



<http://members.shaw.ca/vmss>

# The Binnacle

Victoria Model Shipbuilding Society  
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## ON THE HORIZON INFORMATION ON UPCOMING EVENTS

- SEP 19 -** TUGATTA Open Event, 10:00—  
finish
- OCT 14 -** Regular Meeting (sourcing modelling  
supplies, locally, worldwide and  
on-line)
- OCT 17 -** Powell Cup Series 2 Initiating Winter  
Sailing at Beaver Lake, 1-3 PM
- NOV 11 -** Regular/Annual General Meeting
- DEC 9 -** Christmas Social and Awards Night

\* **POWER:** Sundays 10 – 12 Harrison Model  
Yacht Pond

\* **SAILING:** 1st & 3rd Sundays - 1 – 3 PM  
Beaver Lake



### From the Bridge

Many thanks to all who took part in the Saanich  
Fall Fair Show - your efforts are very much appreci-  
ated.

Don't forget the Tugatta that takes place at  
Harrison on Sep 19 - all are welcome - bring a friend  
or neighbour. This meetings focus on Tugs is most  
appropriate.

Another summer over and we are now into the  
Fall and Winter building programs. Please tell the  
events coordinators if you would like specific edutain-  
ment at the meetings and they will try to get it!

Ken Scotten

Announcing

## TUGATTA 2004

A Model Tugboat Competition

September 19, 2004

10:30

Harrison Model Yacht Pond  
Dallas Road Victoria BC

This event is  
**open**  
to all modellers

There will be opportunity to  
**Practice**  
August 8 & 22



### Events

Log Retrieval  
Team Towing  
Rescue & Recovery  
Barge Push  
Log Corral



This event is sponsored by  
Victoria Model Shipbuilding Society  
Prizes provided by BC Shaver and Hobbies

Next Meeting is

**October 14**

Remember the  
start time is now

**7:15**

**313 Brunswick Place**

**Lower Floor**

**Edutainment:**

*sourcing modelling supplies, locally,  
worldwide and on-line*



## David Powell and his Thames Sailing Barge.

When I first became acquainted with David, he was in the early stages of building a Sprintsail Barge, the type of thing that he remembered from his youth in the east end of London and the Thames estuary. His enthusiasm was very infectious and in a recent trip to the U.K. my thoughts were with David and his barge, to the extent that I am hoping to start one this winter. His eagerness for modelling was also responsible for pushing me into getting the lines on paper for the "Reno Trainer" one metre yacht. How well I remember being at Harrison Yacht Pond and his statement, "Come on Ken, get the lines on paper so we can all build one". David, I salute you and bid farewell to you and your modeling skills. Ken Lockley.

Yesterday at approximately 12.30 pm David passed away after a lengthy battle with cancer. He will be sorely missed by his friends and of course the manner in which he gave to the club members valuable knowledge on the wonderful hobby of model boat construction. He always made himself accessible for advice and guidance, and in my case always opened up a conversation with the words, "what's your problem son" seeing that I am almost old enough to be his father this of course was his humour coming out. I am going to miss my friend as I am sure all who knew him will feel the same. It is said that old soldiers never die they only fade away, and David was an old soldier.

Don Halls CD

David (Dai) Powell



I was saddened to hear of the death of Dave Powell, perhaps we could use a picture of Dave in the Binnacle. This picture was taken during happier times at Canwest. Jack Ross

## 2004 Executive

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Secretary	Tom Pound	595-6487
Treasurer	Derek Woollard	658-1150
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Publicity	Jack Ross	478-3191
Quartermaster	Bob Rainsford	383-2256
Director at Large	Mike Gibson	642-6540
Director at Large	Mike Woodley	598-8379

## 2004 Committee Heads

Librarian	Jack Ross	478-3191
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Binnacle Mailing	Bill Birch	592-6456
Show Coordinator	Derek Woollard	658-1150
Bandit Coordinator	Rick Rainsford	382-0898

It is with deep regret and sadness I have to report our Paddleduck Member Dave (Dai) Powell died at 12.20 pm PMT August 20 in Victoria, British Columbia, Canada. He had been battling cancer for the past year and was admitted to hospital about three weeks ago. I visited him almost every day and his optimistic spirit and cheerful outlook never left him although it was obvious last week his condition was deteriorating considerably.

