



Cruising

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An introduction to Croatia

Dealing with rubbish on board

Why things fail: fatigue

PLUS:

Royal visit to CA House

Choosing a liferaft



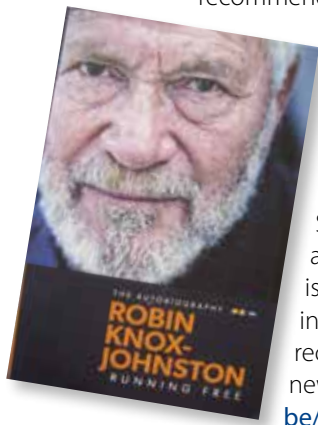
Exciting times at the CA

CA President **Julian Dussek** was thrilled by the Royal Visit – and is looking forward to celebrating a major anniversary with the CA's Patron

This is the first issue of *Cruising* in 2019 and already there are major, unique events to write about, and I am not talking about Brexit – at the time of writing, no-one has a clue what the outcome of that will be.

The first major event was the **visit by HRH The Princess Royal to Limehouse** to celebrate 110 years of the Cruising Association's existence where she met the staff and volunteers who are so critical to the running of the association. (See p3 for photos of the event) .

The other major event is the **celebration of Sir Robin Knox-Johnston's solo circumnavigation** of the globe to win the Golden Globe race. At 3.25pm on Easter Monday, April 22, it will be exactly 50 years since he crossed the line in Falmouth to win the race after 312 gruelling days at sea. I strongly recommend reading his



autobiography *Running Free*. It is impossible to imagine the conditions experienced by Sir Robin 50 years ago, but there is a fascinating interview with him, recorded for a Swiss newspaper, at youtu.be/mPRHMBvs_II.

Sir Robin is having a great celebration in Falmouth on Easter Monday and would like as many CA yachts as possible to form part of a flotilla to escort *Suhaili* into Falmouth. Details are in the February and March Newsletters. As I write, Jean-Luc Den Heede has just won the re-run of the race in a 36 foot Rustler in 212 days.

When you receive this edition of *Cruising* meteorological spring will have arrived. At last we can think of boats, of fitting out, of getting on the water, of getting away. I respectfully realise that many

members sail all the year round, not all are in the UK, some are blue water sailors but the majority of our members are I think, like me, summer sailors. Council meetings are in abeyance as members of Council actually go cruising! Stimulated by articles in *Cruising* we intend sailing with grandchildren in the Netherlands and I'm doing the planning on CAPtain's Mate. With loads of cruising reports and an improved mapping system it's easy. I can do it on my phone! I do have charts and maps too, which brings me to another topic.

What do you do with the charts you no longer need? One answer is to give them to the CA library, but the volunteers who sort these charts, catalogue those they will keep and then file them are overwhelmed and cannot take any more at present. What we need is not more charts but **more volunteers**. It's not an arduous job sorting the charts out, the library is warm even when the Limehouse basin is frozen over and the staff are always welcoming. So, if you can spare a few hours to do a pleasant and rewarding job please contact the CA office. We really need your help or the chart collection will stagnate, a pity because it is probably the best collection in Britain.

This time last year Judith Grimwade, in her President's report, celebrated the success of the London Boat Show when more than 600 members visited our stand and a record number of new members were recruited. Sadly this was not to be repeated this year. We don't know the effect that the disappearance of the London show will have on membership, but we saw a diminution in the number of people attending some of the events in Limehouse in January. Members used to tie in a visit to the LBS with something else. We are thinking seriously about what to do next year.

Meanwhile the CA continues to support members' interests. Ian Wilson hosted a meeting at Limehouse convened



by the Maritime and Coastguard Agency about the **marking of lobster pots**. Representatives of the National Federation of Fishermen's Organisations, the Marine Management Organisation and the RYA were all there - see page 23 for details.

Chris Robb is trying to introduce some sanity into the **Greek cruising tax**. We are liaising with other sailing groups about the problems with **red diesel**. And the Cruising Information Development Group beavers away trying to improve the way in which we handle the **thousands of cruising reports** and how we find the volumes of information available on the website.

Finally, I must thank Judith Grimwade for initiating the visit of HRH The Princess Royal and completing the labyrinth of paperwork without which the visit would never have happened.

Finally, don't forget to use **Find My Friend** on CAPtain's Mate when sailing, you never know who might be just round the corner that you would love to see.



Judith & Julian with HRH The Princess Royal

110 years of the Cruising Association Welcome for HRH The Princess Royal

In his capacity as Patron of the Cruising Association, Sir Robin Knox-Johnston hosted a private visit from The Princess Royal to the CA's headquarters in Limehouse Basin, London on February 13.

Sir Robin, accompanied by the CA President Julian Dussek and immediate past-President Judith Grimwade, was delighted to welcome The Princess Royal to CA House as part of the Association's 110th anniversary celebrations.

The schedule included an opportunity to browse the CA's impressive collection of sailing memorabilia, books and charts and the Princess enjoyed a demonstration of the CA's mobile app, C*aptain's Mate*.

