. Indispensable for home, school, hospital, and doctor's office 10.00
 16. **COMMERCIAL WOODS.** Set of 47 labeled panels 15.00
 17. **CORALS.** Set of 10 beautiful specimens, world-wide in origin 10.00
 18. **SCIENTIFIC CATALOG & PRICE LIST.** 40 pages25
- Order immediately! Avoid holiday rush and insure delivery on time.

Est. 1919 
NEW YORK SCIENTIFIC SUPPLY CO.
 28 W. 30th St. New York 1, N. Y.
 -----ORDER FORM-----
N. Y. SCIENTIFIC SUPPLY CO.
 28 W. 30th St., New York 1, N. Y.
 Enclosed please find \$, for which please send me the following encircled number(s):

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

 Name _____
 Address _____
 City _____ Zone _____ State _____

