



BOOK REVIEWS

Marine Terrassen und Korallenriffe—das Problem der quartären Meeresspiegelschwankungen erläutert an Fallstudien aus Chile, Argentinien und Barbados. Ulrich Radtke, 1989. Düsseldorf Geographische Schriften, Universität Düsseldorf, 246p., 132 figs., 30 photographs. ISSN 0935-9206.

The chronology of Pleistocene interglacial shorelines has always given trouble. The Mediterranean, as their classical type area, is unfortunately prone to considerable neotectonic disturbance. The generalized curve based upon a "numbers game" with correlation to the Milankovitch astronomic model by ZEUNER (1945) and reproduced in FAIRBRIDGE (1961) is unquestionably wrong, but a reasonable, updated model such as developed in Barbados is based upon a uniform uplift assumption and cannot be confirmed according to a new report by Radtke, whose university "habilitation" thesis is now reviewed. The original, in German, carries long summaries in English and French, and is supported by a very large number of MS-Th/U and ESR dates.

Field work was done mainly on the two sides of South America, a Chilean section, reflecting a slowly rising subduction coast, and an Argentinian profile associated with a fairly stable (up and down) passive plate margin. Mollusks provided the dating material and with new techniques they seem to be supplying a consistent pattern, at least for the last interglacial (c. 125,000 BP). The new methodologies offer the potential of eventually pushing interglacial shoreline dates back to about 500,000 BP.

Samples were also collected in tropical Barbados where corals are available; these generally provide the best dating materials. A would-be "standard" late Pleistocene eustatic curve developed for Barbados is regarded by Radtke with reservations because it assumed a smooth, uniform uplift rate, whereas there is good evidence of interruptions. At least a non-uniform hydroisostatic correction would be needed from time to time. Sometime in the future, and following con-

siderably more research, Radtke believes that an El Dorado of eustatic workers will be approached, an approximation of a standard curve, but he doubts if any one site will provide it. Tectonism and geoid adjustment, even infrequent and episodic, should never be discounted.

For readers of the German language this publication furnishes long and well-referenced reviews of the fundamental and classic questions of Pleistocene eustasy, together with the complex questions of absolute dating. Some of the techniques, incidentally, are surprisingly simple, and need not be relegated to the high-cost commercial laboratories. Low-cost ^{14}C assays, of somewhat imprecise quality but nevertheless invaluable for general guidance, can also be employed now by the field scientist.

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Physische Geographie der Meere und Küsten. D. Kelletat, 1989. Teubner Studienbücher der Geographie, B. G. Teubner, Stuttgart, 212p., 106 figs., ISBN 3-519-03426-3.

Not many (non-German) readers of JCR will be able to read Kelletat's pocket-book-sized volume on the "Physical Geography of Seas and Coasts," which is a pity because it synthesizes in a most accessible way the large number of topics and wide-ranging geographic variety of coastal landforms and dynamic processes. Out of 640 references (mainly English, German and French) quite 80% deal with coastal questions. He also provides numerous tables of useful data, and 106 (line) illustrations, which include a large number of world maps, ranging from wave types to zonality (the geomorphic expression of differing climatic zones). The latter is one of the author's pet hobbies, but he does not give it unjustifiable weight.