The Royal visit was rounded off with an opportunity for The Princess Royal to be introduced to a number of the volunteers who help to run the Association and look after its many and varied membership-led interests.



Top, The Princess Royal's standard flies above CA House. Above, Julian Dussek and Jeremy Batch show the Princess the Cruising Almanac



Above left, the Princess finds details of locations in the west of Scotland in C*aptain's Mate*. Above, an introduction to members of RATS: from left, John Lansdell, Peter Burry, Colin Heywood and Ted Osborn



Left, having unveiled a plaque commemorating 110 years of the CA, Her Royal Highness signs the visitors' book. Above, the celebratory cake



Photo: Peter Ludlow

Joanna & Tim celebrate aboard their Breehorn 37 cutter, Feng Shui, below



Joanna is Raymarine prize draw winner



The CA's most recent big prize draw for members, launched at the Southampton Boat Show last September, attracted more than 1,200 entries.

The draw was made by the CA Patron Sir Robin Knox-Johnston at the recent **Flag Officers' Lunch** and the prize of a Raymarine Axiom Pro-S 12.1 valued at £4,000 goes to... Joanna Handley.

On receiving the good news, Joanna's husband Tim commented, "Thanks for picking Joanna's entry; great choice! And thank you Raymarine for your generosity. We have been members of the CA for just two years, having decided that a global club for active sailors best aligned with our needs. To date, we've attended many London seminars, a SW meet including dinner with Sir Robin Knox-Johnston, and a Channel section rally to France and the CI. This has all been hugely enjoyable, as well as meeting so many other CA members along the way. We are so glad to have joined the CA."

The Handleys keep their boat on the Tamar, opposite the Devonport Dockyard, and have a mooring off their home nearby at Kingsand, for use when

there are no easterlies forecast.

"We've both just retired, and I'd spent a long time looking for a Dick Koopmans design," said Tim. "We bought *Feng Shui*, a refurbished Breehorn 37 cutter, from the builder's yard in July 2017, and sailed her home from the IJsselmeer, via Den Helder. Accommodation might be a little tight compared to modern boats, but we wanted a tiller, and good sea-going and sailing qualities. Although the Breehorn was designed in 1980, they are still making new ones.

"This year we have cruised the southwest, including a fabulous few days in the Scillies, and joined the Channel Section rally to Beaucette and beyond."

Tim initially plans to tie the Axiom multifunction display into his existing a95 Raymarine spread, to give a secondary nav station at the chart table. Once he is fully familiarised with the MFD, he will swap unit locations to make the Axiom the primary unit. So it will be a great upgrade.

The couple are equally delighted to receive the Imray and Navionics charts included in the prize draw.

CA backs member's Coastal Clean-up Campaign

The CA is pleased to be supporting the Coastal Clean-up Campaign started by CA member Steve Brown, a worldwide initiative to clean up our coastlines backed by his own efforts to enlist the support of cruising associations worldwide, the organisers of cruising rallies and in due course the local communities. Steve is a sailor, mountaineer and diver and has sailed more than 75,000 miles in all of the world's oceans and many of its seas.

An estimated 12.7 million tonnes of plastic – everything from plastic bottles and bags to microbeads – ends up in our oceans each year. Plastic is already in the food chain and is killing wildlife above and beneath the waves.

Cruising sailors visit every corner of the globe, understand the magnitude of the problem and can do something practical to help improve things.

Steve's initiative is being spearheaded by the 60 boats taking part in the **Suzie Too Rally** sailing in the Western Caribbean. Steve says: "As a long-term cruising sailor, I have seen what can be done by sailors who act together to clean up beaches around their anchorages and so I have created a campaign to encourage ALL cruising sailors to carry out this clean-up on an ongoing basis. This can be achieved but needs the involvement of cruising sailors the world over."

The CA is encouraging members to



support the Coastal Clean-up Campaign. The campaign website at www.coastalcleanup.net includes a form for cruisers to log what rubbish they collect and where they collect it. This is then added to a database that can be used in the future to analyse what is found and where.

Lobster pot campaign: New working group

Last year, the CA ran a successful campaign and petition on the issue of entanglement with lobster pots and other fishing gear.

In a major development, the Maritime and Coastguard Agency has held the **first meeting of the Lobster Pots and Small Craft Safety working group**. It brought together:

- the CA
- the RYA, which has gathered data on entanglements
- the Marine Management Organisation (MMO), a public body sponsored by Defra which supports sustainable marine development
- the Maritime and Coastguard Agency (MCA) which is responsible for safety at sea
- the National Federation of Fishermen's Organisations (NFFO).

The meeting resulted in a consensus that existing approaches to fishing gear marking and hazard reduction need to be reviewed and new approaches explored in the interests of small craft safety.

All the bodies involved have agreed to work together to better understand the causes of small craft entanglement and to develop solutions based on best practice in the UK and elsewhere, and to support innovative development.