Dai was a valued friend and inspiration to many model ship builders not only through his Club, the Victoria Model Shipbuilding Society, but worldwide to many who met him through the internet. He particularly valued his association with Paddleducks and the friends he made in Australia and New Zealand through our group. Although he was a Brit by birth, he had a deep interest in Australian ships having lived and worked in Western Australia for many years before emigrating to Canada eleven years ago. He was an accomplished ship modeler and built an impressive fleet of beautiful models. His last motorized model was a lovely R/C replica of the famous Murray River paddler "Pevensey" which he completed earlier this year. He and I often talked about his next "paddler project" which was to be one of the Manly Ferries.

Dai will be sadly missed but not forgotten and on behalf of Paddleducks everywhere I have expressed our sincere condolences to his wife, Blanche, and family.

Paul Jordan



## How to Lighten and Darken Colours

(If anyone can expand on this, please let us know)

This has appeared in most Model Ship club newsletters, but no one seems to know where it started)

Adding white isn't always the best way to lighten a colour because that often makes a colour or hue look milky. True colour is reduced by giving it a lighter hue. Small amounts of colour are added to change hues or tones.

BASIC COLOUR	TO LIGHTEN (TINT)	TO DARKEN (TONE)
Blue	White	Black
Red	Scarlet	Crimson
Khaki	White	Brown Drab
Dark Green	Medium Green	Black
Light Green	Yellow	Dark Green
Dark Blue	Light Blue	Black
Light Blue	White	Dark Blue
Blue-Gray	Light Blue	Black

## JOIN THE SCHOONER FLEET

A PRACTICUM COMMENCING OCT 5/04 - 9:30-12

Dave Denton and Ken Lockley will have an open workshop for schooner builders at 4114 Cedar Hill Road. We will help/show you how to produce a working, sailing Schooner, based on the lines of "REBEL". Starting with a GRP hull and plans, we will guide you through the building process each week through the course of the winter. Cost of hull and plans \$100.00.

For pre purchase of hulls and/or details, call Dave Denton 478 1800 now or Ken Lockley 477 5830 after October 1.



## Classified

Dave Adamthwaite (658-0952) asks if there is anyone in our club who might be interested in cleaning and repairing a scratch built model of a three masted clipper ship he just inherited. The ship known as the "Titania" is 30 inches in length and has slight damage to it's rigging. He wants to display it in a glass case.

Len Gibbs (384-9007) is looking for an inexpensive small sailboat he can give to a handicapped friend. It has to be small enough that it can be transported on a wheelchair. Preferably with radio installed.

Jack Lenfesty (652-2495) has a friend who is looking for a model ship about 30" long suitable for displaying on a mantelpiece.

## Scale Sail Tip— Best Way to Attach Bolt Ropes to a Sail

(We will try to include some of these tips while the schooner practicum is in progress)

The only way to attach a bolt rope is to stitch it on by hand. The process can be made somewhat easier by taking the thread out of a sewing machine, setting the stitch-spacing to the "pitch" of the line (the distance it takes one strand to go completely around the rope), and then using the needle to punch a line of guide-holes along the edge of the sail. It's then relatively easy to hand-stitch the bolt rope on, using the holes to stitch through (and the holes being in a line, and equally spaced, makes the whole job look good!)

John Kopf (an internet contributor)



## THE SUB SUBJECT

The interview with First Lieutenant Peter Gage RN (Ret.) announced for this month has gone to Davy Jones's locker, but surface life goes on and a foible of batteries that power most model submarines has been biding its time for Binnacle space.

