

Conference Report: International Sail Training and Tall Ships Conference 2018

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Andy Green, Bosun, SV *James Craig*

Overview

The International Sail Training and Tall Ships Conference is a yearly opportunity to bring together the worldwide tall-ship community. There were a few key take-away points for me:

- Sail training and tall ships races are a big business in Europe. The 2018 races and regattas included 6,000 sail trainees from 60 countries, with half of those trainees under the age of 26. Eighty-three vessels from 22 countries participated. Overall, the events drew an estimated 3.9 million visitors to the hosting cities.
- *James Craig* has a world leading safety aloft system.
- We on the *James Craig* could do a lot more in the sail training area than we currently do, and with better structure and organisation. Although the community is small here, it seems there is a lot of untapped potential for events, sail training places, and community engagement.

The rest of this report describes much of what I learned in more detail. The slide packs from the presentations at the conference are also available on the web.¹

I would like to acknowledge and thank Tall Ships Australia and New Zealand for supporting my attendance at this conference.

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¹ Conference website: sailtraininginternational.org/conferences/seville-2018/

1 About Sail Training International

The International Tall Ships and Sail Training Conference is organised by Sail Training International (STI), a UK based non-profit that provides a range of activities and services for the Sail Training and Tall Ships community worldwide. The organisation has existed in some form since the 1956 Tall Ships Races, though in its current form since 2002.

Members of the organisation are national sail training organisations. Most of these are from Europe, but the United States, Canada, India, and South Africa join Australia and New Zealand as members from beyond Europe. Many other countries also participate in events despite not being members. Sail Training International wholly owns a subsidiary, Tall Ships Races International, Ltd., which organises and runs the races and regattas on behalf of STI.

1.1 Endorsement Schemes

Sail Training International maintains two endorsement schemes to recognise ships. They are the Sail Endorsement Scheme and the Blue Flag Scheme.

1.1.1 International Sail Endorsement Scheme

A Sail Endorsement is available to help better recognise the unique skills required to sail a tall ship. Previously known as the Square Rig Certificate, this scheme has recently been refreshed to include both skills for square-rigged and fore-and-aft-rigged ships. The scheme is currently recognised in the UK and Australia, with equivalencies available in Denmark and Germany.

James Craig and *Windward Bound* and their masters regularly contribute to training and assessing candidates in this Scheme in Australia.

More information on the Scheme: www.nautinst.org/en/CPD/studyschemes/ISES.cfm

1.1.2 Blue Flag Scheme

The Blue Flag Scheme recognises vessels with good environmental practice. This scheme is administered in collaboration with the Foundation for Environmental Education. To qualify, vessel owners or operators must commit to a series of environmentally friendly practices in the operation and maintenance of their vessel. Vessels are participating in this scheme primarily to raise environmental awareness, encourage more trainees, and as an aid in finding sponsors. To help support this scheme, host ports of races and regattas are required to provide one black-water pump out for each vessel participating in the event.

At the conference, there was some discussion of issues vessel operators have had while trying to comply with the spirit of the scheme. In particular was problems in meeting various countries waste and recycling management plans, which differ considerably across Europe. Concerns have arisen when trainees and passengers are asked to separate their recycling, but these are then mixed together by the wharf collection.

Several recommendations were made for improving the environmental awareness of trainees and passengers. Part of the onboarding briefing could include a discussion of how waste is treated on board and what environmental impacts and issues there are with ships and the sea. It was also mentioned that the UN has assembled a toolkit: *Ocean Literacy for All* along with a portal that brings together resources on Ocean Literacy: oceanliteracy.unesco.org

More information on the Scheme: sailtraininginternational.org/sailtraining/blue-flag-scheme/

1.2 Reporting

Sail Training International maintains a database of near-miss incidents. Participation in the database is on a purely voluntary basis. Unfortunately, participation has been fairly low, with no new reports in the previous 12 months. There is some concern that public information about near misses could impact either an organisation's image, or cause problems should an incident occur in future and go to court. However, counter arguments were made that the information will come out if there

is a court case, and that if anything, having reported previous near misses, and having shown to have acted to make changes to address them, could reflect favourably on a vessel in the eyes of a court and the public.

