

# GETTING WET

A BEGINNERS GUIDE TO WHITE WATER CANOEING

AN UNFINISHED PROJECT BY TERRY GRIFFITHS

*Equipment*

# Boat

## **Type**

A boat used for White Water needs to be of strong and safe construction, it should take hard knocks and must be easy to get out of when necessary. It must have grab handles at the ends to allow a swimmer to support himself and aid rescue, and must be fitted with enough buoyancy to prevent it sinking when waterlogged.

## **Volume x weight**

A high volume boat will sit high in the water and bob over waves and small stoppers, it will be good for river running, but will not make a very good 'play boat'. A low volume boat will sit lower in the water and plow into waves and stoppers, it will be a better boat for playing in small stoppers and doing 'pop-outs' etc. but may be tiring on long river trips. However, volume needs to be related to body weight, a boat considered high volume by an 8 stone paddler will be low volume to a 14 stone paddler.

## **Long or short**

A longer boat will normally give better directional stability, faster speeds and be more suitable for longer trips. A shorter boat will be more manoeuvrable and suitable for tight, pool drop rivers. Think about what sort of rivers you intend to paddle and choose accordingly.

## **Construction**

For competition use Glass Fibre is still the preferred option due to its lighter weight. For general river running and playing, Polyethylene is the best bet.

## **Buoyancy**

### **Foam pillars**

Many people do not like centre pillar buoyancy as they fear getting trapped upside down in the boat by it. In fact only people with long legs should notice a difference getting out of an upside down boat. The advantage of centre pillars is that they stiffen the boat and help prevent it folding around your legs should it get broached, this will give you more time to escape and could save your life. To buy a boat with centre pillar buoyancy or not is very much down to personal preference.

### **Air bags**

Air bags inside the boat can stiffen a boat and help it keep its shape when broached against an obstacle. They also prevent water getting into the boat thus making it easier to empty after a swim. Air bags can be used with centre pillar buoyancy as well, but they can not be used in the leg area of a boat, if you want protection here it is possible to buy cages for some boats to protect the legs (at the expense of extra weight), otherwise centre pillars are your only option.

## **Footrest**

### **Full plate**

Full plate footrests, as their name implies, consist of a bulkhead type arrangement which it is normally impossible for your feet to pass. Many are built to absorb shock which makes them the best type of footrest for white water use.

### **Pedal**

This consists of a small pedal fitted to a runner on each side of the boat. If the foot passes the footrest it can easily be pulled back without risk of entrapment. These are lightweight footrests and are very common in competition boats, but are not really suitable for river running.

### **Bar**

This is the simplest form of footrest consisting of a bar the size of a paddle shaft (often made from broken paddles) which is either fixed in place by glass fibre or bolted to a bracket on each side of the kayak. This is the least suitable style of footrest for white water use, as it has a small contact area for the foot and allows the ankle to be forced back to unacceptable angles on impact. It is also capable of trapping a paddler if his feet are forced past it by an impact.

**Avoid this type of footrest.**

### **End loops**

Any boat used for white water paddling must have loops at each end to allow a swimmer to hold onto the boat or a rescuer to catch hold. A boat without end loops is very difficult to rescue.

Many modern play boats have grab loops halfway along the deck, rather than near the ends of the boat. These are almost impossible to grab hold of when the boat is upside down. These boats should be fitted with end tapes when used on open rivers.

### **End tapes**

Long tapes on the ends of the boat make the boat much easier to grab hold of when it is upside down, but they can also cause problems for an upright paddler by snagging on obstacles. The ends should always be left loose, do not tie them in a large loop as this is asking to get snagged. Think about the river you are paddling and decide whether they will be an asset or liability.

# Paddles

## ***Construction***

Paddles used for white water will take a lot of knocks and should therefore be quite robust. Though heavier paddles may be more tiring until you get used to them, this is preferable to getting caught half way down a long rapid with broken paddles and ending up swimming.

## ***Length***

Choose the length which suits you and your boat, most people use shorter paddles for white water than they would for flat water (206cm is a good starting point). The method of choosing paddle length by standing up and curling your fingers over the top of the blade is nonsense, it takes no account of body length, or shape of boat, and if it works it is more by luck than science.