To those who use batteries knowledgeably, hydrogen chloride gas is known as a nuisance as well as a danger. It emanates from batteries large or small during discharge cycles. The gas is poisonous and explosive.

In surface models the potential danger of that gas is negligible. The batteries sit somewhere in the model's hull, sheltered by deck and superstructure, but their "breathing" is seldom impaired. So nothing much can happen. They discharge and are recharged time and again. Not so in all model subs and, as will follow, in electrically driven torps.

During my early research into model R/C subs, I saw that batteries were often placed INSIDE the pressure hull and, upon inspection of Greg Sharpe's Alfa, I noticed a vent tube leading from the battery compartment to an expansion tank that not only allowed gas to accumulate, but also gave buoyancy to the bow area. Greg mentioned that, after a run, he'd pullout the reservoir's rubber plug and could usually hear a soft "pfffff." But then, before starting a first R/C model, I also noticed the late Wally Anderson's contraptions at HMYP.

Whenever Wally used batteries, he had them hanging out in the water—powering LEDs as well as serving as ballast. I liked the simplicity of that, and did my own testing. Conclusion: batteries function equally well in or out of water—as long as the anodes/terminals and leads are waterproofed. Based on that, in pursuit of the k.i.s.s. principle, coupled with the goal of minimizing pressure hull volume, my 6V gell cells in 1:96-scale Miami and 1:100-scale Florida sit out there, in their free-flood bow areas. Over time: not a problem. But now on to the accident that instigated this month's substitute "Sub Subject" topic.

For the May 8-9, 2004, model sub regatta, Len Gibbs brought one of the two torps he lets me release from the Molch-type Bratwurst. Len couldn't stay and I would bring it back sometime during the week. After Len's departure - to the Washington guests great admiration—I released the torp five times on fast and fairly long runs. The American participants had seen Bratwurst sans torps at Cultus Lake fun runs two or more times, but retrieval worries keep the torpedoes safe in Victoria.

Once home, readying immediately for Sunday at Thetis Lake, I put the torp, Bratwurst and Florida out on the deck room table, and got both Miamis under charge. I forgot all about the deck room fleet until the following Wednesday when a friend dropped in for a Belgian Trappist beer.

With encouragement, I rattled on about the regatta (which he hadn't attended—partly on account of Coronation Street) and enthused about the torp's unanticipated run time.

"As a matter of fact," I said, setting down my glass, "I'll bet there's life left in 'er yet." I took the "weapon" in my right hand, holding it firmly two-thirds down its length, held down the "on" switch to its "off" position, pulled the tip of the warhead forward to arm the torp, moved my arm up and out closer to my buddy'd shoulder, and lifted my right thumb off the spring-loaded pop-up switch. What then happened very fast and all most likely in this (?) sequence:

1. The screw started to spin at the speed of light
2. We heard a bang, sharp and dry that bounced around in the deck room glass surrounds—like the discharge of a derringer, or other short-barreled pistol
3. Meanwhile, I'd felt the torpedo expand and then shrink in my hand
4. Intuitively (and unnecessarily) I pushed the warhead switch to "off."

"What," my visitor shouted, "was that!!!!?"

"Beats me," I said, ears ringing. "Must phone Len."

Len sort of chuckled and snickered. "You didn't perchance pull the little plug out of the pressure hull on Sunday?"

"The wha— wha— what. . . plug. . . uhhh?"

"The rubber plug in the forward bulkhead. I pull it out before recharging."

I'd never given that a thought. Had forgotten all about hydrogen generation during discharge. As a result, the plexi tubular pressure hull had shattered with such violence that even the outer hull showed cracks. If not for my hand and that outer hull, shards of plexi would have hit my visitor with, most likely, dire consequences. And, no, the beer. It was a lapse of memory on my part.

