

## SOME NOTES ON THE INTRODUCTION OF EUCALYPTS INTO THE SOUTH ISLAND

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Eucalypts have been a part of the South Island landscape for a considerable period, having been introduced approximately 115 years ago. Records of the plantings which took place in the early years of colonisation are, for the most part, fairly scanty, and in a number of cases the only reliable information available is from the newspapers, diaries and articles of the period. In later years, because of the public interest and the historical "glamour" associated with early tree planting, rather extravagant claims were put forward regarding the age of certain well-known trees. These claims were usually based on supposition, local legend, or the reminiscences of old identities, and quite often investigation served to demonstrate amply the frailty of human memory. Further research is proceeding with the object of untangling these skeins of fact and fancy, a necessarily lengthy process; in the meantime, this short historical survey of South Island eucalypt culture has been prepared.

The first species to be used on any large scale was the Tasmanian blue gum, *Eucalyptus globulus*. The reason for the introduction and early widespread use of this species has often been the subject of speculation. Because of its worth as a timber species, *E. globulus* seed soon found its way to Europe. It apparently proved successful in localities such as France and Italy and soon became a prominent species in early seed exchanges. Thus, introduction to New Zealand almost immediately followed early colonisation.

Eucalypts appear to have first appeared on the South Island scene in the Nelson-Marlborough area. A specimen of *E. globulus* in Nelson was considered by the late Dr H. H. Allan to have been planted about 1842. Trees of the same species at Wairau Bar are thought to date from 1843, their presence being locally ascribed to accidental seed distribution from boats landing cargo on the bar in the earliest year of the Wairau Settlement. In 1848 trees of this species were planted by D. Bedborough at Upton Downs in the Awatere. The earliest Christchurch planting of *E. globulus* recorded is by Dr Earle in 1851, when seed of the species was accidentally included in a shipment of onion seed bought by him from W. Wilson, the nurseryman responsible for the importation from Tasmania. A few months later Dr Barker planted the tree which for a great many years was a feature of the central Christchurch area. By 1856, nursery stock of blue gum was being advertised for sale in Nelson, Christchurch and Dunedin.

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Seed was most eagerly sought after when procured, prices as high as 20 guineas for 9 ounces being paid, evidence of the reputation of *E. globulus* and the demand for a good shelter species of fast growth. It should be stressed that this was prior to the advent of goldminers, whom some authorities, notably Cockayne, have credited with introductions. The Central Otago area was almost entirely covered by occupied pastoral runs prior to the discovery of gold in 1861. However, evidence is sometimes encountered supporting Cockayne's thesis. There is the rather circumstantial tale told of one G. Leven, in 1859, while sitting in the front of his hut in Temuka, being given a few seeds by a passing bullock-driver and gold-digger Malcolm Mathias, the nephew of Archdeacon Mathias. This gentleman stated that they "were blue gum seeds collected from Coopers Creek, 400 miles west of Sydney." Before the tree-breeder grasps at this straw of provenance data, it should be noted that *E. globulus* does not occur on Coopers Creek, which is considerably more than 400 miles west of Sydney. And also, Mrs Studholme, writing in 1860, speaks of Capt. Woodcombe of Albury Park, Timaru, as having the only exotic trees in South Canterbury.

By 1864 planting was so popular that the Almanac for that year included transplanting advice in the gardening notes. This reflected the difficulty of handling the species at this stage. As early as 1876 *E. globulus* was therefore being offered for sale in pots for £10 per 1,000 (plus 10/- per 100 surcharge if the pots were not returned). Generally, planters of the period believed in spot sowing, preferably in ploughed ground.

Writing in 1865, Lady Barker remarked on the shelterbelts and plantations of blue gum which were to be encountered in and about the Christchurch area. In 1869 it was averred that Tasmanian trees were growing in all parts of Canterbury. It was in this period that really widescale use of eucalypts became evident and also, even though *E. globulus* was overwhelmingly predominant, other species began to be considered. Plantings by boroughs began in the 1860-70 decade, Christchurch, Oamaru and, surprisingly enough, Charleston on the West Coast, carrying out avenue and plot establishment. The next decade marked the beginning of efforts to form larger plantations, with Canterbury railways plantings beginning in 1873. Reporting to the N.Z. Government in 1877, Capt. Campbell-Walker recorded many occurrences of the genus in all parts of the island, with special emphasis on the success of private plantations seen by him, Robinson of Cheviot Hills, Holmes of Bangor and Watson of Kirwee being noted particularly as having fairly large areas of thriving trees.

The decade 1880-1890 was the boom era of eucalypt use. Private plantings became more widespread with greater diversification of species used. Canterbury Plantation Board, and later Selwyn County Council, undertook large plantings, usually in mixture with wattle. Railways Department holdings were also considerably expanded in Canterbury and Otago, with the major area being established at this

time. T. W. Kirk's short-lived State Forestry Department of 1886-1888 had plans for planting of areas in Central Otago in eucalypts, but due to financial stringency only a small amount was carried out.

Up to the end of the century the more successful species were extremely popular. However, in 1900 the blue gum scale *Eriococcus coriaceus*, appeared on the scene. The area of eucalypts in the South Island, generously estimated by Kirk as about 10,000 acres, received severe losses, almost all the popular species being affected. *E. globulus* was killed in a number of localities. Introduction of the ladybird *Rhizobius ventralis* restored the situation a little. However, this epidemic, plus the mixed reports on the value of locally grown timber, caused the tree conscious public to lose faith and eucalypts fell into considerable disfavour. Some modification of this attitude did take place, but the genus never recovered its previous popularity.

