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Effects of medium and substrate preferences soil extract on growth of coolia (dinophyceae) (Article)

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Abstract

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Coolia is a benthic dinoflagellate that lives epiphytically with a substrate. It has been reported that several of the species produce biotoxins. Therefore, this study was done to identify the substrate preferred by Coolia and the effect of media with soil extraction on the growth of the species of C. tropicalis and C. malayensis. Several substrates; the seagrass (Enhalus), seaweed (Sargassum, Padina (Phaeophyta), Halimeda (Chlorophyta) and coral rubbles were collected and Coolia's cell density was determined. C. tropicalis and C. malayensis were grown in ES-DK medium with and without soil extract at similar conditions. The specific growth rate, division per day and generation time were determined for both species. Results showed that Coolia flourished in the substrate with a greater amount of thalus from brown macroalgae (Phaeophyta). While the cell density of C. tropicalis was significantly higher in medium with soil extract, C. malayensis was significantly higher in the medium without soil extract. This indicates that both species have similar basic requirements, but differ in their specific needs. This information on the substrate and medium preferences increased our knowledge of the ecology of Coolia. © Penerbit UMT.

SciVal Topic Prominence

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