One explanation for the oversight could be that in my 1:125-scale Miami the 20-cell ni-cad pack rides inside the pressure hull but the model has a hatch for access to the two "on-off" circuit switches and the pair of battery jacks (4.8 and 6.0V). As such, serendipitously, possible gas is vented before, between and after each patrol.

Fortunately, this aspect mitigates the torpedo's damage: Len had it scheduled for a drastic revamp (reed switching) and the plexi tube in his workshop will yield many more torpedo pressure hulls. Meanwhile, I thank Len for suggesting this incident as a WARNING topic for "The Sub Subject."

Next month, I hope, an interview with Commander Lloyd Barnes RCN (Ret.)  
Romanus Unicum



## Pneumatic Tables Improve Ergonomics in Model Ship Building

T.S. Gogue, US Navy, PWC, San Diego

Ergonomics is the science of fitting the tools to the worker, instead of requiring the worker to adapt to the tool. When tasks and workstations are not designed for ergonomic comfort, workers are at risk for disabilities. For example, working for long periods of time in awkward positions results in overworking the muscles that are used to accomplish the task, causing those muscles to tire quickly. A person who regularly works at a task in an awkward position may eventually experience a musculoskeletal disorder (MSD) in the overworked muscle group and in the tendons and ligaments that support those muscles. MSDs are one of several terms for discomfort and disability brought about by overuse and misuse of a group of muscles and the soft tissue that supports that muscle group.

The majority of occupational MSDs affect the upper body, especially the hands, arms, shoulders, and neck, but MSDs can also affect the back, legs, or knees. Working on a surface that is too high can cause a worker to lift and hold the shoulders, elbows and arms in an awkward position that forces shoulder muscles to work extra hard to lift and hold the arms. Shoulder muscles tire quickly in such a position, especially when that position must be repeated over and over, or held for more than a few seconds.

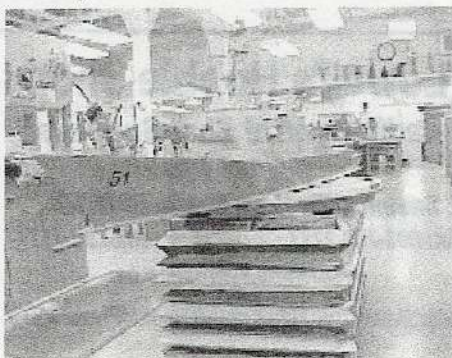
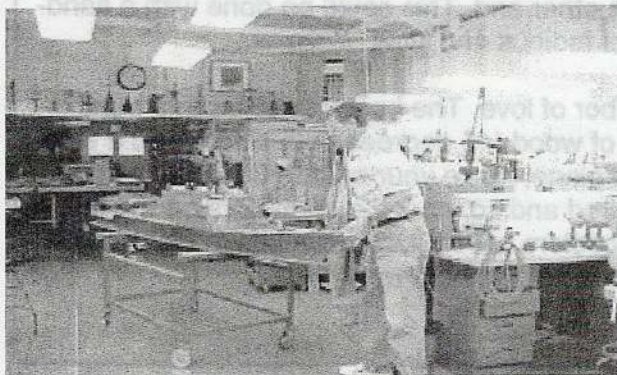
When working at a surface that is too low, personnel may have to hunch over the work surface. Extensive leaning forward fatigues the muscles of the back and neck. The muscles of the arms and shoulders may also be overburdened by working in this awkward posture. Where working surfaces are very far below the worker's normal range, the worker may have to squat or kneel to perform the task. Squatting and kneeling puts a lot of pressure on the knees while they work hard to hold the position and balance the weight of the body, creating a risk factor for discomfort and injury.

