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appt

quarterly

Hiking

Interview

Save That Mast

AUSTRALIAN PAPER TIGER CATAMARAN ASSOCIATION

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Editorial

Welcome to the third edition of "apt". In this issue we continue our series on "classic skippers" by interrogating South Australian stalwart, Russell Jolly. Russell caught the bug in 1983 and has been a keen competitor ever since. In his interview Russell expresses some strongly held views on class development. Please feel free to respond to his comments or express your own through the letters section of this magazine.

MASTERING THE BASICS

We are also carrying on with our coverage of basic PT topics intended to assist newcomers to the class and those who don't have the benefit of contact with the larger PT fleets. The two topics covered this time are hiking and avoiding mast damage.

The reason the top guys power away from you, while your muscles are screaming for mercy, may not be that they are super men but rather that they are better set up to reduce the stresses that you are experiencing. "**Hangin out**" (page 4) provides some suggestions to reduce discomfort and get your mind back onto the race.

We sail a boat with a flexible rig.... That's not the same as a bent rig. "**Avoiding a bender**" (page 13) is intended to provide information that may help some to avoid an expensive learning curve.

THE RIGHT FORMULA

Formula Sailcraft have produced their first PT hulls (page 12) and hopefully are on their way to eventually producing a complete PT for the non-builder. If the project is a success, this will be a significant development in the promotion of the class to a new group of skippers.

NEITHER DOWN NOR OUT

There has been a rumour about for a while now that **Larry Fay** is not interested in making PT hulls and foils any more. It's driving him nuts! It's time to put that rumour to rest. Larry has had a long association with PTs and insists that he has no intention of getting out of PT construction. However, his primary income is earned making components for the *Holden Racing Team* and

others and, realistically, he has to jump to their whip. He is still keen to make PT's but cannot necessarily guarantee prompt delivery times due to his other commitments. The moral is, if you would like to order from Larry, plan ahead.

MAKING THE GRADE

The PT class is more than 40 years old and there are still many of the early boats around. These can be a low cost entry point into the class for beginners. However, the proud new owner can soon be disillusioned if they come up against a relatively new boat fitted out with the latest gear, and bringing a boat up to that standard could cost much more than the original purchase price.

Might there be value in creating a way for these boats to be ranked so that their owners have a more realistic expectation of their performance against the general fleet? Might the skipper also benefit from a system that provides a more equal basis for satisfying competition against boats of their own ranking?

A suggestion is about that a "Classic" division could be created based on criteria such as: non-foam-glass or heavy hulls; old mast section; old sail; non-adjustable rig; basic foils; etc. Each of these features could be assigned a score and the total score, being above or below a set value, would determine whether the boat qualified as a Classic.

Any thoughts on this proposal would be welcome.

2...1...0

Less than two months now till the National Championships in Tassie. I guess if you are on the mainland and decide to attend between now and then, you might have to sail your boat across. However, if accommodation is your only issue, there is some basic camping sites available near the club and some basic cabin accommodation in a nearby Scout Camp.

Check out the event website for all relevant details.

<http://papertiger2011.catsailor.org/>





HANGING OUT

by RALPH SKEA

There is one thing about sailing a Paper Tiger that can be a real pain. Yep, you guessed it, hiking.....

Thankfully, this doesn't have to be the case. Some thoughtful setting up of your boat, correct technique, and the addition of "hiking pants", could significantly improve your comfort whilst racing.

During a recent unfortunate incident, where I was forced to jury rig a toe strap mid race, I was reminded just how painful hiking can be if the boat isn't set up properly.

The basic aim of hiking is to get the majority of your body mass as far from the leeward hull as possible to counterbalance the tipping forces created by the maximum power you can generate from the sail. Clearly, the greater the weight you can get farther outboard, the more sail power you can utilise.

Before migrating to PTs I spent eleven years sailing OK dinghies where the normal hiking position involved bending the body at the hips and knees, with the knees supported by the gunwale (shaped to suit) and the feet under straps in the bilge. This had a natural feel to it, although it did tend to overstress the knees. Hiking on a flat deck is not as comfortable, but it is probably better for the knees.

Now the astute observer may have noticed that not all PT skippers are built the same. This is where things get interesting. A skipper who is solidly built in the upper body is better able to concentrate more weight outboard than someone of the same weight who's body mass is concentrated lower down. Therefore, similar weight skippers may handle similar wind conditions quite differently. A lightweight skipper may fly a hull earlier, thus reducing drag, but will have to hike for longer periods and more strenuously than a heavier skipper. A heavier skipper will struggle to lift a hull in moderate breezes but may be better able to drive the boat harder in stronger breezes.

Effective hiking requires a significant level of fitness and stamina. However, a significant pain threshold will also be required if the boat is not set up correctly, and pain plays havoc with concentration. (see "**Why it hurts**").

Hiking pain can result from excess localised pressure. Therefore, distributing the pressure over the largest possible area will reduce the cause of the pain. The easiest way to achieve this is to have as much of the legs as possible in contact with the deck. This requires the legs to be kept straight and the feet held down firmly by tight hiking straps, and when I say tight I mean as tight as necessary to keep the heels on the tramp. Hiking straps will usually give a little once wet and subjected to hiking loads, and there will be enough give in the tramp to easily slip your feet under. Tight straps also help when heaving yourself back on deck to tack or gybe.

Pain can also be experienced across the abdomen if the legs aren't properly supported. During my little episode I didn't tighten the hiking strap enough and found that my feet and legs were hovering above the tramp and deck. This concentrated all my weight along the narrow gunwale edge and resulted in clenching of the abdominal muscles to pull myself upright to a normal hiking posture. This soon became intolerable and I had to stop to adjustment the strap tension.

So much for the ideal world. The reality for the average sailor is that they probably won't be unable to keep their legs perfectly straight for long. Try sitting on the floor with your legs out straight and lean forward as far as you can. Now try bending your legs a bit and lean forward again...easier isn't it....and considering that there will be times that leaning in is required, the legs will probably end up bent.

OK, lets accept that some of the time your legs are gonna bend and therefore concentrate more of your weight along the gunwale; what to do?

Gunwale rounding is essential. If you have a foam boat this will most likely have been taken care of during construction. However, this is not the case with some older boats. If your boat does not have rounding, seriously consider adding a light timber extension to the gunwale, in accordance with the class rules of course. I have seen standard quarter round moulding fixed to the gunwale to do this job, but if you look at the angle of Neil's leg to the gunwale in the photo at the intro to this article, it is apparent that only the upper part of a circular section gunwale would be in contact with the leg. A flatter curve would support more of the leg. Check out some new foam or ply boats for ideas.

Even the most efficient gunwale rounding can cause a pressure point across the back of the legs causing pain. Interestingly this doesn't seem to be as much of an



Straight legs, heels on the tramp, legs on the deck, gunwale mid thigh

issue for younger skippers. This may have something to do with the late onset of nervous system development, otherwise known as “*no brain, no pain syndrome*”. For the rest of us it can be particularly distracting during a race and lead to significant bruising to the backs of the thighs. All praise to the inventor of hiking pants I say!!!



Probably doesn't feel a thing

If you haven't come across them yet, they are essentially wet suit material pants with plastic battens attached to the backs of the legs between the bum and knees (see Neil's pic. again)....there are a number of different brands and styles available. They are not particularly cheap but are a really worthwhile investment. Effectively what they do is create a rotating deck, which distributes your weight along the thighs and away from the gunwale. They are most effective when the gunwale sits about midway along the padding so that the ends of the battens don't dig into the leg, and this will help determine the correct location for setting up your toe straps.

As the saying goes, its all about “*location, location*”. Some of the really fit skippers set their hiking straps out wide and hike with their knees almost at the gunwale. Hey, if they can do it and survive, who am I to criticise. However, for us mere mortals who would rather keep our original knees into ripe old age, this is probably not advisable.

Setting the straps up so that the gunwale is mid thigh, with the strap comfortably across the top of the ankle, is preferable. Check that the straps are also comfortably located when hiking over the back beam on a reach. This may mean that they need to be closer to the gunwale at the front beam than the rear. If the straps are set too far out for your level of leg fitness, you may have difficulty pulling yourself back onto the deck when tacking or gybing. If the straps tend to cut into your ankles, consider stitching padding to them, (although this can tend to flip them over when slipping your feet under). Wetsuit material sewn on the upper inside of your sailing boots is another option.

Use the mainsheet to help support yourself while hiking. Sheeting directly from the boom can assist.

WHY IT HURTS

There is a limit to how long an effective hiking position can be held. A burning sensation in the legs is caused by static contractions (muscles in tension without making the joint move) of the large muscles of the thighs and trunk. Even at relatively low levels of static muscle tension, the blood vessels can be squeezed shut, rapidly causing pain and fatigue.

A study carried out by the University of Canberra some years ago replicated on a Laser simulator all the normal movements and loads a skipper experiences during an actual race in windy conditions. The subjects “competed” against video of top skippers sailing actual 90 minute races. The subject's heart rate, blood pressure, energy consumption etc. were monitored during the “races”.

