

## **Radiocarbon: Chronometer and Tracer (In the Sea)**

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Wally Broecker pioneered the use of radiocarbon in the ocean as a chronometer and tracer. Through technological developments and oceanographic insights he used radiocarbon measurements of dissolved inorganic carbon to determine the timescale of the ocean conveyor belt and used radiocarbon measurements of benthic and planktic foraminifera to determine changes in ocean circulation and carbon cycling in the past. Since Wally's pioneering work, the number of glacial and deglacial radiocarbon reconstructions has greatly increased, providing new insights into carbon cycling, but also posing new questions. Here, we review major advances in this field, and present new data to inform some of the outstanding questions, including changes in surface reservoir age, ocean circulation, and sources of mysteriously old carbon.