Julian Dussek, President of the CA, wholeheartedly



From left, Ian Wilson (CA), Gwilym Stone (MCA), Robert Greenwood (NFFO), Michael Coyle (MMO), and Stuart Carruthers (RYA) at the first working group meeting at CA House on January 16.

welcomed the formation of this group, with its ambitious Terms of Reference. He commented: "We very much hope that our petition, video and campaign has created the impetus for action and we are delighted to have already found so much goodwill and common ground with our partners."

Stuart Carruthers, RYA Cruising Manager, added: "Poorly marked fishing gear that poses a hazard to navigation because it cannot be readily seen has been a major concern for the RYA and for recreational boaters for many years. Through this newly established working group we will continue to seek better ways for avoiding entanglement and improved enforcement action for those who ignore the law."

The Working Group plans to meet again in the coming months once it has established the regulatory baseline and had time to assess the effectiveness of existing powers across the whole of the UK.

Top designer on why we need more 'slippery' boats



On Wednesday, **March 27**, the CA's Hanson Lecture will be from leading yacht designer, Nigel Irens. In the days of sail and oar, building the most "slippery" hull made perfect sense. But over the past few decades, ever lighter and more powerful engines can make a boat the shape of a house-brick go as fast as you want. Now the cost of fuel and concerns about emissions are becoming serious issues, we must become more thoughtful about how to make better use of every litre.

Nigel Irens, perhaps best known as creator of the

Kingfisher trimaran used by Ellen MacArthur to break the world record for solo circumnavigation in 2005, has spent a lifetime ensuring that offshore racing trimarans make best use of the wind to beat the competition. Now he has turned his attention to finding ways to use "slippery" technology to make a quieter, more frugal motor boat.

Tickets for the Hanson Lecture, at £18 per person, include a buffet supper and **must be booked in advance** at <https://thecaevents.eventbrite.co.uk>. CA House, 7pm.

CREW: "I'm Swiss/American, looking for warm water yachting around Costa Rica (April) and anywhere else (the more exotic the better) from June on. I have the "Swiss certificate of competence for ocean yachting". I'm a non-smoker, non-drinker, non-snorer, need healthy/good food, quick learner, pro-active, extroverted backpacker, love travelling/adventure/exploring and new cultures."

Join the Crewing Service

The CA's Crewing Service puts skippers in touch with crew and crew in touch with skippers. We have crewing meetings at CA House once a month throughout the winter.

There's just a taste of what's on offer in our database in the quotes here. To read the full entries, and more, go to www.theca.org.uk/crewing/welcome – or check the crewing forum from Forums > Crewing Service.

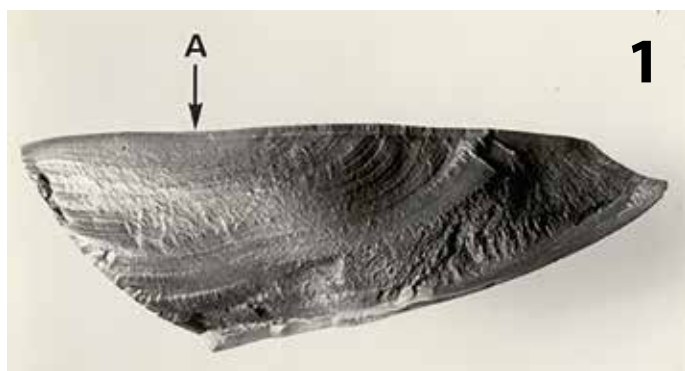
SKIPPER: "I'm single handed cruising the Caribbean Islands until June when I go to Curaçao to wait out the hurricane season. In January 2020 I will make the Panama transit into the Pacific and see as many islands and atolls as possible, aiming to be in NZ by November."

Why things fail: Fatigue

In his series on how and why boating equipment can fail, **Vyv Cox** looks at three case histories: a simple failure and two more complex ones

Fatigue is responsible for something like 75% of engineering failures. The introduction to the series in December's *Cruising* explained the background reasons for this common failure mode and how to recognise it. In summary, cracks grow from an initiation point or points, gradually reducing the cross-sectional area of the component. Ultimately the remaining area is too weak to carry the load acting upon it and it breaks suddenly. This description is very commonly heard from owners and witnesses – "one moment all was well, the next minute it was in two pieces", absolutely characteristic of fatigue failures. In reality of course the crack might have been growing for years, unnoticed.

Case 1. Fractured gear tooth

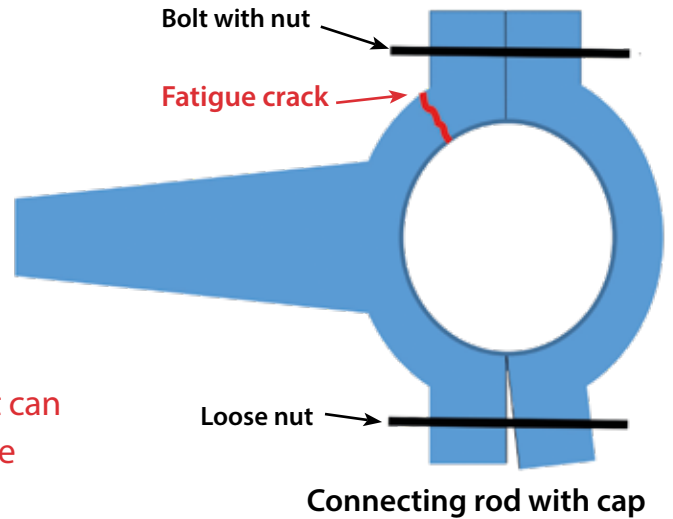


As a simple illustration, **photograph 1** shows a gear tooth that has failed in fatigue. The classic fatigue crack appearance is likened to the ripples that radiate from a stone thrown into water, origin point A. As the crack grew it created what are called "beach marks" until finally, in the lower third of the picture, the load exceeded the strength of the steel and the tooth broke off. A simple fracture like this is fairly rare, as loading in most engineering components is complex.

