

Thus the two most poisonous plants in New Zealand, the tutu and the karaka, were, by the ingenuity of the native, made to supply very palatable foodstuffs. The German name of the European tutu—"gerberstrauch," "dyer's bush"—indicates an economic use. The plant contains sixteen per cent. of tannin. The generic name "Coriaria" is derived from "Corium" leather. The possibilities of the New Zealand species in dyeing and tanning have not been determined, but it is known that they contain much gallic acid.

EFFECTS OF TUTU POISON.

The remarkable thing about the poison of tutu is that it causes those who suffer from its effects to lose their memory. The first Englishman who experimented with crude extracts on himself, and Englishmen have always been ready to experiment on their own bodies before on those of their long-suffering patients, experienced great difficulty for months, after he had recovered from the overdose of tutu, in remembering his engagements. This was Dr. W. L. Christie, one of the first M.D.'s of the Otago Medical School in 1890, whose lengthy and interesting memoirs appear in the *New Zealand Medical Journal* for that year.

Dr. Christie, however, did not have the advantage of experimenting with pure poison, and it has been shown by Japanese experimenters, working on the Japanese "toot," that there may be more than one poison present. The disadvantages, therefore, of working with impure materials which contain the substances of different qualities in regard to the poisonous effects they exert is that one cannot say to what poison the results are due. Immediately the pure principle is isolated and obtainable in a pure condition, in sufficient quantities for medical research, the physicians are stimulated to undertake research work, knowing that no error can creep in from the chemistry side of the investigation. This is what happened with the New Zealand poison. As soon as it was isolated researches were started at St. Andrew's and at the Dunedin Medical School, and also later by independent medical men on their patients. They were thus able to give as small a dose as one-thousandth part of a gramme dissolved in water in perfect security and know that the results should be attributable only to the pure crystalline tutin.

The active principle of the European "toot" has been on the market for many years, prepared by the great Darmstadt house of Merk, and found useful for stimulating the human animal after wasting diseases. If a similar use could be put to tutin, it is possible that it would be commercially satisfactory to extract tutin on a large scale and, although a beautiful plant, farmers and landowners would be well pleased to see this menace to their herds removed from waste places where driven stock even now are often passing. It is not realised, I think, how dangerous a pest the New Zealand plant was to stock-owners in the old days when comparatively large numbers of animals perished annually. Nowadays drovers have become, by bitter experience, possessed of a superior technique in droving, whereby cattle are hurried by localities growing the plant and not allowed, for one moment, to devour, in certain seasons, the tall, juicy shoots of the plant. These seasons are spring and autumn, but, of course, for human beings the poisonous fruit is available only in the autumn.

It is astonishing what a stimulant to the blood pressure and to the whole organism tutin is! When evaporating large quantities of tutu in open vessels in the laboratory a great deal of the tutin is lost through being dissipated into the atmosphere. One only appreciates this in the confined space of a chemical laboratory, and it has been noticed that all assistants working in such a laboratory have their appetites considerably increased, presumably through breathing volatilised tutin.

POOR KNIGHTS.

It is gratifying to be able to announce that the pigs on one of these islands, which are sanctuaries, have now been exterminated as the result of an organised hunt made by the Department of Internal Affairs, headed by Captain Yerex. These pigs have for a long time past been playing sad havoc with the flora and with nesting seabirds. Several spasmodic efforts were made in the past with the object of eliminating the trespassing animals without attaining the desired result. This successful ending of the pig nuisance demonstrates the value of systematic hunting by trained hunters.