

BOTANY

## "Hydroponic" Soilless Farm Created on Wake Island

WAKE Island, tiny dot of coral far out in the Pacific, is to be the site of the newest soilless "farm" for growing green vegetables according to the system originated by Dr. W. F. Gericke of the University of California. With a total surface area of only half an acre, it is expected to supply the table needs of passengers and crews of trans-Pacific clipper planes that use Wake as a way station on the long flight.

The "farm" will consist of a series of shallow tanks, now rapidly being installed. These will be filled with water in which mineral fertilizer salts are dissolved in the right concentration to feed green plants. Over the tops of the tanks wire netting will be stretched, on which, supported in sawdust, excelsior, or other suitable material, tomatoes, peas, beans, carrots, and other vegetables will grow, drawing their water and mineral nutrients out of the tanks in which their roots will be dangling.

Wake Island will represent the westernmost extension of Dr. Gericke's system of soilless farming, or "hydroponics." Similar set-ups of tanks for growing vegetables and flowers have been established under his supervision at a number of places along the Pacific coast

of the United States, and recently the system has been extended to the eastern part of the country. Dr. Gericke has just returned from an inspection visit to hydroponic "farms" in the East. He states that a number of European governments have expressed lively interest in his method of growing crops without soil.

Extensive experiments have been carried out with a large variety of economic plants, even including a full-sized banana tree. Results indicate that for the present at least profits cannot be expected from crops consisting of dry seeds, like wheat and other grains, particularly when these also depend for their value on high protein content. It appears more profitable to raise plants in the fresh vegetable class, which have high water content and are valued mainly for carbohydrates, vitamins, attractive flavor, and mineral salts. Tomatoes have thus far proved the most successful of hydroponic crops.

The system is used either in greenhouses, or out of doors where the climate of the growing season is favorable. In the continuously mild tropical climate of Wake Island, cultivation will be carried on entirely in the open.

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thermore, the blood supply, traceable through the grooves in which the arteries fitted under the skullcap, was relatively scanty and not elaborately distributed. This again is an apelike character; modern human cranial arteries that serve the forebrain are much more abundant and elaborately developed.

The jaws and teeth of Peking Man were the subject of another discussion when Dr. Weidenreich and a group of his American co-workers held a round-table.

Peking Man's teeth, like his brain, are undoubtedly human, yet show some interestingly simian features. They are bigger and longer-rooted than modern human teeth, and there is no sign of reduction or degeneration in the wisdom teeth. The pattern of the grinding surfaces on the molars is complex, like that of ape teeth, in contrast to the relatively simple, cross-grooved pattern of teeth in modern man.

Of especial interest is the total absence of dental caries, traces of pyorrhea, and other symptoms of tooth troubles practically universal among present-day human beings and frequent even among more recent Stone Age races. Among the 148 teeth of Peking Man thus far found, not one is defective.

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GENERAL SCIENCE—SOCIOLOGY

## Propose Society to Study Science's Social Impacts

A MOVEMENT looking toward the formation of a Society for the Study of the Social Relations of Science (S. R. S. it is proposed to call it for short) has been launched by an inquiry undertaken by the British science journal, *Nature* (April 23).

Born of a growing interest in the profound effects of science upon society, this new organization would first be formed in Great Britain and then in other great nations.

The idea of S. R. S. is discussed with general approval by 38 leading British men of science who received *Nature's* proposal in advance of publication.

Three definite trends were cited as leading up to the S. R. S. proposal: 1. Resolutions of the American Association for the Advancement of Science last December stressing the social relations of science. 2. The British Association's move of several years ago for the discussion of social problems which science had helped to create and might help to solve. 3. Action by the International Council of Scientific Unions,

ANTHROPOLOGY

## Brain of Peking Man Shows Many Apelike Features

CASTS made of the space once occupied by the brain, in the skulls of half-million-year-old Peking Man, show many remarkable apelike features, despite the indubitable fact that this Oldest Inhabitant was definitely human. Some of these features were described by Dr. Franz Weidenreich, leader of excavation work in the Choukoutien caves near Peiping, in the annual James Arthur Lecture, at the American Museum of Natural History.

Although the total volume of Peking Man's skull space is definitely in the human range and far above that of the

apes, the distribution of that space is not in accordance with present-day specifications, Dr. Weidenreich disclosed. The arch of the cranium is very low, and the greatest breadth of the skull lies low and toward the rear. All of this minimizes the forebrain, usually considered to be the center of the higher, more intellectual part of the brain's activities.

Not only in bulk but also in detail was the forebrain of Peking Man less developed than that of modern human beings. The folds and furrows were fewer and simpler, more on the ape pattern than those of modern brains. Fur-