OGAWA - MoB and Capsize Practice Day 03 Feb 2019 - C-Fleet Captain's Report

Notice:

OGA
Western Australia
The Association for Gaff-Rig
and Traditional Sailing

MOB and Capsize Practice Day

Mosman Bay - Sunday 03 February 2019

09:00 onwards - weather permitting

The plan for the day is to allow as many members and their boats as possible to have the opportunity to:

a) **Practice Man Overboard recovery** to establish the best way of actually getting someone back on board your boat, both aided (ie someone unable to help themselves) and unaided (ie reboarding your own boat after a capsize or other "excursion". All boats should practice this to understand the very real difficulties and work out how to overcome them.
b) For those with open boats to **practice capsize recovery** to determine that they can self-rescue/recover from an unintended capsize.

Please note that we have selected **Mosman Bay** rather than the previously advised Rockingham because we can access an area close to shore where there is depth enough for a full capsize, and because we should have access to a rescue/inflatable boat there.

The plan is to launch at the **Johnstone St ramp**, and gather in Mosman Bay south of the ramp (some trailer-sailers do find that ramp inadequate and may prefer to launch at Point Walter instead).

Given that this is a practice day, and we are not sure who will want to practice what, how long it will take or how successful they will be, communications will be important: hopefully we will all be within shouting distance of each other, but we will use VHF Ch72 if necessary. Also, we do not want to make things unnecessarily realistic so if the weather is too unsuitable we will cancel or abandon if needed.

Let's make this a fun day and aim to lunch together on the shore after our morning exertions, where we can review the morning and discuss potential improvements to our techniques, craft and equipment. Please let me know if you plan to attend so that we can get an idea of numbers.

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Attending Boats:

- Fala Andrew Bochenek & Crew
- Crazybird John & Jenny Longley
- Whimbrel Peter Kovesi
- Cygnet Mike Lefroy
- Nimba Peter Edmonds
- Wee Birlinn Jim Black

- Standby/Rescue Boat James Bennett & Kim Klaka

Participants' Comments:

Andrew Bochenek:

In "Fala" we noted the slippery hull and lack of handholds are a challenge on a completely upturned boat. Some small amount of anti-skid (that does not affect speed to much!) may be a consideration. "Fala" rights fairly clear of water inside when she comes back up so no bailing is required. She self-drains through the rear scuppers/venturis quickly.

I tested the "Aided MOB" system I set up using a Burke Retriever Float Lifesling. https://www.youtube.com/watch?v=DZL2hxPUHkg

In our boats, the difficulty is rigging a winch/hoist to lift the victim who cannot readily help themselves out of the water.

By using my main halyard and a specific 3:1 purchase set up, I was able to lift my crew, without his assistance, back into my boat hoisting him from the water up to the gunwale.

It is necessary to tie a bowline on the bight high up in the halyard where a snap hook from the block and tackle grabs it. Then the lower block is fixed near the base of the mast.

The other end of the halyard has a snap hook on it and engages the lifesling. Some extra refinement will be necessary to make it easier to use but it looks practical and most reasonably stable boats should be able to use it. All you need is a main halyard and some fixing point low down on or near the base of the mast. It does take a few minutes to set up, but it is one way to get a disabled person into the boat if they are unable to help much or cannot be pulled over the gunwale without threatening to capsize the boat. (ie: everyone on the same side of a low freeboard boat) See my crude diagram attached.

John Longley:

Hi Andrew,

Very good exercise. We need to get more boats to play next time.

Re your recovery sling a couple of questions/points.

What is the sling itself made from - ordinary rope or webbing?

Clearly you have to drop the main to carry out this exercise. Having done so on Crazy Bird I could easily disconnect the main sheet block system from both ends - boom and boat - and use it as the block and tackle. Look forward to trying it out.

A couple of leanings from Crazybird.

If you have flat floorboards as we do on CB you need a square bucket not a round one. I really liked your square collapsible bucket. We need to source them.

We only did a 90 degree capsize. Next time we will do the full 180. We will set up the righting line as described by Jim Black i.e. easily reachable and with knots. It seems we could also put in some loops so that it could double as a ladder to help crew get on board.

We will check the seals on our buoyancy tanks as it was disappointing to find water in some of them.

