

Dr. Ernst Frickhinger, director of the Museum of Prehistory in Nördlingen, not long ago dug up some broken pottery vessels at the site of a New Stone Age village in southern Germany. In one of them was a dark, glistening mass that appeared to be of organic nature. Dr. Frickhinger submitted a sample to the noted Berlin microscopist, Dr.

Johannes Grüss, who identified it as the remains of the special kind of bread used as the starting-point of the brewing process by all ancient peoples who knew how to make beer at all.

This find constitutes the first evidence that any people of the Late Stone Age drank beer.

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GENETICS

300 Generations Descended From One Pair of Insects

THREE hundred successive generations of descendants of one individual have been reared during the past fifteen years in the laboratories of the Johns Hopkins University. This constitutes the longest single breeding experiment ever carried out, so far as known, Prof. Raymond Pearl, noted Johns Hopkins biologist, stated in announcing its result to the Washington Academy of Sciences. Translated into terms of human generations, it would carry us back to 7,000 B.C., at the dimmest twilight beginnings of the Bronze Age and before the dawn of history.

Crowding 300 generations of a living organism into half a human generation of time was made possible by the use of the little gnat-sized insect *Drosophila*, known variously as fruit-fly and yeast-fly. Its life-cycle can be completed in three weeks, instead of the human thirty years.

The experiment consisted in starting with a single normal male, mated to a female with vestigial wings. Normal males were selected from each hybrid generation, and always bred back to vestigial-winged mates. In the end, the "genes," or hereditary units determining normalcy in wings, were still there, striking evidence of the permanence and persistency of these factors in the reproductive process.

Longer Persistence

Prof. Pearl then called attention to far longer persistence in hereditary patterns of other organisms in nature. Some of the lower forms of animal life have come down unchanged through tens of millions of years.

Yet for all this demonstration of potency on the part of the hereditary units, the speaker cautioned against too easy

acceptance of doctrines ascribing all importance to heredity as against environment in human affairs.

"The full implications of the reciprocally determinative influences of organism and environment seem to me to have been generally somewhat less than adequately valued in the last century's development of biological thought," he said, "and certainly an extremely inadequate amount of first-rate research has been put upon the matter."

Nor was he willing to subscribe to the doctrine that birth control, in limiting the reproduction of the "upper classes" while the poor continue to breed, is "ruining the race." Making it plain that he supports the idea of birth control, and especially that he believes in checking the increase of the hereditarily defective, Prof. Pearl declared:

Why are They Superior?

"It is assumed that generally speaking and with negligible exceptions the more fortunate social and economic classes are in that position because they are composed of not only mentally, morally, and physically, but also genetically superior people. But it may be alleged with at least equal truth that these very people who are regarded as mentally, morally and physically superior are that way in no small part only because they and their forebears have been fortunate socially and economically.

"The analogy often drawn between human breeding and livestock breeding is in part specious and misleading. In animal breeding it has been learned that the only reliable measure of genetic superiority is the progeny test—the test of the quality of the offspring actually produced. Breeding in the light of this test may, and often does, lead to the

rapid, sure, and permanent improvement of a strain of livestock.

"But when the results of human breeding are interpreted in the light of the clear principles of the progeny test the eugenic case fares badly. The vast majority of the most superior people in the world's history have in fact been produced by mediocre or inferior forebears; and conversely the admittedly most superior folk have in the main been singularly unfortunate in their progeny.

Science News Letter, March 30, 1935

ETHNOLOGY

Iroquois Indians Had Code for Murderers

RULE number one for murderers: The slayer positively must stay beside his victim until discovered.

It sounds nonsensical, certainly. In this day and age, a murderer defies all laws, takes any chances, saves his skin by any wild maneuver he can think of.

Nevertheless, there used to be rules for murder in America. Iroquois Indians in the Great Lakes country and New York State had strict ones, so an ethnologist has discovered. What is more, an Indian murderer kept the rules, if he knew what was best for him.

How crime has changed in America is vividly shown by these Iroquois ideas on murder, reconstructed by J. N. B. Hewitt of the Bureau of American Ethnology, who has long studied the social organization of these Indians.

An Iroquois murderer, Mr. Hewitt finds, would steel himself to stay right beside the body until some one came along and found him—even if he waited a week in that gruesome company. His hope was that whoever discovered him would take him into custody without violence. Then, his kin would pay an agreed amount of wampum to the bereaved relatives. After financial settlement, the murder would blow over and be forgotten.

The murderer tensely waiting beside his victim knew, however, that there could be another outcome, far less pleasant. If he was found first by a relative of his victim, the enraged relative could slay him on the spot. That was right and proper, according to murder rules, and no weapons were barred.

But, of course, if the avenger slew the murderer then he, in turn, became a murderer. He must stay there beside the two bodies awaiting apprehension.

That could go on indefinitely, it might seem, until a string of victims accumulated.

In actual life, it seems that the Indian sentiment was to avoid needless piling up of tragedy. Honor of the family was generally saved by taking wampum rather than blood.