# Clothing

## ***Helly Hansen etc***

Polypropylene thermal underwear is ideal for canoeing due to its comfort, warmth and low water retention properties. When wet it dries very quickly just from body heat. There are many manufactures of this type of garment including Javelin, North Face etc but the favourite amongst canoeists is Helly Hansen. A Helly may be fairly expensive to buy initially but once you have worn one a few times you will not want to go back to anything else.

## ***Fleece***

Fleece products have become very popular in recent years and are great for wearing over a Helly in colder weather. They do not absorb much water and are easy to wring dry.

## **Cagoule**

### ***Short sleeve***

A short sleeve cag is useful for summer paddling if there is a slight breeze or if you are paddling where the water is cold (e.g. the Alps). It also helps keep the paddler warm if he is playing in a weir or surf.

### ***Long sleeve***

A long sleeve cag is the most common and useful type, it normally has cuff and neck seals made of neoprene to help keep out water. This type of cag is normally hard wearing and will give you years of service for a relatively low cost.

### ***Dry Cag***

The Dry Cag is the state of the art in cag design, it has latex neck and cuff seals which let in hardly any water (and let out hardly any heat). They are essential for winter paddling on rivers from grade 3 upwards but are more expensive to buy than the standard long sleeve cag. Their neck and wrist seals also have a much shorter life than neoprene and are more susceptible to damage. Expect to replace these seals every 3 years or so.

## **Pogies**

Pogies keep hands warm in winter by protecting them from water splashes and wind. Everyone should buy a set as they are fairly cheap and encourage you to paddle on cold days. However, some people do not like paddling on rough water with them as they can be a bit restrictive.

## **Neoprene**

### ***Shorts***

These are comfortable for summer wear and can be bought in many garish, eye catching, posy styles and colours.

### ***Trousers***

Neoprene trousers are becoming more popular, when worn with a Helly and fleece they provide warmth and comfort without the restrictive qualities of a full wet suit.

### ***Long John***

This is the most common style of wet suit used by canoeists, it consists of a one piece trouser and vest arrangement which keeps the legs and body warm while still allowing freedom of the arms. Unfortunately it can also be a bit restrictive on body movement. When choosing one avoid seams across the buttocks as these can be uncomfortable to sit on for long periods. Also avoid the type which fasten by a 'Velcro' pad over the shoulder as these tend to rub your shoulder sore during a long trip.

## **Dry suit**

An expensive luxury. A dry suit allows you to paddle up to your neck in cold water for hours on end and not only keep warm but also climb out of your boat, take it off and be left in dry, warm clothes without all the fun of changing out of wet kit into dry clothes on a bitterly cold day as canoeists have done for years. The down side is that Dry Suits cost an arm and a leg and use the same neck and cuff seals as Dry Cags thus making them very susceptible to damage.

## **Footwear**

Some form of foot wear is essential, the author has seen some horrendous foot injuries sustained by swimmers and canoeists over the years, which could have been avoided if suitable footwear had been worn. When paddling white water there will be many instances where an inspection or portage will be necessary and bare feet will become a liability.

### ***Sandals***

These are suitable for summer and surf paddling but are not very popular in winter.

### ***Plimsoles***

Most beginners to canoeing tend to start off with Plimsoles or Trainers worn over woollen or neoprene socks. These are perfectly acceptable but are not normally designed for this type of use and therefore do not last long.

### ***Neoprene socks***

Worn under Sandals or Plimsoles they are good for keeping feet warm in winter but should not be used on their own as they give very little protection.

### ***Neoprene boots***

These are the most popular form of footwear for canoeists, consisting of a neoprene sock with an integral hard sole, they keep your feet warm while offering a reasonable level of protection. They can become very smelly with use but this can be avoided by wearing socks with them, the socks become smelly instead, but a trip through the washing machine restores them to their former glory.

# Helmet

A helmet is essential for paddling white water, and is compulsory for many forms of competition.

## ***Standard type***

Normally comprising a hard outer shell held away from the head by impact absorbing foam, or a cradle. It should protect the forehead and nape of the neck, and stay in place during a swim.

## ***Full face***

Similar to motorbike helmets, these are popular with extreme white water paddlers but can be claustrophobic and heavy. The author has yet to see one which stays properly in place during a swim. Not really necessary for grade 2-3 rivers unless you have a particularly pretty face you want to protect. Worth considering for grade 4 upwards.

