Jewel-Decked Mummy

The undisturbed mummy of an Egyptian woman decked in the jewelry in vogue four thousand years ago has been discovered by the University of Pennsylvania Museum Expedition at Meydum, Egypt.

A report just received from Alan Rowe, director of the excavations, states that the name of the woman is read as "Sat-her-em-Hat." Her adornments include a string of large graded beads of polished amethyst, a string of exquisite miniature amulets cut in carnelian, lapis lazuli, and jasper, and a semi-circular pendant of green and black faience beads.

The mummy is hailed as an unusual find, since so many of the Egyptian tombs have long ago been pillaged for their valuables.

The expedition is still seeking the burial chamber within the great mastabah, or flat-topped-tomb, near the pyramid of the Pharaoh Sneferu. All evidence indicates that the tomb belonged to some important person connected with the royal family, Mr. Rowe states.

Archaeology
Science News-Letter, April 12, 1930

Copper Alloy for Shears

Soft copper, that easily worked metal used extensively for electric wiring and electrical apparatus, has been made into a razor blade that holds its edge and shaves; and scissors that cut thin paper.

Even the ancients had hardened or tempered copper. Razors and shears have been made in past years as curiosities, but it has remained for "us moderns" to make a copper both as hard and as useful as steel.

The two modern hard coppers, Everdur and Tempaloy, were found during searches for something else, a report to the Engineering Foundation reveals. They are as hard as steel, can be machined and worked, and are as strong as much steel now in use; but they will not corrode and rust like the more familiar metal. Research has already developed both for practical application.

Everdur is a product of necessity found by Charles B. Jacobs, of the duPont Company, during the World War when a fairly cheap metal that would withstand the attack of acids was needed in chemical plants.

Mr. Jacobs knew that silicon, which combined with oxygen is so plentiful, as ordinary sand, was being produced in commercial quantities at a reasonable cost. He mixed a little silicon with copper and obtained a good acid-resistant metal. Later researches led to the addition of a small quantity of manganese.

Tempaloy, as its name indicates, undergoes peculiar changes when heated in different ways. When heated to 750 or 800 degrees Centigrade and then chilled, it is soft and ductile and can be readily worked cold.

When held at 450 degrees for a few hours it becomes lastingly hard. In fact, tempaloy is a copper that can be tempered, in the modern phraseology, as steel is tempered.

This alloy is made of copper, silicon and nickel and is the result of researches by Michael G. Corson in the Union Carbon and Carbide research laboratories.

Metallurgy
Science News-Letter, April 12, 1930

Paradoxical

Removing oxygen from a chemical compound by shooting atoms of oxygen at it is the paradoxical result achieved in an experiment by Prof. W. H. Rodebush and W. A. Nichols, Jr., in the Laboratory of Physical Chemistry at the University of Illinois. The effect was produced with the chemical compound known as molybdenum trioxide. Removal of oxygen is called a "reducing action" by chemists. Atoms of hydrogen have a very great attraction for atoms of oxygen and pull them out of compounds to form molecules of water. Hitherto the effect has not been obtainable with oxygen atoms, and this is the first time that oxygen itself has been made to serve as a reducing agent. The experimenters say that with the molybdenum trioxide the effects of hydrogen and oxygen are identical.

Chemistry
Science News-Letter, April 12, 1930

Mental Disease in China

China, which has lagged behind western countries in treating the mentally sick, is now trying to plan modern scientific attention for the million or more insane who go uncared for there. The China Medical Association has unanimously passed a resolution "that there must be adequate treatment for mental cases," Dr. James L. McCartney, of the Connecticut Department of Health, states in a communication to the National Committee for Mental Hygiene. Dr. McCartney has been on the staffs of several medical schools and hospitals in China.

As a first step toward adequate treatment, it has been proposed that an Institute for Mental Hygiene be established in Shanghai. This institute would be a center for training, research, information, and clinical work. Chinese psychiatrists and social workers would thus be trained by modern methods, and in time there would be clinics and hospitals for the mentally ill in various parts of the country.

In the vast area of China there is not a single national government hospital for the care of the mentally sick, Dr. McCartney states. There are several municipal insane asylums where a few hundred psychotics are "herded" together. Missions and one or two other hospitals reach a few more hundred.

"If native Chinese are caught on the street doing anything unusual, they are arrested and thrown into prison as if they were criminals," he explains. "If they are harmless and wander the streets, they are mocked and laughed at, and are often stoned. Most patients are kept chained at home and are not allowed to go abroad, as the head of the Chinese family is usually held responsible for the injurious acts of any of its members."

Except for a few educated persons, the Chinese know nothing of the real nature of a psychosis, Dr. McCartney's statement continues.

Psychiatry
Science News-Letter, April 12, 1930

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Super-Dogs

"If especially intelligent dogs were bred to dogs of like intelligence, it would result in the production of super-intelligent dogs."

So believes Dr. W. J. Lentz, director of the small animal clinic of the University of Pennsylvania School of Veterinary Medicine.

"Dog fanciers are not giving the dog a square deal in their neglect of intelligence," he declares. "They breed for certain marked physical characteristics, and in so doing very frequently breed out all the brains. While it is true that the weight and size of the brain does not determine exactly the intelligence, in either man or beast, at the same time a head too narrow to accommodate a brain of adequate size must of necessity denote stupidity."

