

It has been suggested that the New Zealand species of *Coprosma* should be examined for caffeine; Skey (1869) did so with a negative result (*Trans. N.Z. Inst.*, Vol. 1, p. 152). J. C. Crawford (1876) (*Trans. N.Z. Inst.*, Vol. 9, p. 546) recommended the ground and roasted taupata (*C. Baueri*) seed as a substitute for coffee, stating that it has then a splendid coffee-aroma, and that when made into coffee the result seems thoroughly satisfactory. J. T. Armstrong (1891), "On Economic Plants," states that the leaves of the karamu were used as a substitute for China tea, and that the decoction is a good febrifuge.

There is no doubt as to the excellence of this genus as a source of dyes. Those species which have the inner bark coloured yield with hot water dyeing-solutions which give perfectly fast colours on wool, with and without mordants, and equal in permanence to those given by the madder (see the writer's papers in *N.Z. Journal of Science and Technology*, 1918, Vol. 1, p. 3, and this *Journal*, 1918, p. 363; also Perkin and Everest, "Natural Organic Colouring-matters," 1918, p. 578).

There is no group of New Zealand plants which, from a scientific point of view, offer a more alluring field for investigation to the plant chemist than the genus *Coprosma*. Not only are the species closely allied, but they exist in comparative abundance throughout New Zealand, and there is considerable evidence that different chemical compounds found vary with the species. Hence chemistry might be of value in determining the relationship of the species to one another.

The fruit of several species was eaten by the Maori. Colenso (1868) states that the root of *C. acerosa*—a littoral species—was used as an alterative by the Maoris ("Essay," p. 39). The roots of this species, which is found growing on sand-dunes, are of great length, and could easily be unearthed from the loose sand.

#### COMPOSITAE.

This, the largest family of all flowering-plants, contains, so far as is known, very few poisonous plants in New Zealand. *Brachyglottis rapanda* (rangiora, wharangi, or pukapuka), a characteristic shrub of the North Island, is no doubt poisonous. Baber (1886) (*Trans. N.Z. Inst.*, Vol. 19, p. 320) states that this shrub is seldom eaten by cattle or sheep, but horses are fond of it. Its effects are staggering of the legs and falling; it is often fatal; after death, the body is much distended. The popular remedy is to keep the animal moving. Skey (1881) (*Trans. N.Z. Inst.*) failed to isolate any active principle to which the poisonous nature could be referred. He made the interesting discovery that the resinous matter which exudes from the trunk and branches of the tree gives with alcohol acidified with hydrochloric acid a rich deep-blue colour—a reaction which has been verified by the present writer.

Colenso (1868) (*Trans. N.Z. Inst.*, Vol. 1, p. 38) states that the leaves, which are large and have a white under-surface, were used by the Maoris as a protection for wounds and old ulcerated sores. The poison of poisonous wild-honey may be due to the fact that the honey has been gathered from *Brachyglottis*, as large quantities of pollen-grains from the plant have been found in poisonous honey (Annual Report of Department of Agriculture, 1908, p. 428).

(To be continued.)