## ***Chin cups***

These are much loved by Scout groups, but should normally be avoided unless they were an original part of the helmet design. Chin cups fitted on helmets not designed for them have a habit of pushing the helmet to the back of the head thus leaving the temples unprotected.

# Elbow pads

Elbow pads have found favour with many paddlers in recent years as not only do they protect the elbows from damage but can also be used to lean onto rocks to perform 'elbow turns' on tight rivers. They are not normally required for grade 2-3 rivers but anyone paddling grade 4 should consider them.

# Buoyancy aid

## ***Competition***

A buoyancy aid is compulsory for many forms of canoe competition. The rules for the particular competition will define what is acceptable.

## ***White Water***

A more robust item than the competition version with greater buoyancy and pockets to keep your Mars Bars in on long trips.

# Spray deck

## ***Nylon***

Cheap and cheerful. They are mainly used by clubs to get beginners on the water cheaply but they seldom keep water out for long.

## ***Neoprene***

More expensive and easier to damage than the nylon variety, they are much more popular as they are very good at keeping the water out and the warmth in.

*Safety*

# Throw bag

## *15M*

The original throw bags held 15 metres of rope, this is too short for most of the situations you may find yourself in today. Not recommended.

## *18M - 20M*

A good compromise of rope length against size. The best option for most paddlers.

## *25M*

The largest size in common use, its advantages are that it will very seldom be too short for any situation, and in some cases it is possible to use both ends to control 2 swimmers, boats etc. The disadvantages are that its size precludes it being carried in say, the pocket of a buoyancy aid and it takes longer to re-pack after use. However its advantages make it well worth considering.

# Knife

If you carry a rope or throw bag you must carry a knife, you may need to release the rope in a hurry.

There are many expensive sheaf knives sold to canoeists these days, but the author uses a product sold by Cotswold Outdoors as the Whitby Rescue Knife which is a one handed folding lock-knife with a serrated blade which makes short work of most materials.

This knife is quite cheap and is recommended.

# First Aid kit

Carry one and learn how to use it!

The Gregson Pack is a waterproof kit which takes up very little room and is highly recommended.

# Exposure bag

The traditional orange plastic bag is better than nothing but is not very effective. More useful is the metalised 'Space Blanket' which folds up smaller, reflects back body heat, and can actually be cheaper to buy.

# Hot flask

Carry one on winter river trips, it can help warm up a person who has taken a swim and is cold, if not used on the trip the contents can be drunk at journeys end when you get changed.

The cheap glass ones are not suitable for canoeing as there is a high risk of it taking a hard enough shock to break the glass. You then end up with slivers of glass in your drink, -not recommended.

The best flasks are the stainless steel variety which not only survive anything a white water canoeist can throw at them, but also keep the contents hotter for longer than a glass flask. Aluminium flasks are not as good as steel but will be adequate for most journeys.

## Split paddles

Useful if you break your paddles on a trip and essential on sea journeys. They can be stowed in the back of a river boat or on the deck of a sea boat.

## Sling

A length of strong nylon tape sewn into a loop. Designed for climbers but a good general purpose bit of canoeing kit. Its uses include dragging a boat on difficult portages and for attaching to waterlogged boats to make them easier to handle.

## Carabiners

Another item with climbing origins, a large clip with a sprung 'gate'. Usually used with a sling or throw bag.

*Carrying  
equipment*

## Balance

Kit stored in boats should be arranged so as not to adversely affect the balance of the boat (unless you are particularly fond of swimming).

## Securing

Kit carried in boats should be secured so it is not lost should you take a swim. With fibreglass boats it is easy to 'glass in' ties or straps at strategic places. With plastic boats it is a little harder, the most common methods are to jam kit in place with air bags, or to thread a loop under a centre pillar and tie kit to each side.

## Dry bags

Strong bags available in several sizes and colours for keeping equipment dry in boats, or preventing wet kit fouling cars on the way home.

## BDH

A strong waterproof plastic container originally designed by British Drug Houses for storing pills and medicines. These have become less popular in recent years as the quality of Dry Bags has improved.

*Choosing the  
river*

# Group ability and aspirations

On most trips paddlers will be of a similar standard, however sometimes this may not be the case, and the leader of the trip must ensure that the less experienced paddler does not feel 'left behind' and the more experienced paddler 'bored'. The trip should be run so that everyone has a good time and gets something out of it.

