

MEDICINE

Harmless Relative Fights Germ Of Syphilis to Cure Paresis

Spirochete From African Tick Induces Fever to Combat Paralysis More Safely Than Malaria Germs Now Used

PARESIS, now combated in some cases by inoculating the patient with malaria germs, will be subjected to a new attack along a somewhat similar line, but with a harmless relative of the syphilis germ substituted for the malaria organism which sometimes causes considerable suffering and even occasionally death while it casts out the original disease.

At the meeting of the American Association for the Advancement of Science in Pasadena, Calif., this week, Dr. Frederick Eberson and William G. Mossman, both of Mount Zion Hospital in San Francisco, told how they have succeeded in growing artificially a harmless spirochete capable of causing a temporary but self-curing fever that operates against paresis much as malaria now does. The syphilis germ, basic cause of paresis, is also a spirochete; so the new treatment is a case of setting cousin against cousin.

Old and New Methods

The new germ was discovered in ticks in North Africa, and has been used in fever therapy there. However, the technique used in Africa by European doctors has involved the inoculation of guinea pigs with the germs taken from the ticks, and then the injection of blood from the guinea pigs into the patients.

The method developed by the two San Francisco scientists eliminates the time loss and uncertainty introduced by the use of guinea pigs. A very small amount of the pure laboratory culture of spirochetes is used directly on the patients. About a week later they develop a strong fever, which runs its course in about seven days. No medication is necessary to stop it, as is the case with malaria. The fever is self-limiting, and it can be provoked anew by re-inoculation as often as is necessary for the benefit of the patient.

Growing the germs in glass vessels in the laboratory also simplifies the hospital's problem of keeping a supply on hand for treatment. Malaria germs have to be obtained from malaria patients, or in blood samples drawn from paresis

patients undergoing malaria fever treatment, and such blood samples of course always run the grave chance of carrying fresh syphilitic or other infection with them. But with the spirochetes growing in glass tubes or flasks, and keeping in useable condition for several months in an incubator, the hospital physician is independent of a living source for the germs of the beneficent fevers he desires to use.

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ZOOLOGY

European Wisent Crossed With American Buffalo

EXPERIMENTS in crossing the wisent, or European bison, with its near relative, the American bison, are being conducted in the German forest reserve at Springe, Hanover. The initial stock of animals there consisted of a pure-blooded wisent bull, two hybrid wisent-bison cows and one hybrid heifer. The three hybrid animals were purchased from three different zoos: Antwerp, Berlin and Stellingen.

SEISMOLOGY

New Earthquake Observatory Is Examined by Scientists

A FEATURE of the recent meeting of the eastern section of the Seismological Society of America in Columbia, S. C., was a demonstration of the new seismological observatory recently installed there and operated jointly by the University of South Carolina and the U. S. Coast and Geodetic Survey.

It is the most southerly of seismological stations on the Atlantic seaboard, and is regarded as most advantageously placed with relation to the region of the great Charleston earthquake of 1886 and the seismically active Southern Ap-

palachians to the west. It is expected to be useful also in obtaining fuller information about earthquakes originating in the Caribbean basin and on the west coast of South America, as well as data on earthquakes occurring elsewhere over a considerable part of the earth.

In the cooperative arrangement, the University of South Carolina furnished the site and erected the massive piers necessary for the support of the instruments, while the U. S. Coast and Geodetic Survey installed the instruments and defrays the operating costs.

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These hybridizing experiments, says Dr. Theodor Ahrens, an American zoologist living in Berlin, are not regarded with entire favor by European naturalists. There are very few survivors of the once vast herds of wisent that roamed Europe and the Near East in ancient and medieval times, and scientists would like to keep the species unmixed if possible.

The World War has brought the wisent much nearer to total extinction than the American bison ever approached as the result of the wholesale hunting of the last quarter of the nineteenth century. The two main herds, one in the Baltic region, and the other in the Caucasus, numbered well over a thousand head in 1914 but both of these herds were wiped out as the result of war and revolution. Now only about 70 animals are left alive in European zoological gardens and on private estates.

So much reduced are their numbers that the recent shooting of a bull and a cow on the estate of Prince Pless in Upper Silesia was almost an occasion for mourning among zoologists. However, the animals were quite aged—15 and 20 years old respectively—and the bull was lame; so that the killing was really necessary.

In spite of their present low estate, the wisent may yet stage a comeback comparable to that of the American bison herds. They are being very solicitously cared for, and a register of all animals known to be free of hybrid blood is maintained.

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