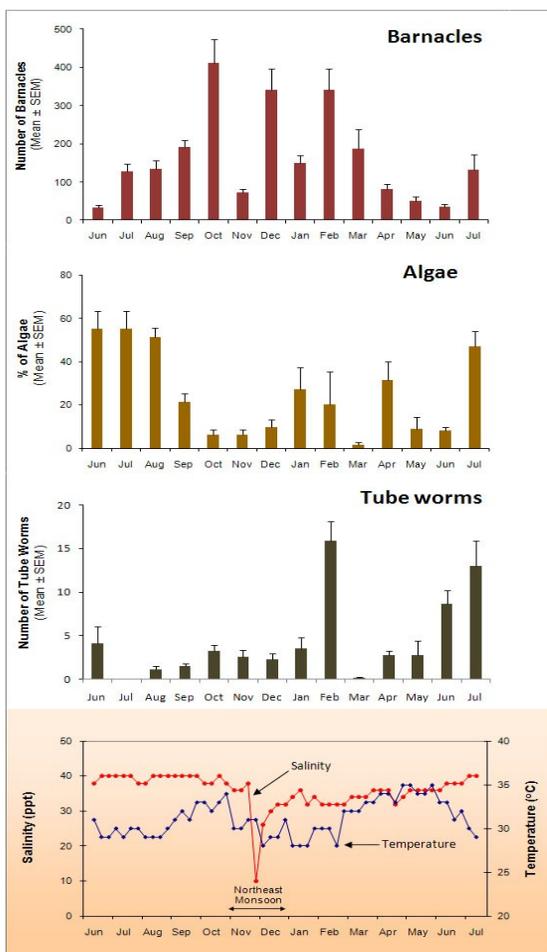


# Poseidon Sciences

Technical Notes: October, 2010

*While formulation R&D on marine coatings continues throughout the year for most companies, the ability to test the performance of experimental coatings typically halts after the summer because of the reduced marine fouling in cold weather countries. Poseidon's static and dynamic immersion platforms provide the opportunity to test new formulations on a year-round basis under tropical conditions.*

**Are there seasonal trends in biofouling even in tropical waters?** Seems like an easy question to answer, but in fact there is hardly any research on this subject. For this reason, Poseidon Sciences has embarked on a continuing evaluation of the fouling conditions at our various test facilities to answer this question. While the research is still ongoing, the interim data suggest that tropical waters do have some seasonality. Data from such studies are useful in planning and evaluation of coatings performance in tropical waters.



The test involves placing 7.5 cm x 21.5 cm PVC panels in the static platform for 30 days and evaluating attachments of algae, barnacles, oysters, tube worms and other fouling organisms. The evaluation is expected to continue for a minimum of 2 years to have a better idea of seasonal trends. The interim 1-year data provide us with a glimpse of the natural fouling conditions in our primary test area in Karrapad Bay under collaboration with SHMRC India.

The data from June 2009 to July 2010 show continuous fouling throughout the year, but with peaks of high fouling depending on the season and the onset of the monsoon. Barnacle attachment started increasing in October and associated with increase in seawater temperature. The barnacle population crashed in November due to the sudden decline in salinity associated with the rains of the short November monsoon. The barnacle population recovers quickly thereafter and remains at high fouling until February. Algal fouling typically occurs prior to the barnacle peak season. Tube worms, on the other hand, have sporadic brief periods of high fouling activities.

**Subsea Biofouling tests** are conducted at 100 ft below the ocean surface using submerged platforms. For more details, please read our recent article [HERE](#). Installation of test panels and inspections are typically done every 3 months. Our forthcoming schedule of activity is in December 2010. Those wishing to use the facilities should submit panels on or before December 10th.

**Patch test on the research vessel Tara** is an ongoing program under collaboration with Tara Oceans. The schooner, Tara, currently in the South Atlantic, is on a worldwide cruise to map the microalgae, bacteria and viruses of the oceans.

The ship is dry-docking in Buenos Aires this November and will continue on its voyage around the tip of South America and will cruise throughout the Pacific in 2011. 1 sq. m patches are placed on the ship hull to allow measurement of the performance of coatings through subzero and tropical water conditions

as it sails around the world. The next opportunity to participate in this program is in Spring, 2011 when the ship docks in Valparaiso in Chile. For more information about this program, please click [HERE](#). Scienceblog entry regarding Tara can also be accessed [HERE](#).

**Marine Toxicology Sentinel Screening (MTSS)** is a method to evaluate the effects of finished coatings or ingredients on marine life forms. Using sensitive marine larval species, MTSS provides an objective method to validate claims of eco-toxicological safety. To learn more about MTSS, please read our newest publication in Polymers Paint Colour Journal [HERE](#).

Our website provides more detailed information about the various research and development projects at Poseidon Sciences. Please visit our website at [www.poseidonsciences.com](http://www.poseidonsciences.com).