Reports are handled by Ben Stewart of Sail Training International, and are invited via email to ben.stewart@sti.com. Reports are kept confidential within the STI Executive Committee, and currently only aggregated or summarised information is made public.

2 Rigs and ship design and maintenance

2.1 Building a ship for accessibility

Lord Nelson was physically disabled, as were many sailors as a result of injuries.

The Jubilee Sailing Trust, which built the fully accessible *SV Lord Nelson* (and later the *Tenacious*) had considerable challenges in designing a ship to meet their requirements. Many of the design challenges revolved around the wheelchair user, as they were often the limiting factor. To accommodate people in wheelchairs, the ship has special hatches where the sill is below the deck level and protected by a grate; there is a lift between decks, and permanent rescue tackles are fixed; and the ship's hull is designed to have a soft roll and maximum heel of about 10°. Many of the regulatory approvals required considerable discussion.

On board *Lord Nelson*, there are considerable concessions in voyage planning and evolution planning. Generally, the voyages are planned to have a holiday feel. Ports are chosen with a preference for an along-side quay to facilitate access, instead of anchoring. Night passages are chosen carefully, particularly considering the often erratic course keeping of the voyage crew. All disabled and able bodied crew participate in evolutions, which take considerable time and therefore advance planning.² Disabled crew are typically given first choice of tasks, and then assisted as needed by able bodied crew.

Lord Nelson's crew includes:

- master and three mates
- two engineers
- medical purser
- voyage doctor, if one is available
- bosun
- bosun's mates, who lead watches
- 40 crew, half able and half disabled, allocated in four watches

2.2 Tuning a rig: *Niagara*

The *Niagara* pulls its entire rig down every winter to cope with the harsh conditions. This necessitates that the rig be correctly set up and tuned every year. With this regular up and down, the captain and crew of *Niagara* have learned quite a lot about their rig and how to best set it up.

They have a goal to set up the masts with a slight forward steeve.³ This forward bend is designed such that when the sails are drawing, the mast will unbend and come into alignment as a single vertical column. To achieve this, they tension their shrouds and stays in reverse order, i.e. starting at the top of the stack at the hounds and working down. Stays are tensioned first to achieve the necessary steeve, and then the back-stays are brought on to hold the mast in place. If the back stays are over tightened, the mast pops out of shape, and the process must be repeated.

The correct tension is largely determined by feel and observation. Feel comes from lots of shaking, hitting and climbing on the rig, and watching the rig while others shake, hit and climb on it. Observing the rig while the ship is under sail then confirms if the tension is correct. The process is iterative, particularly because all of the components are connected.

²Interestingly, *Lord Nelson* tacks easily, but *Tenacious* is very slow in stays and therefore often wears.

³The word steeve (or stieve if your Scottish) is an archaic word that was used, in this context, to describe the bend in a mast or spar. Definitions I can find don't quite match with this use, but I will use it anyway for lack of a better alternative.

Niagara has converted its stays and other standing rigging from steel to Kevlar. The Kevlar rig greatly reduces the weight aloft, and improves the stability and handling of the ship. This conversion was begun in 2006. Kevlar doesn't stretch, but it does elongate. The elongation is predictable, but it took some time to get a feel for what it would be and how to account for it in setting the length of various pieces of the rig. Although Kevlar is impervious to corrosion or water damage, it must still be parcelled, wormed and served to protect it from ultra-violet exposure and chafe. Interestingly, the Kevlar has a feel much closer to that of the original hemp rig, i.e. it is more flexible and movable even when tight than the steel rig. In the end, *Niagara* is happy with its new Kevlar rig, and feels it is a closer representation of a traditional material rig than the steel it replaces.

2.3 Safety Aloft Systems

There was quite a bit of discussion at the conference about safety systems for aloft. The US sail training organisation, Tall Ships America, has a best practice document⁴ on safety aloft systems, and is currently working to update this guideline. Two falls—a fatality aboard a German sail training vessel in 2010 and a fall described at the conference on a US sail training vessel in 2018—helped to bring this discussion to the forefront.

