NEPTUNE TALKS

a series of online scientific lectures

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Biological indicators of relative sea-level change, climate change and palaeoearthquakes

In order to improve understanding of driving processes of relative sea-level change, reliable high-resolution proxy records are needed from different parts of the world covering different time periods. Among markers of relative sea-level change, fixed biological indicators represent one of the best evidences of relative sea-level change as they always occur within a restricted elevational range with respect to the surface of the sea.

Consequently, one of the best sea-level indicator in the microtidal environment on rocky coast are bioconstructions built by alga *Lithophyllum byssoides* called *Lithophyllum* rims. The *Lithophyllum* rim, also termed corniche, or trottoir is an organogenic calcareous protrusion that may attain a maximum width of about 2 m. Their vertical precision (±10 cm) comes from the restricted environmental conditions of the alga *L. byssoides* that exclusively inhabits the narrow part of the intertidal zone. Alga *L. byssoides* can be dated by ^{14}C allowing the creation of high-resolution geochronology.

This presentation will focus on the use of algal rims as high-resolution markers of relative sea-level change, climate change, and paleoearthquakes. Several examples from the eastern Adriatic coast will be presented, from areas of subsidence in the northern part of the Adriatic to areas of uplift in its southern part.

24 February, 4:00 pm UTC+1

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