

## **Vegetation change, climate and volcanism in Taranaki over the last three glacial/interglacial cycles – a multi-proxy approach.**

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Previous studies of past vegetation patterns in Taranaki over the past ~250,000 years have concentrated almost entirely on palynology. While this has given considerable insight into regional vegetation patterns, particularly since the last glacial maximum, there are still some unresolved questions. We report some preliminary results from an ongoing study in which we seek to integrate pollen records with plant macrofossils to help resolve some of these problems.

Three sites in north Taranaki form the basis of the first stage of this study. Two coastal sections, at Bell Block and Airedale Reef include seams of dirty lignite that have yielded pollen, macrofossils, tephra and charcoal. Together with a third, inland section at Colson Road, sampled for pollen alone they will allow comparison with other sites, both onshore and offshore. Initial results from this integrated approach suggest that during both MIS 7 and MIS 5, the coastal plain of northern Taranaki was covered by a complex of dunes backed by swampy podocarp/broadleaf forests, lakes and more open areas of swamp and oligotrophic restiad bog. Both volcanicity and fire seem to have affected the vegetation rather more than previous authors have suggested.