Many ships globally, if not most, use a climb-and-then-clip system, with crew free climbing up the shrouds, and only clipping on if they stop to rest or step out onto a yard. Clip-climbing systems, where two clips are alternately clipped to the rig as the crewmember climbs, are viewed by some as too complicated, and could in fact cause a fall rather than prevent one, and also slow the climbing process considerably. Interestingly, the runner-based safety-aloft system used on board HMB *Endeavour* and SV *James Craig* is world leading, and a number of people asked about it.⁵ The runner-based system allows free climbing while still protecting crew from a fall from the deck up.

The German sail training vessel *Gorch Foch*, which is undergoing an extensive refit, is also the site of considerable testing of systems for safety aloft. Following a fatality in 2010, one of their goals is to demonstrate that the ship's new safety aloft system meets all European Union industrial standards through extensive drop testing. This work is extensive, and they hope to be able to write up their findings in the form of a best practice document or standard that can be used as a reference for other ships around the world.

3 Fund raising, event hosting, and marketing

There were several talks about fundraising, sponsorship and interfacing with the corporate world, and there were a lot of interesting ideas and bits of information.

3.1 Sponsorship

Globally, there is US\$65 million in sponsorship dollars available. Perhaps more staggering is that 70% of companies are looking for new sponsorship opportunities, and the number of opportunities is growing. The current trends are towards increasing sustainability and corporate social responsibility. For those looking to start a new sponsorship, ideas for how a sponsorship might work can be found easily by looking for YouTube videos from sponsored events and reviewing the shortlists and winners for the European Sponsorship Awards, which is held every year.

Increasingly, social media is critical to successful sponsorship and marketing in general. Currently, social media is a highly under utilised and under priced marketing resource—it is so new that people do not yet know how to capitalise on it. This presents a major opportunity for those who can leverage social media effectively. Sponsors in particular will want access to social media, so be prepared for this when considering a sponsorship.

AkzoNobel was presented as an interesting example of a sponsorship, albeit in modern ocean racing. They were able to engage millions of people through social media. Part of the engagement

⁴The "Tall Ships America guidelines for safety aloft" is available on their website: tallshipsamerica.org/about/sailtraining/world/resources.php

⁵To this end, I agreed to write up and distribute a document describing the *James Craig* system and our experiences for those interested.

was with their own employees, helping to make everyone feel “part of the team.” This great video documents the sponsorship over it’s lifetime:

www.facebook.com/1116188021757634/posts/2024272284282532/

3.2 Marketing by Sail Training International

Sail Training International maintains a significant marketing effort to support the general cause. The key markets for STI are trainees (particularly aged 18–25), vessels, ports (to host races and regattas), and sponsors. At the conference, there was considerable discussion of the trainee part of this marketing through the Sail On Board brand.

Sail On Board is the online presence of STI to trainees. The website attracts 830,000 unique page views (I believe this is per year, but might be per month). Of those, 280,000 or about 67% reach a vessel page, and 24,360 continue to a vessel operator page linked from the Sail On Board website. The Sail On Board brand has a social-media reach of about 3 million people.

STI has followed the research on young people (aged 15–25) to better understand how to reach them in marketing campaigns. That research reveals that these people are not just content consumers—they create their own content. More than a third have created and publicised their own videos, and they are generally good at self promotion. People in this age range have a strong interest in good-will and things that make them “feel good”, and authenticity is really important to them. Therefore, it is particularly valuable to encourage those people to produce content about your brand or offering.

In response to the research, STI is increasingly tailoring content to the particular platform (Instagram, Facebook, etc). This means providing the right message, in the right channel at the right time. Particularly, STI is increasing its focus on Instagram because young people have flocked to it to escape the old people on Facebook. Almost two thirds of people on Instagram are aged 18–34.

3.3 Hosting Events

In Europe, the biggest tall ship event hosts are the ports that host the tall ships races and regattas. These are big events, and hosting them is no small feat. For an idea of scale, the Norwegian town of Stavanger has about 132,000 inhabitants, with another 200,000 in the region, but had 350,000–400,000 visitors during the tall ships races in 2018. Harlingen in the Netherlands is a town of only 16,000, but had 70 tall ships and 225,000 visitors for the same event. For an idea of cost, Stavanger had to raise about 800,000 euros for the event.

