LITERATURE REVIEWS

Readers are invited to submit reviews of current literature relating to origins. Mailing address: ORIGINS, Geoscience Research Institute, 11060 Campus St., Loma Linda, California 92350 USA. The Institute does not distribute the publications reviewed; please contact the publisher directly.

A NEW GENERAL REFERENCE ON CARBON-14 AGE DATING

RADIOCARBON DATING: AN ARCHAEOLOGICAL PERSPECTIVE. 1987. R.E. Taylor. Orlando, FL: Academic Press, Inc. 212 p.

Reviewed by R.H. Brown, Geoscience Research Institute

As the title implies, this book was written for individuals who wish to understand radiocarbon dating, but do not have a strong background in physical science. The author is eminently qualified to provide both breadth and depth in a treatment of radiocarbon dating. He is currently professor of anthropology and director of the Radiocarbon Laboratory, Institute of Geophysics and Planetary Physics, at the University of California, Riverside. While a graduate student at the University of California, Los Angeles, he served as a research assistant in the isotope laboratory established by the late Willard F. Libby who developed the radiocarbon dating concept and pioneered the associated laboratory techniques.

The text is amply illustrated and written in a clear, easily readable style. There is a broad discussion of techniques, as well as of the basic principles on which these techniques are based. Explanations from elementary principles are provided for readers who wish to understand the technical details. Extensive references provide easy access to the original literature. A reader who goes through the book rapidly will notice some repetition — repetition that provides for ease of understanding when interest may be limited to only a particular section or chapter.

Throughout the book, particularly in Chapter 5 ("Evaluation of Radiocarbon Data"), Dr. Taylor gives a thorough discussion of the difficulties and uncertainties in the translation of a C-14 measurement into an estimate of real-time calendric age. In Chapter 2 (p 16) he states, "The minimum overall level of uncertainty for an individual C-14 age estimate for middle and late Holocene [less than 6000 years old] samples is about 200 years."

For many individuals these discussions are worth more than the cost of the entire book.

The final chapter (No. 6) gives a highly interesting history of the development of radiocarbon dating from the first suggestion concerning the existence of C-14 that was made in 1934 to the death of Willard Libby in 1980.

The author and publisher are to be commended for a first edition remarkably free of errors. I can cite only two of any significance. In Figure 2:12 on p 33 the lower horizontal line designated "ca. 410 yrs" should extend to the extreme right vertical dashed line, not only to the vertical solid line at which the "ca. 265 yrs" horizontal line terminates. In each of the first two examples on p 138 the last line above "Age range" should be "years B.C.", not "years B.P."

Dr. Taylor's book meets a long-standing need for an up-to-date, comprehensive, authoritative and succinct treatment of radiocarbon dating.