

## ZOOLOGY

## Primitive "Brain" Studied

► ONE OF THE MOST primitive nervous systems in the world is being studied by one of man's most sophisticated instruments, the electronic computer.

Dr. Robert K. Josephson, zoologist at the University of California, Los Angeles, uses the electronic "brain" to simulate the nervous activity of tiny marine animals known as hydroids.

The creatures are the simplest living animals possessing a nervous system. They grow in colonies, attaching themselves to submerged objects.

Individual animals, or polyyps, consist of a simple tube with a mouth surrounded by tentacles, which are used to ensnare prey. Members of the colony are connected by plant-like stems and branches.

The study has furnished new information on how animal colonies are connected

by a nerve network. The network is patterned much like a fish net.

Stimulation of a spot on a branch will cause a contraction of tentacles of a number of individuals in the colony. The number is proportional to the degree of stimulation.

Observation of tentacle response to various stimuli was the basis for the nerve-net model used by the computer to simulate nervous activity of the colonies. The computer was used to test current theories of how the network operates.

Study of the electrical activity in the nerve net revealed a surprisingly complex nervous system in so primitive a creature. Patterned bursts of nervous electricity were detected. This indicated an integrating mechanism for information coming into the nervous system, a sort of elementary brain.

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## GENERAL SCIENCE

## Science Exposes Fakes

► SCIENCE IN QUEST of truth has caught many famous fakes and the very latest may be counted among the "whoppers."

Three "Etruscan" pieces of statuary, all famous and believed of great value, have been exposed in the Metropolitan Museum of Art in New York as fakes.

Proof of the faked statues was provided by laboratory tests that showed the black glaze on the terra cotta figures had been achieved by modern processes instead of the primitive method the Etruscans used.

The two full figures and one head had been exhibited in the museum as fifth century B.C. samples of Etruscan sculpture since 1933. The Etruscans were neighbors of the ancient Romans.

One of the most famous fakes exposed by scientific proof was Piltdown man, found in Sussex, England, between 1908 and 1915 and thought by some to be 500,000 years old. After much controversy, it turned out to be not a primitive man at all but a composite of a skull of modern man and the jawbone of an ape.

The hoax was exposed by microchemical tests, X-ray spectroscopy and crystallographic analysis that showed the skull bone was only 50,000 years old. The jawbone had been "doctored" with bichromate of potash and iron to make it look mineralized.

Another British science hoax was the case of "Flint Jack" who sold "antiquities" he had made himself to the British Museum from 1863 to 1867 when he was put in prison. Scientists later regretted that his technique for making the objects was never learned. It might have been a clue to how ancient flint work was done.

A British gem-fake was the reputed first synthetic diamonds, which turned out to be real gems. In 1880 a Scotsman, J. B. Hannay, stirred bone meal and lithium to-

gether and sealed the mixture in wrought-iron tubes that he heated in a forge.

After the smoke cleared caused by the explosion, three tubes were still intact and claimed to hold the synthetic diamonds. In 1943 British physicists subjected the stones to X-ray analysis and found they were true diamonds.

A famous American fake was the "fossilized giant" uncovered at Cardiff, N. Y. It was later found to be a statue made by



**TALK BY RAY GUN**—Words spoken into a "ray gun" are electronically converted to infrared beams and transmitted to a similar receiver several miles away that converts the message back to sound. The system was developed by Minneapolis-Honeywell Regulator Co. for use in military, police and civil defense operations.

a Chicago stonecutter, treated to look ancient and buried on a farm where it was "discovered" in 1889.

Suspected fakes that have been substantially repudiated by scientists are the "evidence" of Viking occupation of North America before Columbus and the "abominable snowman" of the Himalayas.

The Newport Tower, claimed to be built by the Vikings, is now thought to have been built in Colonial days and the Kensington Stone bearing runic inscriptions and found in Minnesota have been rejected by archaeologists as valid evidence.

The "abominable snowman," or yeti, a monster supposed to live high in the Himalaya Mountains is now believed a myth. A "scalp" produced by the natives was found to be no scalp at all. It had been molded out of skin and hair of a serow, a member of the goat-antelope family.

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## PUBLIC HEALTH

## Throw-away Blankets Tested for Future Use

► THROW-AWAY paper blankets that may help combat hospital diseases spreading among patients have been tested at the children's hospital at Nyköping, Sweden.

Consisting of 20 layers of soft crepe paper, the blanket is used inside a linen sheet cover. The Swedish-International Press Bureau in Stockholm reported that the blankets are as warm and light as a down covering.

The paper blankets are expected to replace dust- and germ-collecting woolen blankets. The cost of a new blanket is reported to be 40 cents, and a child's blanket, 10 cents.

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