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The prevalence of non-indigenous species in southern California embayments and their effects on benthic macroinvertebrate communities

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ABSTRACT

The prevalence of non-indigenous species (NIS) in southern California embayments was assessed from 123 Van Veen grab samples collected in nine bays and harbors during the summer of 1998. NIS occurred in all but two samples. They accounted for only 4.3% of the 633 taxa but contributed 27.5% of the abundance. There was no significant difference in the proportion of NIS abundance among ports harboring large vessels, small boat marinas, and areas where boats were not moored. Three species accounted for 92% of the NIS abundance: a spionid polychaete worm *Pseudopolydora paucibranchiata*, a mytilid bivalve *Musculista senhousia*, and a semelid bivalve *Theora lubrica*. The NIS did not appear to have a negative impact at the overall community level since NIS abundance was positively correlated with the abundance and richness of other species. This may be due to biogenic structures built by *P. paucibranchiata* and *M. senhousia* that enhance the abundances of other macrofauna.

Full Text

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