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Oral legend and geological evidence for a 16th century giant tsunami in Kiribati, central Pacific

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Within Oceania, the vast Central and Western Pacific (CEWEP) is an intriguing anomaly because of the scarcity of historical tsunami observations and the complete absence of dated palaeotsunami events. This study establishes the first dated high-magnitude palaeotsunami event within the CEWEP region. Both geological data and oral legend are presented for a palaeotsunami that struck remote Makin atoll in northernmost Kiribati towards the end of the 16th century. Narration of the euhemeristic myth by the *Wiin te Maneaba*, traditional storyteller on Makin, offered important details supporting a tsunami hypothesis. The legend preserves credible information surrounding the giant-wave origin of *Rebua* and *Tokia*, two prominent named subaerial reefblocks of megaclast size that were produced and transported shorewards away from the reef edge by the event. The youngest U-Th age-dates for fossil coral samples in the reefblocks give a maximum age for the palaeotsunami of *circa* AD 1576. Several far-field Pacific Rim and regional possibilities exist for tsunamigenesis. These include subduction-zone seismicity and catastrophic volcanic eruption, both of which have been linked to late 15th century palaeotsunamis recorded elsewhere in the Pacific Islands. Available evidence, however, suggests that the ~AD 1576 Makin event was more likely locally generated by tsunamigenic submarine slope failure associated with the giant arcuate bight structure that characterises the northern atoll rim.