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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER



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LETTER TO THE EDITOR

Dear Sir,

Reply to McCulloch and Trotter

In view of the fact that McCulloch and Trotter (Newsletter 19, No. 2) have decided to publish their own Errata to our paper on "Radiocarbon dates for New Zealand archaeological sites" (Newsletter 18, No. 3), even though they were aware that we were preparing a similar note, we feel some comments are justified.

First, however, we would like to mention that since the publication of our paper several people have written to us and pointed out a number of errors (which were largely our own) in the maps. This we welcome, because the main aim of our paper was to bring dates out into the open, where they could be discussed and queried. We would also like to point out that through the efforts of these people, we have discovered several anomalies in the Laboratory files; one reason why there are some noticeable differences between McCulloch and Trotter's (Newsletter 18, No. 1) dates and those presented in our paper is because we relied on these files for much of our data. The reasons for other differences are discussed below, and in our Errata and Addenda.

In a comment following McCulloch and Trotter's recent note on "South Island Radiocarbon Dates", the Editor mentions that their paper arises out of correspondence with us, although we were not informed of their intention to publish. In addition, three sites discussed in their paper, S61/4, S84/77 and S143/2, were never mentioned in correspondence, nor were they mentioned when a copy of our Errata and Addenda was sent to them earlier this year for comment. We also find it puzzling why McCulloch and Trotter, after explanations in correspondence, and receipt of a copy of our Errata well before publication of their note, still find it necessary to question certain dates that we have checked and rechecked.

Since we, like McCulloch and Trotter, are concerned at the perpetration of errors in radiocarbon dates, we consider it necessary to correct some errors, and comment on a few points, in their note. Unfortunately, this means repeating ourselves in places, because some points have already been covered in our Errata and Addenda.

- (1) Site S7/1, Heaphy River. As mentioned in our Errata, there is in fact only one date for this site, 550 ± 70 (cf. previous reportings). This is now the accepted date, and was obtained by recalculation wrt the shell standard (the correct standard). The figure of 432 ± 70 was obtained by calculation wrt the ocean water standard.
- (2) Site S61/4, Timpendean. The site number given in McCulloch and Trotter's note, S64/4, is incorrect.
- (3) Motunau. As given in McCulloch and Trotter's recent note, Motunau Beach is site S68/9, and Motunau Is. site S68/29. However, in the appendix to their earlier paper (Newsletter 18, No. 1), Motunau Beach is given as site S68/29.
- (4) Site S84/77, Moa-bone Point Cave. As stated in our Errata, results that clearly indicated exchange with atmospheric carbon were deliberately excluded. Thus, while the Laboratory no longer uses bone carbonate for dating, carbonate results which do not show clear evidence of contamination are still valid, and there is no reason to exclude them (even though their reliability might require support from other data).
- (5) Site S136/1, Tai Rua. There are four moa bone collagen dates for this site, NZ559 (503 ± 32); a re-run of the same sample NZ578 (503 ± 32); NZ752 (543 ± 32); and NZ766 (393 ± 37). The latter date was, as is pointed out by McCulloch and Trotter, obtained from an investigation into contamination as a result of storage. However, the date is valid, and since the sample is from an archaeological site, it must have some archaeological significance. It is also important to note that NZ766 was run on a different bone from NZ559.
- (6) Site S140/2, Takahe Valley. Grant-Taylor and Rafter (1963, p. 125) report only one bark date for this site, 830 ± 50 (NZ52). This was the average of two runs, 820 ± 60 and 840 ± 60 . Fergusson and Rafter (1957, p. 741) also report the date as being an average, though it is not made clear that the figures of 820 and 840 were obtained as a result of two counting runs of the one gas sample.
- (7) Site 143/2, Hawkesburn. The bone dates obtained from this site are as follows:

NZ59	bone carbonate	410 ± 55
NZ59	burnt bone	400 ± 55
NZ60	unburnt bone	450 ± 60

The Laboratory reports: "These were all corrected for fractionation as shown by mass spectroscopic measurement of the stable isotope $\delta^{13}\text{C}$. The result of this procedure is essentially the same as that obtained by calculation against the bone standard. There is therefore no reason to question these particular results".

- (8) Site S55/7, Pari Whakatau. Grant-Taylor and Rafter (1963, p. 135) report the date from this site as being 320 ± 60 (NZ133). This is the only date recorded on Laboratory files.

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