

## BIOLOGY

**Penicillin Kills Germs  
In Microscopic Animals**

► **PENICILLIN** kills bacteria not only in man and the larger animals but in animals too small to see without a microscope. This discovery is announced by Gerald R. Seaman of Fordham University. (*Science*, Oct. 3).

The microscopic animals, belonging to the order Protozoa, are not necessarily sick because they have bacteria in them. The bacteria are just there, as many harmless bacteria are "just there" inside ourselves. Some kinds of protozoa even devour bacteria as the main part of their diet.

However, it is sometimes desirable to have the little animals in a germ-free condition so that results of experiments with them will not be messed up by the presence of the bacteria with their own biological processes.

Protozoa cannot stand being kept too long in the bacteria-killing bath of penicillin solution, the Fordham zoologist states. One lot that he tried were still swimming around vigorously after five hours but were dead at the end of 12 hours.

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## NUTRITION

**Ten Foods Listed as  
Base for Year-Round Menu**

► **HARASSED** homemakers, trying to balance food budgets without sacrificing the family's health, would do well to adopt the following as the backbone of their year-round menu planning:

White potatoes, whole-wheat bread, rolled oats, beef and pig liver, pea beans, rutabagas, carrots by the pound, spinach, and milk, fresh or canned.

This is the conclusion of a two-year study made in Ithaca markets by Mabel Rollins, associate professor of home economics at Cornell University.

Miss Rollins priced 107 foods at two-week intervals in seven stores. She found those mentioned practically always available with relatively small price fluctuations, and were comparatively inexpensive in relation to dietary essentials contained.

At other seasons, other foods would qualify for the "cheap and nourishing" list, she says. Among cheap and nourishing foods at this season are Hubbard squash, sweet potatoes, and green cab-

bage. She also advises that housewives could do worse than cultivate a taste for kidneys (beef, calf and lamb).

The study took into consideration the fact that many foods have much higher percentage of waste than others, as well as the amount of dietary essentials.

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## PUBLIC HEALTH

**Possible to Vaccinate All  
Egyptians Against Cholera**

► **EGYPT'S** entire population could be vaccinated against cholera within one month, half of it within a few days, Dr. Brock Chisholm of the World Health Organization's interim committee estimated.

His estimate was based on figures for cholera vaccine production, which went into high gear to meet the emergency. Enough to vaccinate 750,000 people was sent by air Oct. 25. Another, slightly larger amount was ready within another week, and if the need continues, production can go to three times that amount per week.

Cholera cases, now officially tallied at 4,785 and unofficially estimated at well over 5,000, are expected to continue increasing for a short time. But there are already signs that the epidemic is leveling off. A precipitous drop should start soon, as more and more people are vaccinated and other control measures become increasingly effective.

Never before in history, Dr. Chisholm said, has a cholera epidemic that started up as swiftly as this one been stopped at anywhere near this level. Egyptian health authorities have "done a truly remarkable job in checking the spread of the disease," he declared, adding that there has also probably never before been such international cooperation.

A virtual "freezing" of Egypt's population is considered one of the important measures that helped check the spread of the disease. The epidemic started at El Karim with five cases on Sept. 22. Two days later the prime minister advised military cordons around the infected areas to stop all but necessary official travel into and out of them. The cases have still been largely confined to rural areas.

All pilgrimages to Mecca were stopped, but the first group had already gotten off. No case of cholera among Mecca pilgrims or anywhere else that could be traced to the Egyptian epidemic has occurred, so far as WHO information goes.

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**IN SCIENCE**

## AERONAUTICS

**Floating Seaplane Berth  
Makes Landings Easy**

► **THE** Navy has a new self-propelled floating seaplane berth which will make landings from flying boats easy. The aircraft anchors in waters off-shore and the berth is swung to its side.

The berth is built of pontoons and operates on a 600-foot submerged cable. It can be swung in any direction to permit a plane to taxi on the water into the wind while entering or leaving the slip. As a result the pilot is relieved of the task of maneuvering a large flying boat to a dock or mooring buoy, a difficult job in high winds or choppy seas.

The mooring of the plane in the movable berth is further simplified by the slip's bell-mouthed entrance and by a system of water jets, three on each side of the entrance, which push the plane from one side of the slip to the other. Partially-filled airplane tires along the two inner sides of the berth prevent damage to the airplane on contact.

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## METEOROLOGY-AERONAUTICS

**New Portable Instrument  
Measures Low Wind Velocity**

► **WIND** speed and direction are accurately indicated by a new portable instrument of high sensitivity just revealed by the National Bureau of Standards, where it was developed. It is designed particularly for use in take-off tests at landing fields.

The instrument is mounted on a sturdy tripod like a surveyor's transit and can be leveled in the same way. Wind velocity is measured by means of a propeller forced to head into the wind by a vane. Its speed is registered on a magnetic tachometer, while its direction is indicated at the same time on a circular horizontal scale by a needle connected to the shaft of the vane.

One feature of the new instrument, developed by S. H. J. Womack and F. Cordero of the Bureau staff, is that it can be used to measure very low wind velocities. Previous instruments were not suitable for use in take-off tests.

