PADDLING BLINDFOLDED

by Derek Hairon

We awoke enveloped in fog, not that misty stuff which creates a haze, but instead something that felt like we were wrapped in cotton wool. By the time we'd had breakfast and broke camp during the previous two days the fog had started to lift, so we were not unduly concerned; forecasts also confirmed this would occur. Hours after launching however we found ourselves paddling in visibility of less than 100 m. Sometimes Tony, paddling less than 30 m away, became a misty shadow. We were six miles offshore and 12 miles from our destination... After five and a half hours a faint outline formed in the mist. Land ahoy! Suddenly we burst through the fog into bright sunlight within yards of our target. I'd like to think this was down to our navigational skills and not just good luck; I've been rather more cautious of forecasts that say fog will clear since then, however.

Sea kayaking in fog and poor visibility is something most active sea kayakers encounter at some stage. Around Jersey (my local waters) fog and forecasts of poor visibility are an irritating occurrence, which can stop flights and delay ferries. Annoyingly this often coincides with otherwise great paddling conditions. Over the years I've found myself paddling in poor to very poor visibility but, with the right mindset, the experience can be enriching.
What is fog?
There are various types of fog and the causes of poor visibility, which are
covered in great detail on the UK Met Office website. Fog is caused by
tiny water droplets suspended in air; in other words it is very low cloud.
Read more at the Met Office website: www.meteoffice.gov.uk/learning/fog

Fog is defined as visibility of less than 1 km; mist is visibility between
1 km and 2 km; and haze is visibility from 2 km to 5 km. Forecasts define visibility as:
very poor if less than 1000 m; poor if between 1 km and 3.7 km; moderate if between 3.7–6.26 km; and good if over 9.26 km (6 nautical miles).

Even in poor visibility the range is 1–3.7 km. Paddle at the upper end of the
scale and you fall into the trap of assuming that poor visibility on a
coastal trip is no big deal. Density of fog varies, so plan for the poorest
visibility forecast and do not assume it will remain at the upper end of the
scale. To complicate matters (or add to the “fun”), fog banks also move. On a number of occasions I’ve paddled in bright sunlight and
good visibility while just a few kilometres away visibility was less than
1 km. Even if you have good visibility, when poor or very poor visibility is
forecast build into your trip plan the risk of visibility deteriorating.

Useful kit
If you expect to encounter poor visibility, a few items can make a big
difference, as long as you know how to use them.

Everyone needs a compass
Paddlers without a compass are often heard having to follow the leader,
which is very demanding for everyone. Mount the compass away from
you so you do not have to constantly look down. This allows your focus
to move between the horizon, compass, chart and monitoring other
paddlers. This helps break up the uniformity of the scene and may also
reduce feeling sea sick. Small base-plate-style compasses are often
difficult to read.

If everyone paddles on a bearing then life becomes easier because the
route of the kayakers across the water tends to average out. If you have
only one compass in the group, everyone will be matching the slightest
turn of the leader.

Years ago I watched fog descend while on HMS. Mermaid’s were heard
around the bar as the ternyboat prepared to leave, and was followed
by the mass exodus of small boats following one behind the other as
they followed the ferry back to Guernsey. We wondered what would
have happened if the ferry had in fact been on a private charter and was
heading to Jersey.

If you stop paddling, you will probably drift around a little, In good visibility
this is usually irrelevant, but in fog a pause may result in you facing a
different direction. Without a compass bearing you’ll rapidly become
disoriented and end up heading in the wrong direction.

Charts and communication
Charts are invaluable because they allow you to monitor your route and
identify any visible bits of coastline. Even familiar sections of coast may
appear different in fog. Carry some form of communication which, ideally,
is duplicated within the group. This is especially important if you are
paddling where other craft are, they may be focusing on their radar and
chart plotters and will not be expecting kayakers.

Foghorns and laser flares
In some countries a foghorn is a required item of kayaking kit; they
are powered by a small compressed air container (which usually
discharges by your friends having fun) or a simple plastic horn you
blow into. The range is usually greater than a whistle.

Modern laser flares can penetrate fog more effectively and powerful LED
strobe, used in conjunction with recently released retro glow tapes,
produce up to 3000 times the reflection of a beam of light to increase
detection, even in fog. Small, low-cost, high-visibility glow patches can also help,
especially when available in different colours. If the group becomes
separated you are heading for deep trouble maintaining group awareness
and not technology is the key.

Dealing with poor visibility
If you are heading out with forecasts of poor or very poor visibility, add
a few compass bearings into your trip plan. Even a short point-to-point
crossing may become challenging. Consider hand-railing following the
coastline rather than jumping from one point to another your way around
the coast.

Expect your speed to drop in poor visibility. It helps to have a good idea
of your normal paddling speed so you can revise your ETA to allow for
a probable slower crossing.

