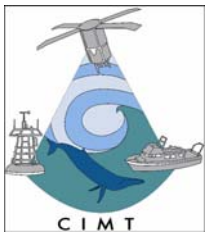

Biological Oceanography: Baldo Marinovic Lab Summary for CIMT Ship Surveys
Submitted by: Nancy Gong and Asila Ghoul

The Zooplankton Ecology Lab aka Marinovic lab started zooplankton sampling as part of the CIMT ship surveys on November 2002. The labbies in Baldo's lab are Nancy, Asila and volunteers: Joy and Ann. Baldo Marinovic has been collecting zooplankton samples in the Monterey Bay since 1997. On the CIMT ship surveys, we collect zooplankton samples so we can find out what the distribution, abundance and species composition of krill are within Monterey Bay. We can compare this data between months and from year to year. We also take zooplankton volume displacements for each sample, which tells us the volume (in milliliters) of each sample. With the volume displacement values along with the volume of sea water filtered through the nets, we get the mean biovolume (mL/1000m3) for each month. We can compare the mean biovolume from month to month or from year to year. This allows us to track any trend or anomaly that might be going on in Monterey Bay.

We sample using a multi-net Tucker trawl with 333 micron mesh. Each net is equipped with a flow meter, which allows us to calculate the volume of sea water that has passed through each net. The samples are preserved in a buffered formalin solution, so the samples can be processed at a later date in the lab. It takes at least two people to launch and recover the tucker trawl on the CIMT surveys, and someone in the cabin, usually Kelly Newton, recording data.

Back on land at the Long Marine Lab is where we enter the data to calculate the flow volume and biovolume. Zooplankton samples are processed in the lab for the krill. We have to split the samples equally and examine each krill with a dissecting scope, so this is better done in the lab than on a rocking boat. Processing the krill involves splitting the zooplankton sample down to a manageable number of krill, and then separating and counting species, sex and age class. In order to get the monthly size frequency distribution of the total length of krill, we photograph all of the sorted krill, and then measure them with imaging analysis software. This information allows us to examine recruitment and growth patterns for krill stocks within Monterey Bay.