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# E FIELDS

## MEDICINE

### Crippled Polio Victims Increase in Recent Years

► THE number of children and young people in the United States crippled by polio has increased almost 45% in the past seven years. It has risen 100% in the last two years, reports to the U. S. Children's Bureau show.

This is what might be expected since we have just passed through the longest period (1943 through 1946) of sustained high numbers of cases of the disease in the history of the country.

Nearly 74,000 persons under 21 years of age were crippled to some degree by the disease as of Jan. 1 of this year, statisticians of the Metropolitan Life Insurance Company point out. At the beginning of 1940 the number was in the neighborhood of 51,000. Only a small part of this rise is due to an increase in the number of children in this country.

Children are the chief victims of poliomyelitis, which nevertheless attacks persons of all ages. It is responsible for one-fifth of all orthopedic handicaps of boys and girls under 21.

The largest increase in crippled survivors was recorded by Utah, which showed a rise of 230%. Other states in which the rate at least doubled during this period were Arkansas, Colorado, Ohio, Tennessee and Indiana.

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## GENERAL SCIENCE

### Science Magazine Tries To Fill Nazi-Caused Gaps

► TO FILL up the great gaps in scientific knowledge caused by Nazi perversion of education is first objective of a small group of German science writers who have established their publication center at the town of Murnau, near Munich. They issue a monthly popular science magazine under the starry name of *Orion*, and have also begun to publish pocket-size, paper-bound books.

"Our objective is two-fold," states one of the editors. "First, we wish to lay a foundation of knowledge, especially for the young people, who in the years of Hitlerism and the war learned less and less year by year and now show terrible

gaps in their education. But the grown-ups, too, have altogether too little knowledge, and the little that they know has often been distorted and falsified in the worst possible way under the Nazis.

"Second, with this foundation laid, we wish to give our readers the materials which they need to create for themselves a correct picture of a world in which many new things are constantly developing."

Editor-in-chief of the new venture is an engineer, Erich Lasswitz, who for 25 years conducted the science page of the *Frankfurter Zeitung*, one of Germany's most progressive newspapers. Goebbels had him thrown out of his job and threatened him with the concentration camp. The other editors are younger men who, however, were already well educated before Hitler came to power.

The tale of their present troubles has a familiar sound to any American editor: inadequate working space, difficulty in finding people who can write good copy, and above all the everlasting shortage of print paper. They say they could double their circulation overnight if they could get the paper on which to print.

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## ORNITHOLOGY

### Many Records Listed Of Torpidity in Birds

► DO birds hibernate?

Usual answer to that question, from biologists, is an emphatic "No." Some doubt is cast on this confidently positive denial by W. L. McAtee, veteran naturalist of the U. S. Fish and Wildlife Service.

On two different occasions, he states, he has found chimney swifts in a torpid, almost death-like state, late in the season after other birds of this species had flown south for the winter. Warmed up and released, they flew away. Through correspondence with other competent scientists, he learned of further instances of the same kind.

That set him to searching ornithological publications for as many recorded cases as he could find. In the *American Midland Naturalist* (July) he gives an annotated list of 152 titles of articles and books in which mention is made of this phenomenon. Some of them, especially the older ones, are akin to the ancient Greek's belief that swallows do not migrate but spend the winter in the mud of pond bottoms; but many are records of observations like his own, by scientifically trained persons.

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## MEDICINE

### Polio Virus Discovered In Blood of Patient

► A RARE discovery, the finding of infantile paralysis virus in human blood, is reported by Drs. Hilary Koprowski and Thomas Norton of Lederle Laboratories and Dr. Walsh McDermott of Cornell University Medical College and the New York Hospital in the U. S. Public Health Service's official journal, *Public Health Reports* (Oct. 10).

The presence of the polio virus has only once before been found in human blood and only rarely, in spite of many attempts, has it been found in monkeys experimentally infected.

The virus in the New York Hospital case was found in the course of efforts to determine the cause of a mild illness in a 29-year-old man. The symptoms suggested a virus infection of some kind involving the central nervous system. Polio was suspected, but the infection could have been some other virus.

Polio virus normally travels along nerve pathways to attack nerve cells in the spinal cord and brain. It is apparently only in a very occasional case that it gets into the blood.

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## CHEMISTRY

### New Sand Fluid Improves Rubber, Paper and Leather

► A SAND dressing to add strength and better wearing qualities to rubber, leather, paper and other materials was revealed by the du Pont Company, Wilmington, Del. It is a fluid containing extremely finely divided particles of silica, most familiar as common sand, and has "Ludox" as a trade name.

This new product, essentially salt- and sodium-free, is highly fluid even in a concentrated form. On drying it yields substantially pure silica in the form of thin films or finely divided particles which can not be re-dissolved in water. When examined by means of the electron microscope these dried particles are found to be less than a millionth of an inch in diameter.

Ludox affords a means of modifying many other materials to utilize the inherent properties of silica. These include mechanical strength, resistance to atmosphere and chemical agents, and resistance to heat. It will have many applications in industrial processes in addition to those mentioned.

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