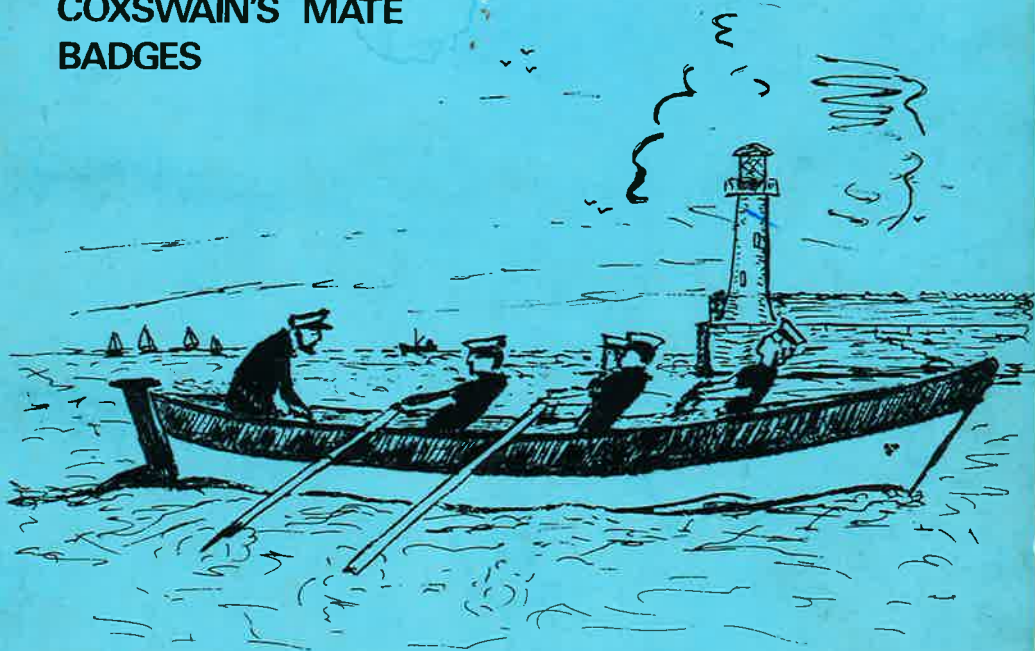


Sea Training Handbook Part 1

BOATMAN AND
COXSWAIN'S MATE
BADGES



Cumann Gasoga na hEireann

SCOUT
ASSOCIATION OF IRELAND

SEA TRAINING HANDBOOK PART 1

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Address:

INTRODUCTION

This handbook is intended for use by Scouts or Sea Scouts who wish to progress in the Sea Training Scheme. The contents are arranged in the order of the requirements for the Boatman's Badge and the Coxswain's Mate Badge. Part 2 of the handbook covers the Coxswain's Badge.

The use of some illustrations from other Scout Associations' publications - from U.K., New Zealand, Norway, Netherland and U.S.A. - is gratefully acknowledged.

Many thanks to all who helped and encouraged this project with ideas, proof reading, etc., and especially to Frances Killen who typed the different drafts, and to Martin Kennedy for his help and advice in the printing.

