

Niche separation of marine thaumarchaeotes from the seasurface to the hadal ocean

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Ammonium (ammonia) and nitrite are important intermediates of oceanic nitrogen cycle, but are depleted in most oceanic waters. The availability of ammonia may influence the niche separation of nitrifiers. Likewise, niche separation may be a signature of geochemical processes, such as nitrification and the degradation of organic matter. In this study, we employed single cell genomics to analyse signatures of niche separation of ammonia-oxidizing Thaumarchaeota in water depths ranging from sea surface to the hadal .