The origin of the crack is a wear step in the face of the gear, not visible in the photograph. This would have acted as a "stress raiser", a common cause of fatigue failures.

Case 2. Connecting rod and big-end cap

My next example, slightly more complex, is a fractured connecting rod from an engine owned by a CA member. In this case the nut on one of the bolts holding the connecting rod big-end together came loose. The consequence was that all the cyclic load was carried by the tight bolt on the opposite side, resulting in bending of the connecting rod as the engine ran.



The diagram above shows the features of the connecting rod and **photograph 2** shows the intact but deformed big-end cap with a fragment of connecting rod after the fracture.



Photograph 3 shows the bolt with the broken piece of connecting rod. The characteristic beach marks are evident but there is no single initiation point. Instead, the crack has initiated simultaneously right across the flat face of the connecting rod. The visible horizontal lines are known as ratchets and are indicative of multiple origin fatigue. This failure was responsible for punching the hole in the crankcase wall that illustrated brittle fracture in the opening part of this series (detail pictured right).



Final fracture

Blue arrows show ratchet marks and crack propagation direction



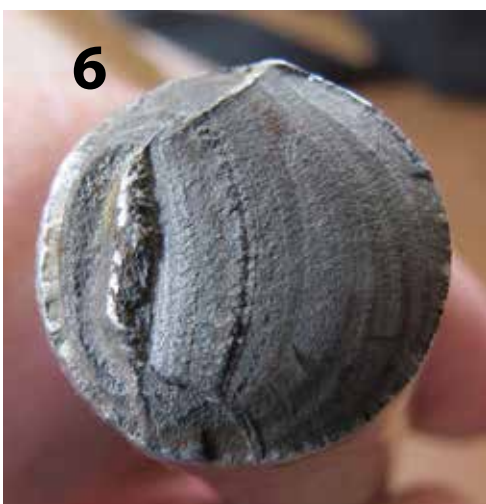
Case 3. Stemball eye failure

This case history describes the fracture of the upper connector of the forestay on a yacht. The connector is a specialised component known as a stemball eye, used to join the upper end of the forestay to the mast above the foil and upper swivel, while allowing lateral movement in all directions. Photograph 4 shows a new stemball eye that comprises a spherical bearing at one end with a cup as a counter face and an eye at the other, to which the forestay is attached. The design is intended to allow a certain amount of lateral movement due to sailing loads: in effect a sophisticated toggle.

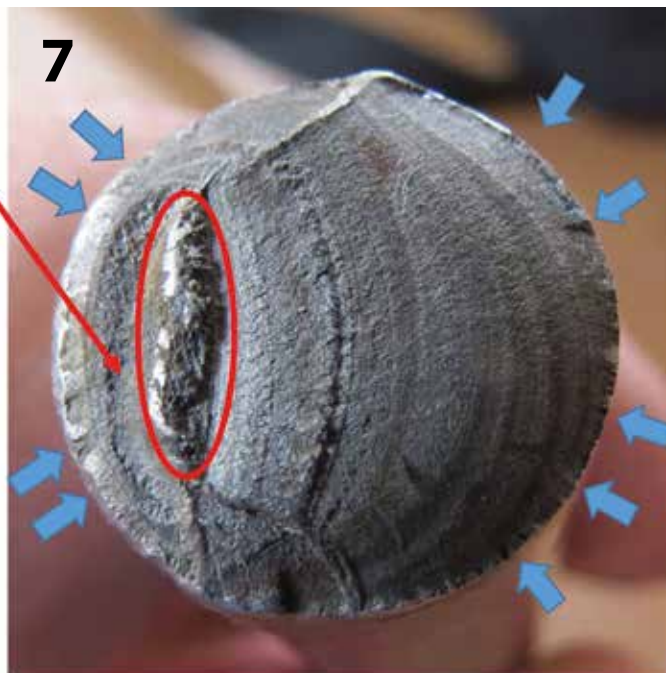
Photograph 4, above, shows a new stemball eye fitting.



Photograph 5 shows the failed component as I saw it. The spherical bearing has broken from the shaft, with the fracture at left. The eye at the right hand end shows evidence of fretting, indicating movement in service. There is some polishing on the shank, right of centre, also indicating movement against another part. The diameter of the shank is about 15 mm.