Large increases in blood pressure and a steady rate of energy consumption were measured, indicating that hiking is a moderate, sustained form of exercise. Aerobic energy consumption during the 20 minute windward legs was 30 – 50% of the subject's maximum. However, blood pressure was extremely elevated matching those during maximum bicycle exercise, indicating just how much muscle contractions were slowing blood flow. Blood pressure and aerobic demand were significantly lower when reaching. Static contraction of the thigh muscles was measured at levels that would result in fatigue within 5 minutes.

Hiking performance is determined by skipper weight in sailing gear; standing height; thigh muscle strength and endurance; and location of hiking straps. The farther out the strap is located, the greater the endurance required from the quadriceps, hip flexor and abdominal muscles.

It was concluded that interruptions due to tacking and responding to waves and wind changes is what allows sailors to sustain hiking for extended periods. Hiking endurance can be improved if muscle tension is momentarily relaxed every so often to promote blood flow. Tune in to the onset of muscular pain and relax before the muscles become over fatigued.

If you are seriously into winning, aerobic exercise can condition the heart and blood vessels to withstand the pressure, cycling is good for the legs and rowing for the upper body. Weight training (knee extensions, leg presses, squats etc.) can improve knee strength.

OK, so now you've adjusted your hiking straps and they are nice and tight, the gunwales are nicely rounded and you've managed to get your hands on a nice new pair of hiking pants without your better half finding out. So how to make the most of all this on the race course?

If I were (or had ever been) state, national or international champion, I might confidently espouse race winning hiking techniques to the masses. However, as this is not the case, I will leave that to the gurus and limit myself to general principles for the less experienced sailor.

The skipper's position will vary upwind, depending on wind and wave conditions, to get the most out of the boat. In a light breeze and flat water, sit forward of the stays near the inner edge of the windward hull to lighten and lift it if possible. Keep the bottom of the transoms above water level, thus reducing drag (turbulent flow coming away from the stern means that the transoms are sitting too low in the water). Don't lie down if this effects your ability to monitor wind telltales on the stays and sail, and don't sit upright too close to the sail as this will disrupt air flow over it.



Sit in and forward to lift the hull

In moderate conditions, sit close behind the stays and hike out as far as is necessary to keep the windward hull just skimming the wave tops. If the leeward bow is regularly dipping below the waves, move progressively back towards the stern until it is only dipping under the occasional big one.

In strong winds and steep waves, sit as far back as necessary to minimise the number of waves slamming into the main beam and slowing you down. Hike as far out as you can comfortably sustain for extended periods. There is no point in hiking to the extreme if you quickly tire then have to sit in for a break. Once you've determined your sustainable hiking position, adjust the rig power to suit.

Reaching, as with beating, involves sitting as far in and forward as necessary in light weather to keep the transoms above water and the windward hull just flying when possible.



Move back on a tight reach

A tight reach (with the traveller near the inner gunwale) in stronger winds requires a hiking position close behind the raised centreboard to keep the bows up, but not as far back as when broad reaching when

On a broader reach, the hiking position will move progressively back as far as is necessary to keep the bows above the water. Be prepared to drop the mainsheet quickly if the bows bury or you may easily slide forward into the centreboard (ouch!). Hiking behind the rear beam may be necessary to keep the bows up (depending on your weight) when broad reaching in stronger gusty winds and steep waves. However, be prepared to shift forward of the beam quickly if the wind eases or the stern will settle and slow you down.

Finally, slippery decks and slippery clothing make it hard to hold your position on the boat in rough conditions. Non skid material near the gunwale and/or grippy pants will help you feel in control

So that is the basics of hiking. There will be times when you wished it would blow enough to let you hike and times when you wished the wind would back off and give you a break from the strain. It is surprising though at the end of a long hard race, just how much pain you can endure when the finish line is in sight and you are bow to bow with an opponent.



Move way back on a broad reach

For more on hiking, visit the PTCIA website and look under - Help and Advice/Sailing a Paper Tiger
<http://www.papertigercatamaran.org/>

Interview

Skippers with a long history
in Paper Tigers

by David Stumbles

Russell Jolly is 68 and sails "Vendetta" (2915) out of Somerton and "Bald Eagle" (2992) out of Arno Bay Sailing Clubs in South Australia



How long have you been sailing Paper Tigers?

Since 1983 when I borrowed a PT at the Arno Bay Yacht Club

What brought you into the class?

I owned a Light Weight Sharpie when I moved to Cleve in 1983; the local yacht club was Arno Bay, which at that time had a large fleet of PTs and Moths. Finding a regular crew was a major problem, so after the State Titles in January 1984 I purchased the winning boat from Mike Hallsworth only to find out later that I did not get the sail he used to win the title. I am a great believer that if you are going to compete and improve your sailing ability, then you need to sail in a class, not a mixed fleet. I found the Moth a little too unstable for me.

What was your first Paper Tiger and what was it like?

My first Paper Tiger was a Fibreglass Foam Sandwich boat built by Congerton of Adelaide, sail no 1744. The sail was made by Mike Hallsworth. I soon found that sailing a cat was not as easy as I had first thought. Although the speed was exhilarating, there was a lot more to learn and I was being left behind by the rest of the fleet, hence I named the boat "Jolls Log"

How many Paper Tigers have you owned?

1744 "Jolls Log" Congerton-built Foam Sandwich
2755 "Aquila" Jan Lindstadt-built Foam Sandwich

2915 "Vendetta" Larry Fay-built Foam Sandwich
(Sail this at Somerton)

2992 "Bald Eagle" Geoff Spiller-built Foam Sandwich
(Sail this at Arno Bay)

2492 Early Fay-built Foam Sandwich
(Rebuilding this one)

Have you ever built a Paper Tiger?

No

What has kept you in the Paper Tiger class so long?

My weight is a big disadvantage for the class, at one stage I did contemplate moving to a larger cat class, but in the end it has been the comradeship that has kept me in the class. I look forward to the Nationals each year and meeting up with everyone, just like one big happy family reunion where I have made some lasting friendships. Now that I am getting older, or should I say getting past it, the boat is easy to rig, a dream to sail and if you have come from a dinghy class you still get the excitement of hanging by your toes. On many a day it gives me great pleasure to beat boats with a lower yardstick, especially when it's blowing. Why would I want to change?

How many Nationals do you reckon you have competed in over the years?

My first Nationals was at Grange in 1986 where I was placed 31st in a fleet of 75 boats, my best race being a 12th and sailing with one rudder for the last triangle in 22 knots. Looking at past records I see that Christine Robinson from Victoria had the best ever finish for a woman in 11th position. From 1992 onwards I have sailed every nationals except Hervey Bay and I had a very good reason for not attending. So in all I have attended 19 PT series. I did sail in the 1989 Sharpie Nationals in Ceduna where I was living at the time. The majority of races were sailed in 18 – 25 knot breezes, very exciting, lots of capsizes - broken boats and masts. Paper Tiger starts are like kindergarten compared to these guys, what does and does not go on at the starts makes your hair stand on end.

Which Internationals have you competed in and were they as a Team Member?

I have competed in 6 international events, one at McCrae, two at Koonawarra Bay and 1 in Adelaide as

an invitee, and I have also been in the team twice in New Zealand - once in Evans Bay where I was placed 18th in the team event and in New Plymouth in 2007.

What have been your best results in the various events over the years?

I was South Australian State Champion in the years 1995 & 1996 and have been runner up on a number of occasions. At the national scene my best position has been a 14th with my best race being a 4th.

Does any one series or event stand out in your mind as a particularly good one or which event or series over the years have you most enjoyed?

I have enjoyed every series that I have sailed in. Each venue has had its own unique traits. Although my home state of South Australia has had some good venues, when you are on the organising committee the stress of helping run the event has always taken the edge off your on-water efforts. I would have to say that Kurnell is my pick, especially at the end of the day after some hard sailing, the hospitality was exceptional and everyone was involved.

Of all the Paper Tiger sailors you have competed against, do any stand out as being particularly hard to beat or enjoyable to race against or do you have you most enjoyed competing against over the years?

Over the years I have enjoyed more than anything competing against Wiggo! Ron is about my weight, however now that he is leaner and fitter since he took up bike riding, the job is getting much harder for me, not to mention the age gap!

I know you have been International Measurer and you are currently the National Measurer. What other roles have you had within the class?

I did act in the President position at the Internationals held at Elwood when the Australian Association did not have the position filled. I have been on the South Australian Committee for many years, and as Treasurer since 1998, and was made a life member of the association in 2009.

Have any other family members been involved in the class?

No, unfortunately my son was more interested in Cricket. My wife, Pauline, gave up sailing in the Heron Class in 2002 and in her last event won a gold medal at the Port Pirie Masters Games.

From my perspective, you have provided some of the funniest moments in Paper Tigers over the years! However, what's the funniest thing you can remember from your years of Paper Tiger sailing?

I recall an incident involving Alan White at Paynesville

when he hoisted his main, then could not find his centreboard. He found it up the sail, hooked to a batten. I have lots of stories I could tell, however I do not think it would be advisable to put them in print.



2007 Nationals, Eden, NSW

I know you are a "retired" bank manager; however you seem to be anything but retired. What are you currently doing?

