

TUSSOCK GRASSES OF BANKS PENINSULA.

B.P.J. Molloy.

How many species of tussock grasses occur in the wild on Banks Peninsula? My limited field experience, and the material in the Botany Division herbarium suggests that there are at least 11 species and one hybrid, excluding such small perennial grasses like Rytidosperma (Notodanthonia) thompsonii and R. buchananii.

My list includes the following:

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| <i>Cortaderia richardii</i> | - common in seepage areas. |
| <i>Chionochoa conspicua</i> | - plentiful at tree limit on some |
| <i>ssp conspicua</i> | high tops. |
| <i>C. rigida</i> | - common on high tops. |
| <i>C. conspicua</i> x <i>rigida</i> | - plentiful on Mt Sinclair at least. |
| <i>Nassella trichotoma</i> | - occasional on Port Hills and |
| | elsewhere. |
| <i>Poa caespitosa</i> | - widespread; the commonest tussock. |
| <i>P. colensoi</i> | - common on high tops. |
| <i>P. labillardieri</i> | - occasional on Port Hills. |
| <i>Festuca novae-zelandiae</i> | - plentiful on most high tops. |
| <i>Festuca</i> sp. (undescribed) | - common on sheltered high |
| | outcrops. |
| <i>Rytidosperma corinum</i> (<i>Notodanthonia setifolia</i> s.l.) | - |
| | occasional on high exposed |
| | outcrops. |

Apart from *Poa caespitosa*, all these species are poorly represented in the Banks Peninsula folders at Botany Division, notwithstanding the recent acquisition of the Canterbury Museum specimens, mainly Arnold Wall collections.

Aside from recent migrants like *Nassella trichotoma* and *Poa labillardieri*, and the *Chionochoa hybrid*, these species have been recorded before under various names by Robert Laing, Arnold Wall and others.

Other tussock grasses could be present on Banks

Peninsula and should be looked for, especially Poa astonii and Poa triodioides (Festuca littoralis). A specimen in the herbarium (CHR 226580) collected from Mt. Berard by Margaret Simpson and Mary Chapman is labelled "Chionochloa pallens". Is this specimen true C. pallens, and does this species grow naturally on Banks Peninsula? I think not, but it might be worth checking all the same.

Banks Peninsula (Akaroa) is the type locality for Chionochloa rigida, and the undescribed fescue tussock may turn out to be another Banks Peninsula endemic, and one worth protecting. This fescue was listed as "undescribed" by Arnold Wall in 1923. Almost 60 years later it is still undescribed!

Forest clearance in the last 1000 years has effected a marked increase in tussock cover on Banks Peninsula. Mainly Polynesian fires had depressed the tree limit on many high tops before European settlement, allowing Chionochloa rigida and Festuca novae-zelandiae to expand their area. Polynesian and European burning have also resulted in extensive colonisation of lower slopes by Poa caespitosa. This species may well be entrenched, and not seral, on the relatively fertile but drought-prone loessic soils of Banks Peninsula, whereas Festuca novae-zelandiae seems to be confined to the less fertile soils in the moister "fog zone" of the higher tops.

Representative examples of these Festuca / Poa grasslands should be protected to compliment the Chionochloa grasslands in existing reserves.

ABBREVIATIONS FOR SOME HERBARIA

AK	Auckland Institute and Museum.
CANU	Botany Dept., University of Canterbury.
CHBG	Canterbury Botanic Gardens.
CHR	Botany Division, D.S.I.R., Christchurch.