

leaves rather stiffly erect, though extreme tip droops when leaves are very long, tapering less narrowly and often 2cm or more wide at 15cm from tip; costae hardly more prominent abaxially than midrib, rarely if ever reddish adaxially, other nerves of several orders of size; female perianth at flowering enclosing ovary to above middle and more or less urceolate, but becoming fleshy, orange and spreading at fruiting - Astelia GRANDIS Hook.f. ex T.Kirk

7 - leaf lamina not thickly felted abaxially; inflorescence large, usually at least 10cm long, raceme-axes more or less uniform in diameter throughout their length; flowers relatively large, with outer tepals as much as 4 x 2.5mm - 9

9 - inflorescence simple, most spathes subtending only 1 raceme, occasionally more in lower 1-2 spathes - 10

10 - leaf lamina with adaxial pellicle well developed, the scales often more or less ruffled up, especially near the margins; perianth relatively long, urceolate, more or less enclosing fruit base - Astelia NERVOSA Hook.f.

MOSS IN BUSH BLOCK NEAR WAIPIPI - - - J.T.Linzey

A collection of moss material was made from a bush section near Waipipi 20 May 1967. The area is located on the south side of the junction of Creamery, Coronation and Kellands Roads, at an altitude of 200ft, 2 $\frac{1}{4}$ miles from the west coast. It is protected from the sea by a range of low hills some 600ft, in height. The rolling hill country is developed on Pleistocene sediments of loosely consolidated silts, dissected by 'consequent' stream erosion. A deep gully with a small streamlet in its base bisects the bush area. Observation of the adjacent road cutting shows a shallow soil profile of clay loam. The development of the moss flora is poor and the total quantity of material is less than the number of species would indicate. Four major factors account for this -

- (1) The forest floor is formed of loose litter and bare consolidated earth, and mosses, either on banks or level areas beneath the trees, are rare.
- (2) There is a general absence of rock and large stones. Thus rupestral species are absent.
- (3) The stream bed has no stable substrate and no firm banks, so typical hygrophylous mosses are not present.
- (4) The forest structure is open and the relative humidity is low, even in the steep sided gully carrying the stream. The overhead canopy is however dense enough to exclude sufficient light to inhibit the growth of many species that could tolerate drier conditions. Consequently the majority of the corticolous growth is confined to the lower parts of the trunks of the trees and their exposed roots.