## Grading system

To be able to assess the difficulties of a river in advance, a grading system has been developed which is used in guide books. Originally a numerical system with 6 grades was used but in recent years Terry Storry's system, which uses both numbers and letters has been adopted by most white water paddlers. I have copied Terrys system from his book 'British White Water' which is the 'Bible' for White Water paddlers in this country.

### *Numerical grades of difficulty*

*1. Easy* Here are rivers with beautiful untroubled waters, flowing in peaceful meanders down valleys. The canoe may float any way which it pleases down the channel.

*11. Moderate* The river is already quicker. At moments there is a disturbance which the canoe sails over with disdain. An overhanging tree forces the canoeist into some adroit steering. A rock in the main channel must be avoided. But always the channel is clear and obvious .

*111. Fairly Difficult* Now things are more complicated. The current is swift. Sometimes the river becomes narrow with big waves. The canoeist may have to manoeuvre between rocks, stop in eddies, and cross currents. Nevertheless the best channel is easily recognised and remembered.

*IV. Difficult* This is challenging water. Rapids follow each other in quick succession, or are continuous and difficult to read. Cushion waves build on obstacles and stoppers form below constrictions. The route is not obvious from the water, so inspection from the bank will be necessary to remember the way.

*V. Very Difficult* Even after inspection from the bank, it is often difficult to recognise a route through Grade V water. There are pressure waves, whirlpools, boils, waterfalls and holding stoppers. The water is always fast, often heavy, and the eddies are very sharp. A steep gradient, tight bends, and large boulders will hide the river from the canoeist on the water.

*VI. Extremely Difficult* All previously mentioned difficulties are increased to the present limit of possibility. Grade VI water is a playing field of descents and foaming chaos. To all but the most experienced, and inexperienced, canoeist the river will appear impossible. It is runnable only at particular water levels. The paddler can expect at times to disappear completely, and at others to be hurled skywards by a prodigious force. The water sucks and surges unpredictably, often making route choice academic. Reactive skills must be of the highest order.

### *Alphabetical grades of seriousness*

*a. Safe* There are no obstructions in the river. It is always possible to swim to the bank with a boat.

*b. Little Danger* The occasional rock, overhanging branch, or bridge pillar can cause problems, but rescue is simple and quick. Swimming to the bank is no problem, but a boat may have to be shunted.

*c. Some Danger* Obstructions can pin or jam a boat, but a long and bumpy swim will hurt the pride more than the body. Ropes and lines are sometimes useful in rescues. An Eskimo roll can save problems.

*d. Dangerous* The force of water can trap canoe and canoeist against obstacles. Stoppers may hold boats, but not swimmers. A swim is usually unpleasant and occasionally injurious, so the ability to roll is important. Rescues from the bank may be necessary.

*e. Very Dangerous* Rescues from circulating stoppers, boulder chokes, jammed logs, and sumps are all very difficult. There is little another person in a boat can do to help; prepared bank security is normal. A swim is dangerous, so rolling is essential. There are committing ravines or gorges.

*f. Extremely Dangerous* Mistakes may be dearly paid for; there is a definite danger to life and limb. Luck is more likely than rescue to be a saviour. Rolling is problematical in the turbulent water. Evacuation from the river will be difficult. Modern safety equipment in the canoeist's gear and the specialised wild water boat will improve the paddler's chances of winning.

A typical grade will be something like 3c.

## Alternate grading systems

Another system in common use is the 1-6 system with + and - signs to signify an easy or hard level for that grade.

The grades therefore go:

1, 1+, 2-, 2, 2+, 3-, 3, 3+, 4-, 4, 4+, 5-, 5, 5+, 6-, 6, 6+

Another system used within Baldock & District Canoe Club is the Mike Jones system.

This has 2 grades only: "It's a goer" and "\*\*\* \*\*\*\*".

## River level on day

The difficulty of some rivers can change drastically with fairly minor changes in water levels. Do not assume that the river will be the same as the last time you paddled it, take a good look and compare it in your mind with how you remember it. If you have not paddled the river before check with the guide book to see if it gives a clue to what level the guide is based on.

## The Shuttle

This is the operation to shift cars around immediately prior to the trip, so you have transport waiting for you when you reach the end.

