

sweeping through the water catching the small fish unfortunate enough to be in their path.

Some fish, more lazy than others, have developed tactics to make life easier for themselves. Angler fish simply rest on the bottom and do their fishing with a rod and bait.

The first dorsal fin ray in this fish is on the snout and is long and limber. At its tip a fleshy flap grows which is waved gently in the water as a bait to lure fish. Sooner or later some passing fish bites, the rod bends, the mouth opens, and the angler deposits another fish in its gullet to be eaten later at his leisure.

Cuttlefish Used by Man

Cuttlefish have long sucker-tipped arms that may be stretched out to catch fish. In certain parts of the South Seas, such sucking fish are attached to lines by men and used to catch fish, providing another example of man's using an animal's highly developed angling technique for his own purposes.

Among the swimming mammals, the walrus has developed a method of plowing for its food. Though extremely strong, the walrus is very clumsy and awkward, and cannot fish very well while swimming. Most of its food is gotten by plowing up the sea bottom with its tusks, eating the vegetation, shellfish and mud-loving fish that are on the bottom.

The molars of a walrus are very heavy and can crush the largest oyster shell with ease. The tusks so useful as plows also serve as boat-hooks. When a walrus wants to get out on the ice, it simply hooks on with the tusks and scrambles up on the ice.

Fishing is definitely not a human monopoly and most of man's favorite devices for catching his dinner were developed by some lower animal during its evolution.

Science News Letter, March 6, 1954

Cotton is picked at the rate of one and a half acres an hour with a new tractor-drawn, low cost harvester using nylon brushes.

The strange actions of *sound waves* in shallow water can be compared to the breaking up of light into many colors when it is reflected from a thin film of oil.

ELECTRONICS

Electronic Blood Analyzer

Inexpensive instrument developed that may be used for quick examination of mass blood samples for possible atomic radiation damage.

See Front Cover

➤ A MACHINE has been created at the National Bureau of Standards that may lead to a device that could be highly useful in identifying victims of atomic radiation in the event of an H-bomb attack.

H. M. Joseph of the Bureau's electronic instrumentation laboratory stated that future variations of his laboratory model might be made to examine blood specimens for symptoms of atomic radiation and report its findings quickly.

A fast analysis of mass blood samples presumably could help doctors find and treat persons who could respond to anti-radiation measures.

The device was previewed by the 40 teen-aged scientists in Washington for the five-day Science Talent Institute, sponsored by SCIENCE SERVICE and the Westinghouse Educational Foundation.

They are shown on the cover of this week's SCIENCE NEWS LETTER with Dr. Allen V. Astin, director of the National Bureau of Standards, at the start of their tour of the Bureau's facilities.

In its present form, the machine can "look" at a blurred photograph or a fuzzy X-ray film and produce a sharper image on a television-like picture tube.

The relatively inexpensive instrument consists of a lens system placed between a cathode-ray tube, similar to a television picture tube, and a photomultiplier tube. A picture transparency is slipped into the lens system. The cathode ray tube scans the transparency while the photomultiplier tube intently "watches," amplifies what it "sees" and feeds corrections back to the scanning tube.

Picture signals are tapped off the photomultiplier tube and are fed through a modifying amplifier to a repeater picture tube. Then a person can adjust the controls to

make the picture appear in sharper focus, or as a line drawing.

The machine also could be adapted to serve the criminologist, it is believed. Fingerprints, often distorted when the criminal applies pressure to safes or automobile doors, could be "straightened out" again when corrections are automatically fed into the device. The result should be a fingerprint that matches the proper one.

Army aerial photograph experts may be able to use another adaptation of the instrument as a camouflage spotter. Aerial photos are compared periodically to reveal changes in the area under scrutiny. This is a tedious, time-consuming process involving skilled specialists.

The pictures must be carefully examined since the photographs of a given sector may be taken from different angles. A future version of the machine could compensate for these different camera angles, showing up camouflage as glaring changes.


Since the machine can recognize shapes, it also seems possible that a modified version could lead a guided missile to the precise airplane or railroad switchyard which it was dispatched to destroy.

The idea for the instrument came from Dr. L. S. G. Kovasznyay of Johns Hopkins University, who also acted as a consultant on the project. The work was performed as part of a basic instrumentation program of the National Bureau of Standards. It was sponsored by the Office of Naval Research, the Atomic Energy Commission and the Air Research and Development Command of the U. S. Air Force.

Science News Letter, March 6, 1954

CHEMICAL INVENTORS:—
You supply the product, we'll be your factory.

- Powder and liquid filling
- Labelling and mailing
- Cellophane wrapping
- Printing and paper boxes



Shurs Lane and Pechin Street
 Philadelphia 28, Pa.
 IVyridge 3-7330

Packagers of Things of Science

Samples in DisOrder?
 Write for three good ideas about keeping small samples in order.
 Just ask for leaflets X-SNL

Mois-Tec RG

A new reagent for low concentrations of water, with possibilities of usefulness in many fields.

Write for Data Sheet RG-SNL

R. P. CARGILLE LABORATORIES, INC.
 117 Liberty Street, New York, N. Y.

GO PLACES
LISTEN and LEARN A LANGUAGE by LINGUAPHONE IN 20 MINUTES A DAY

World's-Standard CONVERSATIONAL METHOD

FRENCH AT HOME, you learn another language — easily, quickly, naturally by LINGUAPHONE. You LISTEN—you hear native men and women speak—you understand—YOU SPEAK! World-wide educational endorsement; a million home-study students of all ages. STOP Wishing — START Talking. Write Today for Free Book, "Passport to a New World of Opportunity."

—29 Languages

LINGUAPHONE INSTITUTE
 3103 RCA Building, N. Y. 20, N. Y.
 Send me your FREE book. Language interest
 Name
 Address
 City, Zone & State
 Our 50th Yr. of Up-to-Date Language Courses