Really pleased about how easily CB rights with the plate down,

Peter Kovesi:

Whimbrel

Lessons learnt:

I managed to turtle my boat by walking across the sail and standing on the mast tip in the water. This surprised me a bit as the last time I tested the capsize behaviour of the boat it seemed to stay very stably on its side. It would be nice to somehow add a bit more mast or yard buoyancy to ensure that turtling is very unlikely to happen. Getting onto the bottom of the turtled hull was not too hard thanks to my gunwale ropes that I could stand on in the water and the skeg that I could grab to pull myself up. However, I should add some righting ropes on each side of the boat (with knots for grip) that can be thrown across the upturned hull to help pull oneself up. The boat came up without much trouble. It had a reasonable amount of water in it but there was no problem sailing the boat around in that state. It was quite stable and still moved at a reasonable speed.

My safety harness line works well. I jumped off the boat twice with no problems. My weight and drag in the water was such that the boat slowed and I had no trouble controlling myself on the end of the line. It was easy to pull myself back to the boat. Note that with the attachment to the boat at the rear of the centrecase the boat would sit on a reach to broad reach when I was dragging in the water. This is not ideal but I do not think there is any way to avoid this. Possibly if the tail of the mizzen sheet was attached to the harness line so that it was sheeted tight when the harness line was under tension the boat might round up if I fell off. However I suspect this might introduce extra things that could go wrong. I should add some crotch straps to my safety harness though it did stay on me quite comfortably when I was being towed in the water.

Reboarding using my gunwale ropes was not as effective as I hoped. My feet tended to swing under the boat and it is hard to push them down and out which is what is needed to get back on. I lengthened them which helped a little bit, but not much. However, despite this, I did reboard my boat four times, I would just like it to be a bit easier. Ropes within the cockpit that can be grabbed to help pull you in would be useful. Perhaps my technique with the gunwale ropes could be improved as well.

The sharp square edge on my plastic gunwale rubbing strip gave me an unpleasant cut on my thumb on one of my reboardings. My first aid kit could do with a good going over. The band aids we extracted from my kit were barely adequate.

The buoyancy vest (not life jacket) that I was wearing did ride up a bit when I was in the water. I need to change the way I fit it, or change the vest.

Your improvised rope harness that you used to lift me into your boat worked well and was surprisingly comfortable. Grog's Knots has a good looking emergency harness constructed from webbing that would also be worth a try. Probably soft rope could be substituted for the webbing.
<https://www.animatedknots.com/harness/index.php>

Peter Edmonds:

Great idea to eliminate the downwind drift from the things we had to address.

I didn't have anything drift away from NIMBA, and I don't think anything sank. This was my first full inversion for NIMBA.

Stability both upright and inverted was quite manageable. I have 4 x 20 litre drums and 2 x 15? litre drums tied in, as well as the bow compartment, and 2 x around 20 litre "dry space" drums.

One "dry space" drum leaked because of a broken tap spigot; the other because I hadn't closed it tightly enough.

The buoyancy volume and distribution gave NIMBA fairly good swamped freeboard to keep at least moderate waves out, support me substantially out of the water, and not have issues for centrecase inflow.

I found that one of my 20 l drums had cracked due to old age and UV; seen earlier but forgotten about.

This occasion prompted me to make good the screws holding in the main thwart (and thus 2 drums).

My attempt at righting line was a good start. I tried to set up a loop to lean against.

It was hard work bucketing perhaps 1 t of water out of the boat.

Let's push for getting plenty of participation in exercises such as Sunday's, as we don't have the culture of developing capsize recovery skills in the supported racing environment. Wave the flag in e-mails and the newsletter recognise those that are addressing the self-rescue by whatever means are available and appropriate.

I didn't get to address MOB situation. Low freeboard does make things relatively easy.

A few years ago, when MATILDA BAY was new, Brian Phillips and I capsized her off East Fremantle YC; very low on buoyancy. We revived old skills to sail her ashore, swamped, with us hanging on overside.

James Bennett:

It is extremely useful/essential to have a rope which can be deployed to assist the crew to climb on to their upturned hulls. The same rope can be used to heave the boat up right, rather than use the centreboard. Rope should be knotted and a decent diameter for comfort. The rope should be set up on both sides of the boat.

All the hulls of the boats were very slippery when upside down, some more than others, carefully located non-slip 3M strips would help crew to not only climb onto the up-turned hull but maintain their feet in a position to roll the boat back up right. These strips could in theory be above the normal waterline, if this was also above the inverted waterline!

Everyone had some sort of issue with getting back on board their boats, flooded or otherwise, so transom steps or a rope ladder of some description is essential/important. On the Bay Raiders with the step on the rudder an additional step (fold out) above this step on the transom would be beneficial, but I reckon a rope ladder would be the best way forward.

