



Remediating a Pesky Case of Glue Failure

***SLACKTIDE's* Sea Trials: Breaking in our T26x7**

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Part 2 of 4

Leg I: Sitka to WarmSprings Bay – September 2009 – ~90nm¹

“A sailor's task is to make the vessel in hand *sail!*”

-- Paraphrased from Tristan Jones

Sea trials for SLACKTIDE began in Sitka, in September, *en route* to Baranof WarmSprings for a winter care-taking job. This leg was reassuring in most respects, despite a daunting beginning!

We sallied forth in the company of friends and a ghosting breeze. Eventually, a 10-knot interval (on the nose, of course), moved us along on the slow side of OK, but we couldn't muster a tack. Uh-oh. But first day and all... I thought we just needed to learn her ways.

On our own, now, and a few miles on, we got caught by a squall in a wind pinch between two islands; one of those natural venturies. Probably the strongest 15 minutes of wind we've ever experienced on the water. Swamped our dory (towed behind), but, deep-reefed in advance, we slid through the squall in style. Pulled the dory out from under its load of water and all's well.

Except... what's *that?* Along the port side? Did we *hit* some flotsam?? One of our copper plates, it turns out, has peeled off the bottom to wing out to port, hanging by the angle-bronze fasteners! Plates are spendy suckers, and one of them was hanging, as it were, by a thread. Later inspection showed that at least one of our plates had gaped, back in harbor (had weed growing on the inside face), explaining our slow start!

¹ This distance is tallied 'as the Raven flies over water.'

Long story short: Every freaking plate had come loose. Something about salt water, copper and polyurethane glues (3M 5200 and SikaFlex) didn't take. *Whatchagonnadoo?* Fortunately, the glues left a great, waterproof gasket firmly bonded to the plywood bottom. Between tides, we fastened all plates with bronze, ring-shank nails and sailed on, sadder and but little wiser.

This set-back used up all but a week before our job's start-date on 1 October. But, without drag from sagging plates, we're really sailing... not burning up the water, but moving right along, and able to tack into 20 knots and about four miles of fetch (the most encountered on this leg).

And now we're slow again, but this time thanks to light and flukey wind. Heading north out of Sitka Sound, one threads a number of narrows and straits. They can incite higher winds to riot, or baffle lighter winds into submission. Our SeaCycle had yet to be mounted, so it's all sculling.



Moving Along in a Breeze

Locally infamous, Sergius Narrows separate outer waters, opening onto the Pacific, from inside passages. Timing differences and large tide ranges push current through three crooked and rocky channels; up to 14kts on large spring tides. Storm surge across the Gulf of Alaska can jack that higher, yet. Twists, shoals and rocks set up violent whirlpools and rips. Navigational buoys get pushed over and under.

Fortunately, it has a back door; an island separates the marked, deep-water channel from Canoe Pass, used by smaller fishboats with local knowledge. It even has a 'doggy door'; very shallow and set off from Canoe Pass by an islet and reef. That's our baby... least current closest inshore.

Our usual method is to buck the last of a neap tide's foul current, make tracks through slack tide and let the new, fair tide spit us out on the far side. Timing is everything. Or should be...

But this time, we were an hour late arriving. Things *looked* placid, and we decided it wasn't too bad... fair tide and rising (lifting off any rocks). Piece o' cake! Of course, the problem is that once begun, there's no turning back.

Anke stood by the 18' push pole at the bow, ready to push off either side. I kicked up the rudder to 45 degrees and raised the leeboards. Forward into the breach.

Hmm... methinks I hear a roar. First muted, then not-so. *Oopsie!* Suddenly we're flying though at six or seven knots (as measured by the Doppler Effect on our screams; *EEEEEEE-YAAAAAH!*).

Pretty thrilling, actually, but no control. Steerageway gone, pole dangerous to use at that speed. We slid sideways, off the midstream bulge of water, out of position, and saw toothy rocks, gnashing and foaming-at-the-mouth within a foot of our pristine chines.

We'd barely pumped a collective quart of adrenaline before we were through. Once back into deeper water, the current gave us a contemptuous 360deg spin, then carried us on in more friendly fashion.

