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Ostreopsis cf. *ovata*: A friendly dinoflagellate who likes to attach to different macroalgae and to a bryozoan

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Benthic toxic harmful algal bloom occurrence, and in particular, the proliferations of the species *Ostreopsis* cf. *ovata*, are becoming more frequent in temperate regions. *O.* cf. *ovata* recurrent blooms covering macroalgal communities have been reported in the last 20 years in the beach of Sant Andreu de Llavaneres (NW Mediterranean) during the summer fall period. The monitoring of these blooms in this beach has been conducted by sampling the dominant macroalgae, usually *Jania* spp. and *Ellisolandia* spp. However, to have a better understanding on the substrates to which *O.* cf. *ovata* attaches in this hot spot, the taxonomic characterization of the macroalgal communities was conducted during the 2019 and 2020 summers. In addition, in 2020 the *O.* cf. *ovata* bloom was monitored by sampling the above mentioned taxa as well as three abundant macroalgae, namely, *Padina pavonica, Dictyota dichotoma* and *Halopteris scoparia* and the bryozoan *Amathia verticillata* which appeared for the first time in that site.

In both sampled periods, the macroalgal communities were dominated by Corallinales species which formed turfs typical of non complex and degraded habitats, subjected to anthropogenic pressure (highly urbanized and eutrophic). Quantitatively, the cell concentrations of O. cf. ovata per fresh weight of the different substrates sampled in 2020 showed high variability along the bloom with the highest values estimated on *Jania* spp. and *A. verticillata*. Qualitatively, the general temporal trend of the 2020 bloom was pretty similar, independently of the sampled substrate, suggesting that any dominant macroalga can be appropriate to monitor an *O.* cf. *ovata* bloom. However, given that the absolute cell concentrations are used to ascertain the risk of the bloom to human health, more in depth studies of the links between O. cf. ovata and the benthic substrates are required.