

In Auckland the favourite fuel is tea-tree or rawiri, which is sold in 4-foot lengths, at from 12s. to 16s. per ton, presumably of 40 cubic feet. In heating power it is inferior to puriri, pohutukawa, and kowhai, which, however, fetch a lower price in the market on account of the extra trouble involved in reducing them to dimensions suitable for the fireplace or stove. Their use is chiefly confined to brickmakers, &c. Where tea-tree cannot be procured, rata and kowhai take its place. Tawa, taraire, and other timbers are but rarely used where either of the preceding kinds can be obtained, although they are of really good quality as fuel, and could be supplied at a low price. They are usually lumped together as "Paramatta" or "white wood." Firewood cutters on private land usually pay a royalty of 1s. per ton, with an extra sum for all logs suitable for fence rails, or small piles, &c.

The tops of the kauri and other pines are rarely or never utilized as fuel in the Auckland district.

In Wellington rawiri is comparatively rare, and the firewood most in demand is rata, which is cut into 2-foot lengths and delivered at from 30s. to 36s. per cord of nominally 128 cubic feet. The tops of rimu, matai, and miro, with a considerable quantity of tawa, are also used. Entire and tooth-leaved beech is delivered at the Pipitea Railway Station, from the Upper Hutt, in 4-foot lengths, at 20s. per cord. It is chiefly used by brickmakers, but is considered inferior to black and red pine; the tops are considered inferior to trunk wood. Beech yields a larger proportion of ash than pine. In Nelson the common pines and the entire-leaved beech supply the chief portion of the firewood, black pine being most valued. On the West Coast of the South Island, black pine, red pine, and miro are mixed with Quintinia, notch-leaved beech, and tawhero. The same kinds of timber are also used in Otago with the addition of broadleaf and maupo. In the North Island maupo is considered to rank before tawa and taraire for firewood.

As heat-producers the chief kinds used for fuel rank in the following order:—1, puriri; 2, kowhai; 3, pohutukawa; 4, rawiri or tea-tree; 5, rata; 6, black pine; 7, red pine; 8, tooth-leaved beech; 9, tawa. Tea-tree, however, on account of its rather slower and more complete combustion, is the most economic of all, except, perhaps, puriri. The beeches leave the largest proportion of ash.

MISCELLANEOUS FOREST PRODUCTS.

Kauri Gum.

Independently of timber, few forest products have been utilized at present. The chief of these is undoubtedly the *kapia* or kauri gum, which is found in a fossil or sub-fossil condition on the sites of old kauri forests or at the base of growing trees, from the North Cape to the Middle Waikato—often occurring in large masses. It has long formed a valuable export, and is extensively used in Europe and America as a substitute for gum mastic, as a base for fine varnishes, and for other purposes. Its price varies in England from £40 to £80 per ton; selected and remarkably clear specimens fetch a much higher price. The exports for the ten years from 1867 to 1876 amount to £1,171,949. For the year 1876 alone, the quantity exported was 2,888 tons, valued at £109,234. The largest quantity exported in any one year was 5,045 tons, valued at £167,958, in 1871; the highest value in any one year was £175,074 for 4,391 tons, in 1870; showing an average price in Auckland of £39 per ton in 1870, and £33 in 1871.

Bark.

The bark of the towai, tawhero, tanekaha, mangrove, hinau, and tooth-leaved beech have been largely used in the colony for tanning leather, and exported to a small extent. The towai ranks very high for this purpose, being superior to the English oak. The bark is collected in a careless and wasteful manner; the tops are never peeled, and it is no uncommon thing to see a fine towai stripped of its bark as far up as a man can reach, and left standing. The bark of tawa would probably prove of value for tanning purposes, and, if so, could readily be procured in large quantities. Nearly the whole of the bark collected is used by local tanneries, the total value exported during the year 1876 being only £300.

Fungus—Hirneola polytricha, Mont.

In 1871, this plant was first collected for exportation to China, where it is used as an article of food, being boiled and mixed with bean curd and vermicelli; it is also administered as a medicine to purify the blood. Its price in Hong Kong is 10½d. per lb. retail. In most parts of New Zealand Chinese merchants pay the collector 3d. per lb., or £28 per ton for the fungus when dry. Fresh specimens lose four-fifths of their weight when drying. The total quantity exported to the end of 1876 was of the value of £18,294. During the year 1876 alone, 2,633 cwts. were exported, valued at £6,224.

Tree Ferns.

These are exported for cultural purposes to the value of about £600 per annum.

Charcoal.

This is only manufactured to a limited extent, and fetches a disproportionally high price as compared with its cost in England. No particular selection of woods for this purpose is made in the colony, as far at least as my knowledge extends.

Potash, &c.

Although thousands of acres of forest land are cleared annually in this colony, it does not appear that any attempt has been made to utilize the ashes of the burnt timber for the manufacture of potash—an important article of commerce constantly in demand, and requiring scarcely any expenditure in its manufacture beyond the labour required in burning the timber, saturating the ashes with water, and watching the final evaporation.