Moral (one more time for us slow learners): If late then *wait!*

The rest of this leg was uneventful, even anti-climactic. Highlights included a 7nm sculling stint along flat-calm Deadman's Reach, A little night beating in 15-20kts up a relatively narrow channel. Some fun poking around while waiting for fair tides.

And then a longish tow.

Now I am averse to getting towed. But without wind, we were going to be late for the job. A friend, starting several days after ourselves, had kindly offered to watch for us along the route, and tow us if necessary. We had commitments, so, for once, we accepted. Just shy of 40nm on a leash... but good company is always a pleasure.



Towing at 4.5kts

The benefit was we got to see SLACKTIDE's wake while being towed upright at 4.5kts (thanks to a 17hp diesel inboard driving a 28' Hess Falmouth Cutter). Water rolls along her sides, then collapses inboard as it clears the upward, aft curve of the bottom. No deep waves are generated, though, as one can see in the picture, there is a fair sized bow wake.

I'll jump ahead, here, to note that our theoretical maximum hull speed (6.66kts) has not been attained under sail, either. In fact, we readily achieve that 4.5kts, but work for more. In winds fresh and fair, we can push to 5kts with intermittent, higher bursts.

Hypotheses:

- Our S/D ratio is low – the snug, junk sail-plan is a first defence against sudden williwaws, but doesn't develop full drive until Force 6 or so.
- By Force 6, the water is getting choppy, and we are slowed by our blunt bow.
- Being only lightly ballasted by copper and possessions, we're reefing by Force 6.
- Our aft curve may be too abrupt for easy release of water, causing drag.
- The long, mid-ship's dead-flat may be inherently slower than a rockered bottom.

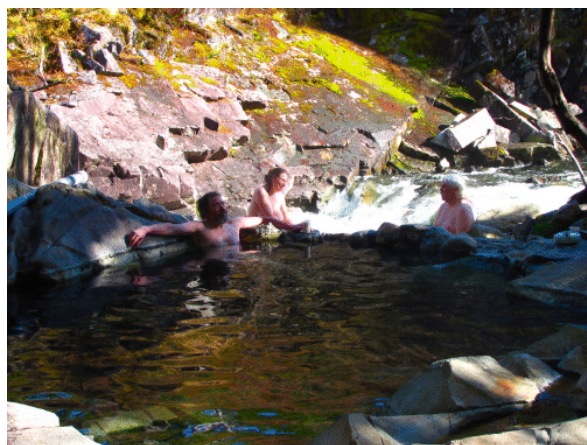
I note with interest that older sailing, box barge designs, seen in profile, are blunt in the bow and easy at the stern. I had thought this a variation of cod's-head-and-mackerel-tail, but now I'm less sure. SLACKTIDE's aft bottom curve is relatively abrupt to maximize displacement yet clear the transom corners when heeled. If these are liabilities, I'd personally accept them in compromise on short hulls, but will be testing models for longer hulls².

Progressively easing both ends eventually meets in the middle to produce full rocker, as found in sharpie and dory hulls, eliminating the barge's mid-body dead-flat. I've heard it said that some rocker makes for a faster hull, but note that commercial barges have none. Certainly an easy release reduces stern drag. Entries and exits are eased at the expense of displacement and ease of construction, and extend a curve underfoot if living on the inside of the hull.

All in all, our compromises seem to have paid off. We were braced for a total slug, but instead find our average speeds acceptable. Not fleet but fit.

Thanks to our friend, we arrived ahead of schedule in WarmSprings Bay. The job requires living ashore, so we cozied up to a dock, unloaded her, and put her to bed for the winter.

As you can see, we put the extra time to good use!



WarmSprings – Good Livin' on the Ring of Fire

2 Poor Feller's Tank Test: Take two competing models and trail them from either end of a spreader (plank, rod, pipe, etc.). Suspend this spreader from the middle, as you would for a mobile, over a smoothly running stretch of water (canal, ditch, tide... the smoother the better), with the models trailing. See which pulls ahead and ponder the results.

This four-part series of articles includes the following:

- Introduction to SLACKTIDE and Living Aboard
- Leg I – Sitka to WarmSprings Bay
- Leg II – WarmSprings Bay to Haines
- Leg III – Haines to Tenakee Springs

Please check back at this site for the rest of the series.

SLACKTIDE and other designs, along with more articles and FAQ pages, can be found at www.TriloBoats.com