Access

## **Access - LEGAL**

In England and Wales there is no general public right of navigation on non-tidal waterways, except where, under common law, it is recognised as having been established by immemorial use, or by express or implied dedication by the owner of the bed, or where it has been conferred expressly or by necessary implication by an Act of Parliament or royal letters patent.

In simple English this means :

All INLAND RIVERS (i.e. not tidal stretches) are owned by the landowner. Without his permission canoeing is trespass.

In the Eastern Region we have legal access to the River Ouse and River Nene through an Act of Parliament. The access is administered by the National Rivers Authority, with whom the Club's boats are registered.

So DON'T canoe without a CLUB STICKER.

You are also reminded that the National Rivers Authority forbids canoeists to paddle on or around Weirs ; or sluices ; or backwaters.

Also remember trespass is not a criminal offence, so the landowner will have to sue you in a civil court action (a lengthy process).

## **Access - ACTUAL**

Many of these restrictions are regularly ignored by canoeists but be aware that the NRA have expressed a willingness to prosecute those found breaking their rules.

Finally we try to canoe the River CAM and the River IVEL outside the fishing season to avoid aggravating the anglers. This means paddling from mid-MARCH to mid-JUNE. Technically this is still trespass but normally no problem is encountered.

## **Access - BCU**

The British Canoe Union has a network of unpaid, access officers who cover the majority of rivers throughout England and Wales. Where an agreement has been reached with the landowner to canoe during certain months the B&DCC will attempt to uphold and maintain that agreement by paddling in a responsible manner.

(Access section by Martin Home)

*Paddling*

## **Speed of boat in relation to water speed**

Providing you are moving at a different speed to the water (either faster or slower) you will have control of your boat. Once you are travelling at the same speed as the water you will lose control. This is why you will often hear experienced paddlers telling you to “keep paddling” or “PLF” at a difficult point.

## **Breaking in**

This is the act of paddling from slack water, or an eddy, into a moving current.

## **Breaking out**

This is paddling from moving water into slack water.

## **Crossing currents**

### **Ferry glide**

The boat is faced upstream, held at an angle to the current and tilted downstream. A strong paddle action will then take you across to the other side of the river.

### **Reverse Ferry glide**

As for Ferry Glide, but with the back of the boat facing upstream. Sometimes used when paddling downstream to avoid an approaching obstacle.

### **High cross**

As for Ferry Glide but performed very close to a sluice or drop, the canoe is usually surfed across a wave.

## **Obstacles**

### **Avoiding obstacles** (From BCU Handbook)

The worst hazard of all in moving water is to become entangled with a fallen tree. This is followed, in degree of calamity, with becoming wrapped around a single, narrow stanchion. In both of these cases, the safest remedy is to evacuate immediately. If, in spite of every effort to avoid the situation it has become obvious that a collision is inevitable, the following factors are critical.

If the obstruction is a rock or a horizontal tree, throw your body weight onto the obstacle, at all costs keep your hull, and not the cockpit, presented to the flow. If there is any danger of your not being able to maintain this position, immediately climb out onto the tree. Alternatively, work your way along, leaning hard onto the tree all the time, until able to pivot round the end and paddle free. For a rock, shunt your weight hard forwards or backwards (depending on the circumstances) and endeavour to 'wriggle' the boat free. If, however, you start to be overcome by the pressure, and feel the boat wrapping around, or you are being capsized upstream and cannot contain the situation, evacuate immediately. Should a collision with a single stanchion in heavy water be inevitable, it is best to be capsized upstream, so that the leg joints are stressed naturally, and control of them can be exercised. For a double obstruction, i.e. each end of the canoe held, the capsize must be downstream, otherwise the legs will be thrown up into the face as the canoe folds.

## **Fishermen**

Fishermen tend not to like canoeists, they feel that canoes can scare the fish. (I have yet to find a fisherman who feels the same way about motor boats and cruisers!).

Whenever canoeing where fishermen may be present, keep a good lookout (fishermen tend to hide behind trees, or in bushes which makes them hard to spot) and pass as far away from them as you can. Some fishermen can be quite friendly but others can be very aggressive. Treat all fishermen as fellow human beings, even if they do not behave the same way.

