A NOTE FOR NOVICES

RADIOCARBON's previous special Calibration Issues in 1986 and 1993 (Stuiver and Kra 1986; Stuiver, Long and Kra 1993) have been among our most popular and widely distributed issues. This is not surprising, as reliable calibration of radiocarbon dates is crucial to researchers in disciplines where chronological interpretation of data is fundamental—archaeology, paleoenvironmental studies, and Near Eastern history, to name a few that are often represented in the pages of this journal. With INTCAL98, the precision of the calibration curves has been increased and their backwards range extended.

The theory of ^{14}C calibration is relatively straighforward: naturally occurring materials that exhibit annual growth phenomena (*e.g.*, tree rings, lake and marine varves) are ^{14}C-dated as precisely as possible over age ranges that can (ideally) be dated absolutely. The resulting calibration curve shows the relation between conventional ^{14}C dates and calendar ages, its trends and "wiggles" reflecting the variation over time of ^{14}C in the geosphere. Once generated, the calibration curves (or more accurately, their underlying data sets) enable the conversion of a date in radiocarbon years (BP) to a calendar age range or ranges (cal BC/AD). For many users of ^{14}C dates, this is a simple matter of plugging a conventional age into one of the computer calibration programs, or even of accepting and reporting the calibrated dates calculated by the laboratory when it returns results on a sample.

However, it is crucial to remember that a calibrated ^{14}C age is *probabilistic,* and must not be confused with an absolute calendar date. The papers in this issue report in great detail on the data sets used to construct the INTCAL98 curves; the methods used in choosing, treating and measuring samples; and the statistical assumptions made to arrive at calibrated dates and their associated margins of uncertainty. Understanding this background is important when using calibrated ^{14}C dates as evidence for a chronological argument, particularly when conventional ^{14}C dates intersect multiple ranges on the calibration curve or when claiming very narrow calendar ranges as probable dates of origin.

Introductory discussions of ^{14}C calibration can be found in Aitken (1990: Chapter 4), Bowman (1990: Chapter 4), Bronk Ramsey (1998b) and Taylor (1987: 133–142). The manuals for the OxCal (Bronk Ramsey 1998a), CAL25 (van der Plicht 1998) and CALIB (Stuiver and Reimer 1998) calibration software also discuss the principles of calibration as used in those programs.

David R. Sewell

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