Photograph 6 has the general appearance of a fatigue fracture



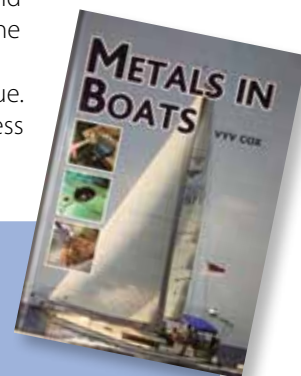
but at first sight does not have a straightforward two-zone appearance. At the right side the 'beach marks' that characterise fatigue are fairly evident and careful examination shows something similar at the left. As in Case 2 there is no single initiation point but instead the crack has initiated at multiple origins all around the circumference, as shown by the ratchets.

What has happened here is explained in **Photograph 7**. Two cracks have propagated inwards towards the centre, one from each side, creating the characteristic beach marks. Finally, the stress acting upon the remaining area exceeded the strength of the metal and it fractured in a ductile manner, creating the small, almost vertical mark left of centre. The area of this is perhaps 5% of the total cross section area, indicating that the forestay was quite slack at the time of fracture. Typical static loads for a forestay are around 20% of ultimate tensile strength (UTS).

The final fracture was aligned with the eye at the end of the fitting, which in service was in line with the axis of the boat. The two fatigue cracks have been growing alternately as the boat was sailing on either port or starboard tack. The forestay seems to have been so slack that the spherical bearing was forced against the cup, imposing a stress upon the point where it met the shaft.

In both case histories 2 and 3 the cause of failure is slackness – the bolt tension was lost due to loosening of the nut and the forestay tightness was far lower than it should have been. The message is clear: ensuring the correct tension in components of all types considerably reduces the likelihood of fatigue. In case history 1 the cause of failure was stress concentration, and this will be discussed further in the next article.

Vyv is a chartered engineer and regular *Cruising* contributor. With his son Owen he runs a marine engineering advice site at coxeng.co.uk. Since retirement he and wife Jill have sailed their Sadler 34, *Straitshooter*, across Europe to Greece.



A GUIDE TO MEDITERRANEAN SAILING

Croatia

In the second part of our series on Mediterranean cruising destinations, **Andrew Osmond** extols the virtues of Croatia

Our Bavaria 42 was delivered to Izola, on the Slovenian coast, at the northern extremity of the Adriatic Sea. The plan was to sail down to Greece and keep the boat in the Ionian or the Aegean. To get there entailed going through Croatia, where we had never sailed before, and we were so taken with the area we decided to stay and have been based there for the last 13 years.

Overview

Croatia is a most attractive cruising area for a number of reasons. There are several hundred islands off the coast, about 50 of them inhabited, and as a result there is a total coastline of about 3,000 miles. This is mostly steep-to with hardly any beaches, meaning that navigation is simple with few hazards for the unwary yachtman. The islands are close enough to each other to give line-of-sight sailing and typical passage times of a morning or afternoon.

Croatia has been invaded by many nations over the years with the result that there are plenty of small towns and villages to visit with excellent facilities for

sailors. The Venetians controlled Dalmatia (the area from Zadar down to Dubrovnik) for much of four centuries and they left their mark in some wonderful architecture.

The Italian influence is much seen in the food. Pizzas and pasta are available everywhere along with some delicious Croatian specialities. Locally caught grilled fish is served in most restaurants, frequently cooked over olive tree fires; the fish is delicious, but expensive.

There are numerous bars and restaurants as well as decently stocked shops and supermarkets. Nautical tourism is a key part of the Croatian economy and sailors are made very welcome, in our experience.

Croatia has become very popular in recent years and there are many flotillas and bareboat charterers in July and August. They tend to stick to familiar routes such as Split, Brač, Hvar and Vis. If you are willing to go off the beaten track, you can usually find quiet bays and quays, even at the height of summer. Changeover day is Saturday, so you can

predict with some certainty where most charterers will be on various days of the week.

Sailing party weeks are a reasonably new phenomenon, consisting of as many as thirty chartered yachts with professional skippers touring the main sailing destinations. Individual berths are sold to groups of young and the marina or anchorage they tie up at for the night becomes extremely noisy. If you spot a party arriving where you were planning to spend a peaceful evening, you just have to move elsewhere.

Getting there

One of the attractions for UK-based sailors of keeping their boats in Croatia is the ease of travelling there. The number of airports with flights to Croatia has increased considerably in recent years. During the summer season as many as six different airlines have UK flights to the key cities of Split and Dubrovnik, with smaller airports like Zadar and Pula also enjoying regular services.

Flights from Britain tend to cost £50-£100 each way and take a bit over two hours.



Opposite, a peaceful evening anchorage in Jadrtovac, near Sibenik. Above, Lady Olivia lies to lazy lines on the quay at Vodice, also near Sibenik

Cruising in Croatia

Pros

- Beautiful scenery, pretty towns and villages
- Numerous marinas, town quays and anchorages
- Islands a short distance apart
- Excellent summer weather
- Good sailing winds

Cons

- Very busy in the high season
- The bora wind
- Numerous charter boats and noisy party week groups
- Fees are higher than elsewhere
- Charges for using town quays

Some CA members drive down at the start of the season. It's quite a hike, but a lot more feasible than driving to Greece or Turkey.