Thus, for a fairly lengthy period, planting has been sporadic, with a continued swing of opinion away from widespread use by public and Government bodies.

There is, of course, evidence of the early introduction of species other than *E. globulus*. *E. obliqua* is thought to have been introduced into Riverlands, Blenheim in the early 1840's. *E. viminalis* is said to have been planted in 1857 at Fairhall, Blenheim. Also a number of species have been introduced by arboriculturists who were able, in part, to provide some evidence for species selection. The earliest of these "species trials" was probably that of Holmes of Awamoa, Oamaru, who in 1877 had 20 "varieties" planted. Armstrong established a number of species in the Christchurch Government Gardens and, in 1886, published a list showing relative frost hardiness of these species. Potts of Governors Bay and Adams of Greendale planted a few species, as did the Dunedin Public Gardens. However, the only conscious effort at species trials was by the N.Z. Forest Service. At Dusky Forest in 1917 and in Westland in 1920-30, various species were planted to give some comparative idea of their worth. These trials have unfortunately been largely a failure. At Dusky, silvicultural considerations were neglected and the resultant failures are not necessarily due to climate and soil effects. In Westland, the trials were on either Okarito soils or dredge-tailings, neither of which would give reliable results.

Today, trials are going ahead in Westland where spot sowing and direct planting of a number of species has been undertaken. Despite the setbacks that the genus has received in recent years, the results of this work, plus the intelligent appraisal and use of the few species suited for this area, could cause the return of some of the respect which the genus formerly so generally commanded.

### Summary

The problem of collection of reliable historical data is reviewed and the early introduction of the eucalypts outlined. An historical survey of the spread in use and popularity, mainly of the species

*E. globulus*, is given. The effects of insect epidemics on the popularity of the genus are noted, the attempts at species selection trials critically described and the possible future use of the genus commented upon.

#### *Information Sources*

- Adams, T. W., 1886: Planting Forest Trees. N.Z. Country Journal 10: 367-370.
- Allan, H. H., 1940: Notes on Historic Trees. J. Roy. N.Z. Inst. Hort. 10(1): 19-27.
- , 1947: Excerpts from unpublished manuscript. Records N.Z. Dept. Int. Affairs.
- Almanac, 1864: Otago. McKays. Advert. Nurserymen.
- Annual Reports, 1866-1884: Canterbury Acclimatisation Society.
- , 1864-1877: Otago Acclimatisation Society.
- Armstrong, J. B., 1879: Planting in towns. N.Z. Country Journal. 3:98-105.
- , 1886: Injury to plants by severe winter. N.Z. Country Journal. 10: 394-396.
- Barker, Lady, 1870: Station Life in New Zealand: 26-84.
- Beattie, H., 1947: The pioneers explore Otago; Diary of John Goldie 1861-1862 as appendix.
- Brown, J. A., 1867 et seq.: Photographs held at Pioneers Gallery, Oamaru.
- Campbell-Walker, J., Conservator of State Forests, 1877: Report, proposals, for organisation and working of the State Forestry Department. 7-54. (N.Z. Parliament Appendix to the Journals of the House of Representatives 1877 C-3.)
- Cockayne, L., 1919: N.Z. plants and their story, 2nd ed. Wellington, N.Z. Board of Science and Art. (Manual 1.)
- Cooney, E. A., 1949: History of the Selwyn Plantation Board. N.Z. J. of For. 6(1): 11-19.
- Domain Board, Christchurch 1864-1876: Minutes of meetings held 1864-1876, held at Christchurch Civic Chambers.
- Duncan, A. D., 1876: "Arboriculture" a paper read to the Canterbury A. and P. Association N.Z. Country Journal 1:54.
- Kirk, T. W., 1877: Notes on forests and plantations in the Oamaru District. Appendix to the Report of the Conservator of Forests 1877.
- , 1884: The cultivation of Wattle (N.Z. Parliament. Appendix to the Journals of the House of Representatives 1884).
- , 1186: The proposed school of Forests, Pomology and Agriculture (N.Z. Parliament. Appendix to the Journals of the House of Representatives 1886).
- , 1908: Gum tree blight and the natural enemy. N.Z. Dept. Agric. Ann. Report 1908: 117-122.
- Newspaper Files, 1845 et. seq.: Nelson Examiner.
- , Lyttelton Times.
- , Otago Witness.
- , Timaru Herald.
- Oamaru Borough Jubilee, 1916: Jubilee Civic Government, Borough of Oamaru 1866-1916.
- Perrin, G. S., 1897: Conservation of N.Z. Forests. Tree cultivation in Otago and Canterbury (New Zealand Parliament. Appendix to the Journals of the House of Representatives 1897).

- Papers, 1868: Papers relating to the Parliamentary debates and resolutions on the forests of the colony (N.Z. Parliament. Appendix to the Journals of the House of Representatives 1868).
- Papers, 1874: Papers relating to State Forests, their conservation, planting, management, etc. (N.Z. Parliament. Appendix to the Journals of the House of Representatives 1874).
- Report, 1936 et seq.: To the N.Z. Railways Dept. (unpublished). An inventory of railway plantations. Hansson and others.
- Records, Unpublished file records N.Z. Forest Service.
- , Ibid Internal Affairs Dept.
- Thompson, R., 1876-7: Nursery catalogue held at Hocken Library, Dunedin.
- Wilson, W., 1864: Early history of gardening. Southern Provinces Almanac for 1864. 31-33.
- Woodhouse, A. E., 1937: George Rhodes of the Levels, and his brothers. 65, 128.
- , 1940: Ed. Tales of Pioneer Women. Women's Institute of New Zealand. 176.