Raising money for an event like this, despite the surprising number of visitors, is still a difficult task, and requires thinking outside the box. Stavanger, in particular, had a number of interesting lessons learned in their most recent event (they have hosted the tall ships races four times now):

- Eliminating lower levels of sponsorship, which can require considerable extra work, does not necessarily have a negative impact on the campaign.
- A specific sponsorship level for pubs and restaurants with a lower dollar value, but tailored to their specific needs proved very valuable.
- Instead of having VIP access to the event itself, proving a network for local and regional businesses to connect as part of the sponsorship can be more effective and costs less. Part of this network might be access to the mayor or other community leaders of interest to sponsors.
- Focus on the sail trainees, particularly youth to appeal to the corporate social responsibility. Build a program for local trainees that is much longer than just the four day race stopover, and make this a major component of what the sponsorship is supporting (even if the dollar cost of this is actually much lower).
- Come up with a motto/theme/goal which fits well with current local social and political climate. Stavanger used “Fair winds to new horizons” as a microcosm of the larger community, which was recovering from an economic slump.

Dublin, which hosted an event in 2018, looked for sponsorship to support sail training places for at risk people. They were able to bring in a major corporate sponsor, who in turn recruited others. Dublin ultimately had more trouble recruiting the trainees than the sponsors. Clearly there is money available to event hosts willing to think creatively and put in some work to find the right connections and goals.

4 Psychology of Sail Trainees and Volunteers

4.1 Group Dynamics

Interestingly, we often ask people to “work as a team”, but never teach people how to work as a team. Many different things can define a team—effective leadership, a common goal, mutual trust, or an understanding of how to work together. Though the difference between a group and a team is perhaps fundamental to much of the workplace and life, ideas differ considerably on what makes this difference and which points are actually important.

A common model for how team building actually works is that of Tuckman (1965), which describes team building as a group moving through a series of stages: forming, norming, storming, performing, and then adjourning:

Forming

At this stage, the group has little agreement and an unclear purpose. To move through this stage, the group must learn about one another. There are many ways to bring people together, such as simple introductions and ice breakers.⁶ SMART⁷ learning goals are particularly useful. Interestingly, more intense emotional experiences tend to bring people together much more quickly.

Storming

During the storming phase, there is increased clarity of purpose, but also power struggles, conflicts, etc. Perhaps the most important thing to keep in mind is that this phase is normal, and it will pass. This is a great time to identify and use strengths and weaknesses of others in the group—team building activities can often be a great aid. It is also the time to identify goals and share ideas.

Norming

In this phase, the group begins to settle into a working team. Identifying roles and rotating people through those roles can help people to settle.

Performing

This is the phase everyone wants to be in. It is often characterised by: when a leader is no longer required (though may still be helpful), a greater emphasis on coaching, a greater effort to find common solutions rather than assign blame, and the emergence of team rituals and celebrated successes.

Adjourning

The final stage is more retrospective. Here it is important to help everyone reflect on what they have achieved and overcome. Reflection and evaluation methods that are short, open, diverse and facilitated will help find issues and improve future outcomes. This will also be a prime time to ensure the group has a way of contacting each other or reconvening in the future.

Note that groups do not necessarily progress through these stages linearly, and may revisit some stages many times.

4.2 Managing and retaining volunteers

Why do people volunteer? There is considerable research into this topic, but little consistency in the conclusions. Reasons for volunteering tend to divide between altruistic and selfish (personal), though people who cite purely altruistic reasons tend to drop out. A common reason for volunteering is to support kids, making the most common volunteer in Australia the 44-year-old woman supporting school and/or youth sports. Volunteering increases with household income. A compelling case can be made that whatever the reason people initially volunteer, what keeps them coming back in the long term are selfish reasons.

⁶A particularly useful idea that came up is to have each new trainee/crew make their own diagram of the ship which they can refer to later when they are confused by all the vocabulary.

