Nile Swimmers "Crawled"

Archæology

The "modern" crawl stroke recently adopted by European and American swimmers was nothing new to the Egyptians 3,000 years ago, according to Prof. James E. Dunlap, of the University of Michigan, writing in *Art and Archæology*.

Study of ancient mosaics and vases has convinced Professor Dunlap that overhand strokes were practiced by swimmers of Egypt, Rome, and Greece. The Assyrians appear to have been less at home in the water. In one scene of Assyrian soldiers crossing a river, two of the three soldiers stopped to blow up inflated skins, so that they would have support. Clinging to the long, balloon-like skin, the soldier pushed back and down with his (*Turn to next page*)

Germs To Fight Borer

Bacteriology

A near relative of the silkworm disease which caused the famous Pasteur much grief, but also brought him much fame, is being studied in France as a possible ally in the war against the corn borer.

It is known that insects suffer from a multitude of diseases, many of which are epidemic and destroy large numbers, but the practical applications of insect pathology present an almost unexplored area of science. Insect diseases, like those of man, are usually caused by microbes such as bacteria, fungi, or the ultra-microscopic group of viruses.

Dr. A. Paillot, in a paper presented at a recent meeting of the French Academy of Science, reported the discovery of two new protozoa or single-celled animals which are parasites of the European corn borer in certain parts of France. One is a flagellate and propels itself forward and backward with a nearly ultramicroscopic whip-like appendage. It is quite rare and is found occasionally in the internal organs of the corn borer larva.

A more promising disease is a microsporidia to which Dr. Paillot proposes to give the name *Perezia pyrausta*. It spreads decidedly in an epidemic fashion, and has been observed frequently in two regions of the Jura.

Dr. Paillot says that externally the sick corn borer larvæ do not differ from the healthy larvæ, but that internally they are pretty badly wrecked. The disease is transmittable from individual to individual through the intestinal tract.

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Keeping Cool A Science

Physiology

Keeping cool is really a science, but one which the everyday man can practice. Many of the customs we follow in our struggle to beat the temperature have a scientific background, though few of us realize it. For instance. we instinctively wear loose, porous clothing, and not too much of it, knowing that we feel cooler so.

The reason is that such clothing allows the heat generated in our bodies to pass into the air away from our bodies. For it is not a question in hot weather of how to keep the heat out but of how to get the heat out.

No matter what the weather, we have to keep our body temperature at normal. In cool weather the heat passes from a higher to a lower temperature as easily as water runs down hill. When the temperature around our bodies gets as high as the temperature inside them, it is difficult to get rid of the surplus heat of our bodies.

One way to do this is to keep the body from making much heat by eating very little food, especially those foods that have a high fuel value and make the body fires burn faster and hotter. Such foods are sweets and starches and proteins, which the dietitians call high-calory foods.

Another way of keeping cool is by perspiring. Water can carry more heat without showing it than anything else in the world. Of course, we must drink plenty of water, in order to replenish the supply in our bodies. People who do not perspire much will be more comfortable in hot weather if they drink hot tea and coffee rather than the iced variety, as the warm drinks will induce extra perspiration.

If you sweat a quart of water you have gotten rid of about 500 calories of heat. But if the air already holds all the water it can take up, you cannot get cool by sweating off the heat, which is why a muggy day with high humidity is so uncomfortable. On such a day you must drive the hot, moist layer of air away from your skin, using a fan if there is no breeze available.

Of course, everybody drinks more water during very hot weather, but if just a pinch of salt is added it will help greatly toward enduring the heat.

Scientists investigating conditions in hot coal mines and steel plants found that the workers who succumbed rapidly when working in a temperature of about 100 degrees, were able to stand it better when this small amount of salt was added to their drinking water.

At high temperatures, especially when working hard, the body gives off large amounts of water in perspiration. This is Nature's way of keeping us cool. But our bodies also lose much salt with the perspiration, which is what causes a large part of the physical exhaustion felt when working in hot weather. To overcome this add a pinch of salt to your drinking water.

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Ice Cakes Standardized

Home Economics

Now the ice cake that meltingly does its part in combatting summer heat is to be standardized. The U. S. Bureau of Standards has issued standard weights and maximum sizes for the chunks of frozen water that the ice man puts into the refrigerator daily. Cakes of 25, 50, 75, 100 and 150 pounds are declared standard and for these weights maximum dimensions are specified. The smallest weight, 25 pounds, must measure less than 12 by 12 by 8 inches, while the 150 pound cake must not exceed 12 by 24 by 24 inches. Manufacturers will shape the ice compartments of refrigerators so that the standard cakes will slide into them easily.

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Army To Test Explosive

Chemistry

The region of Fort Humphrey, Virginia, will echo to the explosions of radium atomite, new explosive claimed to be more powerful than T. N. T., some time this month. According to the office of the Chief of Engineers, of the War Department, Major William H. Lanagan, of the Board of Engineer Equipment, has requested such a demonstration. A preliminary test of the explosive invented by Capt. H. R. Zimmer, of Los Angeles, former army officer, was made at Pasadena by Lt. Col. L. M. Adams, of the California Institute of Technology. Lt. Col. Adams reported to the Chief of Engineers, and the board, after examining his report, has decided that the new explosive "appears to have military value."

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