Peter Kovesi's semi-elasticated rope located each side under his gunwale was a good idea, but required fine tuning to make sure it was the right length to assist him re-board.

Crazy Bird had a lot more freeboard after they righted themselves compared to Wee Birlinn, due to the sealed compartments each end. Kim and I were concerned that in a decent breeze/wind slop you would be battling to bail any water out as your freeboard in a flooded condition was very low.

Crazy Bird and Fala both had electric bilge pumps that activated at some point after the capsize (manually switched, rather than automatic?). I can understand Crazy Birds coming on but I thought Fala's only operated from the ballast tank, so what was going on there?

Everyone with hollow spars should carefully check and make sure that they are sealed against water ingress. The buoyancy in the masts and gunters is essential.

While no one wants a polystyrene ball at the top of the mast, one way forward would be to get the sail maker to add a small section of foam pocketed with sail cloth at the very top of their sail (much less noticeable)

Some of the plastic buckets being used were so flimsy as to be a liability, so a decent strong bucket with a decent handle is essential. (one bucket was almost lost during the capsize, before it was even used to bail, as the handle detached itself)
Circular buckets cannot get the last bit of water out, so a dinghy type scoop bailer is very useful.

In retrospect it would have been useful to practise righting a boat with the skipper doing the righting work and the crew allowing themselves to be scooped up into the boat as it comes upright. This means that there is someone on the boat immediately

upon righting, they can ease any sheets and then help the person in the water get in. This would have worked very well on Crazy Bird, Fala and Whimbrel.

Peter E obviously needs at least two more 20 litre containers and these need to be securely lashed into position, not moving about on the end of slack string!

Cygnet (Mike Lefroy) needs to seal the masts etc, also consider the foam insert in the top of the sail, but I wonder if a bit of asymmetric buoyancy on one side of the boat would also assist.

Final thoughts, skipper and crew need to talk through who does what in the event of a capsize, so that the actions are immediate rather than being discussed in the water.

Kim Klaka:

General comments on capsize drills

The exercise proved very clearly that every boat is different and you have to set your own boat up to meet its individual quirks and foibles. To do this you need to practice under controlled conditions.

Need to have a means of levering yourself back on board and also levering the boat up from inverted. Jim's midships knotted rope was an effective solution. Peter Kovesi's "gunwhale stirrup" rope also looked promising, needed fine tuning to get length and tension right.

Several people/boat combinations had some difficulty getting back on board the righted boat. If they had been wearing inflated lifejackets it would have been all but impossible. Therefore need to know how to partially deflate your lifejacket (reverse the mouthpiece cap and insert into mouthpiece). A boarding ladder near the stern is a possible solution. There are some very innovative products coming on the market as a result of the recent EU requirement for all new boats to have a means of getting back on board unaided.

Buoyancy distribution in boats is a difficult compromise: too low down and the boat is too stable when inverted; too high up and the boat swamps easily. Asymmetric buoyancy is worth exploring, to prevent a full inversion. Buoyant spars are a big help, but it is difficult to make them truly watertight. Solid timber clearly has an advantage here.

Comments on specific boats.

Jim's boat

Difficult to capsize, easy to right even with centreboard in case. Just what you want, you might think, except that the but was nearly awash when back up. This is probably due to the amount and distribution of buoyancy. Not only was the deck edge within a few cm of the outside water level, but the top of the centreboard case was close to the inside water level. If there had been any waves I am not sure the boat could have been bailed out. Something we didn't try was sailing a boat to safety when flooded; would this have been possible?

John Longley's boat

Worked well with the usual provisos about getting back on board. A lot of time was needed before hand tying things down to stop them falling out. Are the tie-downs

going to become the standard sailing setup, or do they get in the way of operating the boat?

Peter Kovesi's boat

This also worked well, the gunwhale stirrups were important. They needed length adjustment and suffered the usual rope ladder problem of disappearing under the boat when stood on. The skeg provided a valuable handgrip. Peter cut his finger on something sharp, though we couldn't find the culprit immediately. Possibly the rubbing strake capping - make sure your boat has no nasty sharp bits on it!

Andrew's boat

Generally went well, but was one of the more difficult boats to get back into or onto – underwater area too slippery and fast!

Peter Edmonds' boat

Despite the ramshackle appearance (the buoyancy, that is!), this worked quite well once some knotted ropes were attached to the shrouds. A lot of water poured out of the mast when upright; mast buoyancy would have really helped.

