Abstract

The mortality of the Japanese littleneck clam (*Ruditapes philippinarum*), caused by a decline in bottom dissolved oxygen (DO) concentration, in the shallow muddy bottom of Mikawa Bay, was measured throughout a 50 day period during the early summer of 1996.

Using that data, it was attempted to compute the change in mortality as a function of change in DO.

When the percentage of DO saturation was considered as the only factor affecting mortality, it did not fit the observed mortality, however it did fit when water temperature was included as an additional factor.

Decline of the standing stock of macro-benthos and meio-benthos in the same area was well represented by this mortality function. It was also suggested that meio-benthos mortality in lower temperature than 25 degree is larger than that of macro-benthos.