

EPIDEMIOLOGY

Encephalitis Outbreak Possible During Summer

Public Health Authorities Believe New Epidemic of Sleeping Sickness Will Not Strike St. Louis This Year

BECAUSE of the possible occurrence of encephalitis in other communities during next July, August and September, Dr. David P. Barr of St. Louis pointed out salient features of the epidemic occurring in his city last summer for the benefit of physicians from all over the country at the meeting of the American College of Physicians.

Dr. Barr explained that these outbreaks, if they occur, may be of similar character and of greater or less severity than the St. Louis epidemic which involved about 1,000 of the population in that area.

One location where the disease will probably not occur next summer is St. Louis, in the opinion of health authorities. Another factor, about which little is known, but which may influence the occurrence of the disease is climate.

The summer of 1933 in St. Louis was unusually hot and dry, Dr. Barr reported. June was the hottest ever recorded and the rainfall in June, July and August was the lowest in the history of the city. A prolonged drought followed heavy spring rains.

Similar climatic conditions prevailed at the time of a similar outbreak of encephalitis in Japan a few years ago. Health authorities do not yet know, however, whether there is any but coincidental relation between the climate and the appearance of the disease.

Caused By Virus

The disease is caused by a filterable virus. Blood of patients who recovered from the disease, and to a lesser extent of doctors and nurses who were exposed to it but did not get sick, contain properties that neutralize the effect of the causative virus, Dr. Barr said.

In the St. Louis outbreak the disease was fatal in one out of five cases, but the death rate was much higher in persons over forty than those under forty years of age. Most of the deaths were attributable in part to complications, chiefly pneumonia. Kidney disease, high blood pressure and harden-

ing of the arteries when present before the onset of encephalitis seemed to play a role in lessening the chances of recovery.

One favorable aspect of the disease as it occurred in St. Louis is that the nervous changes generally following in the wake of encephalitis have not so far appeared in patients who recovered.

"It is of special importance," Dr. Barr said, "that examination of many patients three months after the epidemic revealed no new symptoms referable to encephalitis and no evidence of progression of the disease."

Science News Letter, May 5, 1934

CHEMISTRY

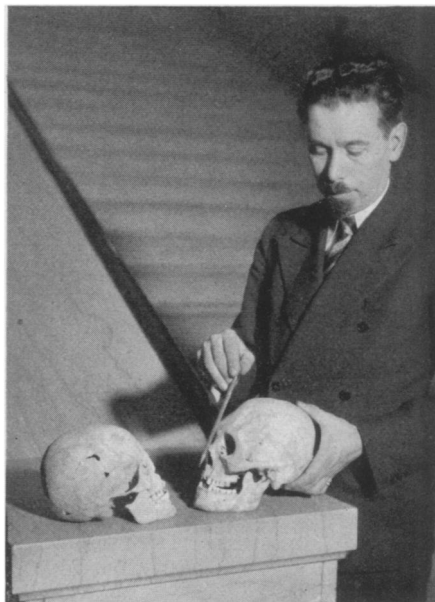
Cheaper Process for Making Charcoal From Wood Waste

PATENT for an improved process of making charcoal, believed to be the cheapest possible method of obtaining this product from wood waste, has been granted to Prof. O. F. Stafford, head of the University of Oregon chemistry department.

The improved process involves the feeding of a stream of chipped wood and sawdust into a rotating cylinder, where the material is dried and carbonized by heat produced principally as a result of the burning of the combustible carbonization products of the wood itself. The method makes no attempt to recover any of the other by-products of wood waste, and was perfected chiefly because of expense involved in making charcoal as only one of the products.

The Stafford process differs from similar processes by incorporating a device which permits the carbonizing material to be protected from furnace gases containing hot free oxygen, while at the same time permitting the combustible decomposition products of carbonization to burn and thereby supply the heat necessary for the drying operation.

Prof. Stafford began work upon an



GOTHS WERE HIGH-BROWS, TOO

A high-brow Goth sounds paradoxical to us, accustomed as we are to thinking the worst about "Goths and Vandals." But archaeologists, exploring in Crimea, have evidence that Gothic nobility set store by high foreheads. Careful mothers of high born children wrapped the pliant heads tightly and arranged cradle boards so that young skulls attained a noble loftiness. Commoners remained "low-brows" from birth to death. A joint expedition from the University of Pennsylvania Museum and the State Museum for the History of Material Culture in Leningrad discovered the skulls shown above in catacomb burials in a city believed to be ancient Duros, fortified Gothic capital about 600 to 800 A.D. Eugene Golomshtok, field director of the Museum expedition, is shown pointing to an artificially made high-brow Gothic skull in contrast to the skull of a commoner.

improved method of utilizing wood wastes by carbonization about twenty years ago at the university as a research project. By 1916 this work had led to the discovery of a continuous process for the carbonization of such material, which involved not only the formation of charcoal but the recovery of all other carbonization products. The Stafford process was tried out on a semi-commercial scale and was installed commercially in a large plant in the South. Later a still larger installation was built at the plant of the Ford Motor Company at Iron Mountain, Michigan.

It was while working on the carbonization project that Prof. Stafford attacked the problem of producing charcoal from waste wood in the cheapest possible way without regard to other by-products recovery.

Science News Letter, May 5, 1934