On the 10th September I retired for the 5th time. In March 2009 the Rural Finance counselling service offered me a 4 month contract to help the fire victims in Victoria. This was a very rewarding experience, my job was to help genuine farmers ie; not Collins Street farmers or Hobby Farmers. I was given a list of 3200 names together with their losses. In the end I was lucky to find 100 farmers that fitted the bill. After the contract expired I returned to SA to find that a number of counsellors had retired or quit, so I filled in until replacements were up and running.

For the last six weeks Pauline and I have been travelling the Greek islands and Northern Italy. I have agreed to go back and help should the Counselling service get overrun with clients. At this stage it looks as though the farmers are going to have a bumper year and very good prices. So at my age do I really need to? I think you can say I am now in full retirement.

What other classes have you sailed over the years?

I started in Light Weight Sharpies as forward hand in 1972 at Ceduna. The owner was an Italian and the boat was named "Mafia". In those days I did not sail with a life jacket because it was a hindrance, until we were cut in half and sank. It was only at that stage when the three of us were sitting on the rear buoyancy tank did I learn that the owner could not swim. So after that I thought it would most probably be a good idea to wear a jacket.

What interests do you have outside of Paper Tiger sailing?

I really enjoy snow skiing, have skied with Rick Stout who has a share in a lodge at Mt Hotham. Have also skied in Colorado and a few times in New Zealand. Perhaps one of my most exciting moments has been a free fall from 14,000 feet and the next adventure is to swim with the great spotted whale shark off WA next May. One of my hobbies since I was a youngster is photography. I would like to put together a DVD on Paper Tiger events over the years, so if anyone has photographs of people and PTs sailing in the early years, and is willing to lend them to me to scan or are prepared to scan them and forward the images to me, then I would be most grateful. I have lots of photographs taken over the years that I have been sailing in the class.

What do you see as the main things the class needs to focus on for the future?

I would like to thank you David for all the work you did with the last changes to the rules of the class. However, more changes need to be made to bring us into the 2020s. We need to get the die-hards of the class, who seem to have a lot of influence over others, to have a hard look at where the class is going. Time has proven that the class has the ability to survive whereas others have come and gone, and this has been due to the fact that we have proceeded with caution and not made radical changes. However, there are things which can be changed at no real cost or inconvenience to those in the class which will make the boat a better craft to sail. Some of these are:- Loose Foot Sails - the SA association has been trying to get this through for the past 25 years to no avail. I was disappointed that this did not get through in the last series of amendments. I believe that as sailors are replacing their sails they are now becoming more aware, mainly because of their sail makers, just what benefits can be gained from moving in this direction.

I would like sailors to give some thought to the possibility of adding diamonds to the rig. Masts are not getting any cheaper and there are still many breakages. Diamonds would certainly stiffen up the mast, other classes have them, why not give this say a two-year tryout for those who wish to explore?

What was really wrong with the proposition to enable sliding blocks on the boom for the mainsheet? We all know how hard it is to control the leach when in light airs and the boom wants to move inboard due to the pulley system. This would certainly alleviate the problem. What are the major concerns with this alteration to rules? I would like someone to explain this to me.

This is a great boat but we do need to move with the times, the Mosquitoes have and they are now a growing class. I am not asking for massive changes but when they are put forward to be voted on please give your undivided attention to what is being proposed and above all send in your vote. The last time voting numbers were very disappointing.

Do you see yourself continuing to compete for some years yet?

I am now 68 years of age. At the Somerton Sailing Club we have a member who is 85 years of age and still sailing a PT every week unless the breeze is over 18 knots. I can always remember the words of Jack Levers, who gave up sailing at 81 years of age, that after he gave up sailing it was all down hill. I trust this does not happen to me. I have and do play an occasional game of bowls but, having said this, do I really want to end my days on the bowling green? The saying is "old salts never die", isn't this a frightening thought!

Thankyou for sharing your experiences, Russell.



"Snoopy", the dog, is awarded to the oldest non-prior-recipient competitor at a National Titles. Ed.

FAILURE REVISITED

In the previous issue of “apt” I attempted to cover all the maintenance issues relevant to Paper Tigers which had the potential, if ignored, to result in a DNF when racing. In spite of all my zeal I overlooked one of the most important maintenance areas – hiking straps.

Talk to a group of PT sailors and there will very likely be at least one of them who has suffered the indignity of plummeting backwards off their boat at some critical moment during a race because a hiking strap failed. I recently suffered this indignity myself (not the first time I might add) because the stitching on new straps that I installed last season wasn't up to the task.

I slipped up in two ways here: firstly I didn't engineer the straps to a high enough standard for the task, and secondly I assumed that because they were a relatively new addition there was no need to inspect them pre-season. The past failure had been due to long term neglect. Lesson learnt I thought.

HIKING STRAPS

Hiking straps are generally made from 50mm wide nylon webbing. This stuff is almost indestructible, so failure will not generally involve the webbing itself, unless it is being cut by an attachment fitting or has had very long UV exposure. I have seen other forms of webbing used and these may not be as stable long term as the nylon.


There are a number of ways that straps are attached to the boat at either or both ends including: lashing to saddles, wrapping around the front beam, adjustable metal fittings attached through the beams, and bolting or riveting through the beams.

Check that any stitching used to form loops in the ends of the webbing is sound. Restitch or overstitch with heavyweight polyester thread if there is any sign of breaks or wear.

Check that riveted attachment points are secure and replace rivets if loose. Nylon saddles are not appropriate attachment points for the loads imposed by hiking.

If the straps are secured by metal plates, check that the plates are not cutting through the webbing at the edges.

Check that rope lashings are sound. If the lashings pass through eyelets in the straps, check that the eyelets aren't pulling out of the webbing. Lashing is not always the most effective way to hold the straps flat and maintain appropriate tension. It may be worth considering alternatives if your straps go loose or roll when in use. Compare your system to other boats.

If metal adjusters use 4.8mm diameter fully threaded bolts, check the bolts for distortion or cracking. Replace the bolts if they are bending or showing rust stains. 4.8mm rod threaded at the ends, or 6.4mm bolts, are a sounder long term option. 

HINDSIGHT

This personal experience may be of some value.

When a strap fails, the first reaction is to hang on to the mainsheet and tiller to stop yourself falling. Unfortunately it won't work. All this will do is bend the tiller extension over the gunwale, power up the sail and steer the boat to leeward, leaving you dragging through the water until you let go.

If you can keep your senses as you are falling, let go of the tiller quickly and hang onto the mainsheet with both hands. This may save you the cost of a new tiller, and will allow you to hold the boat down as your drag, and the freed rudders, steer the boat into the wind.

Once back on board, depending on your setup, you may be able lash it in place with the spare cord that you always carry... right? This could mean the difference between a DNF and a minor placing if you can catch up to the fleet.



Jury rigged strap using a towing ring

I want it **NOW!** update

The following is an extract from Formula Sailcraft's website.

Formula Sailcraft are now building Paper Tiger catamarans.

Our Paper Tiger hulls are built from moulds acquired from Ken Fay and incorporate a roll-over gunwale for easier grip when lifting and carrying the complete boat.

The gunwales incorporate extra strength at the beam attachment points and are designed for bolting the beams through the gunwales rather than internally.

Like the other boats we build, the Paper Tiger hull/deck assemblies are made from vacuum bagged fibreglass/foam sandwich. Our standard PT hull/deck incorporates fibreglass/vinylester laminates on Klegecell foam with carbon fibre and kevlar reinforcing at the beam attachment points. The surface finishes are white Aquaguard gelcoat, other colours are available.

Internally, the hulls are fitted with substantial foam sandwich ring frames at the beams, a half ring frame at Station 2 (forestay location) and a fully sealed bulkhead either side of the centrecase creating a very strong centrecase and also dividing the hull into two buoyancy chambers.

The centrecase is designed to take the moulded high aspect A-Class centreboards that we currently make from the McKenzie Composites mould (as used by the current A-Class World Champion) these centreboards are made from carbon/vinylester/foam core with white gelcoat finish.

We intend to make a new mould for producing Paper Tiger rudder blades which will fit into the standard rolled alloy rudder boxes. Blade lifting mechanism is still to be decided but is likely to be the fibreglass rod system used on A-Class cats. A moulded carbon rudder box option will also be available later (similar to our 125 and Impulse carbon rudder boxes).



The first production hull



Our Paper Tigers are available as:

Bare hull/decks in white - **\$6380.00**/pair incl. GST

Centreboards (high aspect carbon/foam) - **\$940.00**/pair incl. GST

Rudder blades - **\$TBA**

Rudder blades fitted to rudder boxes - **\$TBA**

Beamed hull/decks with trampoline tracks, hatches, chainplates and rudder pintles fitted - **\$TBA**

Complete fully rigged Paper Tiger with Allen Brothers UK fit-out and Irwin sail - **\$TBA**

We will also be able to supply trailers and beach trolleys

<http://www.formula15.org/FSPaperTigers.htm>

Contact **Jim Scott at Formula Sailcraft on 0409 151121** or email **formula15@bigpond.com**



by RALPH SKEA

For some, a bent or broken mast can be a rude introduction to Paper Tiger sailing. Here are some basic steps that can be taken to reduce the risk.

