MEDICINE

Typhus Strikes Third Health Service Worker

TYPHUS FEVER has stricken a third U. S. Public Health Service scientist who sought to conquer it. With Dr. R. E. Dyer not yet well enough from his attack to put in a full day at the laboratory of the National Institute of Health, his 32-year-old assistant in the typhus fever research, Dr. W. G. Workman, has now succumbed to the disease.

Dr. Workman had been carrying on the typhus fever investigations during Dr. Dyer's illness, and as soon as Dr. Dyer was well enough, Dr. Workman went daily to see his chief and to get directions from him.

Dr. Workman is a native of Ohio and received his medical degree from Ohio State University Medical School. He showed such promise during his interneship at the U. S. Marine Hospital in Baltimore that he was brought to the research staff of the National Institute of Health in Washington, D. C., immediately after finishing his interne training. This is a most unusual proceeding, but U. S. Public Health Service officials have found him fulfilling his early promise of becoming an able research worker. He has been a member of the research team headed by Dr. Dyer which found that the rat is a reservoir of American typhus fever and that the flea transmits the disease. The latest efforts of the group have been toward producing a protective vaccine. This has not yet been accomplished.

Dr. Dyer's attack of typhus came this fall, but the first victim on his staff was Dr. Elmer T. Ceder, 26-year-old assistant who was stricken in December, 1931.

Science News Letter, December 10, 1932

BACTERIOLOGY

Caviar Preserved By Ferments From Bacteria

THE ADDITION of minute quantities of certain ferments will keep caviar from decomposing in the absence of chemical antiseptics, Mme. Jermoljewa, a woman scientist at the Bach Institute for Biochemistry at Moscow, has found.

Ferments or enzymes are substances produced by animals and plants to help them break up and digest complicated organic substances. They all act as catalysts, that is a very small quantity will change or digest a very large amount of material.

Bacteria do much of their destructive work by liberating specific ferments. This fact gave Mme. Jermoljewa the clue for fighting the bacteria which are responsible for the caviar becoming deteriorated.

She claims to have obtained from dead bacteria ferments which inhibit and even dissolve some of the living germs responsible for this deterioration. A very small quantity of such ferments added to the caviar will prevent the growth of the undesirable bacteria. Caviar so treated at Baku five months ago, without the addition of any preservative or antiseptic, is still in an excellent condition.

This discovery may be of great economic value since it will greatly facilitate the export of caviar to America and other distant countries. It has also an important scientific significance because of its possible relations to the action of the bacteriophages which are known to destroy bacteria and which have usually been considered as living organisms.

Science News Letter, December 10, 1932

ORNITHOLOGY

Fish Hook Catches Jaybird in Mid Air

A BLUE-FRONTED JAY, apparently suspended in midair without support, confronted Ranger Naturalist Cope Jensen of Yosemite National Park recently as he was guiding an auto caravan. Investigations proved the bird to be caught on a fish hook at the end of a leader entangled in the branches of a tall alder.

Someone had been fishing along the banks of the Merced River and had caught a six-foot leader in the alder. The lower hook, baited with an angleworm, was dangling in the air, with the live jay firmly hooked in the mouth.

As Mr. Jensen and his party approached, the jay attempted to fly; then, finding this impossible, folded his wings at rest and swung like a pendulum.

With a long pole Mr. Jensen succeeded in loosening the leader from the tree and the bird flew downstream with the leader and hooks still attached. Hoping to free him, the party tried to catch the jay, but after a few minutes' maneuvering in a thicket he emerged, freed of the leader by his own efforts.

Science News Letter, December 10, 1932

IN SCIENC

ARCHAEOLOGY

Aida was Roly-Poly, Ethiopian Bowl Indicates

IMPRESARIOS who seek realism in grand opera may now have to choose plump divas for the role of Aida. Science has unearthed a picture of a real Ethiopian princess of long ago, and there is no doubt about it, the lady is decidedly roly-poly.

Patina and dirt of some 4,000 years removed from a bowl in the Museum of the University of Pennsylvania revealed the picture of the Ethiopian princess. The picture shows her consuming her supply of milk. The milk-drinking rite was on a large scale, judging by the procession of royal cows and the row of five bowls set before the princess.

When Verdi's opera "Aida" was first produced, some one suggested that Aida should be a plump heroine, since beauty and avoirdupois went together in ancient Ethiopia. But this idea was laughed down, despite the fact that weight is an attribute of beauty even today in Ethiopia, and the fact that Herodotus, first of the columnists, commented on the size of the royal ladies of Ethiopia when he traveled in that country. The bowl leaves little room for argument. Aida was fat.

Science News Letter, December 10, 1932

MEDICINE

Colds May Be Caught Before Sneezing Stage

WE MAY, it seems, catch cold from persons who are about to develop colds as well as from those who are already sneezing and blowing noses.

A report from the Johns Hopkins University bases a conclusion to this effect on an experience with two chimpanzees living under strictly controlled laboratory conditions. The animals developed typical common colds two days after they had been in close contact with one of the laboratory workers who herself had all the symptoms of a respiratory infection the next day and then proceeded to a severe common cold.

