

species of insects, is expected to supply valuable information to scientific investigators and to give guidance to the different administrations, by indicating the lines of advance of the disease and the districts which require special protective measures. The duties of the director of the bureau will for the present be undertaken by Dr. A. G. Bagshawe, of the Uganda Medical Staff.

BEAUPERTHUY ON MOSQUITO-BORN DISEASES

DR. AGRAMONTE, in an article quoted from the *Havana Cronica Medico* by the *British Medical Journal*, calls attention to the pioneer work of Louis Daniel Beauperthuy, born in Guadeloupe in 1808. Writing in the *Gaceta Oficial de Cumanà* in May, 1853, Beauperthuy says:

To the work I undertook (health officer in a yellow fever epidemic in Cumanà) I brought the knowledge gained during fourteen years' microscopic observation of the blood and secretions in every type of fever. These observations were of great service to me in recognizing the cause of yellow fever and the fitting methods of combating this terrible malady. With regard to my investigations on the etiology of yellow fever I must abstain for the present from making them public. They form part of a prolonged study, the results of which are facts so novel and so far removed from all hitherto accepted doctrines that I ought not to publish them without adducing fuller evidence in support. Moreover, I am sending to the Académie de Paris a communication which contains a summary of the observations I have made up to the present, the object of which is to secure the priority of my discoveries concerning the cause of fevers in general. . . .

The affection known as yellow fever or black vomit is due to the same cause as that producing intermittent fever.

Yellow fever is in no way to be regarded as a contagious disease.

The disease develops itself . . . under conditions which favor the development of mosquitos.

The mosquito plunges its proboscis into the skin . . . and introduces a poison which has properties akin to that of snake venom. It softens the red blood corpuscles, causes their rupture . . . and facilitates the mixing of the coloring matter with the serum.

The agents of this yellow fever infection are of a considerable number of species, not all being of equally lethal character. *The zancudo bobo*, with legs striped with white, may be regarded as more or less the house-haunting kind. . . .

Remittent, intermittent and pernicious fevers, just like yellow fever, have as their cause an animal, or vegeto-animal virus, the introduction of which into the human body is brought about by inoculation.

Intermittent fevers are rarer in proportion to the prevalence of mosquitos, and disappear or lose much of their severity in places which, by reason of their elevation, have few of these insects.

The expression "winged snakes" employed by Herodotus is peculiarly applicable to the mosquito and the result of its bite on the human organism.

Marshes do not communicate to the atmosphere anything more than humidity, and the small amount of hydrogen they give off does not cause in man the slightest indisposition in equatorial and intertropical regions renowned for their unhealthiness. Nor is it the putrescence of the water that makes it unhealthy, but the presence of mosquitos.

It was to the *Gaceta Oficial de Cumanà* that Beauperthuy seems to have written most fully, but he made more than one communication to the Académie des Sciences. One of these, dated from Cumanà, January 18, 1856, is entitled "Researches into the Cause of Asiatic Cholera and into that of Yellow Fever and Marsh Fever," and in this he says that as early as 1839 his investigations in unhealthy localities in South America had convinced him that the so-called marsh fevers were due to a vegeto-animal virus inoculated into man by mosquitos.

SCIENTIFIC NOTES AND NEWS

OXFORD UNIVERSITY has conferred its doctorate of science on Dr. F. Raymond, of the Hôpital de la Salpêtrière, professor in the University of Paris; J. J. Harris Teall, M.A., F.R.S., director of H.M. Geological Survey; and James Ward, ScD., fellow of Trinity and professor of mental philosophy in Cambridge University.

DR. BIRKELAND, professor of physics at Christiania, has been given the honorary