

GENETICS

Radish-Cabbage Hybrid Illustrates the "Impossible"

SOMETHING declared impossible by many non-scientific opponents of evolution was exhibited at the Sixth International Congress of Genetics in Ithaca. Fertile crosses between distinct species, and even between separate genera, are growing in a special garden which has been laid out on the grounds of Cornell University.

For some reason, the alleged infertility of crosses or hybrids has long been a prime talking point among anti-evolutionists, though such crosses have long been known to be fertile in some instances.

The most outstanding example on display is a hybrid between radish and cabbage, made by a young Russian scientist, Dr. G. D. Karpechenko of the Leningrad Botanical Institute. Radish and cabbage, though botanically related, are separate genera, and are as far apart for plants as domestic cattle and American buffalo or bison are for animals. The cross was successfully made, and the big lusty plants, looking like giant radish leaves on a cabbage stalk, that are now growing in the garden at Cornell University represent the fifth generation. The cross therefore is certainly not sterile.

Another successful cross made by Dr.

Karpechenko is between cabbage and Abyssinian mustard. These plants are somewhat more closely related than radish and cabbage, being separate species within the same genus. Still another thriving inter-specific cross growing in the garden is one between cauliflower and broccoli. This hybrid was originated by Dr. C. H. Pearson, of the California Agricultural Experiment Station, Davis, Calif.

Science News Letter, September 3, 1932

MEDICINE

Invisible Germs Should Not Stop Disease Fight

JUST because the viruses which cause such diseases as infantile paralysis and the common cold cannot be seen or cannot be grown on lifeless media does not mean that the diseases themselves cannot be controlled, Dr. T. M. Rivers of the Rockefeller Institute for Medical Research told members of the American Society for Clinical Investigation, in an address published in a current issue of *Science*.

The success of Jenner's vaccination against smallpox was firmly established before it was known that bacteria or "germs" cause disease, Dr. Rivers pointed out.

"In order to know an infectious agent it is not essential to see it or to grow it on laboratory media any more than it is imperative to see electricity in order to recognize it and to control it for our daily needs," he said.

While it would be of great importance to the naturalist to know the exact nature of these viruses, Dr. Rivers does not see that it would lead to immediate and great advances in the handling of the virus diseases.

"There are successful methods of vaccination against many virus infections, notably smallpox, yellow fever, rabies, fowl-pox, canine distemper and cattle plague," Dr. Rivers stated.

"I have little patience with those who state that just as soon as the viruses are cultivated on lifeless media it will be possible to make vaccines to prevent and sera to cure the diseases caused by them.

"Numerous diseases spread by means of water, milk, food, filth and insect vectors have been controlled not by preventive vaccines and curative sera, but largely through the improvement of sanitary conditions.

"Many viruses obtain entrance into their hosts by way of the upper respiratory tract," he continued, referring to colds, influenza and the like. "Our inability to control diseases arising in this manner is not due to the fact that we have not used some special kind of media for the cultivation of the viruses, but because it is essential that we breathe, and as yet no one has suggested a practical method of obtaining uninfected air for human beings living among their fellows."

Science News Letter, September 3, 1932

NUMISMATICS-ORNITHOLOGY

New Washington Quarter Has Wrong Species of Eagle

THE BALD or white-headed eagle, chosen by the founders of the Republic as the national emblem, has been cheated out of a place on the Washington memorial twenty-five cent piece just issued. The bird that roosts on the lictor's fasces on the reverse of the new coin has feathered "trousers" coming clear down to his feet, which marks him as a golden eagle. The golden eagle is native to the Old World as well as to America, and is displayed by the coats-of-arms of several European nations.

The bald eagle, a strictly American bird, has the "trousers" only in his juvenile stage; when mature he is bare-shanked.

The bald eagle is correctly shown on all save one of the other United States coin where an eagle appears at all. The other exception is the half-dollar that came into use just before the World War, on which a "trousered" golden eagle is shown. On all the older coins, the bird is unmistakably a bald eagle.

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▼ The Science Service radio address next week will be on the subject,

R HARDENING OF THE ARTERIES

by

A Dr. Herbert Fox

D Director of the Pepper Laboratory of Clinical Medicine at the University of Pennsylvania

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