

Tech Tips: Mildew Problems

By Bill Whitney

As we put our boats away for another winter we may notice some of the little 'issues' that have accumulated over the season. Although this season may have been shortened, the wear and tear on boats that did get launched and their systems was probably about the same as previous years. Frayed and chafed lines, grass in the sea strainers, wear on the packing glands and mildew on the sails and cushions. For those boats that didn't make it into the water the subject of this article may also apply due to poor ventilation while covered. This article focuses on the hull interior, fabrics in and on the boat, and how they respond to the normally damp environment within which they exist. Dealing with black spots and boat smells are just as much a part of sailing as bottom painting and other chores we perform to keep our floating treasures in good condition. Searching for products that are effective and inexpensive is always a chore for a "frugal" (cheap) Yankee such as myself. I'm forever trying different things, with varying success.

Last fall, while volunteering on the Schooner **Adventure** out of Gloucester, we discovered a mildew problem in the foc's'l. Luckily another volunteer had a formula consisting of readily available household products that proved to be an excellent remedy. Coincidentally this fall Practical Sailor magazine published an article by Darrell Nicholson on mildew and mold treatments, concluding with results that matched what we experienced. What follows is a summary of a dozen or so products tested on various materials both in the lab and on board boats. For more detail on methods and results, we refer you to the full article.

Twelve products were tested, comprised of gels and solids that work through emitting a vapor, and liquid sprays that work by direct contact, two of which were home-made formulas, as well as household bleach and vinegar. These are listed roughly from most effective to least.

Goldshield GS 5: This product was a clear winner, earning the Best Choice pick. It is currently available only on the web but the company is working on a wider distribution for the marine market. It is regarded as safe when used as directed and is approved for a wide range of applications.

Formula A: Combined one quart hot water, one tablespoon baking soda (sodium bicarbonate), two tablespoons washing soda (sodium carbonate), and two tablespoons trisodium phosphate (TSP). This homebrew is cheap. It works. Find your own empty spray bottle and try it.

Formula B: Combined one quart hot water, two tablespoons baking soda, two tablespoons Borax, and one tablespoon TSP. Without a doubt, this was the cheapest mildew solution, and was very effective.

3M Marine Mildew Block: Based on the formula, we expect that the water resistance will be superior to Concrobium and the DIY blends. This is a good product for areas exposed to occasional spray.

Siamon's Concrobium: This recommended product rated well again, but it was matched by the cheaper, homemade Formula A.

Household Bleach, 10% solution: Bleach killed mold, removed stains, and greatly reduced reinfection (especially when not rinsed with fresh water). Of course, the sample was bleached, reminding us that it is only suitable for completely color-fast surfaces and materials. Sailors should be aware of bleach's bad reputation in the marine environment. It is not eco-friendly, but it still has a place in the cleanup arsenal.

Pur-A-Fy Air: The formula is not cheap, \$43 for an 8-ounce tub. It is an expensive air-freshener that has some limited natural mildew-fighting properties and a nice scent.

Renuzit Super Odor Neutralizer: While it won't kill mold, our test noses approved, and it certainly could make sense as part of a spring cleanup.

Forespar's Tea Tree Power Gel: Fine for freshening cabins, but don't expect miracles.

Forespar's Tea Tree Oil Spray: Use sparingly for masking odors and perhaps to control some incipient mildew.

Star Brite NosGUARD SG: Rather than relying on NosGUARD, the owner of a used boat is going to be happier if he/she bites the bullet and cleans the boat thoroughly, then concentrates on keeping humidity levels down.

Plain vinegar: Left to dry, reportedly works on some hard surfaces, however, this sample became more mildewed than the control sample! Not recommended.

In general, treated Sunbrella fabric samples remained mildew free. All of the other fabric samples developed a few small mildew spots. Vapor emitting gels and solids could not prevent tough infestations, but we found that the pillows and interiors were noticeably fresher smelling after a few weeks of exposure, though the benefit lasted only a few weeks. These products seemed mostly to be masking odors. They might retard mildew growth, and the science supports that, but it's not enough to make a difference in any significant infestation.

All of the spray products gave similar coverage, as all are water-based and have the same instructions: Spray from 6 to 10 inches away until the fabric is moist, remove excess, and let sit. Figure on about 100 square feet per quart, and at least double that figure on hard surfaces. While some mildew returned to the control area, the treated areas stayed clean and fresh smelling for six months. None of the products worked well as hull or deck cleaners. They seemed to deteriorate or wash away in the weather and can strip away wax.

As a rule, keeping things dry using dehumidification or ventilation, though not always practical or possible, was far more effective than any product we have tested. Dry should always be the first line of defense, with chemical treatments saved for those areas and items that unavoidably get damp.

On schooner **Adventure** we used Formula B by the gallon, spraying it on with a good agricultural sprayer. The results were excellent. All of the mildew was gone the next day. Since then we have rigged fans throughout the hull to keep the air moving and reduce interior humidity, which is a challenge in a large wooden hull.