If you have been around PTs for a while you will no doubt have seen the occasional on-water mast realignment. You may even have engaged in this form of non-productive rig adjustment yourself. If the result is a “nice” even curve in the mast where there shouldn’t be one (and there shouldn’t be one anywhere) then the problem may well be fixable. If, on the other hand, the curve in the mast is interrupted by a sudden change in width and direction, then it is probably time to be philosophical - at least you shouldn’t have to sell one of your kids or a spare body part to afford a new one.

In my 30 years of racing PTs I haven’t destroyed a mast on the water and have only curved one on a few occasions in strong winds. So it is not a given that PT sailing equates to broken masts, but luck can play a part in this. Getting caught out in severe conditions may not end well, especially if you and your boat part company.

My biggest concern is for the newcomers who starts

damaging masts as soon as strong winds are encountered. This usually occurs because they are unaware of a few basic precautions that will protect the mast under most conditions. The aim of this article is to increase awareness of the risks and suggest a tried technique for straightening a bend, should it occur.

Paper Tigers have always carried a lightweight section mast. The advantages are a lighter boat overall, less weight aloft to cause pitching in short, steep waves, less tipping moment when the boat heels, and a more tuneable rig. The disadvantage is an increased risk of damage to the mast if sufficient care isn’t taken.

Before I get into the nitty gritty, I’ll take a moment to give the uninitiated a brief history of PT masts. The mast size on the PT is controlled by a couple of basic dimensions as set out in the class rules. These are a maximum length of 6780mm, maximum cross section size of 80mm long by 62mm wide, a minimum weight of 0.95kg per metre and a stipulation that the mast cannot be tapered but can be internally stiffened.

During the early years of the class, the common mast used had an oval shaped section of 65mm x 50mm (A), significantly less than the maximum section allowable. Some larger sections were tried, but the smaller section prevailed as it was lighter than the alternatives.

The rigging was set up tight, inducing mast pre-bend to try to reduce the risk of mast failure in the event of a nosedive downwind. The lower forestays were not adjustable on the water, so had to be set up to suit the forecast conditions, i.e. loose for light weather or tight for heavy weather. If a strong front came through unexpectedly mid race, things could get pretty hairy.

In the late eighties, a new, larger Australian teardrop mast section of 75mm x 50mm (B), which was stiffer but still relatively light, was adopted by many skippers. Lower forestay tension still had to be determined onshore, so the risk of getting caught out remained.

During the nineties, the class rules were changed to allow on the water adjustment of the lower forestays. As well as enabling better control of the sail shape, this also enabled action to be taken to protect the mast should conditions change mid race. An imported light but stiffer mast section of 80mm x 50mm (C) also became available at this time. The combination of the two enabled the rig to be set up without induced mast bend, and some boats today carry very loose rigs. An 80mm x 50mm modified section (D) was developed by NSW skipper, Garry Williams, and is now available.



So what is the upshot of all this? Well, we now have a boat with a very adjustable rig; the ability to adjust that rig mid race when necessary; the opportunity for an expensive afternoon on the water if the necessary adjustments aren't made when required.

Now let's get into it. What can be done, before going on the water, to increase the chances of coming back in one piece?

First, ensure that all the rigging is sound, i.e. no broken strands of wire in the stays, no cracked stay thimbles, no bent shackles, no cracked hounds, no loose or badly corroded hound fastenings, a tightly attached mast base, and a properly sealed plug in the mast head (see **Failsafe**, August APT).

Second, ensure that all shackles and stay adjusters attaching the mast to the boat are tightly done up. If distracted whilst attaching a shackle, you may forget to tighten it when you return. Get in the habit of finishing the task before helping others. How would you feel if they beat you because your mast fell off?

Finally, ensure that there is no way that the boom can contact the stays. This is possibly the number one cause of mast damage for novices because no one thought to tell them. Basically what happens here is that the boom rockets across the boat when gybing and slams into the backstays. As the majority of the sail is outboard of the stays, the sail and boom try to carry on to some point forward of the mast. However, as the boom is attached to the mast at the gooseneck and the centreline of the mast is held in line with the boom by the now tightened vang, the mast gets levered sideways along its narrowest (and weakest) axis by the boom. If the wind is strong enough and the impact with the stays great enough, the mast can be bent beyond its elastic limit.

To set your boat up so that the boom won't contact the stays, tighten the vang, let the mainsheet traveller out to the end of the track, release the mainsheet, release the lower forestays and push the boom out till it touches the stays. Now tie a knot in the mainsheet (a simple half hitch or figure of eight will do) so that it comes up against the first mainsheet block in your system when the boom is at least 25mm off the stays and the mainsheet is pulled tight. Then pull the lower forestays on tight and test again to ensure that there is still no way that the boom will make contact.

OK, now secure in the knowledge that the boat is up to the task, it's onto the water. There are three main areas where you are at risk of mast damage when racing; the capsize, the nosedive and the gybe.

Capsize

I have witnessed a number of situations where a capsize has ended in mast damage. These were:-

- A capsize in shallow water where the mast top touched the bottom and the skipper tried to hang on to the elevated hull, thus overloading the unsupported top section of the mast.
- A capsize in shallow water where the mast became stuck in the mud and was damaged while the boat was being righted by an inexperienced power boat crew.
- A capsize in very strong wind where the skipper lost contact with the boat and the wind flipped it repeatedly, breaking the mast.

In the first two situations, by all means hang on to the boat but get off the top hull before the mast sinks. Of course the best remedy for these situations is not to capsize in the first place. Some of the more common reasons for capsize are:-

- Inability to release a cleated mainsheet in a gust.
- Forgetting to release a cleated mainsheet when tacking.
- Getting feet caught in ropes, when tacking.
- Breaking a hiking strap while hiking out.
- Gybing in strong weather.
- Gybing unintentionally.



Capsize on a beat – well almost, he recovered

Most of these situations are due to sloppy boat handling. Practicing tacking and gybing and thinking before you act are the best remedies. Make sure that ropes aren't tangled around themselves, or your legs, before launching into a tack or gybe. The mainsheet must be uncleatable whilst hiking out as far as you would be when frantically trying to stop the boat tipping over. This usually means that the cleat has to release downwards, i.e. the cleat positioned upside down so that it releases when the mainsheet is pulled level with the deck. Unfortunately this can make it a bit more awkward to use. The alternative is a good pair of sailing gloves, a good ratchet block and strong arms.

Nosedive

It is worth noting here that **a doubling in wind strength can result in a quadrupling of the power generated by the sail**. This may help explain why things can go wrong so quickly when reaching or running in strong gusty conditions. The most notable feature of a serious nosedive is the rapid deceleration of the boat. In a worst case scenario, the skipper may also be introduced to skydiving.

Nosediving is most likely to occur in fresh to strong winds:-

- On a reach or run on flat water because of a rapid power increase from a strong gust pushing the masthead forward and the bows under water.
- On a reach or run in short steep waves when the pitching bows bury in the back of the next wave and the flat, downward sloping foredecks force the bows under.
- During a gybe if the boat is allowed to slow too much, or the bows are buried in the back of a wave, when the sail fills on the new gybe.
- When turning from a beat onto a reach or run if the boat is allowed to rapidly accelerate during the turn, especially if the centreboards are still down.

Here are a few things that can be done to reduce the risk of a nosedive, or at least help you survive:-

- Raise the centreboards to allow some sideslip of the boat in a gust.

- Tighten the lower forestays so that the mast is straight or curved slightly forward in the middle and is well supported. Do not over tighten the lowers or the upper stays will go loose leaving the upper mast vulnerable.
- Sit well back on the boat to keep the bows up. Sitting behind the back beam will be necessary at times and will stop you sliding forward and making matters worse should you stop suddenly.
- Don't cleat the mainsheet when sailing off the breeze in strong winds. Wrap the mainsheet once around your hand so that it can be released quickly.
- If the bows bury, release the mainsheet, push the tiller away from you quickly and hike out hard so that the boat begins to turn into the wind before the rudders lift out of the water.
- Check that the mainsheet and traveller ropes aren't getting tangled so that when you release them they run out quickly and freely.
- If the boat is travelling too fast on the run and burying in the backs of waves, pull the boom in enough to reduce the sail area presented to the wind and thus slow the boat to a safer speed.
- When bearing away onto the reach or run, turn sharply and release the traveller at the same time so that the boat doesn't get a chance to accelerate before it is on the new heading. If one or both of the centreboards can be raised before commencing the turn, all the better.



Nosedive and recovery on a reach





Cartwheel on a run – no recovery here

During a cartwheel, let go of the boat before the mast hits the water or you may overload it. Try not to land on the rig if thrown forward as this may break somethingthen again, you may not get a say in the matter.