When land is rapidly vanishing into the haze try and get a few compass
bearings on any headlands or features. If things deteriorate and you lose
sight of land these bearings will be your last accurate bit of information and
can be used to counter mutant bearings from others (and even yourself) that
you are being pushed by the wind currents more or less than expected. This
will also give a dead reckoning of your position. Returning to Jersey on a
6 mile crossing from Ile Ecrehou we found ourselves in fog (about halfway
through the trip with a 5-knot cross-tide). Within minutes of the fog
arriving came the comment “I think we need to head east a bit more”. Had we not
grabbed a last bearing on a distant headland we might well have changed
course and found ourselves well offshore.

Trust your pre-trip navigation (assuming you normally trust it) as this is not
the time to start doubting it: your pre-trip chartwork should remain valid,
even in fog. Why start changing your bearings because self-doubt or the
doubt of others has crept in? Even a laser bearing on a distant landmark
helps validate your navigation. This data and preparations made are going
to be your only solid bits of information, so trust them: it’s all you have.
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Even in poor visibility the range is 1–3.7 km. Paddle at the upper end of the scale and you fall into the trap of assuming that poor visibility on a coastal trip is no big deal. Density of fog varies, so plan for the poorest visibility forecast and do not assume it will remain at the upper end of the scale. To complicate matters (or add to the ‘fun’), fog banks also move. On a number of occasions, I’ve paddled in bright sunlight and good visibility while just a few kilometres away visibility was less than 1 km. Even if you have good visibility, when poor or very poor visibility is forecast, build into your trip plan the risk of visibility deteriorating.

Useful kit

If you expect to encounter poor visibility, a few items can make a big difference, as long as you know how to use them.

Everyone needs a compass

Paddlers without a compass often end up having to follow the leader, which is very demanding for everyone. Mount the compass away from you so you do not have to constantly look down. This allows your focus to move between the horizon, compass, chart and monitoring other paddlers. This helps break up the monotony of the scene and may also reduce feeling seasick. Small base-plate-style compasses are often difficult to read.

If everyone paddles on a bearing then life becomes easier because the route of the kayakers across the water tends to average out. If you have only one compass in the group, everyone will be matching the smallest turn of the leader.

Years ago I watched fog descend while on Herm. Mutterings were heard around the bar as the ferryboat prepared to leave, and was followed by the mass exodus of small boats following one behind the other as they followed the ferry back to Guernsey. We wondered what would have happened if the ferry had in fact been on a private charter and was heading to Jersey.

If you stop paddling, you will probably drift around a little. In good visibility this is usually irrelevant, but in fog a pause may result in you facing a different direction. Without a compass bearing you’ll rapidly become disoriented and end up heading in the wrong direction.

Charts and communication

Charts are invaluable because they allow you to monitor your route and identify any visible bits of coastline. Even familiar sections of coast may appear different in fog. Carry a chart and a compass and let them be your guide. In fog, charts can help you stay on course and prevent you from losing sight of land. Charts can also be used to chart the course of an entire group.

Foghorns and laser flares

Modern laser flares can penetrate fog more effectively and powerful LED strobes, used in conjunction with recently released retro glow tapes, can be used to attract attention. A flare may help you see the land, even from a distance. Strobe lights can also be used to attract attention, especially when available in different colours. The group should be separated and heading for deep water, maintaining group awareness and not technology is the key.

Dealing with poor visibility

If you are heading out with forecasts of poor or very poor visibility, add a few compass bearings into your trip plan. Even a short point-to-point crossing may become challenging. Consider hand-railing following the coastline rather than jumping from one point to another your way around the coast.

Expect your speed to drop in poor visibility. It helps to have a good idea of your normal paddling speed so you can revise your ETA to allow for a probable slower crossing.

When land is rapidly vanishing into the hazes it time to set a few compass bearings on any headlands or features. If things deteriorate and you lose sight of land these bearings will be your last accurate bit of information and can be used to chart the course of another group member. If you are being pushed by the wind, it is better to double back and head for land than to continue.

Trust your pre-trip navigation (assuming you normally trust it) as this is not the time to start doubting it; your pre-trip chartwork should remain valid, even in fog. Why start changing your bearings because you’re already in fog? If you’re using a chart, ask for advice from other paddlers. You may be getting your bearings wrong. Trust your friends to help you navigate and get more accurate bearings.

Photo by Jeff Allen.
If the group becomes separated you are heading for deep trouble; maintaining group awareness and not technology is the key.

If you stop paddling, you will probably drift around a little. In good visibility this is usually irrelevant, but in fog a pause may result in you facing a different direction.
Involve others in the trip planning to share responsibility within the group and reduce the risk of small (but possibly significant) errors creeping in. If your paddling partners are part of the process they are more likely to be responsible for the outcome.