## **Weirs**

Weirs can be a great source of fun, they can also be a great source of danger. It takes a fair bit of experience to accurately assess a weir, many experienced paddlers have been caught out by what appeared to be a simple little drop. Likewise, some that look horrendous at first glance can turn out to be quite safe. Do not go near weirs unless an experienced paddler has demonstrated to you that they are safe. Always ensure that a member of your group who is not playing in the weir has a throw line and knows how to use it. **NEVER GO NEAR WEIRS ON YOUR OWN.**

## **Natural**

Natural weirs are often the safest, as they tend to be irregular in water behaviour and are therefore easier to get out of.

## **Man made**

Man made weirs are usually better for playing in, as they are regular and consistent in water behaviour. However, this also makes them more dangerous than natural weirs.

## **Stoppers**

Stoppers, or 'hydraulic jumps' to use the technical term, are formed whenever water passes over an obstacle and then drops to a different level. The falling water continues its flow below the surface of the river and along the river bed until it hits slower water. It then rises to the surface and flows back against its original direction thus forming a rolling wall of water capable of holding a boat or paddler. Experienced paddlers play in stoppers, using the direction and force of the water to perform tricks. Beginners are advised to treat them with the same caution as weirs (by definition, a weir will usually have a stopper at the bottom of it).

## Reading the water

### Inspection

Any obstacle which is not clearly visible should be inspected prior to any attempt to negotiate it, that innocuous little rapid disappearing round the next bend could be the lead in to an horrendous gorge section.

### From bank

Often only the leader of the group will need to get out on the bank, othertimes the whole group will need to inspect so that each person can make an individual decision as to whether to tackle the obstacle.

### From water

It is often possible to assess obstacles ahead by paddling up close to them while staying in an eddy or area of slow moving water. Sometimes in gorge sections the only practical way to inspect is by 'eddy-hopping'.

### Bank support

When paddling a serious rapid or drop, it is often necessary to position people on the bank at strategic points, to assist a paddler who may get into difficulty.

## Group control

### Leader

An experienced paddler should always be at the front of the group to ensure that any potential hazards are spotted in good time. Having assessed the situation the experienced paddler may encourage someone else to lead down a rapid or past an obstacle in order to improve their ability.

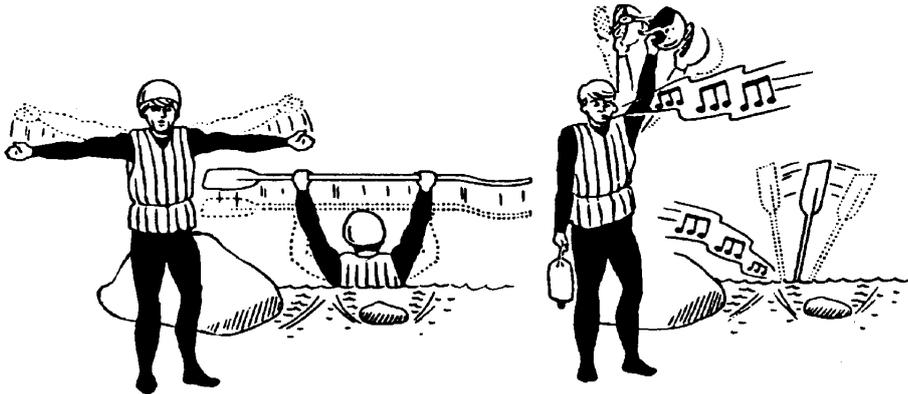
### Tail end Charlie

It is normal for an experienced paddler to be the last person in a group, this prevents an inexperienced paddler getting left behind, plus it ensures that should people at the front of a group get into difficulties there is always someone behind capable of providing assistance.

### Signals

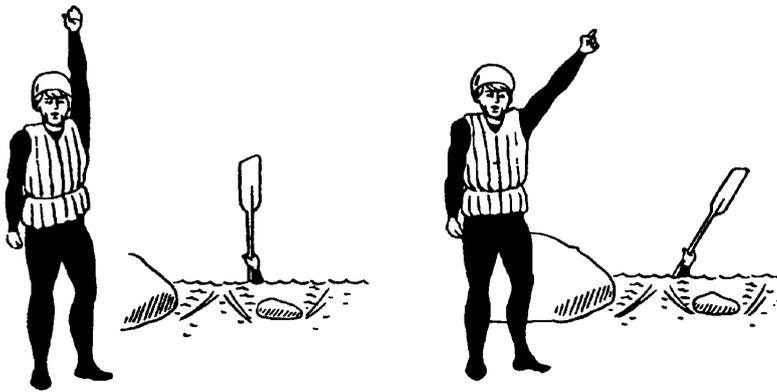
When paddling moving water, a set of signals are necessary so that instructions can be given to people in the group who are out of earshot.