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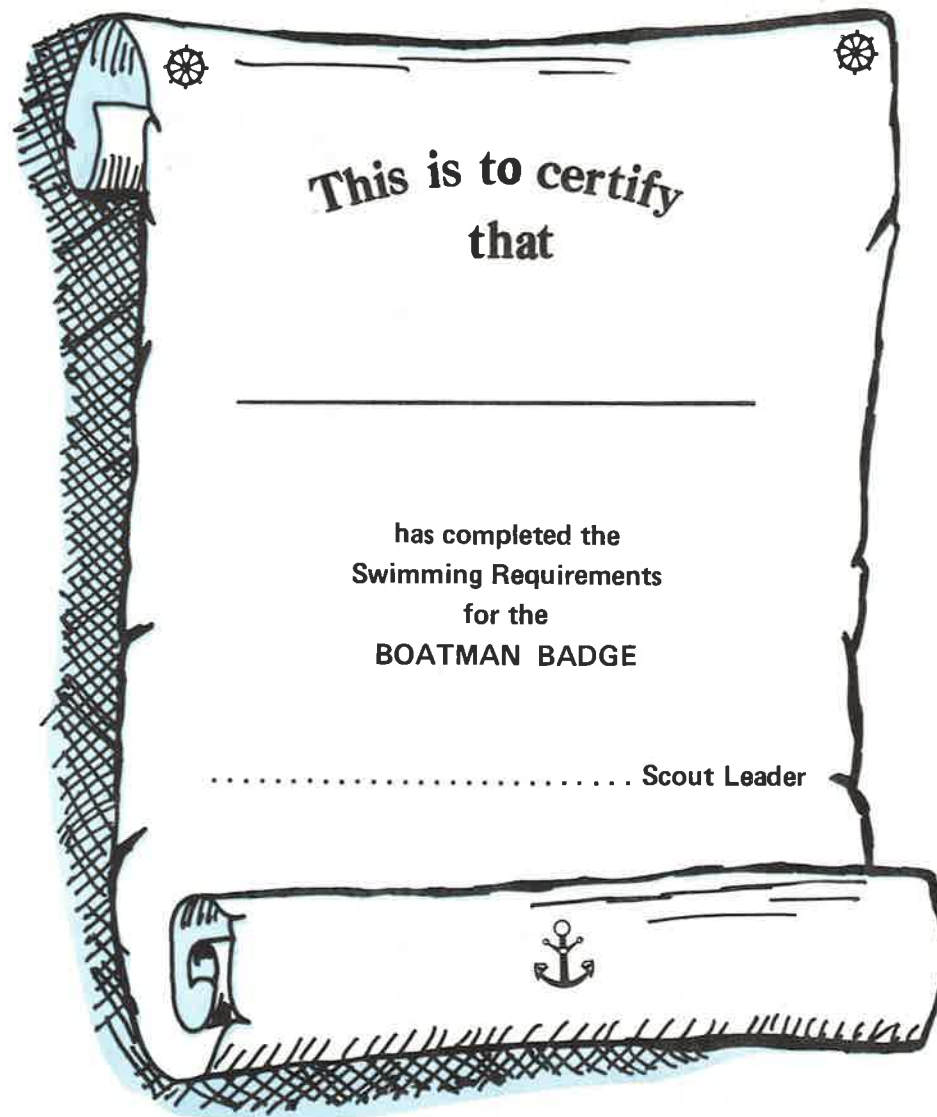
Boatman Badge

The first grade in the Sea Training Scheme is the Boatman Badge. This is mainly a practical badge, learning how to row a small boat on your own and also to row as a member of a crew in a larger boat. There is a little bit of theory to be learnt also, but you should not find this very difficult. Your Watch/Patrol Leader will probably be responsible for most of the instruction. Your Skipper or one of his Assistants will supervise your progress and award the badge when you have achieved all the Targets. You can do these in any order you wish.

1. Swim 50 metres in clothes, and thereafter remain afloat for two minutes (one minute in fresh water).

This is really the absolute minimum standard that should normally be acceptable for Scouts going afloat. You should try to improve upon this standard if possible and perhaps gain the Swimmer's Badge. It is very important for people involved in boating, particularly in small craft, to be confident in the water, and to practise swimming in light clothing, and also when wearing a life jacket or buoyancy aid. If you do not know how to swim you will not be able to make any progress in boating, and your activities will be very limited. The Scout Boating Rules make it clear that Scouts who cannot swim may only go afloat in very restricted circumstances (See Boating Rules). If you cannot swim get someone to teach you. It is possible that your Troop may be able to arrange swimming classes in a nearby swimming pool - ask your Scout Leader.

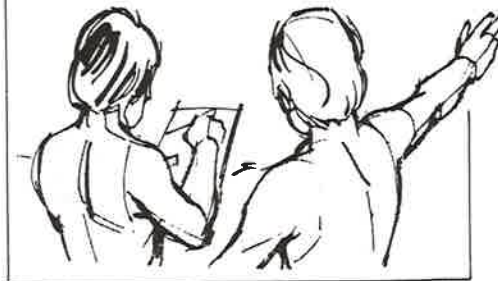
Most Scouts like swimming for fun, but in the Sea Training Scheme swimming is included as a basic safety factor, and it is not just "for fun". The test is very important and serious, and should take place out of doors, in waters in which your Troop usually does its boating. It does not matter which swimming stroke you use, so long as you show that you can manage it competently.