Gybe

Gybing can be a traumatic experience for the novice in fresh winds.....scares the heck out of me at times too. To protect the mast during a gybe:-

- Tighten the lower forestays so the mast is straight for maximum support.
- Keep the vang tightish so that the sail leach helps support the mast.
- Gybe when the boat is travelling quickly, not when it is slowing on the back of a wave. If you can't pull the boom across, you are probably travelling too slowly.
- Don't gybe in a gust. Look for wave patterns and the behaviour of boats astern that may indicate an approaching gust.
- Sheet the main in before gybing on the run so that the boom doesn't swing as far (and therefore as fast) across the boat.
- Don't gybe just as the bows are burying in the back of a wave.
- Turn quickly and further into the wind than required for the next leg of the race when gybing from one reach to another. This will reduce the impact on the rig when the boom reaches the opposite gybe.

RIGHTING A STUCK PT

A safe and effective way to right a PT with its mast stuck in the mud (using a power boat) is to wrap the tow rope around the front beam a few times just below the top hull (never over the top of the hull), stand on the chine on the bottom hull next to the front beam and hang on to the loose end of the rope. Ensure that the lower forestays are tightened, the mainsheet is uncleated, and the power boat pulls slowly but firmly in line with the mast.

When the mast pulls free of the mud and lifts clear of the water, or if the power boat starts to drift sideways while the mast is still stuck, let go of the tow rope. The mast can be bent if the PT is turned whilst the mast is still stuck. It is safer (and cheaper) to reposition the tow boat and try again.

- Remember, there is always the option to tack instead.

While I have probably not covered every possible situation that could lead to mast damage, the risk should be significantly reduced if the principles I have mentioned are followed. Some skippers will be much more aggressive and daring on the water than I have proposed here and will get away with it, but they may also place more importance on a win and be prepared to wear the cost if things go wrong. Hopefully the less experienced skipper will now be better prepared to avoid a bender.

On the next page I outline the procedure I use to try and put things right when they go wrong.



Nosedive and recovery during a gybe



BENDER MENDER

So, in spite of all the well meaning advice and your best efforts, you've done the deed anyway. As I said earlier, if the mast is kinked, it is pretty much terminal. However, if it is only curved there may yet be hope.

If you are serious about rescuing the situation, take your time. I can't recall how many times I've seen a bunch of guys, mid regatta, levering a bent mast between a couple of trees, usually accompanied by the following... *"it's nearly there.... just a bit more.... Ohh S###!!!"*. This is not the best way to fix a mast. A pressure point (like a tree) can collapse the side wall of the mast, even with a cloth pad.....and that's game over.

The following is a technique that I have used to straighten quite large bends successfully on a number of occasions. However, there can be no guarantee that it will always work, and the bend characteristics of the straightened stick are unlikely to be identical to the original extrusion.

The first step is to use a straight edge or string line along the mast track to determine the start and end of the bend. Mark these points on the mast. If the bend extends through the hounds, remove them, as pressure applied to them during the process could kink the mast.

Get a straight, clear grained timber board 12mm thick, 75mm wide and at least a metre long. The timber has to be as bendy as the mast and not likely to break. You will need two solid points that will be the anchor point and the bending point (like the trees mentioned above), but horizontal is better. I use the end of the house and a sawhorse.

Tie the board to the mast so that the mid point of the board is positioned at the start of the mast bend. If the board is flexible enough it will spread the load and prevent a pressure point which could kink the mast. If it is too stiff it will create pressure points at each end.

Place the mast base under the anchor point and the centre of the board on the bending point with the mast bend uppermost. Measure the height of the end of the mast off the ground.

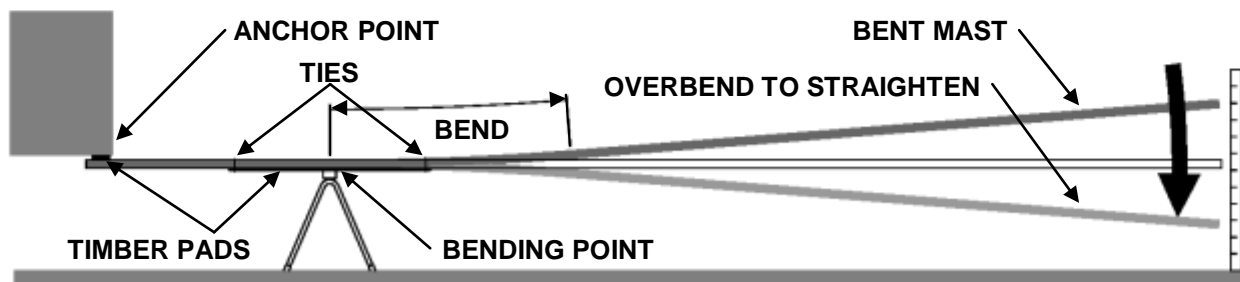
Now push down gradually on the end of the mast until it is bent below horizontal by about 30cm. Hold it there for about 10 seconds, then let the mast up and measure the height of the mast end off the ground again. If it hasn't changed, repeat the process but push down a little further until the measurement changes (don't get too carried away now, 50mm extra at a time will do). Once the mast starts to respond, you will have a better idea of how much pressure is required, and you can develop a feel for when the mast gives. Don't bounce it up and down, use your body weight and steady pressure.

Now use a straight edge, string line or a good eye to check if the first section of the bend is now correctly aligned. If so, reposition the board and mast so that it is at the new start of the bend and repeat the process. Once the bend is pretty much removed, work carefully back along the mast until it is all looking pretty true.

Warning!!!...resist the urge to hurry and bend too far in one go. Protect the mast at the anchor and bend points as dents aren't removable. Take special care when bending near the hound rivet holes as this is a weak point and the mast can crack there.

Straightening the mast sideways is not too difficult, but if it has also bent backwards you may not have much success straightening it because of the greater rigidity and the sail track.

There are certainly other methods for straightening a mast that people swear by, including bending it over a tyre....choose the one that works for you. By all means accept help if offered, but don't be rushed...it's your money after all that will have to pay for a replacement.



For more on PT mast issues, visit the PTCIA website and look under - Help and Advice / Sailing a Paper Tiger
<http://www.papertigercatamaran.org/>

GREAT EXPECTATIONS

by RALPH SKEA

A whole week of anticipation can be swept away when, come the weekend, the wind blows too much or too little

Unlike many other sports, we play a game that is totally weather dependent. Somewhere within the range of wind and wave combinations that are generally accepted as “racing conditions” will be your ideal, depending on your weight, skill, patience and budget.

With such reliance on the weather (especially the wind) it surprises me how often people show up on a sailing day with the expectation that conditions will match their ideal having made no effort to check a forecast. With an abundance of forecasting services available via radio, TV and the web, there is no excuse for this.

Weather forecasting is often regarded, within the general community as unreliable. Considering the complexity of the atmosphere, the local nature of some influences on it and the methods of acquiring the data on which computer generated forecasts are made, the overall results are actually pretty good.

With this in mind, the following sample of some of the online sites available that may assist you be more psychologically prepared for your weekend on the water (or maybe off the water).

The main site is the government’s Bureau of Meteorology. They provide a wide range of surface pressure maps, radar coverage of rain and wind, and forecasts and wind warnings for all of Australia. The info is regularly updated and ABC radio and TV uses this as the basis for their weather information. It can, however, be a bit general in nature for our purposes and there are other sites, tailored to the sailor, which claim to be more local and precise in their forecasting of wind and wave patterns. You will have to judge their accuracy and suitability for yourself.

I would voice a word of caution here. I sail on the western side of Lake Illawarra, on the NSW east coast, which is separated from the ocean by a narrow strip of low lying land. I have sailed many an afternoon in a perfect (for me) 12 to 15 knot Nor-Easter when the forecast was for 25 plus knots of breeze. The moral is, use the forecast as an indication of what may occur rather than a firm basis for your weekend plansit may well have been blowing 25 knots at the beach a few kilometres away.

BUREAU OF METEOROLOGY - <http://www.bom.gov.au/>

WINDFINDER - http://www.windfinder.com/windreports/windkarte_australia_oceania.htm

PREDICTWIND - <http://forecast.predictwind.com/location/free/find>

BUOYWEATHER - <http://www.buoyweather.com/index2.jsp#>

SEABREEZE - <http://www.seabreeze.com.au/>

WINDGURU - <http://www.windguru.cz/int/>

State Of The Nation

NEWS FROM STATE
PT ASSOCIATIONS

QPTCA Report

News from the North

Summer is almost here and sailing around the state has been underway for almost two months. Unfortunately the weather hasn't been optimum for thrilling events (very light wind sailing) so we can only wait for the winds to become stronger.

Our four Paper Tigers at Lake Samsonvale are regularly sailing and we welcome any newcomers to come and join our ranks. Bundaberg host regular events which our members attend.

The QPTCA and are hoping to run a state title in the new year, most probably at Lake Samsonvale but the date is still to be decided. For anyone in Qld reading this, if you have any suggestions please let us know as all feedback is appreciated.

Happy sailing!

Gary Fleming
QPTCA Treasurer
2314 - Tigger



queensland

TPTCA Report

Greetings from Tassie Tiger Land!

Only nine weeks to go to the nationals and the excitement is reaching fever pitch. The off water preparations are going really well and, with everyone participating, a great time is guaranteed. Lets all hope that Huey co-operates and provides us some thumping sea breezes on the water!

