

Abstract:

This paper describes the reproductive activity of the pearl oyster *Pinctada imbricata* Röding 1798 in two adjacent areas in Gazi Bay, Kenya, exposed to different tidal current velocity. The annual mean temperature, salinity, suspended matter and organic content of the suspended matter were similar in the two areas. Gonad activity and spawning of the oyster population occurred throughout the year. Male sex expression was higher than female sex expression, and also higher in the current swept area (m:f = 1:0.72) than in the sheltered area (m:f = 1:0.81). The developing gonad stages were more abundant during the southeast monsoon period between July and October, while spent stages were more abundant between May and July and between November and February. The condition index indicated similar gonad development patterns at the two sites and was higher in the current swept site during most of the year.