

### SOLONS TRACING INTERNAL WAVES IN OCEAN DEPTHS

New Instrument Sent Down Beneath Homogeneous Layer of Top Water to Seek Suspected Motion

By HOWARD W. BLAKESLEE  
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WOODS HOLE, Mass.—(AP)—The existence of internal waves in the sea is expected to be revealed through studies with a new instrument in use at the Woods Hole Oceanographic Institution.

The internal waves, if they exist, are not small like surface swells, but more like tidal waves. Their surface is not more than 100 feet down. It lies under the "homogeneous" layer of top sea water, a layer created by the churning of wind and waves, and of differences in temperature, density and salinity between the surface water and the water below.

The "homogeneous" layer is a sort of restless, Neptune's blanket covering the calm, cold depths. Man sees beneath it only rarely. With a "gliss" sea it may almost disappear. Swimmers ordinarily swim in this blanket, but occasionally it gets so thin their bodies break through into the colder water below.

Interest Weathermen  
The internal waves have some interest to weathermen, because of theories that they may resemble meteorological conditions believed to exist in upper layers of the ocean of air at the bottom of which man lives.

The new instrument was devised by Prof. C. G. Rossby of the Massachusetts Institute of Technology. It was nicknamed "the rat trap" by the sailors of the Atlantic, the Oceanographic Institution's vessel, from the stocks of which it is operated.

The "rat trap" resembles a metal suitcase, higher than it is long. Lowered over the side of the ship, it reads water temperature and pressure simultaneously and automatically. The pressure shows the depth.

So it makes a continuous record of the Neptune blanket of water. No other instruments have done this easily and automatically. The old method of measuring the depth of wire submerged is not accurate enough when the current slants the wire too much.

Records Written on Foil  
The underwater records of temperature and pressure are written by one pen, a horizontal displacement indicating temperature changes and a vertical displacement changes in depth. No writing fluid flows from the pen. It scratches its record in a film of lamp black coated with oil, and spread over the surface of a metal foil as thin and flexible as paper.

After it comes out of the water, the lamp black-oil film is fixed as firmly as a photograph by a bath of alcohol and shellac.

The scratched line shows temperature changes as slight as a tenth of a degree, and changes in depth foot by foot. The pressure is measured

by a flexible metal tube, its end sealed, so that it shortens like an accordion as the pressure increases with depth.

Heat Curls "Cuff"  
The temperature is read, not with a thermometer, but with a metal sheet shaped like a man's cuff and about the same size. It is two kinds of metal, one overlapping the other, each responding differently to expansion and contraction due to temperature. So the cuff curls up more as it gets warmer, and straightens out more with a temperature drop.

The experiments indicate that the "homogeneous" top layer of water varies from zero to 100 feet in thickness. It is thinnest in summer because there is less wind and the higher temperature at the surface reduces density, making it difficult for the warmed water to mix with that below.

### WOODEN SHOE TRADE THRIVING IN AMERICA

WASHINGTON—(UP)—Approximately 1,000,000 pairs of wooden shoes are manufactured and consumed annually in the United States, the commerce department reported.

The shoes chiefly are used by workers in damp fields, factory workers and theatrical people, the department reports.

Manufacturers produce a wide variety of wooden shoes ranging from women's and children's open sandals to heavy work shoes for men. Prices range from \$1 a pair for all wood soled, to \$1.50 for a pair of oxfords. High wooden shoes range in price from \$1.75 to \$3, the department said.

### CCC BOY WINS FIGHT WITH RATTLESNAKE

SACRAMENTO, Cal.—(UP)—Matching his speed against that of a rattlesnake, John Licciardi, 21, CCC camp enrollee, snatched the reptile as it struck and dashed it against a rock, thereby winning the grim contest.

Licciardi was working alone, attempting to pry a boulder from a new road, when he heard a hissing rattle behind him. He leaped to a shivering rock ledge, dropping his crowbar. The snake struck and he dodged. The reptile coiled and struck again, and this time the youth grasped its body in midsection and threw it against a rocky wall, crushing its head.

**NOTICE**  
**GLADIOLUS GROWERS**  
It has come to the notice of the Gladiolus Association that some Gladiolus have not bloomed out, or have wilted. If your gladiolus have not done as well as they should we will inspect your garden and try and help you solve your problems. Yours for better Glad blooms. Phone 1093. No obligation.  
—Gladiolus Association

Saturday and Monday, September 15, 17 Shopping Suggestions

**SAFEWAY QUALITY FOOD Stores**

We'd Like to Shout Our **Values** From the Housetops!

TODAY'S changes in business necessitate that the buyer consider VALUES as never before. Money should not be wasted on foods that do not give the utmost in VALUE. Only such foods that are of good quality, fresh and reasonably priced do this. We guarantee that you will receive good VALUE for your money at our stores... or "your money back."