Mooring and marinas

Croatia is very well served for places to moor. There are 56 marinas, about half of which are owned by ACI. This started as a government-owned company but was privatised some years ago. The standard of both ACI and other marinas is high with washing and bathroom facilities kept very clean. Typical overnight costs in the season are £5-6 per metre. Annual berthing contracts are available at most marinas and prices for a 13m boat would typically be £4-5000. It is always worth trying for a discount.

Mooring is generally stern or bows to and lazy lines have been installed in all marinas. There are usually mariners around to help you dock. Many marinas have haul-out arrangements if you

want to overwinter ashore. There are often yards at marinas where most maintenance work can be carried out. Standards inevitably vary from place to place, but a check on CAPTAIN'S MATE or a request on Mednet can usually give some guidance.

Most coastal towns and villages have a quay that is controlled by a local company operating a franchise. This means that lazy lines have been installed and are maintained and that water and electricity are available. There will generally be someone to take your lines and your money. Typical mooring costs on a town quay are £3-4 per metre.

In an increasing number of bays, buoys have been installed for the summer. These are also run on a franchise basis by a local operator. The quality of these moorings is generally high and they are usually placed a reasonable distance apart. Typical charges for picking up a buoy are £2-3 per metre. Restaurants on the coast often put out buoys which are free to use by diners.

There are many opportunities to simply drop your anchor in a sheltered bay. There should be no charge for this as long as you are not anchoring in or close to an area of buoys. We have a number of favourite anchorages and one can sit undisturbed for days on end in the best of them. CAPTAIN'S MATE gives good guidance.

Equipment

The Adriatic is one of the cooler parts of the Mediterranean but you still need to equip your boat for hot weather. This

means either a bimini or some other shade from the sun and an efficient fridge to keep the beers cool. There are no special Croatian requirements for safety equipment. Your boat should meet the legislation of the country in which it is registered.

It is likely that you will be anchoring frequently so it is well worth having an anchor you trust along with sufficient chain and a powered windlass. If you are anchored overnight in settled weather it is likely the wind direction will reverse in the night. Many yachtsmen have purchased one of the "new generation" anchors that reset quickly when this happens. We have a Spade which we have found to be very reliable.

Pilot books

The main English pilot covering Croatia is *Adriatic Pilot* by Trevor and Diana Thompson (Imray). A German book available in English called 777 is also useful.

Every year *More*, the main Croatian sailing magazine, publishes a special edition called "Sailing in Croatia". This contains data and charts for all the marinas, the latest information on rules and fees and a number of articles on cruising in the area. The English version is available free at marina receptions but it can also be purchased via www.more.hr

All pilot books go out of date rapidly, but due to the number of CA members cruising in Croatia, CAPTAIN'S MATE is a godsend and is strongly recommended for getting the most up-to-date information.



Above, Hvar. Left, Dubrovnik, and right, an anchorage off Mali Losinj

Weather

One of the advantages of Croatia is that it is further north than most of the Mediterranean with the result that it is not as hot in the summer as, say, Greece or Turkey. Typical afternoon temperatures in the summer months are 25°C. It is unusual for it to get over 30°C.

Summer weather is normally settled with a good afternoon breeze from the west. This will stop at about drinks time allowing for pleasant evenings and nights at anchor. Occasionally a front will move in from the north west bringing rain and thunder but these storms are well forecast and using the latest thunderstorm apps you can see the lightning approaching.

After a low has passed through, rising pressure can bring on the famous Bora wind. This blows from the northeast, but is usually brief in the summer and well forecast. The multitude of marinas and town quays means that if the weather is going to deteriorate, shelter can be easily found. Best then to repair to the many excellent bars and restaurants.

As well as the well-known weather apps, the Croatian Meteorological service has its own website which we have found to be very good – www.meteo.hr.

Where to go

In a brief article it is not possible to describe each part of the Croatian coast in detail. Generally the area around Split and the islands of Hvar, Brač and Vis is the



busiest due to the number of marinas with charter fleets. The Gulf of Kvarner in the northeast is quieter with beautiful anchorages and islands. The only downside is that the Bora can blow more frequently here.

Many people love the Kornati island chain southwest of the city of Zadar. The area has a desolate feel due to the lack of trees, which have been destroyed by fire over many years. Further south, the islands of Korčula, Mljet and Šipan running down to Dubrovnik offer wonderful sailing and great anchorages.

A New Zealander acquaintance keeps his boat in the same marina as ours near Split. I asked him once why he made the long trip to Croatia every year. Despite having crossed oceans and sailed almost everywhere he simply said that in his view Croatia offers the best cruising in the world. I think he is right.

Regulations and fees

Croatia joined the EU in July 2013 but has yet to become part of the Schengen area or to use the Euro. The currency is the kuna which is linked closely to the euro at about 7.5 kuna to the euro, meaning you get about 8.3 kuna for a pound sterling.

