

Guide to Biofoulers



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In recent years, designing antifouling coatings to prevent the attachment of biofouling organism on submerged surfaces has become an even more challenging task. The environmental and regulatory trends are pointing towards reduced cuprous oxide content in coatings and less co-biocides. These are pushing paint chemists to be more creative in designing the blends necessary to achieve the antifouling effects. I suppose that a formulator's life would have been easier if fouling conditions are uniform throughout the world's oceans, ports and estuaries. The reality is far from uniformity. Fouling along the inter-coastal waterways of Eastern United States is different from that of the San Diego area, for example. And, so are the fouling issues of the Baltic so different from that the Mediterranean, the South China Sea and numerous other places. Even within the same port area, the degree of barnacle fouling is dictated by the level of salinity, pollution, currents, etc.



The barnacle, *Balanus trigonus*

Understanding what types of fouling occur in any given location is important from an academic and industry point of view. A formulation that may seem to work well in Florida may not be necessarily effective in Singapore or India. As we continue to evaluate a variety of coatings over the years, it is becoming clear that paint chemists tend to wear two hats--one as the formulator and the other as a biologist trying to interpret the fouling presence in experimental coatings, trying to make sense of the images being received from various test sites. A formulation that works well against barnacles may not be so effective against mussels and bryozoans. This problem is even more acute when trying to develop copper-free and biocide-free coating systems.

To help in this process and create a better awareness of the importance of fouling as a major economic issue, Poseidon is launching a web **Guide to Biofoulers**. This Guide will feature the types of fouling organisms present at different locations around the world. Contributions to this Guide come from marine research laboratories and commercial enterprises with strategic interest in marine biofouling. To view this site, please click [here](#). We invite scientists and industry specialists to post their locations and fouling conditions to diversify this site and make it as informative as possible. Please send images and descriptions to jrmatias@poseidonsciences.com.

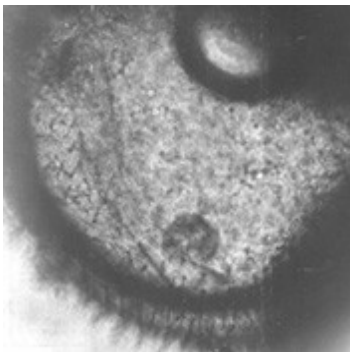


Noah ! What do we do? We have more than two barnacles !

Published articles and newsletters. 2009 and 2010 had been productive years of technical writing. Here are some articles in marine science that you might be interested in reading. **Please click on the image of each article below to read a pdf copy.** More can be found in the 'Publications' section of our website www.poseidonsciences.com.



Non-Marine R&D Update. Revenues from contract research support other scientific programs under Poseidon Science Foundation, the non-profit organization of Poseidon Sciences. A major effort is being undertaken to develop biological control methods of larval mosquitoes in freshwater habitats. This work is a collaboration with TPRI in Tanzania and the Harvard School of Public Health. Last year, the concept of using annual fish as a biocontrol measure showed great promise. Our ongoing semi-field trials in Tanzania demonstrate that the concept can be transferred to real world conditions.



This unique fish can be transported to remote areas without water by using eggs of the fish in suspended animation. Transported in dry soil, the embryos hatch upon contact with fresh water and prey on mosquito larvae. Over a million deaths a year is attributed to malaria, most of whom are children under the age of 5. In Tanzania, over a third of the population has malaria. With increasing resistance of mosquitoes to pesticides and increased resistance of the malaria parasites to drugs, unconventional biological methods need to be developed to reduce the malaria burden. To read more about this unique fish, please go to our scienceblog [here](#) or read the article in Parasites & Vectors [here](#).

For more information, please contact:

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