

Neomysis/Zooplankton Abundance

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Neomysis mercedis, the opossum shrimp, has undergone a long-term decline in abundance since sampling began in 1968 (Figure 1). Abundance was about the same in 1995 as in 1994. *Neomysis* appears to be food-limited and is now competing with an introduced species of *Acanthomysis*.

The copepod, *Eurytemora affinis*, is an important food for young-of-the-year striped bass. It has also declined in abundance and shares its habitat in the entrapment zone with two introduced copepods, *Sinocalanus doerrii* and *Pseudodiaptomus forbesi*. *Eurytemora* abundance increased slightly in 1995, as did that of *Sinocalanus* (Figure 2). On the other hand, *Pseudodiaptomus* abundance decreased slightly.

Acartia is a marine coastal copepod found at the seaward end of our sampling area. Its abundance is usually directly related to salinity, but in 1993 and 1994 its abundance was lower than expected (Figure 3), perhaps because of the introduction of an exotic copepod. The high freshwater outflow of 1995 would have kept its abundance down.

Synchaeta bicornis is a rotifer that has historically been most abundant in the entrapment zone. It has undergone a long-term decline that suggests food limitation as a cause (Figure 4). Its abundance rose slightly in 1995.

The high freshwater outflow of 1995 had little effect on the abundance of any mysid or zooplankton species. Food limitation and competition from introduced species seem to be the factors that control the native fauna.

