The above are timbers with an established commercial reputation. The following, which are not so well known, are all good hardwoods which have proved suited to local conditions:—

*Tamarindus indica** (Tamarind).
*Artocarpus integer** (Jakfruit).
*Adenanthera pavonina** (Bead Tree).
*Cassia fistula** (Indian Laburnum).
Filicium decipiens.
*Lagerstroemia flos-reginae** (Indian Lilac).
*Michelia champaca** (Champak).
*Myroxylon balsamum** (the source of Balsam of Tolu).
Pericopsis mooniana.

Dipterocarpus grandiflorus, which provides the "Apitong" which is imported into this Territory from the Philippines, has never been tried here, but should do well.

Trees planted for timber should be grown as far as possible under forest conditions. Specimen trees and trees planted in avenues may grow more quickly, but they generally branch too low and fail to form long straight boles.

KAMARERE (*EUC. DEGLUPTA* (*NAUDINIANA*)).

By C. E. Lane Poole, Inspector-General of Forests, Canberra.

In New Britain kamarere (*Euc. deglupta* (*naudiniana*)) occurs as a very fine riverine type thriving best in pure stands on the alluvium in a valley which is flat enough to be subject to annual flooding in the height of the rainy season which in New Guinea occurs in the north-west monsoon.

The species come under the category of a giant gum, for it towers to a height of 240 feet, and yields timber both in size and quality which rivals that of the great gums of Australia.

After the undergrowth has been removed, a stand of kamarere resembles in appearance the mountain ash forests of Victoria (Australia). The trees shed their bark in the same way, and, although the colour of the boles is darker—sometimes purplish—the species are very much alike.

The crowns of the kamarere, however, carry more spreading foliage, and the leaves do not hang down straight like the more sclerophyllous of the eucalyptus species, but spread out straightly. The leaves are, moreover, of less leathery texture.

The volume of timber yielded by the kamarere may be gathered from the following measurements of a tree felled some time ago for the Korindal Mill in New Britain:—

1. Log, 20 feet in girth, 8 feet long.
2. Log, 18¼ feet in girth, 16 feet long.
3. Log, 15 feet in girth, 18½ feet long.
4. Log, 14 feet in girth, 19½ feet long.
5. Log, 13 feet in girth, 18½ feet long.
6. Log, 12½ feet in girth, 29½ feet long.
7. Log, 11½ feet in girth, 18½ feet long.

The length of the eight logs into which the millable portion of the tree was cut measured 136½ feet, and the solid content of the logs was calculated at 2,120 cubic feet or 25,419 superficial feet. The volume of timber recovered after milling these particular logs is not known, but, owing to defects, it would probably not exceed one-third of the total.

A survey was made of an area of 14 acres which was chosen as being a patch of timber that could be taken as fairly representative of the timber lands at Korindal in New Britain. Other species besides kamarere were on the area, and details of measurements were taken of these trees as well. The table set out below gives an excellent idea of the volume of kamarere timber yield on the area:

Species.	Number of trees.	Cubic Contents.			Percentage.		
		Total.	Per tree.	Per acre.	Trees.	Cubic feet.	Trees to acre.
Eucalyptus naudiniana ..	103	185,408	1,800	13,243	85.8	98.6	7.5
Pometia pinnata ..	5	646	129	46	4.2	0.13	0.3
Dracontomelum mangiferum	10	1,716	171	122	8.3	0.9	0.7
Celtis sp.	1	202	202	14	0.85	0.1	0.07
Vitex cofassus	1	210	210	15	0.85	0.1	0.07
Total	120	188,182	..	..	..	..	..

Realizing that it was possible that the species would succeed equally well in other countries, seed was obtained and despatched to many different places, including India, Africa, West Indies, Federated Malay States, Philippine Islands, Palestine, British Honduras and Mauritius.

While many failures were experienced, results in many places have been such as to show that the species is likely to become established and prove an equally valuable timber tree in its new setting as in its native habitat. A tree planted out as a seedling at Port of Spain, Trinidad, British West Indies, in 1928, when measured in November, 1936, eight years later, had attained a height of 65 feet and a girth of 3 ft. 10 in., whilst another planted the same year was of about the same height, but with a girth of 4 ft. 9 in. Others planted at the same time were 55 feet (24-in. girth) and 50 feet high (19-in. girth). Seedlings planted out in 1935 were 6 feet to 8 feet at the end of the first twelve months.

At Burma, India, trees reached a height of 17 ft. 6 in. in twelve months.

The Forest Research Institute of Kepong, Federated Malay States, reported that trees in eight years from planting out had attained girth measurements of up to 18½ inches.

Reports from Africa are equally encouraging. Seedlings planted out by the Forest Department at Uganda in 1934 a year later were 2 feet high, and, while one tree only gained 5 feet in height in the next twelve months, a companion tree added to its stature to the extent of 25 feet, due, no doubt, to the more favorable situation.

The Forest Department at Kenya has a tree which, at four years from planting out, was 30 feet high, and the trunk at breast height measured 17½ inches.

Many of the experimental plantings have been so highly successful that further supplies of seed will be distributed with a view to permitting further sowings to be made.

It is a matter of interest that it has been found that kamarere has successfully withstood 4 degrees of frost, and also that trees have succeeded on upland country as well as under riverine conditions.

METEOROLOGICAL DATA, KIETA.

By B. G. Challis.

The town of Kieta, situated 6° 13′ S., 155° 39′ E., on and in the hills about the western and southern shores of Kieta harbour on the east coast of Bougainville Island, is the principal administrative centre of the Kieta District. The harbour is extremely well sheltered from prevailing winds, especially in the north-west season, by the protecting nature of the surrounding country, which is extremely mountainous. These mountains extend to the north, west and south of the harbour and reach from 1,000 to 3,000 or more feet above sea level within five to ten miles from the town.

Above the 3,000-ft. altitude, about six miles from the sea, rain falls almost every day and mists and fogs are common, while at lower altitudes nearer the sea the rainfall is not so heavy but is more or less seasonal. In Kieta itself the force of winds is greatly reduced by the high mountains surrounding the harbour, and consequently the temperature there is hotter than in more exposed localities; and for the same reason the rainfall in the harbour is also affected. The average annual rainfall for the past 21 years is 119.19 inches.

Sea-planes could descend on and ascend from the harbour safely, and there is a small privately owned aerodrome just outside the southern boundary of the town.

The basic rocks round Kieta give rise to a stiff clay soil except on the sandy foreshores. In some cases, close to Kieta the foreshore is higher than the land at the base of the foothills where water tends to collect. The country rock comes close to the surface and there is a good deal of erosion as for example in Toberoi some six miles away. The surrounding gullies contain talus materials which have fallen from the higher hills behind.

The Government Geologist, Mr. N. H. Fisher, M.Sc., reports as follows on the geology of this district:—

"The topography of the inland portion of Bougainville is exceedingly rugged. Mountains rise to a maximum height of 10,000 feet and in general the country consists of streams occupying steep-sided gorges between mountain ridges. In