The season so far has seen some great sailing conditions, averaging 12-18 knots on most sailing days. At Lauderdale we enjoy a variety of conditions ranging from a south to south-easterly sea breeze, which can get quiet strong with lumpy seas on top of an ocean swell. The easterly sea breeze, which pushes in from the east coast, can be light to moderate with short choppy seas. The south west can blow its tits off and is often associated with a cold change. North-West winds can provide great sailing with smooth seas, though this can be rather shifty, between 5 to 30 knots. The Northerly is usually connected with the back of a high pressure system and the temperature usually at the 30 plus degree mark. These conditions typically mean a fresh gusty breeze. Most sailors might find the bay at Lauderdale warmer than they would imagine as water temperatures in January are 18-20 deg.

On the sailing front, honours so far this season have been shared between Mick and myself. Mick is lightning quick in 5-12 knots and above this wind range I tend to enjoy myself and have the edge.



tasmania

On the sailing front, honours so far this season have been shared between Mick and myself. Mick is lightning quick in 5-12 knots and above this wind range I tend to enjoy myself and have the edge. Although we are all striving to be competitive in all wind ranges (i.e. tinkering with rigs and new sails). Andrew sails well, when his extra curricular activities do not interfere with his sailing! Davin is picking his way up through the fleet with a new sail and aggressive tactics. "What are you doing on your trampoline, Davin?,

did you break it a second time? I am sure it must be entertaining for the neighbours!" Paul has also recently acquired new toys, with a new Redhead, and is sure to be quicker once the new mast goes up. Patrick and Oliver have also raised their standards with a bit a rig fiddling. Both of these boys have managed to become more competitive in the stronger breezes.

October 30th and 31st saw five skippers compete in the RYCT Showdown Regatta with eight races over the two day weekend. This was excellent training for the nationals for all involved. I am looking forward to seeing everybody in January.

See Ya,
El Presidente

Sean Keady.

2997 - Sssmokin Billy



Showdown Regatta

Some banter about the rig

By Davin Faux - 2932 Chilli Toes



Andrew Barnard - 2773 Barbadian Czar

When someone rolls up to the club and starts rigging up something a little different, a little new or not quite the norm, what a great way to get yachties talking! Be it a new sail, a slightly different cleating arrangement, or even a new type of rope/sheet – the conversation kicks-off and debate rages among the group. Some people remain silent, taking it all in, whilst others pass the new thing off as a complete waste of time. I guess the main thing is that all this talk and banter can have a positive effect on the group just because people are talking about sailing.

Over the last couple of weeks the conversation topic (aside from Sean's problem with fictional story telling) has primarily hovered around mast rake and stay lengths. The interesting thing that we have found is that the detail surrounding Paper Tiger design for stay lengths, mast rake, etc, was either unknown to some of us or highly variable in our understanding of it. Some people had not questioned this aspect of the rigging since purchasing their respective boats in the first place.

Whilst there is plenty of room for debate about what rigging settings are appropriate for Paper Tigers, body weight etc, it is fair to say that sailors should consider the following:

- Be aware of the original design concepts of the boat and sail.
- Check with the PT association websites and experienced sailors for further information (the Paper Tiger Catamaran Information CD issued by David Stumbles on behalf of the national body is an excellent example).
- Check with your sail-maker with regard to rigging and tuning specifics for your sail.
- When checking or adjusting any aspects of your rigging be sure to know what you have changed, and try to minimise the number of things you change. This will enable you to absolutely quantify what your changes have done to your performance. If you change too much and or do not wait long enough to observe your own performance you may just miss that critical item you are searching for.



It is always good to suss out your opponents before a major event. The following results are from a recent Tassie (Showdown) regatta. Youngster, Patrick Amos, took out the "most improved" award. The event was sailed in predominantly light and shifty conditions. (Ed.)

Rank	Skipper	Boat	Sail No	R1	R2	R3	R4	R5	R6	R7	R8	Tot
1	Mick Boyle	Re-entry	2927	1	1	1	1	[-6]	1	1	1	7
2	Patrick Amos	Go with the Flow	2679	2	3	4	2	[-6]	3	6	2	22
3	Davin Faux	Chilli Toes	2932	4	5	3	4	[-6]	2	2	3	23
4	Oliver Bailey	Bongo Fury	2912	5	4	5	3	[-6]	4	3	4	28
5	Sean Keady	Sssmokin Billy	2997	3	2	2	[-6]	6	6	6	6	31

These are the results from the Short Series, sailed in better breeze, just to fill out the picture (Ed.)

Rank	Skipper	Boat	Sail No	R1	R2	R3	Tot
1	Sean Keady	Sssmokin Billy	2997	1	1	1	3
2	Michael Boyle	Re-entry	2927	2	2	2	6
3	Paul Mathews	Ne Eye Deer	2955	3	4	4	11
4	Andrew Barnard	Barbadian Czar	2773	8	3	3	14
5	Patrick Amos	Go with the Flow	2679	4	6	5	15
6	Oliver Bailey	Bongo Fury	2912	5	5	8	18
7	Nathan Whitton	Gulf Buggy	3020	6	8	8	22

SAPTCA Report

It's been a slow start to the season for the SAPTCA. Following the hosting of last year's nationals, there looks to be a strong contingent of SA skippers heading over to Tasmania this year. In preparation, Neville Rowe and Mitch Wiley have been busy over the winter season rebuilding their boats so they are bullet-proof ready for the southern ocean. As often happens when you take the boat apart it isn't quite back together in time for the first races of the season!

One of the strengths of the PT class is the co-operation of the skippers, and from some of the emails I've received regarding the travel plans of the guys, I'm sure they will find an innovative way to get to Tassie (just how many Tigers can you get on one vehicle?). And no Mitch, you can't just sail across... I'm sure the guys will have a great time at Lauderdale, good luck.

As discussed in the last APT news, the SA titles for 2011 will be held at Arno Bay on the 29th and 30th Jan. This is a fantastic place to sail, with country club hospitality, and grassed rigging area overlooking the bay. If the wind is right, this is the only place I've sailed where you can't see the boat in the trough of the next wave, so the surfing downwind can be a blast! Hopefully we get a good turnout of boats and the guys fresh back from the Nationals can show off their newfound skills.

Tom Bawden
Carbon Copy - 2974



Peter Darling – 2979 *Mission Impossible*



VPTCA Report

By the time this issue of APT is published, Heat 2 of the Traveller Series, held at the HBS Rose Regatta, on Lake Hume, will have been run. Details of Heats 3 and 4 are now finalised.

Heat 3 will be held at McCrae Yacht Club's Catamaran Championships on the 20th and 21st November. Registration is between 09:00 and 12:00 on the Saturday with racing to commence at 13:00. There will be a welcome dinner at 18:30. Sunday's racing will commence at 10:00 and late entries may be accepted at the race committee's discretion. Entry fees are \$50.00 for seniors and \$30.00 for juniors.

For further information, contact McCrae Yacht Club at gosailing@mccrae.com.au

Heat 4 will be held at Somers Yacht Club on the 4th December. The racing will be preceded by a morning of boat tuning and on water training, commencing at 10:00, under the guidance of our best skippers. The club race will commence at 14:30. As Somers will be the venue for our 2011 State Championship Series, this will be a good opportunity to get a feel for the local water and tidal conditions.

A number of Victorian skippers will be crossing the Tasman, along with skippers from South Australia and New South Wales, to take part in what should be an excellent 2011 National Championship Series at Lauderdale Yacht Club. At least ten boats from the host club are expected to take part.

Mike Wold
3050 - Boy At Heart



Jacob McDonald – 3052 Unleashed



NSWPTCA Report

2010 STATE POINTSCORE SERIES

The NSWPTCA competition got under way with Round 1 of the annual pointscore series, which was held at the Mannering Park Amateur Sailing Club's 14ft Cat Regatta on Lake Macquarie on the 9th & 10th October. The mixed fleet of forty one boats included eight PTs from four clubs.

Day one began with a light north-westerly wind. Ian Marcovitch scored his first win of the series in the fading breeze. Unfortunately only one race was completed before the wind died, later returning after proceedings were called off for the day.

Sunday dawned with a south-easterly breeze, which freshened to around 15 knots during the morning. Three short and one long race were run back to back to complete the regatta within the time limit. Ian scored two more wins to take the round.

Round 2 of the series was sailed two weeks later at the YMCA Sailing Club's Catamaran Championships on Lake Burley Griffin, Canberra, on the 23rd and 24th October. Ten PTs from six clubs attended, including Rod Riding from Ballarat, Victoria. Tigers made up almost half of the fleet of twenty three boats.

Three races, consisting of one windward/leeward, one triangular and one figure of eight course, were sailed on Saturday in moderate to fresh north-west to south-west winds. Race 3 saw a brief front roll through the course with gusts up to 50knots on the first leg. Ian, Neil Waterman and Steve Halliday revelled in the blow on the flat water and establish a solid lead on the rest of the fleet. However, at the end of day one, I held the lead because Ian had decided to chase the big cats around an extra lap in the first race. He just can't stand having boats in front of him.

A further three races, consisting of one triangular and two figure of eight courses, were held on Sunday in lighter, variable, south-west to north-east winds. At the end of the day, Ian's consistent recovery from holes in the breeze saw him score another two wins, take the round and finish two up in the Pointscore Series.