2. Know the Safety Rules that apply to boating and appreciate the effects of wind, tides and currents.

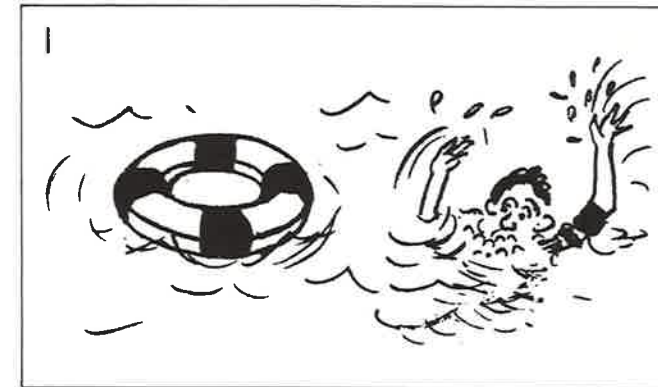
Safety Rules for Swimming:

- a) Always use the "buddy system" so that whoever is in charge can check you are still all there.
- b) Always swim well within your capabilities.
- c) Do not swim in dangerous areas.
- d) Do not dive into unknown water - beware of underwater rocks, weeds, etc.
- e) If someone is in trouble and you cannot swim yourself, try to reach out with whatever is handy - something to increase your reach such as a branch, fishing rod, oar or heaving line. Throw in a life buoy, life jacket, etc. Do not swim where there are strong currents and tides - if the place is unknown to you, ask.
- f) Do not ignore any warning notices or danger flags.
- g) Do not swim for at least an hour after a meal.



When someone is in trouble -

Throw a Life buoy



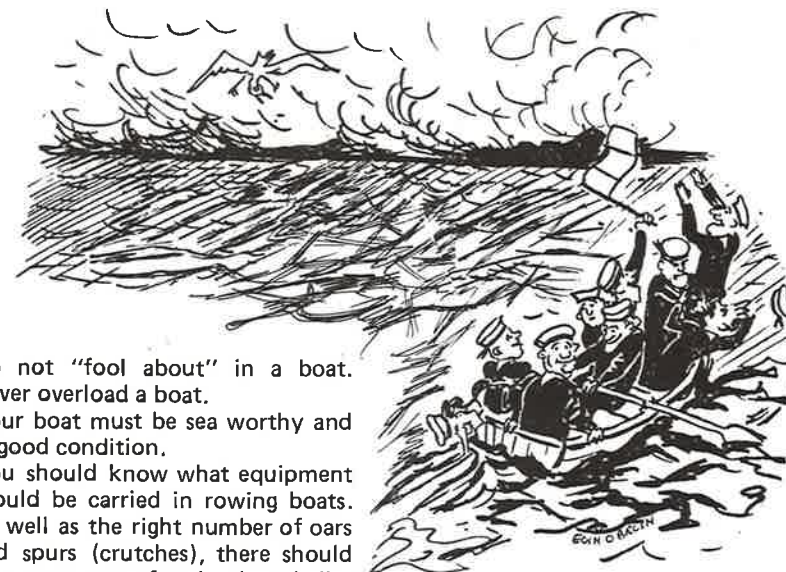
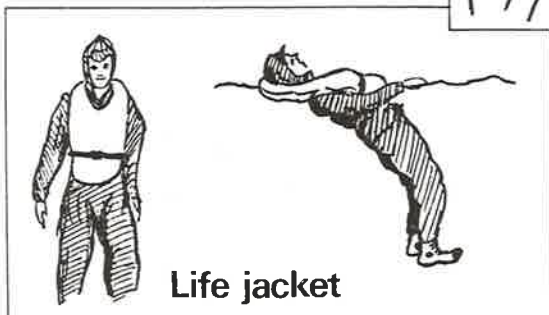
Boating Safety

The full Scout Boating Rules will be found at the end of this book, but your Scout Leader will not expect you to know them all off-by-heart. He will however expect you to know the main points, and the following is a useful summary:-

