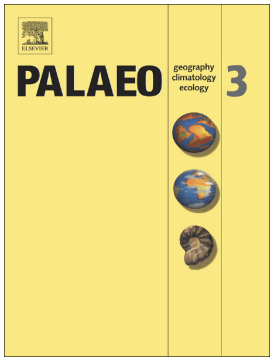

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Contrasting storm- *versus* tsunami-related shell beds in shallow-water ramps

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Abstract

Shell beds are sedimentary features that can potentially provide significant palaeoenvironmental and sequence stratigraphic information. High-energy events, such as storms/hurricanes and tsunamis, might originate sedimentary shell beds due to either landward-incoming waves or basinward backwash flows. Many papers have dealt with the taphonomic characterization of storm shell beds (= tempestites) along palaeobathymetric gradients. On the contrary, only a few taphonomic studies have examined the skeletal remains deposited in tsunami shell beds (= tsunamiites). These studies seek to differentiate taphonomic traits of skeletal remains in tempestites and tsunamiites. These assessments are restricted to tsunamiites deposited inland in connection with historically well-known tsunami events. To date, no studies of tsunami shell beds deposited offshore are available in the literature and, consequently, whether taphonomic attributes can be used to separate storm and tsunami shell beds deposited along the shelf remain to be demonstrated. In the Sorbas Basin (SE Spain), uppermost