## Appendix B Universal River Signals



**Stop:** Potential hazard ahead. Wait for "all clear" signal before proceeding, or scout ahead. Form a horizontal bar with your outstretched arms. Those seeing the signal should pass it back to others in the party.

**Help Emergency:** Assist the signaller as quickly as possible. Give three long blasts on a police whistle while waving a paddle, helmet or life vest over your head. If a whistle is not available, use the visual signal along. A whistle is best carried on a lanyard attached to your life vest.



**All Clear:** Come ahead. (In the absence of other directions proceed down the center.) Form a vertical bar with your paddle or one arm held high above your head. Paddle blade should be turned flat for maximum visibility. To signal direction or a preferred course through a rapid around obstruction, lower the previously vertical "all clear" by 45 degrees toward the side of the river with the preferred route. Never point toward the obstacle you wish to avoid.

### Towing

Though towing a tired or injured paddler on flat water is acceptable, trying to tow on moving water can be dangerous. Attaching yourself to another paddler means you are at the mercy of what happens to the other person and restricts your ability to avoid obstacles.

## If things go wrong

### Swimming in rough water (Taken from the BCU Handbook).

In heavy conditions, such that it is not possible to swim with your boat to the bank, but with a rescuer at hand, it is often useful to hold on to your canoe for a while. Initially, it may help to pull you clear of stoppers. If you have hold of your boat, there is less chance of being hit on the head by it, and the canoe gives support while swimming. However, it is unlikely that a single paddler could tow you and your boat together to the bank in these conditions, but try and keep hold of your paddle, as this does not affect towing, and is difficult to find afterwards. In big, technical water (grade VI, V and even IV) the boat, paddle and paddler are often separated by the water immediately. Survival is what matters. There is probably little anyone else on the water can do, and so the swimmer must be prepared to extract himself from the situation. Try to relax, and conserve energy. Do not struggle to keep your head above water all the time, allow the current to carry you under, but take big breaths when you surface. Keep your feet well up. Nasty accidents have occurred where swimmers have had their legs trapped between unseen boulders. Try and keep your head upstream and swim on your back. In this way, legs and backside (which should be protected by a wet-suit) take any knocks. If you do manage to get on to the back of a rescue boat, try to paddle with your hands, and keep your feet up, to make the task possible for the rescuer. Practise makes a difference when it really matters, do not miss the opportunity therefore if you are at Augsburg at any time!

## Rescue

### Use of the THROW LINE

There are 2 things to consider when using a throw line :

- a. WHERE SHOULD I POSITION MYSELF ?
- b. HOW WILL I STOP MYSELF BEING PULLED IN ?

### POSITIONING

Don't stand immediately adjacent to the problem area. A capsize occurring here will not afford the swimmer time to see you.

Stand downstream of the location where the capsize is expected so that the canoeist capsizing has time to exit from his canoe, come up for air and see you.

Position yourself such that you can "PENDULUM" the person into an EDDY.

### INTERJECT

SHOUT to gain the attention of the SWIMMER (you know you are going to throw a line but does he).

### SLING I T

THROW the line to go beyond the swimmer so that the line drapes across him. Do NOT throw behind or ahead of swimmer. ACCURACY is essential.

### STAY PUT

SIT DOWN and brace yourself (imagine the effect of a 12 stone swimmer moving at 10 mph and below your centre of gravity. You will not stand on the bank long, but will soon be joining him in the water. I have seen it happen!!!).

As an alternative to sitting attach YOURSELF to a TREE or a BOULDER using a sling and carabiner and the harness on your buoyancy-aid, or attach a sling and carabiner to a TREE

or a BOULDER and pass your throw line through it. (only attach your throw line if you have a knife or saw to cut it in an emergency).  
Do not jerk the swimmer to a stop because he may well have the throw line jerked out of his hands) but play out the throw line slowly.

## SUMMARY

Remember if you miss you might as well PISS on the swimmer

Position for pendulum  
Interject for attention  
Sling for swimmer  
Stay put

N.B. PRACTICE IS ESSENTIAL FOR YOU TO DETERMINE THE BEST METHOD OF RESCUING A SWIMMER USING A THROW LINE. DO NOT BELIEVE OTHERS. TRY IT YOURSELF.

