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RADIOCARBON DATES FOR OTAKANINI

P. S. Bellwood

The earthwork pa of Otakanini is situated at the southern end of the South Kaipara Harbour, and was excavated by L. M. Groube and P. S. Bellwood in 1968. A report on the excavations has been published (Bellwood, 1972), and page numbers given below refer to this report. The purposes of this note are twofold: to present a new radiocarbon date, and to discuss the bristlecone pine calibrations of all the dates for the site. The Institute of Nuclear Sciences in Lower Hutt has recently adopted a policy of giving three dates to users for each sample: namely, a date based on the old half-life of 5,568 years, a date based on the new half-life of 5,730 years, and a date based on the new half-life as corrected against the bristlecone pine curve. Even within the time span of New Zealand prehistory, these calibrations can make a difference of almost a century to the mean dates of some samples, as may be seen from sample NZ1676 reported below.

Previous dates for Otakanini as determined on the old half-life of 5,568 years are as follows:

- | | |
|---|----------------|
| 1. NZ1279 from a period I hearth (page 271) | A.D. 1351 ± 78 |
| 2. NZ1280 for the demolition of the period II defences (page 272) | A.D. 1561 ± 48 |
| 3. NZ1281 for a period III palisade post (page 274) | A.D. 1493 ± 49 |
| 4. NZ1282 for a modern post (originally thought to be a period III palisade post) | Modern |

The new date is from charcoal from a lens in trench G108, level 7, which formed part of the period III bank. This is A.D. 1635 ± 54 (NZ1676). Stratigraphically, NZ1280, 1281 and 1676 date the same event, which was the demolition of the period II defences and the construction of the period III defences. Taking one standard deviation for the three dates, the date for this event falls between A.D. 1444 and 1689. This range is embarrassingly large, and is slightly reduced when the bristlecone calibration is applied to the dates.

When adjusted to the new half-life and calibrated, the dates are as follows:

1. NZ1279 becomes A.D. 1372 ± 78 (archaeologically an insignificant change)
2. NZ1280 becomes A.D. 1583 ± 48
3. NZ1281 becomes A.D. 1476 ± 49
4. NZ1282 remains modern
5. NZ1676 becomes A.D. 1551 ± 54

The date for the period II/III event now falls between A.D. 1427 and 1631 at one standard deviation. Hence the date for the event can only be placed in or around the sixteenth century. Calibration of NZ1676 does add 84 years to the mean date, but in the context of the other two dates the archaeological interpretation is not altered.

The information given in this note does not alter the conclusions given in the main report. The problems of equating archaeological and traditional dates (pages 282-3) still remain. However, if period III can be equated with Hakiriri and the Ngati Whatua, then the combined evidence of three radiocarbon dates may suggest that the genealogical dates are too recent.

REFERENCE

- Bellwood, P. S. 1972 "Excavations at Otakanini Pa, South Kaipara Harbour", J. Royal Soc. N.Z., 2: 259-91.