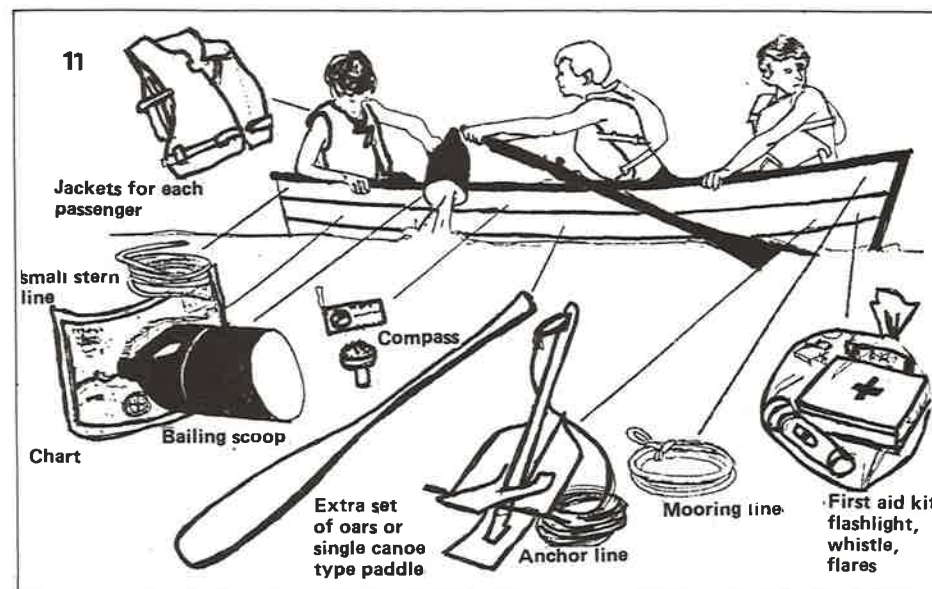
- a) The importance of being able to swim - the main importance of this rule is that a person who can swim, even if only for fifty metres will not panic when he falls into the water and his face gets wet. Unfortunately, people who are unable to swim will often panic and do the wrong thing, even though they may be wearing a life jacket.
- b) Dangerous or heavy clothing should not be worn while boating - e.g. waders, heavy boots, rain capes, etc.
- c) You should know the rule about Life Jackets and Buoyancy Aids, and should know the difference between them. Life jackets used by Scouts have some permanent buoyancy, but are not really lifejackets until they are fully inflated or blown up with air. Buoyancy aids are exactly what they say - aids to keep you afloat, and they have permanent buoyancy only. A life jacket or buoyancy aid must be put on securely. Buoyancy aids provide good insulation both in and out of water and do not make your movements any more difficult in the water. Although unconscious person will be kept floating by a buoyancy aid, he



could be face downwards and therefore drown in the water. However a full life jacket will keep the unconscious person afloat and keep his head back and his face clear of the water, so that he may continue to breathe even if he is unconscious. A fully inflated life jacket on the other hand makes manoeuvring in the water more difficult.

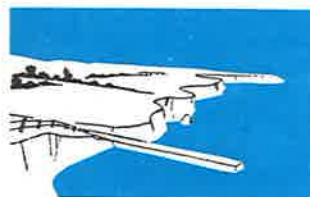


- d) Do not "fool about" in a boat.
- e) Never overload a boat.
- f) Your boat must be sea worthy and in good condition.
- g) You should know what equipment should be carried in rowing boats. As well as the right number of oars and spurs (crutches), there should be a spare one of each, plus a bailer and bow and stern lines. All loose gear should be tied into the boat with lanyards. If you are going on an expedition in the boat, even a short trip outside the local area, an anchor and adequate length of cable, and a heaving line should be carried. For longer expeditions, particularly on tidal waters, you should include a First Aid Kit, flares, a compass, and a local chart. (Fig 11).



Currents, Tides and Winds

- a) Tides are caused by the gravitational pull of the sun and the moon on the seas and oceans of the Earth. This pull causes the water of the sea at any particular place to get deeper or shallower in a definite rhythm. The rising tide is called the "flood tide", and the falling tide is called the "ebb". The



High water

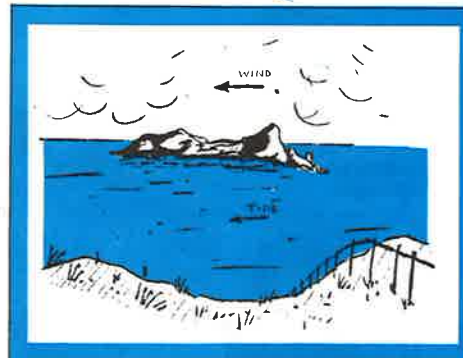
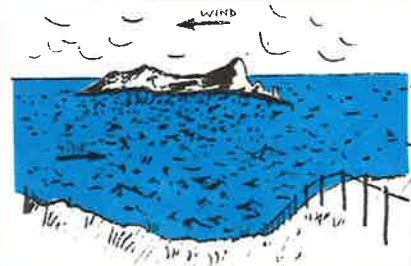


