

tussock and bog of the Mokai Patea would more conveniently be grouped with those of the Whanahuia Range, bringing out certain affinities between the western and northern subdivisions.

The eastern face of the range drops abruptly 3,000 to 3,500ft on to the plains of central Hawke's Bay, and contains only two longitudinal valleys of any size, the Makaroro and Tukituki, so that forest on this side occupies a fairly narrow belt along the face of the range; west of the divide larger forested areas occupy the Mangatera and Maroepa basins. The upper portions of these as well as of the Kawhatau and Pourangaki valleys fall within the area of mountain beech forest.

CENTRAL: PODOCARP FOREST

In the course of European settlement, the whole of the Hawke's Bay (eastern) side of the range has been cleared and grassed up to the foot of the main scarp, to an altitude, opposite the middle of the range, of about 2,000ft. Consequently only traces remain of lowland forest, the former belt of podocarp-maire (*Gymnelaea* spp.), the extension of the Forty-mile Bush known as the Seventy-mile Bush, which ran between the tussock of the Takapau and Ruataniwha Plains and the Ruahine Range to as far north as Kereru. From the few remaining pockets, of which Gwavas Bush is the largest and most important survivor, totara was an important constituent in places and the regeneration of totara in grassland which is now a feature of the rolling country from Ashley Clinton to Kereru appears to outline the area that was previously forested, although *Podocarpus totara* has not been seen within the boundary of the range in the vicinity. (List 2.)

At the present day a fringe of podocarps, mainly rimu (*Dacrydium cupressinum*) with a little matai (*Podocarpus spicatus*) and kahikatea (*P. dacrydioides*) occur either scattered through the lower red-beech forest or in small pockets on favourable sites (List 3A). Scattered trees of miro (*P. ferrugineus*) are also present to somewhat higher altitudes, while thin-barked totara (*Podocarpus hallii*) is rather a component of red-beech forest, whose altitudinal range it matches, than of podocarp forest proper. Logging in these remnants at the northern (Makaroro) and southern (Moorcock) margins has only ceased in the past few years.

In the heart of the range at Colenso's Lake (2,300ft) which lies on a down-faulted tertiary block in the upper Mangatera valley, podocarps occur in red-beech-dominant forest together with a number of characteristically lowland species. The abundance of matai and relative scarcity of rimu relate this community to the matai-dominant podocarp remnants in the Northern Ruahine. Although totara has been reported from Colenso's Lake this appears likely to have been a misidentification as only the related *Podocarpus hallii* could be found on a recent visit.

CENTRAL: RIVER BANK

The streams in the larger valleys, particularly those draining the eastern side of the range, are unstable at the present day with frequent changes of channel and much deposition of shingle and scouring out of older terraces, which suggest at least one previous cycle of activity. An occasional local cloudburst, as that of the winter of 1954 in the Makaroro-Waipawa area, brings about major changes which will be recognizable over a long period.