

The next best land on the West Coast is the ordinary alluvial found on all the rivers in more or less quantities. There is a considerable breadth in the Hokitika and Arahura Valleys, and narrower strips and patches in the Grey and Buller. Particularly good patches also occur on the eastern side of Lake Brunner, and at the confluence of the Kopara and Ahaura Rivers. The latter are only covered with scrub.

The second quality of land in the preceding schedule is generally covered with dense forests, growing in soft ground, with a considerable depth of vegetable matter overlying a shingly or sandy subsoil. There is always a deep layer of peat where the smaller pines grow.

The third quality is chiefly terrace land—dense forests growing in peaty soil overlying clay on cemented shingle, which in turn lies on the sandstone reef.

Some of the land in the fourth class finds a parallel in the moors of Ireland and Scotland. Addison's Flat, between Westport and Charleston, is almost a *fac-simile* of a Highland deer-forest. The general impression is that these lands are good for nothing; but I do not think so. I am of opinion that a moderate expenditure would make them fair pasture lands. Some of the pakihis contain very poor land—shingle imbedded in stiff clay, that only grows stunted manuka scrub. A large amount of labour and capital must be expended on them before they can be called good land. The flats at Ahaura and Squaretown are samples of these poorer pakihis.

FORESTS.

GENERAL DESCRIPTION.

There is as much unanimity about the value of the West Coast forests as there is diversity of opinion about the value of the land. All authorities agree in considering them a large item in the assets of the colony, more particularly as the wetness of the climate prevents their destruction by fire.

Extent.—There is comparatively little forest lands in Canterbury, Marlborough, and Northern Nelson within the area accommodated by the proposed railways, but to all intents and purposes the whole of the western watershed is continuous bush. In fact, all the west coast of the Middle Island, from end to end, is one immense forest.

The preceding tables give the total quantities of bush and open country in the area we are dealing with, and the accompanying map shows their relative positions and the different kinds of the predominating timbers. Subdivided the quantities appear as follows:—

—			Beech.	Pine.	Mixed.	Total.
			Acres.	Acres.	Acres.	Acres.
Canterbury	...	...	76,700	...	...	76,700
Westland	...	...	40,900	453,700	227,100	721,700
Western Nelson	...	...	1,699,000	193,700	462,400	2,355,100
Northern Nelson	...	...	221,900	...	187,300	409,200
Marlborough	...	...	169,800	...	192,000	361,800
Totals	...	...	2,208,300	647,400	1,068,800	3,924,500

In estimating forest lands it is difficult to know how much should be allowed for scrub and inferior timber. Taking it, however, at 50 per cent., the quantity of timber-producing bush in the country affected by the railways will stand, in round numbers, thus:—

—			Beech.	Pine.	Mixed.	Totals.
			Acres.	Acres.	Acres.	Acres.
Canterbury	...	...	40,000	...	...	40,000
Westland	...	...	20,000	230,000	110,000	360,000
Western Nelson	...	...	850,000	100,000	230,000	1,180,000
Northern Nelson	...	...	110,000	...	90,000	200,000
Marlborough	...	...	80,000	...	100,000	180,000
Totals	...	...	1,100,000	330,000	530,000	1,960,000

BEECH FORESTS.

Beech—or, as it is more commonly called, birch—constitutes the greater portion of the forest. It is the only timber on the Canterbury side, and north of the Ahaura it occupies all the country except a belt along the coast and narrow strips in some of the river-beds. The three beeches best known to commerce as red, black, and silver beech—*Fagus fusca*, *F. solandri*, and *F. menziesii*—are all found.

Fagus solandri—also known indifferently as entire-leaved, black-heart, white, and Oxford birch—occupies the greater portion of the Waimakariri watershed and the higher ridges in the northern districts. At high levels it merges into a variety known only to botanists—*Fagus cliffortioides*, or mountain-beech. The Oxford birch is comparatively small, seldom exceeding 35ft. or 40ft. in