

irrigated crops. Forestry research also has been concerned with the effect of forests on water supplies, as well as the best methods of raising seedling trees in the nursery and for planting out in the forest, and the protection of East African forests against insect attack, particularly by timber borers, and the use of ultrasonic and gamma-radiographic techniques to detect attack and to measure the severity of attack are being examined. In the Veterinary Research Organization, the Division of Virus Diseases achieved interesting and important results in its investigation of rinderpest. Good progress was made in research on swine fever, and work on East Coast fever continued; but the work of the Division of Bacterial Diseases was hindered by shortage of staff.

The reorganization of the East African Trypanosomiasis Research Organization is well advanced, and all research disciplines are being concentrated at Tororo in Uganda. Studies on the trypanosomes are being developed mainly towards an understanding of immunology and the routine testing of new drugs for cattle prophylaxis is now to be the concern of the Territories, and the Research Organization is recruiting workers for fundamental studies on drug resistance. The Marine Fisheries Research Organization continued its work on tuna longlining and the North Kenya banks survey, and an investigation of the potential prawn fishing of the estuarine waters of Tanganyika was commenced.

The Pare-Taveta malaria scheme of the East African Institute of Malaria and Vector-borne Diseases, which ended in June 1959, has shown that malaria transmission can be reduced to a very low level but not completely arrested, as a result of four years residual spraying of houses, in an area of hyperendemic malaria. The dispersion and longevity of *Anopheles gambiae* were studied mainly by introducing

radioisotopes into the larval breeding pans. The completion of the 120-ft. steel tower in the Mpanga forest enabled the Virus Research Institute to expand considerably its work on the biology of mosquitoes and other blood-sucking flying insects, and the analysis of data collected over the past fifteen years indicates that while in some species of mosquito the biting pattern is uniform over a very wide area, in others the pattern varies according to locality, environment or even level in the forest. The East African Leprosy Research Centre commenced a therapeutic trial of 'Etisul', and surveys of leprosy clinics in Uganda and Kenya confirmed the low proportion of true lepromatous cases.

The East African Industrial Research Organization completed its projects on the mechanical drying of coffee and on the control of arsenic in the production of cement copper. The Meteorological Department continued its investigation on the use of cetyl alcohol to reduce evaporation from water surfaces, and a two-year programme of forecasting research was commenced in June 1959 to gain knowledge of the rain-producing agencies operative in East Africa and the improvement of weather forecasting generally. Progress is being made in the study of the strong winds which occur at high levels in tropical and sub-tropical latitudes. The Desert Locust Survey reports on control operations against swarms in the Somaliland Protectorate, January-June 1959 and July-October 1959, and in Turkana, April-May 1959, and on campaigns against hopper of the short-rains generation in the Somali peninsula conducted in the Ogaden. Reference is made in the report to the problems created for the Directorate of Civil Aviation by the introduction of jet airliners and to the difficulty of recruiting suitably trained and experienced officers capable of maintaining standards.

SUICIDE: A NEGLECTED PROBLEM

THE incidence of suicide is on the whole low in the less-developed countries, high in the more; and in some countries of very high living standards it has become a problem of considerable proportions. Between the ages of fifteen and forty-four it is the second most important cause of death in Japan, the third in Germany, Denmark, Sweden and Switzerland, and the fourth in Canada, Australia and the United States. It is also an important cause of death between the ages of forty-five and sixty-four*.

In the United States some 16,000 people commit suicide every year, as compared with 14,000 who die from tuberculosis and 40,000 who die from motor accidents; in England and Wales the number of suicides, approximately 5,000 annually, is nearly as great as the number of those who die from pulmonary tuberculosis, and slightly exceeds the number who die from motor accidents. More men commit suicide than women, and, as age increases, the preponderance of male suicides becomes greater.

Durkheim, in his classic study of suicide, divided suicide into three types: the altruistic, in which the individual's life is rigorously controlled by the customs and beliefs of a rigid society, and who commits suicide for religious or political reasons; the egoistical, in which he is insufficiently integrated into

society; and the anomic, in which he is insufficiently regulated by society and his adjustment may be upset by economic catastrophes or sudden wealth.

Inherent disposition plays an important part in suicides. The stresses of loneliness and friendlessness act with selective severity on those predisposed to mental illness, and these are often the individuals who commit suicide. Cause and effect are not easy to distinguish. Do individuals, for example, who commit or attempt to commit suicide drift into isolated environments because of the illness that drives them to take their own lives, or are certain environments conducive to suicidal tendencies? Alternatively, is loneliness both a consequence of mental ill-health and a factor increasing the chances of suicide? The whole problem of suicide is extremely complex; the causes are not well understood.

Statistical data about suicide are among the most clear-cut epidemiological facts in the whole field of psychiatry, and should lend themselves to intensive inquiry. It might then be possible to understand more clearly why there are striking differences in incidence between the more-or-less developed countries, between communities of different religious denominations, and between urban and rural areas. It should then be possible to prevent attempts at suicide, and provide those who attempted but failed with efficient after-care or social support.

* WHO Chronicle, 14, No. 5 (May 1960).