⁷SMART: specific, measurable, achievable, realistic and timely

There is a dichotomy between how one should best handle altruistic volunteers vs selfish volunteers:

<i>If Altruistic</i>	<i>If Selfish</i>
Management kid glove approach—whatever you want to do	Management Agree on what needs to be done (consensus)
Recruitment Help assist the less fortunate	Recruitment learn new skills, indulge yourself
Retention There are more people we can help	Retention More or different opportunities
Reward The happiness of the people we help	Reward Your own reward.

Keep in mind that volunteers can always walk away. Though I have lost the attribution for this quote, it is very telling:

“The beauty of being a volunteer is that you need me more than I need you. I therefore have more power than I would in a job.”

5 Incidents

There were two very interesting incidents profiled at the conference. The first one below is the fall of a climber from aloft onboard the USCGC *Eagle*. This was perhaps most relevant to the *James Craig*. The second, the medivac of a 14-year-old girl with appendicitis from a vessel crossing the Atlantic was also very interesting in a comparison and contrasting exercise with the rescue of a lady from HMB *Endeavour* in early 2015. Considering both of these, the *James Craig* is actually well placed to manage an incident similar to either of these.

5.1 Fall from aloft on *Eagle*

The United States Coast Guard Cutter *Eagle* initiated a rapid reduction of sail to avoid a approaching squall at approximately 11 pm local time. Once this was complete, climbers were ordered aloft to furl all sail. A climber fell while climbing down the futtocks, struck the lower shrouds, and then went overboard. The ship’s small boat was launched, and the person overboard was recovered within 11 minutes of the fall. The casualty had suffered four breaks to the femur. The *Eagle*’s senior crew employed the Human Factors Analysis and Classification System (HFACS) in their review of the incident, which I will describe later.

The *Eagle*’s safety aloft system is similar to that originally found on the *Craig*. Crew wear a body harness with two clips attached by lanyards to the harness. Crew free climb, but are required to clip in whenever they stop e.g. for a rest, and crew clip into a safety line when on the yards⁸. Crew are to climb the windward shrouds only. The climbing training is included in the “School of Ship,” in which all cadets participate when they come aboard.

The casualty was one of the ship’s cooks. He had come on deck to assist when all hands were called. The watch leader asked for volunteers to climb aloft and furl, and the cook volunteered to climb to the royal yard to assist with furling. It was his first time climbing to the royal yard. He subsequently assisted with furling the upper topsail before descending via the lee shrouds. While descending the futtocks of the top, he “let go” because he was exhausted. Once in the water, the small boat was only able to find the casualty by his voice: he could not be seen in the water.

Perhaps fortunately, the crew had practised the launch of their small boat earlier that same day. The launch party is similarly sized to that of the *James Craig*. In the incident, they were able to launch the boat in just six minutes, impressive considering some of the launch crew still were to come down from aloft. For comparison, the crew typically launch the boat in 4–5 minutes in a drill.

⁸I’m not actually certain about this safety line for the yards.

The HFACS Review identified the following:

Act leading to incident

Erroneous course of action, the casualty did not clip into the rig when tired.

Pre-conditions

- Fatigue: the person was exhausted. He'd furled two sails and climbed further than ever before, despite it being late at night after a full day.
- Technical or procedural knowledge not retained

Supervisory Factors

Choose the wrong person for the task: the cook was not suitably experienced or fit for the task.

Organisational Factors

Policy: The organisational policy on climbing allowed perhaps an unsuitable person to go into the rig.⁹

The review made the following recommendations:

- Need to remind people that they can rest
- Consider requiring a physical fitness test for those who are allowed to climb aloft.
- Need for emergency situation to be described as part of the all hands call. Many crew came on deck, but were not actually sure what was going to be expected or required of them.
- Review how the ship finds a person overboard, particularly at night.

Finally, I'll briefly describe the HFACS Review process. This system is used across all branches of the US military. In each unit, there is a standing review committee that can be convened to review an incident as soon after it happens as possible (however, if the incident involves a fatality, then there will be an external review). This review committee immediately begins collecting information for the review process: logs, statements from witnesses, etc. Once this is complete, the review committee works through the set process. A pocket prompt provides all the possible likely causes. Each is said allowed, and then there is time to discuss if it is relevant to the incident at hand. These causes are organised into different areas, such as pre-conditions, supervisory factors, and organisational factors. This committee then produces a report.

