



## Mass deposition of jellyfish in the deep Arabian Sea

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**ABSTRACT:** In December 2002, large numbers of dead jellyfish, *Crambionella orsini*, were observed on the seabed over a wide area of the Arabian Sea off the coast of Oman at depths between 300 m and 3,300 m. Moribund jellyfish were seen tumbling down the continental slope. Large aggregations of dead jellyfish were evident within canyons and on the continental rise. At the deepest stations, patches of rotting, coagulated jellyfish occurred. The patches were several meters in diameter, at least 7-cm thick, and covered about 17% of the sediment surface. At other locations on the continental rise the seafloor was covered in a thin, almost continuous, layer of jelly "slime" a few millimeters thick or was littered with individual jellyfish corpses. Photographic transects were used to estimate the amount of carbon associated with the jelly detritus. The standing stock of carbon (C) varied between 1.5 g C m<sup>-2</sup> and 78 g C m<sup>-2</sup>, the higher figure exceeding the annual downward flux of organic carbon, as measured by sediment traps, by more than an order of magnitude. The episodic nature of jellyfish blooms, which may be modulated by global change phenomena, provides a hitherto unknown mechanism for large-scale spatial and temporal patchiness in deep-sea benthic ecosystems.

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