Ship model builders at the Navy Public Works Center (PWC) in San Diego carry out high precision work on models

of Navy ships built to scale. The models are used to test, prove, and refine ship specifications prior to ship construction. The working surfaces for model construction at PWC San Diego, Naval Submarine Base Point Loma were often too high or too low for the worker and the particular work process. This forced model builders to assume awkward positions while working on ship models. In addition, model builders were using weakly structured wheeled carts as model building tables. The wheel locking devices on these carts did not work. This required the worker to use a foot or knee to keep the cart stable and in one place. Model builders who worked on these surfaces were at risk for MSDs of the shoulders, lower back, and knees from maintaining awkward postures for prolonged periods.

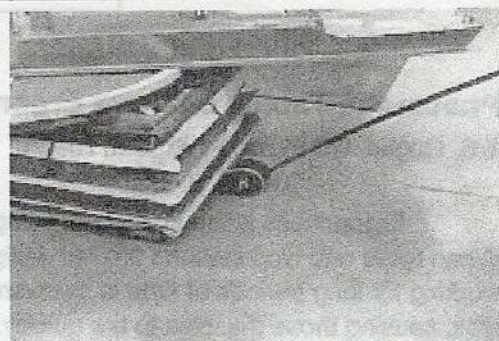
The MSD risk factors were discovered during ergonomic discomfort surveys conducted by Safety Coordinators at the Naval Submarine Base Point Loma. The Safety Coordinators and a member of the Employee Driven Cultural Safety Forum reviewed the findings, discussed the issue with the employees at the workshop, and gathered data on recommendations to eliminate the problem. The Safety Coordinators submitted their recommendations to the Ergonomic Program Coordinator who reviewed the recommendations and subsequently authorized the purchase of pneumatic tables to replace the wheeled carts. The overall timeframe from discovery of the problem to its resolution was approximately two months.

Self-leveling heavy-duty pneumatic tables have been installed in the model workshops at the Naval Submarine Base Point Loma. These adjustable work surfaces can be automatically raised or lowered to a comfortable height for the individual model builder. Workers no longer need to hunch, twist, bend, squat, or kneel for extended periods while working on a model ship. The new workstations have rotating tops that allow easy access to any part or side of the ship model without requiring the model builder to move. Using pneumatic tables has significantly decreased the frequency and duration that workers must assume awkward postures and the fatigue associated with such postures. This has reduced the risk of MSDs.





The new pneumatic tables have bellows guards that protect workers from pinching their fingers or wrists and reduce maintenance requirements to periodically scheduled lubrication of the rotating table mechanical gears. Wheels located under the tables allow easy repositioning or relocation of the tables. Table wheels have a locking feature that keeps the pneumatic table from moving or rolling around once the work area is established. A follow up survey has been scheduled to obtain and evaluate data on mishap reduction, cost savings, and other benefits of the new tables.



### A repeat tip to help deal with MSDs

If you can find an office posture chair, you will see it rotates, elevates and tips at an angle. Remove the seat and back and install a plywood workbench in place of the seat, and you have a work table for your model that rotates, elevates and tips at an angle. You can also roll it into a corner when you are not modelling. The only feature missing is a brake, which you can install simply by buying a locking caster. This will give you everything the US navy model makers have!

Ron H.

### How to taper a mast (an internet question and answer)

I have to taper a mast and was wondering what techniques have been found the best. The mast is made by gluing up a square from two 1/8 by 1/4 inch pieces. The directions say taper the mast from a 1/4 by 1/4 in square on one end to a 1/8 by 1/8 inch square on the other end. This could be done with a sanding block, but to get a uniform taper on all 4 sides will be rather tedious and slow.

Shipmodelling in general is tedious and should be a labor of love. The best way to taper a mast is to start with square straight grained stock. A V grooved piece of wood (45 degrees both sides) and a stopper block on one end will hold your square stock. With a small plane, make your square 8 sided, then 16 sided then round with sandpaper. Predetermine the taper desired and so mark the diameters on the fixture so you can measure your progress along the length. Some modelers will chuck a dowel in an electric drill and hold sandpaper against the spinning dowel. However, this is not the best way.

Phil Krol

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