Mike Lefroys' boat

This is the only one that required unreasonable effort to right. When the boat was recovered onto its trailer it was discovered that quite a lot of water had got into the buoyancy area. I am not sure of the buoyancy geometry, but I don't thin this was a major factor – most leaky tanks have a large free surface effect which helps re-righting. I think the main problems were the large beam, which made the boat very stable when inverted; and low level position of the buoyancy, which also makes the boat stable when inverted. Of course these two factors made the boat very stable with good freeboard when upright (and not much water to bail out?). How to make this boat easier to right? A buoyant mast should be investigated, and also explore: buoyancy bag on one side only, under the gunwhale (maybe with manual CO^2 inflation with trigger accessible from water when capsized?)

Helping a MoB

At the end of the capsize drills Peter and Jim used Jim's boat to rig up a block and tackle to recover a MoB. Mainsheet was attached to the main halyard, had to be hoisted to above head height despite the low freeboard. The halyard was tied to the yard to give the geometry more stability. Attaching the victim to the tackle is always a challenge. A length of rope with two snap clips was available to initially keep the victim connected to the boat, then the stern warp was used to make a cradle round thighs, waist and whatever else. This proved relatively comfortable for the victim to be hoisted aboard. I don't think it would have worked with an unconscious or completed incapacitated victim (that's when you need a VHF or PLB to issue a Mayday)

Falling overboard when attached

Peter Kovesi trialled falling overboard whilst attached (I stayed on board as helper). I was worried because sea trials on larger boats showed that the person would be towed face down at speeds more than about 2kn, with drowning likely in under 3 minutes. b This did not happen because Peter's drag was enough to slow this light boat down so much that he could pull himself back up the tether to get to the boat. Even when I tried to sail the boat it would not go at more than 2kn with him being dragged in the water. I think if we had used one the heavier boats the result would have been drowning.
Peter had a knife to cut the tether in case there was a problem. The best approach is

to have a webbing tether and a webbing knife (Crewsaver make them), which is a protected V-shape, very difficult to cut anything accidentally. On the subject of knives, a serrated knife cuts rope better than a clean blade, but you don't want either of them anywhere near an inflatable lifejacket! If you do have a knife. I suggest grinding the pointy end into a large radius to reduce the chance of accidentally stabbing anything or anyone.

What if you can't rescue yourself?

The exercise was invaluable, but we need to discuss what happens if in real life you can't right the boat or get on board. Unless you are only 100m off the beach, swimming to shore usually ends up with a body washed ashore, so how do you get help? You need to be wearing something – either a PLB, AIS, waterproof VHF, signal mirror or whatever. And you need to be able to operate it from the water. Don't bother with smoke flares – imagine trying to read the instructions whilst in the water without your reading glasses, then holding the correct end of it, breathing in the smoke, bits of red hot debris splattering on you….

Jim Black:

I have (so far!) never capsized *Wee Birlinn* "in anger", but this was my second deliberate capsize. In the first one, some years ago, I only capsized to 90 deg and made sure that the centreboard was extended; I also removed a lot of gear from the boat to prevent it from getting wet or lost. This time I decided to capsize to the full 180 deg, with the board retracted, and with all my normal gear on board, ie as realistic as possible. I was very pleased to find that I could still right the boat in that condition, that nothing floated away or sank, and that most of my "waterproof" stowages were in fact adequately waterproof! Those that were not I have since upgraded.
I have taken the point well made by both James and Kim that my buoyancy was probably inadequate and have now fitted two more bags; yet to be tried out.
The next exercise will also be to try to sail the boat ashore in its swamped condition to see if that is a possible option for me if conditions are such as to prevent effective bailing.

Summary:

The day was a great success in that many important lessons were learned by all participants that attended, as detailed above, and many thanks to James Bennett and Kim Klaka for providing support services. I would also like to particularly commend Peter Edmonds for managing to right and recover *Nimba* unaided, just a few weeks short of his eightieth birthday!

The most disappointing aspect was that the six boats' crews that took part were probably the most experienced amongst our membership, and yet all knew that they had more to learn, and certainly did - where were those who most likely had more to learn about their boats and themselves? We will do this again before too long and I expect to see many more of our fleet taking part - this was a safe environment to practice in and one day your life could depend on it!

JIM BLACK
OGA C-Fleet Captain

27 April 2019

[Photographs of this Practice Day will be posted on our website: www.gaffrigsailinginwa.org]