Escape, the first thought of murderers in the white man's America, seems to have been the last resort of the Iroquois killer. He had little hope of casting suspicion on the wrong man, and still less hope that mystery would swallow up the situation. In so small and closely organized a society as the

Iroquois Indian world, personal grudges and hates were too much public property for murder crimes to remain unsolved.

There was no way for the Indian slayer to brazen it out. Escape meant fleeing to another tribe, asking refuge. If they needed warriors badly they might take him in; otherwise they would add his scalp to their collection. Or, he could vanish into the wilderness to become an outcast, there to starve, or to wander hermit-like until some Indian came along and dispatched him. Killing strangers was permitted, by the crime code in those days.

Science News Letter, March 30, 1935

fection with measles, within a period of a few days, determines in large measure whether the disease will develop in the susceptible children. In this respect, measles is like tuberculosis.

Science News Letter, March 30, 1935

PHARMACOLOGY

Candy Pills Not For Children

NO ONE in his right mind, of course, would think of letting three-year-old Susie eat her fill of chocolate-coated or pink candy laxative pills. Mother keeps them on the top shelf of the family medicine chest and the manufacturing pharmacist may even label them Not For Children.

Susie, however, cannot read the label and she has a way of getting her hands on things not meant for her and, unfortunately, of putting them into her mouth. When they happen to be laxative pills, the results are too often tragic.

These pills generally contain strychnine, a poisonous substance. The amount of strychnine in each pill is not very great—1/120 grain—not enough to hurt an adult. One of them might not hurt a child either, but the danger is that the child who gets at them unobserved does not stop with one. Children have been known to eat as many as 80 to 90 of these pills. (Turn to page 198)

MEDICINE

Convalescent Serum, Hygiene Preventives of Measles

WITH measles on the rampage and new cases being reported at the rate of over 30,000 a week, particular interest attaches to the latest reports on how the disease spreads and on results obtained with convalescent serum as a preventive measure.

Preventive serums have captured the popular fancy, perhaps because of their appearance of magic. A prick of a needle, a "shot in the arm," and presto! your body is endowed with a mysterious, invisible power that protects you against diphtheria or typhoid or some other dreaded malady.

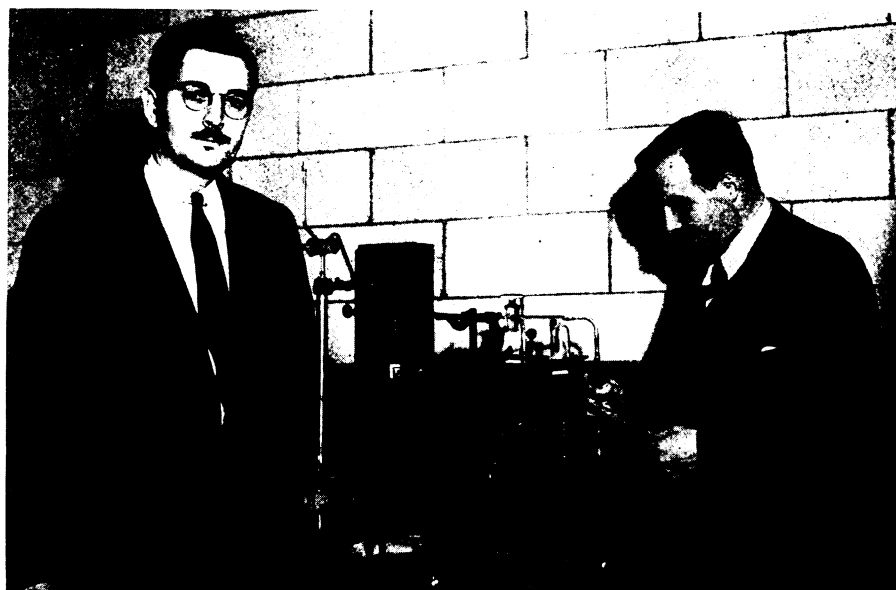
In the case of measles, convalescent serum from the blood of recently recovered measles patients seems to give a fair measure of protection. Equally important, however, are less dramatic hygienic measures.

Measles spreads more rapidly in congested districts and in homes where the hygiene is poor, two New York physicians, Drs. Samuel Karelitz and Bela Shick, the latter of diphtheria test fame, have just reported (*American Medical Association Journal*, Mar. 23). They class as homes of good hygiene those in which the sick child is isolated from other children at an early stage of the disease.

A study was made by these physicians of 106 children who had been exposed to measles. All had been exposed to the disease for from two to five days. All were given convalescent serum in the same amounts. The serum gave no protection to the children who lived in

homes where the hygiene was poor. It protected over half of the children in homes where good hygiene prevailed. Eighty-three per cent. of children who were in hospitals were protected. Children coming from careless homes must be given much larger doses of measles convalescent serum if they are to escape the disease.

These child specialists also report that the degree and frequency of in-



RARE WATER

In the tube which Prof. Hugh S. Taylor (right) is indicating with his pipe are ten drops of water very rich in triple weight hydrogen. The apparatus shown was used to produce these precious drops from 75 tons of ordinary drinking water. At the left is Dr. Pierce W. Selwood who did the research under the direction of Prof. Taylor, at Frick Chemical Laboratory, Princeton. (See SNL, March 23)