

Epiphytic bacteria in a copper-enriched environment in northern Chile

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Abstract

This study was designed to characterize the bacterial community epiphytic on the green alga *Enteromorpha compressa* in terms of density, generic composition and degree of copper tolerance. Algal hosts were collected in Caleta Palito, a rocky beach in northern Chile which has suffered the impact of waste disposal from the copper mine El Salvador during the last 20 years. Comparisons between epiphytic bacteria from Caleta Palito and those from Caleta Zenteno, a control site with no history of copper enrichment, showed that differences in generic composition and density were very minor. However, a larger number of isolates from Caleta Palito showed higher copper tolerance. Our study demonstrates the high copper tolerance of bacteria epiphytic on the dominant algal taxa in Caleta Palito and suggests the potential role of bacterial films in lessening the negative impact of copper on algal hosts inhabiting copper-polluted environments.