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## Inferring modern extinction risk from fossil occupancy trajectories

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Besides providing information on ancient mass extinctions and intrinsic extinction risk, the fossil record may also provide useful data for assessing the extinction risk of extant species. Here we analyse the palaeontological trajectories of geographical occupancy in extant marine species to identify species that have been declining over geological time scales and may thus be more prone to extinction than expanding species. The slopes of these occupancy trajectories are used to categorize evolutionary extinction risk. Mapping the risk at global scale we find that low to mid latitude regions are at significantly higher risk than high latitude regions. We also find a moderate correspondence between high extinction risk on geological time scales and modern extinction risk for reef corals and propose to add fossil data to the assessment of current extinction risk, especially for the notoriously data deficient marine taxa.