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MEDICAL SCIENCE AND THE TROPICS.

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The pressing need for effectively occupying the northern half of Australia should ensure practical interest in the proposal to establish a Chair of Tropical and Semi-tropical Agriculture in the Queensland University. Funds are in hand to equip an efficient laboratory, but a further sum must be raised to provide a competent staff, qualified, under expert guidance, to conduct extensive scientific investigations, and to initiate pioneer work in the field of territorial development. Advocates of the scheme point out that the Queensland University is admirably situated for tropical studies, on the threshold of tropical Australia, and within easy reach of New Guinea, the Straits Settlements, and Singapore. Scientific knowledge of the capacities of these areas will be the surest foundation for successful settlement by white races, if they can adapt themselves to the climatic conditions. This consideration is dependent largely upon the progress of medical science, and the possibility of overcoming and eradicating the diseases and pests peculiar to torrid regions. A school of agriculture, by studying such subjects as parasitology and helminthology, will assist and supplement researches by schools of tropical medicine. The remarkable benefits achieved through the application of sanitary and hygienic teachings to town and village communities in equatorial Africa, America, and India warrant the expectation that greater triumphs will be won, and that many places now avoided as plague spots by Europeans will eventually be made habitable and even salubrious.

Sir Ronald Ross, the eminent physician who has done so much to remove from Sierra Leone the reproach of being "the white man's grave," is convinced that the backwardness of Africa is due principally to the prevalence of diseases which white men could not overcome. Africa is near to Europe, and in ancient times there was a high civilization in Egypt. There have been many routes of communication, both across the desert, and by sea down the west and east sides of the continent; and yet civilization was repulsed at every step. The tropical diseases, which slew so many immigrant Europeans, have been almost equally disastrous to the natives. Among indigenous populations, malaria often affects every one of the children, probably kills a large proportion of the new-born infants, and renders the survivors ill for years; only a partial immunity in adult life relieves them from the incessant sickness. When it exists in an intense form, the malady always paralyses the material prosperity of a country. Until recently visitors to tropical Africa were almost certainly attacked by yellow fever, and the chances of death were as one is to four. Perhaps the greatest enemy of all is dysentery, which formerly killed thousands of whites and millions of natives in India, America, and all hot countries, and rendered survivors ill for years. Malaria has always been the bane of Africa and India, and the Bilharzia parasite, of Egypt. Sleeping sickness and kala-azar still claim thousands of victims. Life in

the tropics may also be made miserable by such maladies as dengue and sandfly fever, filariasis, and various skin diseases. In many parts of India the death rate is still between 50 and 60 per 1,000 annually!

Tropical medicine and bacteriology have during the last 30 years discovered the origins of the more fatal maladies. Malaria has been shown to be due to a minute animal parasite, which is conveyed from man to man by Anopheline mosquitoes. Filariasis is carried by another group of mosquitoes; and yellow fever and dengue, although their actual cause has not yet been certainly ascertained, have been demonstrated to be communicable by a third group of these insects. Sleeping sickness is caused by other species of parasites, and is carried by tsetse-flies. Dysentery is known to be of two kinds—bacillary and amebic. Relapsing fevers have been traced to a third group of parasites. The causes of cholera, Mediterranean fever, bubonic plague, kala-azar, and the Aleppo boil have been ascertained. Every year, too, witnesses advances in the researches regarding beri beri and other non-parasitic ailments. The knowledge acquired is invaluable, and concerns the lives, the happiness, and the prosperity of every one residing in the tropics. Britons have special reason for gratification, because the victories already won have virtually added vast and flourishing possessions to the Empire. The forward movement in tropical medical research has hitherto been prosecuted at little or no cost to the Empire, but Sir Ronald Ross says that the work cannot be worthily continued unless the Imperial and other State authorities shall give to it their aid and patronage.