When you first bring a boat into Croatia you must clear immigration and customs which includes a number of formalities. The captain of a boat in Croatia must have a recognised qualification. The International Certificate of Competence (ICC) is accepted as the norm.

Two taxes must be paid. The first covers navigation and safety and costs around £80 a year for a 13-metre boat. In recent years a Sojourn Tax has been introduced, which is in effect a tourist fee but is charged to boat owners based on the size of their boat. There was huge increase in 2018 but as a result of representations from the CA and others somewhat lower fees have been announced for 2019. The charge varies with how long you spend on the boat and also its length. Up to 12 metres is £360 and up to 15 metres is £500 for a full year.

Full details of all Croatian regulations and fees are on the CA website.



A vice-president of the CA, Andrew spends much of the summer sailing in the Adriatic with his wife, Kate, in their Bavaria 42.



Choosing and using a liferaft

Do you need a liferaft on board?

Many yachts cruise in coastal waters, very often within sight of land. Catastrophes are thankfully rare, but if the yacht is involved in a collision or suffers a fire, things can happen very quickly. At other times a damaged yacht might be taking in water slowly and there is time to prepare for a rescue or to abandon ship. With modern communications, it's usually relatively easy to alert nearby vessels or rescue services.

Heading offshore or crossing the oceans is another matter. Extreme weather can take its toll and the nearest rescue vessel can be days away, so no sailing crews would be making proper preparations unless they were carrying a liferaft of sufficient capacity for the numbers of people on board.

Cost is a major concern for many cruising yacht owners when deciding whether to carry a liferaft. If you are just doing one big trip, such as a summer cruise, or winter Atlantic crossing, you could hire a liferaft instead. It's worth discussing your options with a specialist supplier.

Choosing a liferaft

It's important to choose the right sort of liferaft. For offshore sailing, many crews choose one that meets ISO 9650-1, which comes equipped with the greater than 24-hour emergency pack containing additional water and food rations. For coastal cruising you may want to choose a liferaft from a leisure or compact range. You should choose a liferaft for the maximum number of crew you are likely to have on board.



It's equally important that you know what is inside the emergency pack within your raft. You can add to this by using a grab bag. Liferaft equipment packs normally contain items such as flares, bailer, torch and oars, but not always food and water. For longer voyages or for races where ORC regulations apply, custom packs can be put together.

Stowing and launching

Consider how your liferaft will be packed – a hard case or a softer valise. This mainly depends on where you are able to stow it: a hard-cased liferaft is usually secured on to the rails or coachroof, and can be quickly released from its straps. It can be deployed with a minimum of obstacles in the way. The raft can also be fitted with a hydrostatic release to ensure the raft is deployed should the vessel sink.

If you need to stow the liferaft elsewhere, for instance in a cockpit locker, then a soft outer casing may be more suitable. This might make the yacht look tidier, but it can also be harder to lift out and launch a raft in a valise, especially in extreme weather and sea conditions. The ideal place to stow a liferaft is often on the transom, since it is nearer the water and will be easier to board.

Make sure you know how to launch your liferaft, especially because it is likely to be happening in extremely stressful conditions. It is important to have a practice drill to ensure the crew are aware of what is required of them. Abandoning to the liferaft must be considered as the last resort.

Looking after your liferaft

When you have chosen your liferaft you will need to plan for servicing at the manufacturer's intervals, normally every three years. A service provides a great opportunity to see the raft inflated and most service stations are happy to arrange this by appointment. This enables you to become more familiar with the raft and will stand you in good stead should you ever need to use it.



Ideally liferafts should be brought ashore during winter, but this is not obligatory; modern packing techniques provide excellent protection from the elements. The winter is the ideal time to have your raft serviced if needed, but make sure you allow plenty of time to have the service completed.

Marina Johnson



What's on offer from Ocean Safety

Ocean Safety sells a full range of liferafts, with options for leisure rafts ranging from the Ocean Standard Liferaft to the Ocean ISO 9650-1 approved liferaft which meets international requirements. The Ocean SOLAS/MED range includes the Compact SOLAS liferafts.

The company runs a hire scheme. If you choose this route, you know that your liferaft will always be up to date with its servicing, and the hire charge will be considerably less than the cost of owning a liferaft.

Ocean Safety will happily give you advice on which liferaft to choose. Its safety experts have all undergone in-water training in Ocean Safety rafts and have the knowledge to answer your questions.

With a worldwide network of liferaft service technicians, you can be sure of excellent servicing every time.

Ocean Safety is running Cruising Association safety days this year, as well as carrying out demos on the waterside at major boat shows. Keep an eye on www.oceansafety.com for future demos.



Left, all plastic waste from the Arctic trip was cut into small pieces for storage and disposal back home. Below, shopping in markets reduces packaging, and non-refrigerated produce keeps better. Bottom, netting is ideal for fruit storage



Dealing with waste on board

Doina Cornell has seen sea creatures eating colourful plastic scraps, mistaking them for food. She says it's enough to make any sailor take action

Sailors are only responsible for a small percentage of the millions of tons of waste that ends in the ocean each year... but we have no excuses for not taking this seriously.