Low water

length of time taken by the tide to flood and ebb may vary a little in different parts of the country, but the average is about 6½ hours each way. This means about 12½ hours between Two High Waters (H.W.) and the same amount between two Low Waters (L.W.) Times of H.W. and L.W. are found in "Tide Tables". As well as the level of the sea rising and falling, there are also horizontal movements of water which will vary with the state of the flood and ebb - these are called Tidal Currents.

- b) You must know something about the effect of wind blowing over the water - this causes waves, and the stronger the wind, the bigger the waves. Areas of shallow water may cause waves to break dangerously for a small boat. If the tide or cur-

rent is going in the same direction as the wind, the water may not be very rough. However, if the tide then turns against the wind, the sea condition may change very quickly and this could be dangerous for a small boat. If the tide or current can flow strongly in your Troop's boating area, you should find out about the way these currents move, and what local problems may be caused by a change in direction of the tide or of the wind.

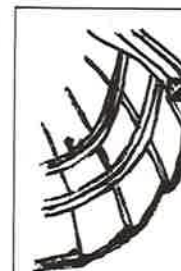


- c) Wind can push your boat off course - this is known as 'lee-way'. You may have to head more in the direction the wind is coming from to balance this. This is called heading to 'windward'.

3. Name the parts of a boat and its equipment and understand the maintenance of a boat.

Boats may be built from a large variety of materials - timber, marine plywood, fibreglass, canvas on a timber frame, metals such as aluminium or steel, concrete on a steel frame, etc. The names of various parts of boats will depend on the construction of the boat. You should have some idea of the different names associated with boats which your Troop has. Most Troops probably own or have access to a traditional wooden boat. There are three types of timber construction - clinker, carval and diagonal. In Clinker built boats the planks or "strakes" run from the bow to the stern, overlapping each other at the edges. The word Carval is used to describe boats made from timber "strakes" which run from bow to stern, but are fitted together edge to edge, to create a smooth surface. In diagonal construction the planks do not run from bow to stern, but they run diagonally, in two layers, with the inner layer running at right angles to the outer layer. The normal type of boat built by any of the above

methods is usually of a "Round Bottom" type. There are other forms such as "Flat Bottom" and the type known as "Hard Chine" hull which has a narrow "V" shape forward, becoming gradually flatter aft, with the angle between the sides of the hull and bottom becoming almost a right angle. This type of hull is very suitable for construction from sheets of plywood and is very common in many modern sailing dinghies.