(Throw line section by Martin Home)

## Coping with casualties

### Bleeding

### Resuscitation

(Taken from the St John Ambulance First Aid at Work Manual)

If the heart has stopped beating, start external chest compression whilst continuing to give artificial ventilation.

Together this is known as **RESUSCITATION**.

- a. Put the casualty on his back on a firm surface - the floor.
- b. Take up a position at the side of the casualty.
- c. Find the junctions of the rib margins at the bottom of the breastbone.
- d. Place the heel of the hand two fingers above this junction.
- e. Cover this hand with your other hand interlocking the fingers.
- f. Keeping the shoulders directly above the hands and the arms straight press down vertically on the breastbone, moving it 4-5 cms/1 1/2-2 inches for the average adult. Release pressure. Compressions should be regular and smooth and not jabbing and jerking.
- g. Fifteen heart compressions should be given (at the rate of 80 per minute) followed by two deep lung inflations and repeat the cycle (15 compressions to two inflations).
- h. The carotid pulse should be checked after a minute and then after every three minutes.
- i. When two First Aiders are present, one should undertake five compressions (at the rate of 80 per minute) whilst the other gives one lung inflation. The pulse should still be checked as in (h) above. Compressions and inflation should be performed so that there is a pause, to allow the lungs to be inflated, after the fifth compression. The operator at the head giving the inflation on the up stroke of the fifth compression.

## Broken bones

## Hypothermia

If a person gets too cold (often after a swim during winter months) hypothermia may occur. The following extract is from the book "River Rescue" by Bechdel and Ray.

### Symptoms of Hypothermia

**BODY temperature:** The hypothermia victim has a core (internal body) temperature that is lower than normal. The following list shows the successive stages of the condition:

#### Moderate

Above 95°F. The victim is conscious and alert and may have vigorous shivering.

90°-95°F. The victim is conscious but has mild to moderate clouding of mental faculties. Shivering is present but diminished.

#### Severe

86°-90°F. The victim has severe clouding or consciousness, may even be unconscious. Shivering is replaced by muscular rigidity.

Below 86°F. The victim is unconscious, with diminishing respirations.

Below 80°F. The victim has barely detectable or non detectable respirations.

**Blood Pressure and Pulse:** Blood pressure is lower than normal (frequently less than 100 mm mercury systolic). Pulse is generally slow and often irregular; it may be difficult to find it at all in the extremities because of blood vessel constriction, measure the heart rate in the neck at the carotid artery or in the groin at the femoral artery.

**General Appearance:** The victim is pale in appearance and his skin is very cold to the touch. In fact, his skin and subcutaneous tissues are often at the temperature of the water he was immersed in. The victim's pupils begin to dilate at temperatures around 92°F and are fully dilated and poorly reactive to light at around 86°F.

### Treating Hypothermia

The basic rule is that if the victim has cooled quickly then heat him up again quickly. If he has cooled slowly then heat him slowly. In the early stages a hot drink and a bit of exercise is often all that is needed. In later stages professional medical help (hospital) will be required.

## Hyperthermia (Heat stroke)

The victim has a temperature higher than usual ( 104°F or more).

### Treating Hyperthermia

Wrap casualty in cold wet sheet and support in sitting position.

Keep cooling casualty until temperature reduces to 101°F.

Arrange for professional medical assistance.

## Getting help

White Water Canoeing, by its very nature, often takes place away from easy access to emergency help. It is vital that more than one person in the group knows the shortest route to go for assistance. When all else fails, follow the river (direction dependent on how far you have travelled on your journey). Ideally a minimum of 2 people should go for help and should have details of the casualties condition and location. The casualty should never be

left alone unless he/she is unmovable and there is only one other paddler present with no expectation of other paddlers passing.

*Further  
reading*

“British White Water” by Terry Storry.  
“White Water Kayaking” by Ray Rowe.  
“White Water Safety” by Stuart Hardy.  
“River Rescue” by Les Bechdel and Slim Ray.  
“Canoeing Handbook” BCU.  
“White Water Safety and Rescue” by Franco Ferrero.

## Disclaimer

This is an unfinished project by Terry Griffiths. The views expressed are personal and should be taken as guidance rather than gospel.