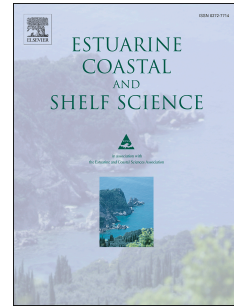


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Bioerosion structures in high-salinity marine environments: Evidence from the Al-Khafji coastline, Saudi Arabia

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1 **BIOEROSION STRUCTURES IN HIGH-SALINITY MARINE**
2 **ENVIRONMENTS: EVIDENCE FROM THE AL-KHAFJI COASTLINE, SAUDI**
3 **ARABIA**

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12
13 **Abstract**

14 Salinity is one the major stress factors that controls the biotic activities in marine
15 environments. In general, the mixture with fresh-water has been mention as a great stress
16 factor, but the opposite, i.e. high-salinity conditions, is less developed in the ichnological
17 literature. Along the Al-Khafji coastline, Saudi Arabia, hard substrates (constituted by
18 gastropods, bivalves and coral skeletons) contain diverse and abundant bioerosion traces
19 and associated encrusters. Field and laboratory observations allowed the recognition of
20 eight ichnospecies belong to the ichnogenera *Gastrochaenolites*, *Entobia*, *Oichnus*,
21 *Caulostrepsis* and *Trypanites*, which can be attributed to various activities produced by
22 bivalves, sponges, gastropods and annelids. The borings demonstrate two notable
23 ichnological boring assemblages, namely, *Entobia*-dominated and *Gastrochaenolites*-

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