Attending a practical kayak navigation course is a great way to develop your confidence and navigation skills, especially if you have the opportunity to practice in real navigation and tide streams.

Wind, sun and sound

Wind can clear or push fog banks onto you. In poor visibility you can sometimes use the direction of any breeze or even small patches to maintain a rough course. Keep wind or swell coming from the same direction as you paddle. Both wind and swell directions may change and should be used with caution; they are best combined with maintaining a compass course.

Sound can travel a considerable distance in fog, but is deceptive. Tiny waves washing onto a beach may sound like crashing surf. Use sound as an additional source of information and rarely make major course changes based solely on this. If the sounds indicate your navigation is correct, re-check the compass.

During a very foggy 15 nautical mile crossing from Honson to Jersey we heard vehicles an hour before we set off. We had sailed along the north coast of the island. As we struck our course and later realized that the vehicle sounds were caused by a couple of cars going up and down a hill a short distance from our direction.

If you are lucky, the sun sometimes makes an appearance and can indicate that the fog is thinning. The position of the sun relative to your course can act as a handy guide and may let you relax, albeit temporarily, from staring at the compass.

Tune into the environment

Poor visibility is an opportunity to focus on small changes in the sea and tide streams. Look for variations in the colour of the water which might indicate changes in depth. Look to your chart work and it may indicate you are approaching the shore or moving into shallow or deeper water. Changes in the swell may warn of an approaching beach long before you see or hear the waves.

In rocky areas look for breaking waves, particularly at sound exposed to swell. Even the passing swell of ships and motorboats can seem to come out of nowhere.

Work as a team

How you manage the group will depend on many factors, such as their previous experience. There will often be a range of skills and experience of paddling, in poor visibility within the group. It usually feels more comfortable for everyone to see each other rather than ‘buddying up’, which can result in paddlers focusing only on their partner and losing contact with the rest of the team.

Check how the group feels about the forecast and actual conditions both before and during the trip. Allow for any changes in moods or location when the weather changes. Feelings of frustration can be uncomfortable when others are uneasy with the plans, but felt uncomfortable voicing their feelings. A simple method is to ask the team to stand with their backs to you and then indicate by the number of fingers raised on one hand how comfortable they feel about the trip. No one except the team leader will know who raised one finger (not all happy) compared to the five fingers (no hassles/great rating). If you are feeling uncomfortable about the trip, you can be fairly sure others are feeling the same.

Ultimately, if things get very difficult, waiting up and waiting may be the best option (providing you have some form of communication).

GPS and technology

It’s easy, we have a GPS... sounds nice but you learn it is the only one in the group. A single shared GPS is not sufficient. Fixed with a tripod and in very poor visibility I’d hope to see everyone carrying a GPS. Having a GPS can also cause the navigator to feel overconfident and keep paddling at their normal speed, while the others play catch up and become separated. Once happened to a group of experienced kayakers’ racing to Isle of Wight, luckily the rest of the group appeared out of the fog 10 minutes later.

If you wish to fine-tune your navigation skills while maintaining a safety buffer-in with the GPS is invaluable, as long as it is not your sole aid. Don’t fall into the trap of thinking that because you have a wonderful bit of technology everything will be okay. Better to go fast, water seeps in and gear gets washed overboard.

Other vessels

If you are in an area where other vessels are likely to be sailing, be aware... In poor visibility a ship’s crew will be busy monitoring the radar and trying to maintain a watch for known hazards and other vessels. Sea kayakers may, quite literally, fall beneath their radar.

Writing about a 90 mile crossing of the English Channel from Alderney to Weymouth, Kevin Munsell describes how on very poor visibility he has “...seen the bow wave of a large ship at close quarters and it frightened the life out of me... The forecast said fog patches soon clearing so we were not unduly worried. In this case the fog patch was about 68 miles across.”

In March 2011 a high-speed ferry travelling in fog at 35 knots cut a 1.3 m fishing boat in half, killing the skipper and injuring the crew. The accident revealed that despite the radar echo showing a collision course, the crew failed to notice the boat due to a lack of attention.

On my practical navigation courses I highlight how, when a large ship cannot notice a 9 m aluminium boat with radar reflectors in fog, we should not be surprised if better visibility vessels of any size may not detect sea kayakers. Fix the idea that other craft are going to see you and assume you are invisible. Fog is not the time to be crossing shipping lanes. If you are in an area where you expect to encounter other craft, inform the Coastguard so other skippers are made aware and are ready to put a call on your marine radio to alert other vessels of your presence.

About the author

Derek Haines is a BCU Level 5 sea kayak coach who has been paddling in various foggy places around the world for more than 40 years. He is director of Jersey Kayak Adventures Ltd and organizes sea kayak tours and courses around the coastline of Jersey and to the offshore islands (which are usually fog free).