Round 3 will be held at Port Kembla Sailing Club on Lake Illawarra on the 27th and 28th November.

Some of the fleet at Round 2, Canberra



Steve Halliday (3021) & Andrew Holly (2909) at Round 1, Mannering Park



As mentioned in the last issue, the NSW State Championships will be held at Koonawarra Bay Sailing Club on the 29th and 30th January 2011. Based on participation in the first two heats of the State Pointscore Series, and indications of intent to attend, there should be a good sized fleet and competition should be keen.

The hunt for a 2012 National Championship venue continues. The association is currently investigating what it hopes will be the venue for the event. Assuming that all goes well, An announcement will be made at the 2011 Nationals.

Another PT is now on the water at Wallagoot Lake Sailing Club. Named "**The Mystery Tiger**" (XXXX), owner Max XXXX is new to the class so will be on a fast learning curve to challenge fellow club member, Tony Hastings. He experienced the challenges of sailing a PT on inland waters at the YMCASC regatta at Canberra recently.



The Wallagoot boats at Canberra

Wagga Wagga stalwart, Bill Arthur, (*Out of Sight - 3098*) has finally embraced retirement and will be relocating to Canberra later this year, giving the PT a permanent presence there. Judging by Bill's demonstrated mastery of the local conditions, he should soon make his presence felt in the local mixed fleet and will hopefully generate class interest.

Ralph Skea
3065 Solitaire



This is a link to footage from Round 2 of the State Pointscore Series at Canberra by Mary Tulip. (Ed.)

<http://catsailor.net/forums/showthread.php?3599-YMCA-Canberra-Cat-Champs-2010-Race-Report>

STATE POINTSCORE ROUND 1 - MANNERING PARK

Rank	Skipper	Boat	No.	Club	1	2	3	4	5
1	I. Marcovitch	Mojo	3039	Manning Park	1	3	[4]	1	1
2	S. Halliday	Dipsi Danis	3021	Manning Park	[5]	1	2	4	2
3	N. Waterman	People Eater	3018	Koonawarra Bay	[4]	4	1	2	3
4	R. Skea	Solitaire	3065	Koonawarra Bay	2	2	[5]	3	5
5	A. Holly	Happy Holly	2909	Toukley	6	5	3	5	DNF
6	D. Collins	Chicken Liver	3027	Manning Park	DNF	6	6	6	4
7	B. Proctor	Bean	1437	Toronto	3	DNC	DNC	DNC	DNC
8	S. McClure	Jordy	2457	Koonawarra Bay	DNF	7	7	DNF	DNF

STATE POINTSCORE ROUND 2 - CANBERRA

Rank	Skipper	Boat	No.	Club	1	2	3	4	5	6
1	I. Marcovitch	Mojo	3039	Mannering Park	[8]	2	1	1	1	2
2	R. Skea	Solitaire	3065	Koonawarra Bay	2	1	3	2	2	[7]
3	T. Hastings	Tigerdelic	2901	Wallagoot Lake	3	3	5	3	[7]	1
4	B. Arthur	Out Of Sight	3098	Wagga Wagga	1	[9]	6	4	3	3
5	S. Levi	Wet Dreams	3016	Concord Ryde	4	5	[7]	7	4	4
6	N. Waterman	People Eater	3018	Koonawarra Bay	5	4	2	6	8	[9]
7	S. Halliday	Dipsi Danis	3021	Mannering Park	[9]	7	4	5	5	5
8	M. Dogger	The Mystery Tiger	3038	Wallagoot Lake	7	6	DNF	8	9	8
9	R. Riding	Maximum Warp	2878	Ballarat	10	8	DNF	DNF	6	6
9	D. Collins	Chicken Liver	3027	Mannering Park	6	[10]	8	9	10	10

STATE POINTSCORE SERIES - OVERALL

Rank	Skipper	Boat	No.	Club	RD1	RD2	RD3	RD4	RD5
1	Ian Marcovitch	Mojo	3039	Mannering Park	1	1			
2	Ralph Skea	Solitaire	3065	Koonawarra Bay	4	2			
3	Stephen Halliday	Dipsi Danis	3021	Mannering Park	2	7			
4	Neil Waterman	People Eater	3018	Koonawarra Bay	3	6			
5	Des Collins	Chicken Liver	3027	Mannering Park	6	9			
6	Tony Hastings	Tigerdelic	2901	Wallagoot Lake	DNC	3			
7	Bill Arthur	Out Of Sight	3098	Wagga Wagga	DNC	4			
8	Andrew Holly	Happy Holly	2909	Toukley	5	DNC			
9	Steve Levi	Wet Dreams	3016	Concord Ryde	DNC	5			
10	Bruce Proctor	Bean	1437	Toronto	7	DNC			
11	Max Dogger	The Mystery Tiger	3038	Wallagoot Lake	DNC	8			
12	Steve McClure	Jordy	2457	Koonawarra Bay	8	DNC			



International Scene

by DAVID STUMBLES

An update from the Paper Tiger Catamaran International Association (PTCIA)

NEW ZEALAND



Carl Syman – 2922 Unplugged

Leatham

The class continues to go from strength to strength in New Zealand, with good fleet numbers at various events. They are gearing up for their Nationals (a five day event), which will be sailed at Evans Bay, Wellington. This is a venue that a number of Australian PT sailors will be familiar with, as it hosted the 1998 and 2001 International Championships (both won by Victoria's Ben Deed). The city is known as "Windy Wellington" and has certainly dished out plenty of breeze in past events. The Kiwis are hopeful of building on their fleet of 46 boats at the last Nationals in Napier.

SOUTH AFRICA

The following report comes from John Spencer, based in Durban. John is one of the growing number of Paper Tiger sailors in South Africa. Thanks for the report, John.

"Thanks for the mail, we do enjoy your news and having contact with you guys. I have attached a couple of pictures of my PT, which is progressing well. I have been at it since the beginning of August and only have foils and mast left to do, so hopefully will be on the water by the end of October. Note the Aussie-type rudderstocks!"

The cost of building this PT should end up at around R18,000, which is less than AU\$3,000. This is very affordable here even with the current recession, so hopefully we will generate enough interest to get quite a strong class up and running again. One thing we are struggling with here is weight; we need to





source lighter plywood. We also usually end up sailing in fairly rough seas, so cannot afford to compromise on strength.

Bill Ellens, Keith Ribbink and I want to start producing components for future boats to make it easier and more attractive to newcomers, and possibly do complete kits for home assembly. Not all yachties here have the skills to build boats these days."

NORTH AMERICA

Canadian catamaran builder, Jim Helps, has been communicating by lengthy e-mail with Ralph Skea as he progresses towards building a Paper Tiger in Edmonton, Alberta. Jim intends to use the stitch and glue method of construction without using a jig. He has been supplied with patterns taken from an Aussie jig and should commence a test build soon. I have enjoyed being part of the various discussions they have had as Jim has delved into the complexities of constructing and sailing a PT.

In September we had an enquiry from someone in the USA wanting to purchase plans.

EUROPE

Two older boats have recently been purchased in Europe. In September I had a request for the PT Info CD from someone in Sweden who had just purchased an old Paper Tiger and was about to restore it. In November I had another request for the CD from someone in the Netherlands who is already in the process of restoring an old Paper Tiger. Hopefully I can report on their successful progress in the next issue of APT.

Stick a **PLUG** in it!

Edited from an article by Mike Wold

Consider this: a fitted mast can weigh around 8kg and can hold around 17 litres of water. If you have turtled and your mast is sealed, the contained air provides a 17 litre buoyancy component to help you get back to horizontal before you begin to lever the boat upright against the mast's 8kg weight. However, if the mast has filled with water, the total weight is 25kg – 3 times as much. If you have managed to get it to the horizontal, you now face the extremely difficult task of levering that 25 kgs to vertical – virtually impossible for most of us, and here's why.

The centre of gravity of the mast is about 3.4m from the pivot point – the lower hull. The moment required to begin rotating it up is 85kg.m. If you weigh 70 to 75 kg, about average for a PT skipper, your centre of gravity must be more than a metre the other side of the pivot to lift it up. Let's say you hang out straight legged at 45 degrees on your righting rope, if your C of G is about where your stomach is and your height is 175 to 180cm, your C of G will act about 75 to 80cm from the pivot, well short of what you need. If you lean out further your backside will soon be in the water, even if you can begin to lift the mast up. Also, this ignores the weight of the wet sail and the onset of exhaustion, etc.

So it's obvious – **THE MAST MUST BE WATERTIGHT!**

When the mast is submerged at a depth of 6.7m, the water pressure is more than enough to push a poorly secured foam plug up the mast. So ensure that any plug is tightly fitted, secured and sealed over its full length. Also ensure that the hound fittings and mast base are sealed and there are no open drill holes from replaced fittings. Seal holes with silicon and rivets. If there are holes in the lower section of the mast that can't be sealed, add a plug above them.