Science News Letter, December 10, 1932

E FIELDS

PUBLIC HEALTH

Influenza Cases Doubled Health Officers Learn

THE AMOUNT of influenza in the country has almost doubled, reports received from state health officers by the U. S. Public Health Service show. A sharp outbreak on the West Coast has spread to the South.

For the country as a whole, 6,306 cases were reported for the week ending November 26, the last for which complete figures are available. For the preceding week the total was 3,086. Influenza reporting is said to be notoriously poor, and health officials estimate that the actual number of cases is probably five or six times the reported number.

The states having the largest number of cases are Alabama with 1,940, Arizona with 479, Louisiana with 600, and California with 1,721.

Science News Letter, December 10, 1932

ENTOMOLOGY

Australian Ants Show "Missing Link" Behavior

QUEEN ANTS in Australia show behavior traits in their mode of starting families that support the theory long held by naturalists, that ants are descended from wasp-like insects. Studies that revealed these traits were outlined by Prof. William Morton Wheeler, of the Bussey Institution.

Female ants in other parts of the world, Prof. Wheeler said, are divided into two classes. Those supplied with abundant food reserves in their bodies retire into little cavities which they make in the earth or rotten wood, lay their eggs and rear their first small families of worker ants. They eat nothing during this time, and nourish their young with their saliva. When the new workers are able to get about, they go forth and forage for food, and also enlarge the nest and take care of the young of the colony. The mother ant becomes simply an egg-laying mechanism.

The other type of non-Australian ant has no bodily reserves. When she flies forth to found a family, she finds the nest of another ant species, intrudes herself into it, and becomes a social parasite.

One thing both kinds of ants have in common: once the female goes under ground, she never comes out again.

The dominant ant group which Prof. Wheeler studied in Australia differs from both kinds of non-Australian ants, in that the female or queen ant does emerge from the earthen cell into which she retires to found her colony. She has no reserves of food within her body, and she does not become a parasite in another colony, so if the young are to be fed she must needs forage for them. This she does, bringing home pieces of freshly-killed insects.

Science News Letter, December 10, 1932

ZOOLOGY

Predatory Animals Held Useful to Farmers

MAN BLAMES the fox, mink, wildcat and other predatory wild life for doing far more damage to farm and game birds and animals than can fairly be charged against them, and tends to forget that these predators are an important factor in nature's scheme of checks and balances, which man himself is guilty of throwing out of order.

This new angle on the real damage done by predators is the result of a two-year study of the food habits of this group, arrived at by study of more than 3,000 specimens of digestive remains of nine animal species; for, skunk, weasel, mink, wildcat, opossum, raccoon, coyote and badger. The work was done by Dr. Ned Dearborn for the University of Michigan School of Forestry and Conservation.

The analyses made by Dr. Dearborn from many specimens indicate that such ordinary judgments usually wrong the predator. The skunk gains over 57 per cent. of his diet from insects, while birds comprise only 2.35 and eggs 0.11 per cent. A skunk may eat a pint of insects at a single meal.

The fox is not in general the popularly imagined terror of the hen roost or public enemy of the game bird. The fox diet in Michigan, according to the 1931 studies, was 91 per cent. mammals, rabbits and hares comprising 81 per cent. of this class, with mice, rats, squirrels, deer, moles and shrews in order.

Science News Letter, December 10, 1932

ARCHAEOLOGY

Town of Viking Age Unearthed in Ireland

A STRIKING picture of life in Viking times about a thousand years ago is revealed by discoveries at Ballinderry, Ireland, made by the Harvard University Expedition under Dr. O'Neil Hencken of the Peabody Museum.

For four months, the Harvard Expedition has been engaged in excavating an artificial island, or crannog, inhabited over a considerable period of time when the Norsemen invaded and settled in Ireland about 1000 A. D.

This artificial island was built up of layers of peat and brushwood held together by massive piles of timber. On the island was the wooden floor of a circular house with a circular central hearth and a wide doorway. When this circular house had fallen into decay, further layers of brushwood and peat were piled on it, and two smaller, rectangular houses were erected upon them.

The manner of life on the island is indicated by remains, animal and other which have been found. Reports received here list among the animals cows, sheep, deer, goats, pigs, and a small, agile cat. The people were hunters and herdsmen and also practised agriculture, as is shown by the coulter of a plow and the querns in which they ground their grain. They had wooden vessels, in place of pottery. Tools and weapons were of iron and ornaments chiefly of bronze.

Science News Letter, December 10, 1932

ENGINEERING

New Device Measures Car's Air Resistance

FOR PROBABLY the first time the air resistance of a car on the road under actual operating conditions has been accurately measured by Prof. W. E. Lay, of the University of Michigan.

The solution he found in a "floating envelope" or cover of pressed wood fastened to a light wood frame which was mounted on steel tubing free to move forward or backward on grooved ball-bearing rollers. As the car within this envelope moves forward, the envelope moves back due to pressure from the air, and the force of this backward drive is measured with a dynamometer.

Science News Letter, December 10, 1932