5.2 Medivac of girl with apendicitis

The second incident discussed was the medical evacuation of a 14-year-old girl diagnosed with appendicitis. The girl was aboard a small vessel 600 miles off the US coast. She was transferred to the *Royal Clipper* by a small boat and then picked up by chopper from the quarterdeck of the *Royal Clipper*. From diagnosis to rescue was four and half days.

After the initial diagnosis, the girl required considerable care. In the first day and half, the ship expended considerable medical supplies on the girl, including the entirety of their IV equipment and needles.

From the captian's limited view on-board, the only option he could identify was to transfer the girl to another vessel with their small zodiac by crossing a lot of water in the middle of the Atlantic ocean. Shore support suggested there were additional options and resources they could bring to bear on the situation.

Shore support were able to find the ship *MS Professor Logachev* in the vicinity, which was able to transfer needed medical supplies after 1.5 days, but ultimately choose the *Royal Clipper* to take the girl close enough to shore for a helicopter rescue. Although the rendezvous with the *Royal Clipper* was later than that with the *Professor Logachev*, the ultimate time to shore was shorter (this decision was seriously questioned by the Dutch Coast Guard). The *Royal Clipper*, in addition to being faster, also had a large and well stocked medical bay, a large boat which could be used to transfer the girl, and, perhaps most important to the sanity of any 14-year-old girl, WiFi/internet access.

The girl was picked up from the quarter deck of the *Royal Clipper* by chopper. This rescue required considerable discussion among the chopper pilot, the shore support and master of the ship. Key points included:

- drawing a picture of the quarter deck of the ship for the chopper pilot,
- negotiating the ship motoring downwind to increase the stability of the ship and rig and make it easier for the chopper to approach the masts, and

⁹My notes are vague on this last point

- using video of previous rescue in similar situation to help the chopper pilot understand the realities of the situation.

Video of the rescue itself was shown, which could be shared with other ships should the need arise. In the rescue, the rescuer comes down on a line from the chopper astern of the ship. A heaving line was used to pull the rescuer in to the quarter deck. Once on board, the rescuer disconnected from the chopper, but attached the heaving line to the choppers cable, and then let it out so the chopper could remain astern of the ship. It took some time to prepare the girl. One difficulty was handling her baggage—she had a backpack, but this proved problematic for the rescue (though ultimately went along). There was also a passenger aboard the ship who was surreptitiously filming the whole thing, which wasn't appropriate for the girl's privacy (particularly on a ship with instant access to the internet). Once the girl was prepared, the rescuer brought the line from the chopper back in, and then hoisted her to the chopper, before departing himself.

There were a number of lessons that they took away from this incident:

- Share knowledge. Other people have done this before. The tall ships community is happy to help, and it will be to your advantage to help others. In this case, the knowledge sharing proved vital to a successful outcome.
- communication is vital. Make sure you know how you're going to keep all those communication lines open.
- In an ocean crossing, make sure you have an experienced doctor on board, especially one who is experienced with trauma.
- Make sure you have enough medication on board. Don't underestimate how quickly someone will dehydrate in hot weather, which means plenty of IV bags!
- Think about what the casualty needs to take with them in the medivac in advance. Mobile phone and passport are really all you need!
- The team must be a step ahead of the media. Think about what you are going to say to them. Be ready for them.
- Also be ready to deal with the family. Where might they want to fly to, and is that useful or just getting in the way, or not even where the casualty is headed.
- Do a risk assessment on an evacuation before it happens.
- Write a media response handbook in advance.
- Consider how you will keep your shore incident management centre staffed 24-hours a day for several days.

Closing Remarks

The conference was a wonderful opportunity to meet the international community and learn a great deal about tall ships and sail training. Perhaps as valuable as the talks was the opportunities to meet and discuss other issues in the coffee breaks. I would strongly encourage anyone who is able to attend.

It is also worth noting that there is another big conference on the calendar, that run by Tall Ships America. Their next conference is scheduled for 25–27th February, 2019 in San Pedro, California. Full details can be found on their conference website: tallshipsconference.com.