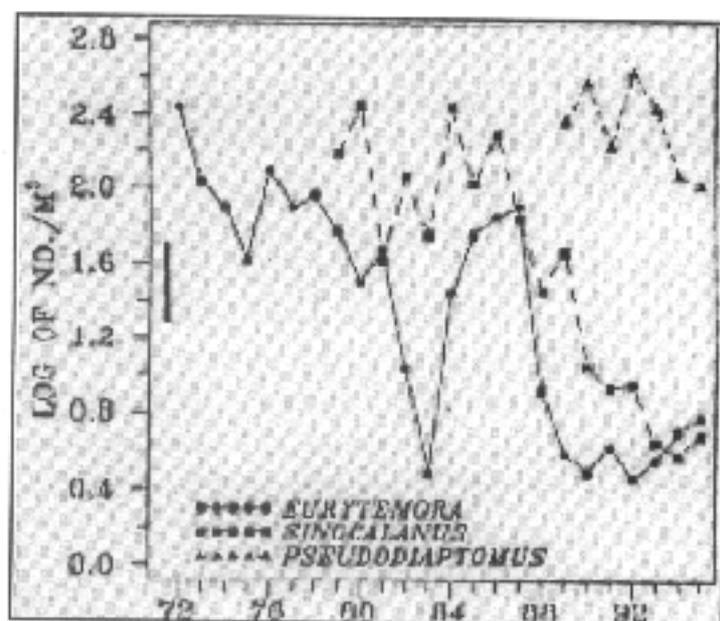


Figure 2
Abundance of
Eurytemora, *Sinocalanus*, and *Pseudodiaptomus*

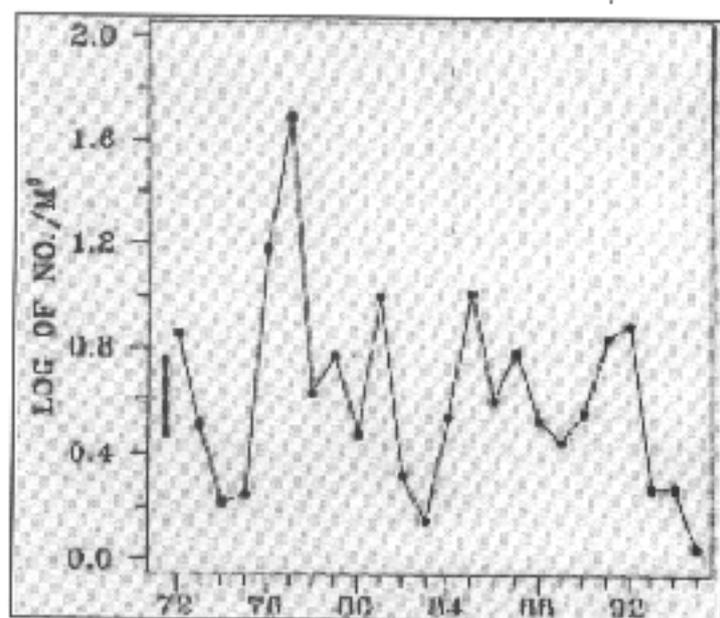


Figure 3
Abundance of *Acartia*

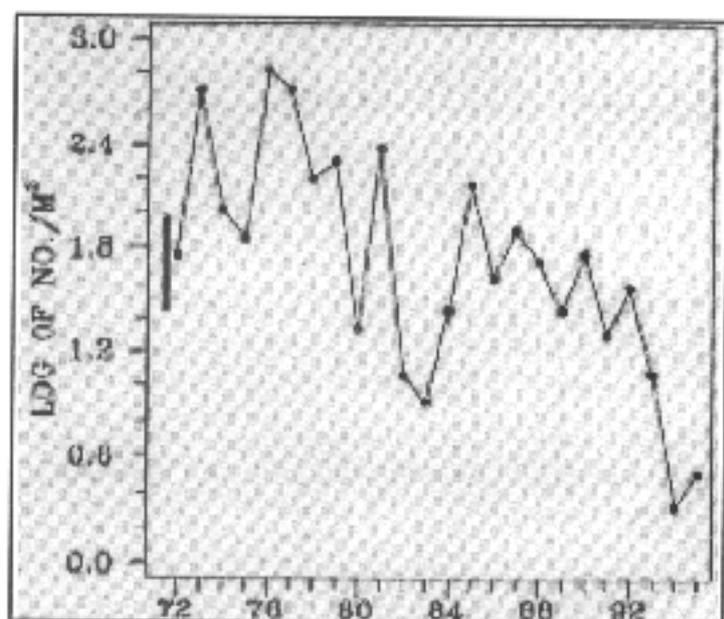


Figure 4
Abundance of *Synchaeta bicornis*

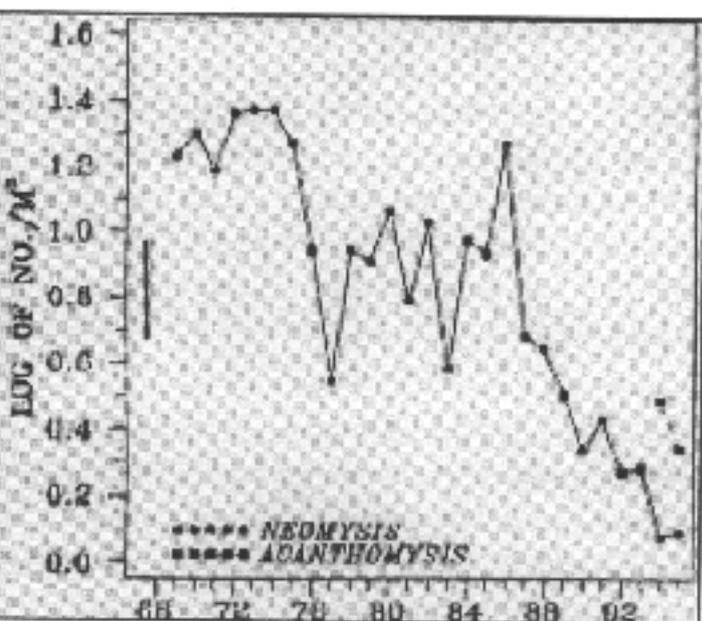


Figure 1
Abundance of *Neomysis* and *Acanthomysis*