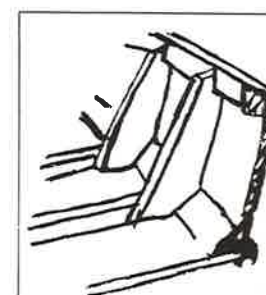
Clinker



Carval

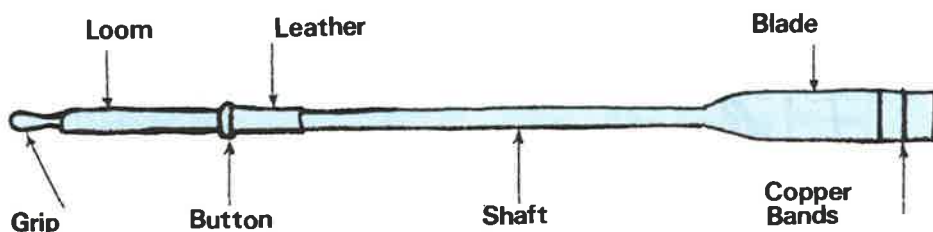
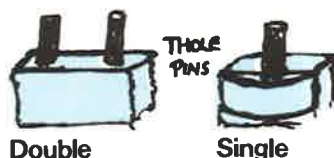
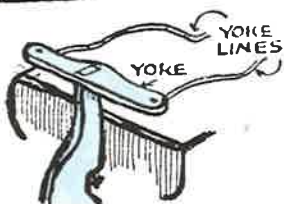
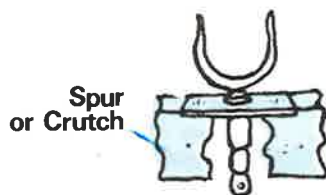
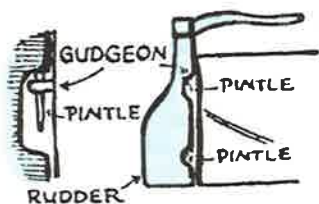
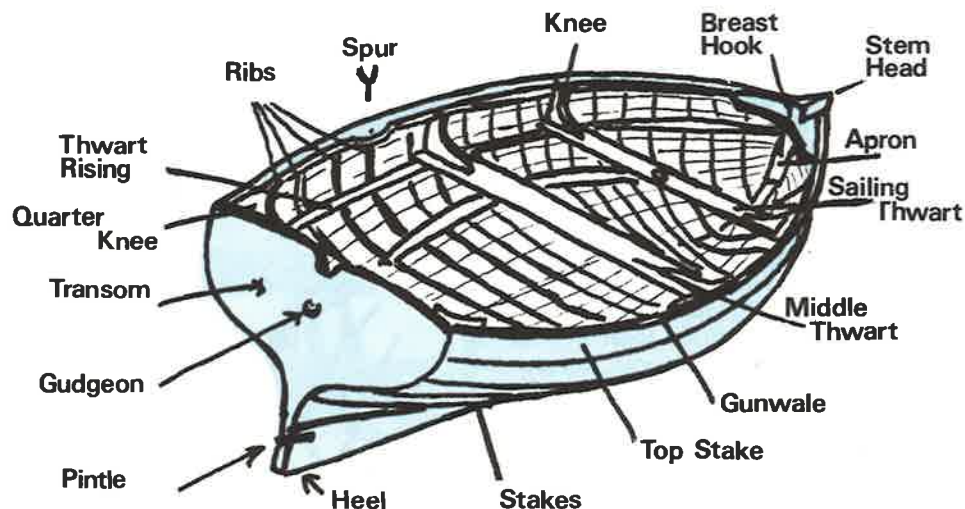


Diagonal



Hard Chine

The names of some of the commoner parts of a boat, particularly parts of a wooden boat are shown in the accompanying diagrams. At this stage of your training you will not be expected to know about these parts in very great detail, but later on when you come to enter for the Seamanship Competitions you will learn more details.



Boat Maintenance

Since boats are quite expensive pieces of equipment, it is obviously very important to maintain them correctly, and to repair any damage as it happens. This means that a boat will be kept in good order and seaworthy at all times. Before winter "laying up" a boat should be cleaned out thoroughly. It should be stored under cover or upside down. Most boat maintenance occurs during the winter, and for wooden boats this means sand-papering down the varnish or paint, and putting on fresh coats before the next season. If the varnish or paint is old, it may be cracked and flaking, and the loose pieces may have to be removed. Sometimes, the condition of the old paint or varnish is such that it must all be removed, right down to the wood. This is a tedious job, but one which is extremely important to do correctly. You will probably learn how to use paint scrapers, and perhaps even see a blow-torch being used to soften up old paint. You must always be very careful about using such tools, particularly a blow-torch, as a lot of damage can be done to the boat by in-expert use. However, at this stage of your Scout career your job will mainly be using sand-paper and then a paint brush. When putting on paint or varnish be careful not to put it on too thickly, and try to keep the paint brush handle, yourself, your clothes and surrounding structures as clear of paint as possible! The object is to put the paint on the boat, and not too thickly - work it in well, paying particular attention to corners and crevices. Small structural maintenance jobs are often required on boats, and you will probably be asked to assist your Watch Leader or one of the Adult Leaders or Venture Scouts in some of these jobs - watch carefully so that you can learn some of the simple techniques.

Types of boats

Many types of small boats are used throughout Ireland and unfortunately, their names are not well standardised. Sometime you may see a type of boat mentioned in an English book, but the name that is used may have a different meaning in Ireland.

DINGHY

In reference to sailing craft, this means a small light sailing boat, fitted with centre board. They can usually be easily transported on a trailer. Most modern sailing dinghies have a hard chine hull, and the usual building material is marine plywood or fibreglass. However, some of the older types of dinghies may have clinker built hulls. The word dinghy may also be used in other circumstances to describe any small rowing boat or a small inflatable rubber craft.