**SYRUP** KARO Blue Label 5 lb. Pail **31c**

**CHEESE** BROOKFIELD Lb. **15c**

**WHOLE WHEAT FLAKES** KELLOGG'S—Crisp, Flakes 2 Pkgs. **15c**

**TUNA FISH** WHITE STAR Chicken of the Sea No. 1/2 Can **15c**

**RELISH SPREAD** Best Foods, for the School Lunch. Quart Jar **33c** Pint Jar **18c**

**SUGAR** Pure Cane 12 lb. Bag **67c**

**SALAD OIL** Max-I-Mum, for better frying. Quart Bottle **29c**

**MACARONI** Rose City Curve Cut. Stock up Now? **3 POUNDS 25c**

**TOILET TISSUE** Waldorf, costs no more than inferior tissues. Don't take chances **5 ROLLS 19c**

**MUSTARD** RING CROSS An exceptional value **QUART JAR 23c**

**FLOUR FLOUR**  
BUY YOUR WINTER'S SUPPLY NOW!

**Crater Lake** Hardwheat. All purpose **\$1 89** Barrel **\$7.35** 49 lb. bag

**Lion Brand** Family blend **\$1 63** Barrel **\$6.39** 49 lb. bag

**MILK** MAX-I-MUM Try it in your recipes Case **\$2.71** 6 Tall Cans **34c**

**BEANS** Small White. New Crop Clean **10 Pounds 47c**

**SHORTENING** White Ribbon Fresh, Sweet 8 lb. Pail **93c**

**POST TOASTIES** Crisp and Tasty. Pkg. **7c**

**MAXIMUM SALT** Plain or Iodized. 2 lb. tubes. 2 for **15c**

**JAR RUBBERS** Regular Size. Doz. **3c**

**SUPER SUDS** Best for Washing Dishes. 2 Pkgs. **17c**

**SOAP** Crystal White. Less Rubbing. Regular size. 10 Bars **29c**

**CRACKERS** N. B. C.'s Snow Flakes. Oven fresh. **29c**

**Pancake Flour** Safeway. Made with buttermilk. No. 10 bag. **47c**

**TOMATOES** Our choice solid pack. 3 No. 2 1/2 cans **35c**

**AIRWAY COFFEE** A pure Brazilian blend **3lb. bag 61c**

**TEA**, Lipton's black. 1/2 lb. **41c**

**CORNED BEEF**, Libby's. 12 oz. can **15c**

**HOMINY**, Van Camp's. No. 300 can **5c**

**MATCHES**, Favorite. 6 box carton **25c**

**JELL-WELL**, Assorted flavors. Pkg. **5c**

**SANKA COFFEE**, Lb. **44c**

**CERTO**, anyone can make jelly with Certo. Bottle **22c**

**PILLSBURY PRODUCTS**

**Cake Flour** 2 1/2 lb. Pkg. **25c**

**Pancake Fl'r** 2 1/2 lb. Pkg. **21c**

**BRAN** 1 1/4 lb. Pkg. **17c**

**HOT SAUCE** Our choice for cooking. 8 oz. can. 4 for **15c**

**SPINACH** Del Monte. So healthful. No. 2 can **10c**

**ROLLED OATS** Sun ripe. Big flakes. 9 lb. bag **39c**

**FRUITS and VEGETABLES**

**CELERY** Fresh Crisp Stalks. Each **5c**

**CABBAGE** Solid Heads. Pound **2 1/2c**

**PEACHES** Local Crawfords. Box **59c**

**ONIONS** Yellow Globes. 7 Lbs. **17c**

**BANANAS** Fancy Golden Fruit. 3 Lbs. **19c**

**POTATOES** Klamath Gems U. S. No. 2s 50 lb. Bag **59c**

**Quality FRESH MEATS**

**OYSTERS** Fresh Select pt. **35c**

**SALMON** Sliced or Piece. Fancy Red lb. **19c**

**GROUND ROUND STEAK** Your Choice **2 lbs. 29c**

**PURE PORK SAUSAGE**

**BEEF ROAST** Choice Steer Beef lb. **9c to 13c**

**DILL PICKLES** qt. **10c**

**HAMS** Corn Fed Eastern. Half or Whole. lb. **23c**

**SAFEWAY STORES**  
DISTRIBUTION WITHOUT WASTE

Wings of the Morning!  
Good coffee—man's morning friend—warm and fragrant as her greeting.

**A tip to coffee lovers.** Whatever the method you use (Drip or Percolator), buy a coffee prepared for that method. It's important. Here's why. In a Drip Maker, boiling water drips only once through a coffee prepared to yield its flavor quickly. In a Percolator, water passes many times through a coffee prepared to yield its flavor slowly. No coffee should try to serve both methods. "A Jack of all trades is master of none." There are two Schilling Coffees—one for Drip—one for Percolator.

**Two Schilling Coffees**

Percolator + Coffee  
Drip + Coffee