

Growth and extremely high production of the non-indigenous invasive species *Corbicula fluminea* (Müller, 1774): possible implications for ecosystem functioning

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The Asian clam *Corbicula fluminea* (Müller, 1774) is a major component of the River Minho estuary, almost completely dominating the benthic biomass. As part of a major study into the ecology of *C. fluminea*, benthic samples were collected monthly from January 2005 to August 2006. These data were then used to estimate the abundance, biomass, growth, and growth and elimination production of this non-indigenous invasive species. *C. fluminea* growth was continuous throughout its life span. The annual 2005 growth production was estimated to be 463.8 g AFDW.m⁻².year⁻¹, and the mean annual biomass was 160.7 g AFDW.m⁻², resulting in a P/B ratio of 2.89.year⁻¹ and a turnover time of 126.4 days. In the light of these results, *C. fluminea* is a fundamental element in the River Minho estuary, possibly sequestering a large portion of the carbon available for benthic production and altering the ecosystem functioning. This species should be considered when modeling the nutrient cycles and energy flow in aquatic ecosystems.

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