Dr. Lentz calls especial attention to the degeneration of the police dog's intelligence to give him a "pretty" head. Fanciers of the German shepherd point with pride to the fact that within the last three decades the dog has been "ennobled," selective breeding having lengthened and narrowed the

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head and muzzle considerably, as is obvious when prize-winners of today are compared to the types of thirty years ago, when the breed first began to attract attention. Dr. Lentz makes it plain that dog fanciers long ago parted company with scientific men.

Originally the German shepherd was a utilitarian dog, bred for farm work, with little attention being paid to the shape of the skull, but the fanciers soon began to "improve" the animal.

Dr. Lentz has no sympathy with breeders who strive for long narrow heads or any other physical features. He points out that the grayhound is one of the oldest and purest breeds, with a long, narrow head, and yet this dog displays very little intelligence compared to many "mutts."

Many police dogs have earned places for themselves in the movies, but these dogs are very much like the sleek-haired human "sheiks" of the screen. Many little dogs of uncertain origin have done far cleverer things on the stage and in the circus, but these little workers have been forced to yield laurels to good-looking canine actors far less intelligent than themselves.

Dr. Lentz has a warm place in his heart for the "mutt," the little dog with brains, whose skull no fancier has bred into a fantastic shape.

Genetics
Science News-Letter, April 12, 1930

English Physicist Honored

Sir William Bragg, director of the Royal Institution of Great Britain and winner of the Nobel prize in physics, will come to the United States next month to receive the Franklin Medal, awarded by the Franklin Institute. He will be awarded the medal in the hall of the Institute, Philadelphia, on May 21. At the same time another Franklin Medal will be given to Dr. John F. Stevens, who effected the engineering organization for the construction of the Panama Canal and is distinguished for his work in locating, erecting and administering railroads in the United States and foreign countries.

Following his appearance on May 21, when he will acknowledge the medal with a paper on his work, Sir William will lecture at several American universities. On May 23 he will speak at Johns Hopkins University, Baltimore; on May 26 at Columbia University, and at Princeton University on June 2.

On May 30, at 3:45 p. m., eastern time, he will give a radio talk under the auspices of Science Service through the stations of the Columbia Broadcasting System.

Physics
Science News-Letter, April 12, 1930

World Phone Book

An international telephone directory, listing 60,000 European subscribers who talk from one country to another, will make its appearance in Copenhagen in June. It is the third edition of the "Annuaire Telephonique International."

Telephony
Science News-Letter, April 12, 1930

Locusts

Egypt is engaged in furious war against one of the most ancient and dreaded of her enemies, a foe that invaded and devastated in the days of the Pharaohs—locusts. But according to advices received the newest onset of these hordes is now being faced with weapons reminiscent of those of the World War: flame throwers and instruments of chemical combat.

The swarms of locusts, which are coming out of the East, from Trans-Jordania into the Sinai frontier, are literally flying squadrons, and their attacks are like the surprise attacks of war. They are being met as the best teachers of tactics say such attacks should be met, with mobile forces able to bring a maximum concentration of fire to bear on a given area in the least possible time. Concentration of fire in the literal sense, for there are eighteen batteries of flame-throwers mobilized. These meet the enemy on the move, and mow down the swarms that do not show an inclination to settle on the ground.

Where the locusts come to earth, chemical warfare is resorted to. Baits of poisoned food are set out in the open fields, and where the locusts settle on the trees they are assailed with powerful spray pumps hissing forth poison spray.

The casualties are not counted; they are weighed. After one engagement eleven tons of the enemy were carted off dead. Very few prisoners have been taken; only such few hundreds as the government entomologists wished for study. For the rest, there has been no quarter.

Entomology
Science News-Letter, April 12, 1930

From Adrenal Cortex

Within the same week, almost on the same day, two groups of scientists, working separately at different institutions, have announced the extraction of a potent substance from the cortex of the adrenal gland. A report of studies on this important subject by Dr. W. W. Swingle and J. J. Pfiffner of Princeton University appeared in *Science* almost simultaneously with the report made to the American Physiology Society meeting at Chicago by Prof. F. A. Hartman and Dr. K. A. Brownell of the University of Buffalo.

Dr. Swingle and his associate had previously reported the production of adrenal cortex extract, but they have just obtained a watery preparation which is much more powerful than their first extract.

Prof. Hartman and Dr. Brownell of Buffalo call their extract cortin. It is obtained differently.

The cortex, or outer layer, of the adrenal glands is known to be essential to life. When both glands are entirely removed death follows, although a small portion of cortex is sufficient to maintain life. Scientists have been investigating the subject trying to discover whether the cortex has any other functions and also trying to obtain a cortical extract.

Dr. Swingle and his associate removed both glands in a series of cats and then administered their new, watery extract. The cats remained alive in perfectly normal condition up to forty or fifty days. Some were still living after eighty days. They could not be distinguished from normal unoperated cats, and ate, played, fought with one another and kept themselves sleek and clean. Cats which had had both adrenals removed but which received no extract lived only seven days, on the average, the Princeton investigators reported. They believe that they have successfully extracted from the adrenal cortex an active hormone which maintains life in animals that have had both adrenal glands removed.

The Buffalo investigators reported that their extract could safely be injected into human beings, and that it had been given by mouth with beneficial results. These men also worked with animals and found that their extract would prolong life in animals which had no adrenals so that the treated animals lived from two and one-half to three times as long as the untreated animals.

Medicine
Science News-Letter, April 12, 1930