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The evolution of sessile benthos biodiversity in the Genoa harbour over a multi-decadal period

In the 1960s and 1970s, the sessile benthos of the Genoa harbour was studied using panels left in the sea for varying periods (between 1 month and 1 year) at 5-10 m depth. Biodiversity, biomass, and sessile community dynamics were assessed at different time scales. Over 50 years later, from June to December 2023, the study was repeated to evaluate possible variations putatively related to global climate change. The main species found were the barnacle *Amphibalanus amphitrite*, the serpulid *Hydroides elegans*, and the bryozoan *Schizoporella errata*, which were the most abundant also 50 years ago. In 2023, some individuals of the serpulid *Hydroides dirampha* were observed. This species, with a tropical affinity, in the 1960s was reported only near the hot water discharge of a thermoelectric power plant, suggesting its increased presence may be related to sea warming. In the 1970s, *Simplaria pseudomilitaris* was the only abundant spirorbid species on the panels, occurring only in winter and spring; today, *Neodexiospira pseudocorrugata* is also present with comparable amounts, with both species occurring in midsummer. Some previously abundant organisms, like the sponge *Sycon ciliatum*, the hydroid *Ectopleura crocea*, and the ascidian *Ciona intestinalis* disappeared. General settlement dynamics appear comparable to the past, with summer peaks and winter lows. However, barnacle and serpulid settlement in autumn has considerably decreased, while encrusting bryozoans, scarce in the past, were reported as abundant in summertime 2023.