TEST YOUR METAL

Aluminium plays a major role in a number of vital components on the Paper Tiger, namely the hull beams, mast and rudder stocks. While you can be pretty confident that your mast will be made of the right stuff, care needs to be taken when purchasing beam sections from a supplier, as choosing the wrong grade can result in a rather flexible boat. The following tables may be enlightening. The correct grade for our purposes is 6061-T6.

Comparative Characteristics and Applications of Aluminium

Alloy	Characteristics	Available forms	Typical uses
1305	'Commercially pure' aluminium. Very ductile in extruded condition. Excellent resistance to corrosion. Excellent electrical conductivity.	Simple shapes.	Mouldings, lightly stressed and decorative assemblies in architecture and transport, chemical, food and brewing iequipment; heat exchangers.
6060	Suitable for intricate sections of light and medium strength. Forms well in T1 and T5 temper. High corrosion resistance. Good surface finish. Anodises well.	All shapes. tubing, rod.	Light structural and architectural extrusions such as glazing bars, window frames and general purpose extrusions.
6106	Light structural alloy. Designed to provide an optimum combination of mechanical properties, complexity of shape, minimum section thickness and good surface finish together with good corrosion resistance, weldability and formability.	Thinner structural shapes, rod, bar and tubing.	Structural applications, ladders, pylons and towers. Railcars and marine applications. Automotive structures.
6261	Special purpose structural alloy. Good surface finish and corrosion resistance. Good formability in T4 temper. Good weldability.	Structural shapes of all types, rod, bar and tube, offered in the T6 temper.	Structural applications where surface finish is important . Yacht masts, road transport sections, and ladder sections.
6082	Recommended alloy for structural purposes. Good strength and general corrosion resistance. Good weldability.	Structural shapes of all types; rod, bar and tube, offered in the T6 temper.	Vehicles, bridges, roof trusses and general structural applications.
2011	Free machining alloy of medium strength giving fragmented chips. Not suitable for anodising or welding.	Rod	Automatic lathe products, suitable for high speed repetitive machining..

Description of Tempers	
F	Extrusions as fabricated
O	Extrusions annealed
T1	Cooled from elevated temperature then naturally aged
T4	Solution heat treated then naturally aged
T5	Cooled from elevated temperature then artificially aged
T6	Solution heat treated then artificially aged

Source: Ullrich Aluminium - <http://www.ullrich.com.au/compar.php>








National Regatta Scene

The following calendar brings together regattas which are organised by national or state Paper Tiger associations; used by state associations as rounds of their annual traveller series; or are regularly attended by Paper Tiger sailors.

Regatta details are provided in this issue when available. The calendar will be added to as event dates are set or altered. For further details, contact your state association or the regatta venue.

	Queensland	Tasmania	South Australia	Victoria	New South Wales
OCT					9 th – 10 th Manning Park 14 th Cat Regatta
				30 th – 31 st Rose Festival Reg. Albury Wodonga YC	23 rd – 24 th ACT Multihull Champ YMCASC
NOV				20 th – 21 st McCrae Cat Champs McCrae YC	27 th – 28 th Kembla Klassic Port Kembla SC
DEC				4 th Somers YC + training morning	
2011 JAN	2 nd – 10 th Paper Tiger Catamaran Australian Championships – Lauderdale YC, Tasmania				
			29 th – 30 th SA State Titles Arno Bay YC	TBA Aust Day Regatta Yarrawonga YC	29 th – 30 th NSW State Titles Koonawarra Bay
FEB		26 th – 27 th Crown Series Bellerive YC		TBA Elwood SC	12 th – 13 th Koonawarra Bay 14ft Cat Regatta
MAR		5 th – 6 th Tas State Titles (TasCat Regatta) Lauderdale YC		12 th – 14 th Victorian State Titles Somers YC	
APR				TBA Anzac Regatta Yarrawonga YC	9 th – 10 th <u>Anzac Regatta</u> <u>Batemans Bay</u>

International Championship  National Championship  State Championship 
 State Pointscore Series  General Regatta 

41st Paper Tiger Catamaran Australian Championship - Hobart 2011



3rd to 10th Jan 2011 Lauderdale Yacht Club, Lauderdale
Roaches Beach, Frederick Henry Bay

www.papertiger2011.catsailor.org



Key Dates:

Entries Close	<u>Friday 3rd December</u> (before late fee applies)
Measuring	2 nd and 3 rd January
Invitation Race	3 rd January
First race and welcome night	4 th January
Layday	6 th January
Last race and presentation dinner	10 th January

Contacts:

The main contacts for the event are the President and Secretary of the TPTCA.

Sean Keady Telephone: Home (03) 62487762
President, TPTCA Mobile 0410487762
E-mail: skeady@internode.on.net

Mick Boyle Telephone: Home (03) 62478393
Secretary, TPTCA Mobile 0410487762
E-mail: mickspot@yahoo.com.au

Host Club: - Lauderdale Yacht Club

The LYC is located at Roaches Beach, Frederick Henry Bay, is only 20 minutes drive from the CBD of Hobart and is within 10 minutes drive of most facilities. The LYC is the only yacht club on the east coast of Tasmania and enjoys pristine southern ocean waters.



Lunches can be ordered each morning prior to sailing. At other times snack food will be available from the club. The club has extensive car parking, a trailer park, lawn, boat launching ramp, large beach access, and barbeque.

Boats may be left overnight with masts up on the rigging area adjacent to the club house at the owner's risk.



41st Paper Tiger Catamaran Australian Championship Program of Events

Day	Date	Event *	Description
	Sunday, 2 January 2011		AM – Measuring
Day 1	Monday, 3 January 2011		AM – Measuring
		Invitation Race(s)	PM - Format TBA
		Welcome Dinner	Evening at Foreshore Tavern
Day 2	Tuesday, 4 January 2011	Heat 1	AM - Long Race
		Heat 2	PM - Long Race
		AGM	7.30 pm at Foreshore Tavern
Day 3	Wednesday, 5 January 2011		AM - Allowance for Re-sail
		Heat 3	PM - Short Race (Back to Back)
		Heat 4	PM - Short Race
		Spit Roast	Evening at LYC Club House
Day 4	Thursday, 6 January 2011		Lay Day
Day 5	Friday, 7 January 2011		AM - Allowance for Re-sail
		Heat 5	PM - Long Race
Day 6	Saturday, 8 January 2011		AM - Allowance for Re-sail
		Heat 6	PM - Long Race
		Beer, Spirits and Tasmanian Seafood Night	Evening LYC Club House
Day 7	Sunday 9 January 2011		AM - Allowance for Re-sail
		Heat 7	PM - Short Race (Back to Back)
		Heat 8	PM - Short Race
Day 8	Monday, 10 January 2011	Heat 9	AM - Long Race
			PM - Allowance for Re-sail
		Presentation Dinner	Evening at Foreshore Tavern

*Each Heat is to be followed soon after with Nibbles in the LYC Club Rooms

TASMANIAN P T STATE CHAMPIONSHIPS

LAUDERDALE YACHT CLUB

5th and 6th March 2011

PROGRAM	5 th Mar. 1100 - Briefing 1200 - Race 1 1400 - Race 2 & 3 6 th Mar. 1000 - Race 4 & 5 1400 - Race 6
ENTRY FEE	\$25.00 per boat - Beach entries TASCAT membership required to be eligible for trophies
SOCIAL EVENTS	Saturday night: Don your wackiest outfit and makeup and get together for great company, drinks, barbecue and music. All welcome.
ACCOMMODATION	Free camping in the club grounds.
CONTACT	Mick Boyle mickspot@yahoo.com.au

SOUTH AUSTRALIAN P T STATES

ARNO BAY YACHT CLUB

29th and 30th January 2011

PROGRAM	29 th Jan. 1300 - Race 1 5 races programmed for weekend
ENTRY FEE	\$50.00 per boat Entry closing date 20th January
SOCIAL EVENTS	Saturday night dinner.
ACCOMMODATION	Free camping in the club grounds. Hotel Ph.8628 0001 Caravan park Ph.8628 2587
CONTACT	Peter Darling Ph 8628 2587

NSW P T STATE CHAMPIONSHIPS

KOONAWARRA BAY SAILING CLUB

29th and 30th January 2011

PROGRAM	29 th Jan.	1000 - Briefing 1100 - Race 1 1400 - Race 2 & 3
	30 th Jan.	0930 - Race 4 1300 - Race 5
ENTRY FEE	\$80.00 per boat	
SOCIAL EVENTS	Saturday night: Dinner after AGM	
ACCOMMODATION	Camping available in and around clubhouse 5 minutes to hotel 15 minutes to caravan parks	
CONTACT	David Stumbles Dave.Stumbles@bluescopesteel.com	

Spreading the Word

As part of our promotion of the Paper Tiger class, a new sticker has been produced to help attract non PT sailors to our international website. At 500mm x 40mm, it will easily fit on a boom, rear beam or hull. It is also large enough to be readable on a trailer when viewed from a following vehicle.

These stickers will be freely available and requests can be lodged through

ptcia@papertigercatamaran.org

At this stage it is intended to set a limit of 3 per person. Bulk requests from multiple recipients is OK but please include details of each recipient and one return address.

Printing is being arranged and stickers will be available as soon as we take delivery.

www.papertigercatamaran.org