Whether you are sailing off the coast for a few days or embarking on a longer ocean voyage, the challenge is compounded by the fact that onboard storage is at an premium. Furthermore, if you are sailing to more remote places, you might find a lack of access to good recycling facilities, although this is improving worldwide.

I was presented with an extreme version of this challenge when I took part in an attempt to transit the Northwest Passage in 2014. I was sailing on a 45-foot yacht with a crew of eight and faced the prospect of at least seven weeks in the Arctic, with no options for onshore disposal at all.

If I have learnt anything from my parents over 40 years of sailing together, it's that preparation and planning are always a good place to start. I remember as a child my mother saving empty coffee jars for months before we left on our first voyage as a family, to store all sorts of loose food such as flour and rice. Ironically, in the 1970s we probably produced less waste than today, as there was much less plastic packaging then.

My own preparation started in Limehouse basin next to the Cruising Association headquarters, where *Aventura* was based for a short while before heading north. Sailing Arctic waters means being as self-sufficient as possible, and so I spent a lot of time planning menus and food supplies. I discarded any excess packaging that I could in these early stages, such as the cardboard boxes that contained bread and cake mixes, and wrote on the plastic inner bags with marker pens to identify them. This had the two-fold result of taking up less space and also cutting down on waste later on in the voyage.

Fruit and vegetables are often excessively packaged in supermarkets, so it is helpful if you have the opportunity to hand pick your own from a fresh produce market or greengrocers. For those embarking on a transatlantic voyage this is a pleasure rather than a chore as you can enjoy the colourful delights of the Canary Islands markets. An added advantage is that market produce is less likely to be refrigerated and therefore will keep better on a longer voyage. Fruit can be stored in overhead nets to avoid bruising which further avoids the need for packaging.

En route to the Arctic, a load of fresh Cornish potatoes were bought in the Orkney Islands, the final stop before

Greenland, and stored in a large open plastic box below the floorboards in the main cabin. Helped by the cool temperatures, these potatoes kept well for weeks in the dark.

The plastic waste that we generated during the voyage had to be stored for weeks on board. So the daily crew rota included not just cleaning, cooking and washing up, but also cutting all the plastic waste into small pieces. Empty long-life milk bottles were used to hold the smaller pieces. Although the cutting up was time-consuming, it was also strangely satisfying, and most



Small islands such as Tahiti have to take recycling seriously. Below, bales of pop cans and inset, hand sorting at the Fenua Ma recycling centre.

Bottom, inventive use of flotsam and jetsam on the Cocos Keeling islands



importantly, did make a real difference in cutting down the space needed.

So what can you throw overboard? We used to think it was okay to toss over cans and glass jars in mid-ocean but this is no longer the case. Metal cans and glass are the easiest and most useful of materials to recycle, and they may have harmful chemical linings and can last indefinitely on the ocean floor. Even innocuous looking products such as paper kitchen roll may be treated with chemicals such as bleach, while tea bags contain plastic – all of these items should be kept out of the sea.

The International Maritime Organisation says that the only sort of waste that may be disposed of at sea is food waste: if pulverised, at least three miles offshore, and if not pulverised, then 12 miles offshore. In certain special areas, and

Arctic waters, no food waste at all may be disposed of less than 12 miles offshore or in the vicinity of ice.

You also need to reflect on where the waste will end up once you reach port. Many countries do have good recycling facilities, but if you are heading for the Caribbean or Pacific, should you be placing the burden of waste disposal and recycling onto small island nations with little space for landfill? During our Odyssey sailing rallies which we organised from 2013-18, this was of particular concern, so we organised trips to visit local recycling facilities to see for ourselves. It is encouraging to see these smaller countries making real efforts to manage their waste and recycling, which is progress from the days when I started sailing and in many places all waste was just thrown into the sea.



Some useful tips:

- Remove all unnecessary packaging in ports which have access to good recycling facilities.
- Cardboard in warmer climates may contain pests and cockroach eggs. Don't bring it on board.
- Cut up the plastic that holds six-packs of beer or soft drinks, and avoid it getting into the sea at all costs as it can end up round the necks of sea creatures.
- Cigarette butts are especially toxic to sea life, so provide any smokers on board with a receptacle to hold the butts, for safe disposal on land later on.
- Choose biodegradable versions of toiletries, cotton wool and sanitary products.
- If you consume a lot of canned goods and you like gadgets, buy a can crusher. It deals with tins which are too strong to crush by hand, and they take up much less space when flattened.
- A web search can lead to useful info, for example: www.thegreenblue.org.uk/Boat-Users/Sewage-and-Waste/Boaters-Best-Practice-Rubbish



Doina Cornell is the daughter of best-selling cruising author Jimmy Cornell, and they have worked together for more than 30 years on sailing rallies and publications. In 2014 she and her daughter Nera accompanied Jimmy on an attempt to transit the Northwest Passage (pictured above).

Doina is also leader of Stroud District Council in Gloucestershire, one of the top councils in the UK for recycling and keeping waste out of landfill.

