

Smith, J.R., R.F. Ambrose, and P. Fong. 2006. Long-term change in mussel (*Mytilus californianus* Conrad) populations along the wave-exposed coast of southern California. *Marine Biology* 149:537-545.

Abstract: Mussel (*Mytilus californianus*) populations were studied throughout California to determine changes over the past few decades, and, in particular, to determine if declines reported for southern California have occurred outside of the region. We compared mussel cover, biomass, and bed thickness reported in historic studies in the mid-1970s to 1980s with measurements made in 2002. Mussel cover and biomass in southern California declined markedly over the past few decades with a mean cover loss of 31.2% (40.2% loss) and biomass loss of 25.1 kg m<sup>-2</sup> (51.3% loss). Changes in mussel bed thickness were not as strong as cover and biomass, but also appeared to decline over time. Declines were limited to the southern California region, since mussel cover, biomass, and bed thickness remained unchanged or increased at sites in central and northern California. Causes for mussel declines in southern California are unknown, but may include human visitation, increased sea surface temperatures, and pollution.