Dinghy/Punt



Hard chine pram dingy



Pram dingy

PUNT

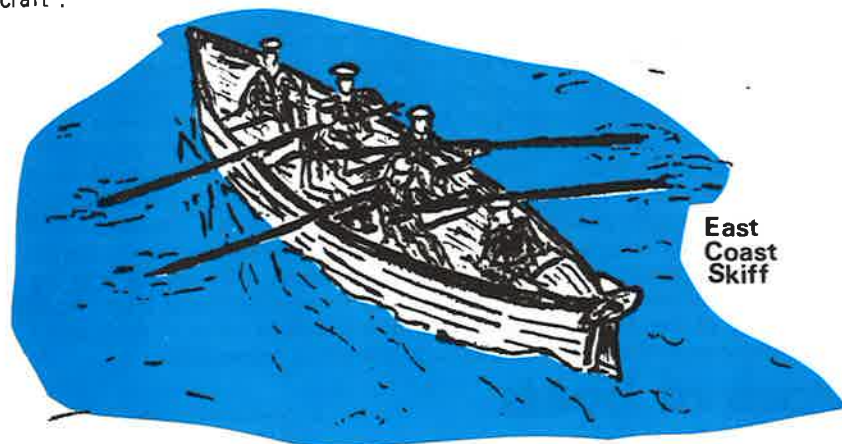
This may also be a small rowing boat, and often the words "punt" and "dinghy" may be used for the same boat. A "pram" dinghy or punt means a very small rowing craft with a transom bow.

INFLATABLE DINGHY

In recent years inflatable craft have become very popular because they are easy to transport when deflated and folded. They are made of reinforced rubber or plastic material and may be rowed or powered by an out-board engine. They are often used as tenders to yachts, and larger types are popular as rescue craft.



Inflatable Dingy



East Coast Skiff

SKIFF

This often refers to the very light boats or "shells" with sliding seats and out-riggers for oars, which are used for river racing. They may be of various sizes either for a single oarsman rowing pair-oar or four or eight oarsmen. However, around the Irish coast, the word skiff is used in various places to mean a much sturdier craft used for sea racing, and usually propelled by four oars. The East Coast Skiff, found between Skerries and Wicklow, is a 24' long, double ended, open sea boat, clinker built, and propelled by four oars. Different sizes of skiff are found in Donegal and in West Cork.

Cot

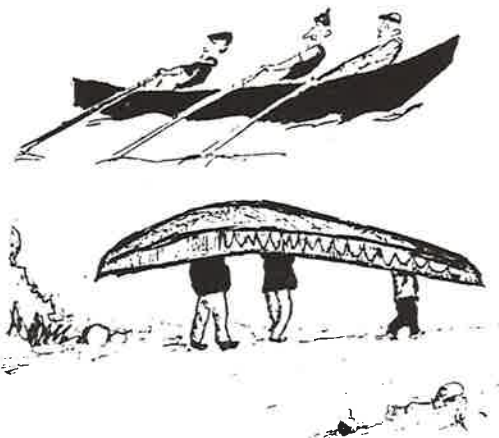


COT

This word is commonly used in the South East of Ireland, particularly on the rivers Slaney, Barrow, Nore and Suir. There are many different varieties of Cots, but the basic construction is always similar - they are flat bottomed, double ended boats, usually used for fishing. On the Barrow and around New Ross the cots are quite small and are propelled by one or two men facing forward using paddles like a canoe. The cots work in pairs, towing a fishing net between them. In Wexford, much larger cots will be found, sometimes up to 25'. They are often fitted with a centre board, mast and sails.

CURRACH OR NAOMHOG

These are old traditional canvas covered rowing boats which are still found in many places on the West Coast, particularly in Gaeltacht areas. The currach is usually propelled by three pairs of oars which are mounted on thole pins and have narrow blades. In suitable weather conditions with the wind off the beam the currach may occasionally be seen under a simple lug sail rig. The naomhog is the name given to these craft in Kerry.



LAUNCH

This is usually used to describe a small craft propelled by an in-board motor. It is usually an open boat, but may have a small cabin.

YACHT

Means any type of sailing or power driven pleasure craft.

CRUISER

It is usually used to cover a sailing or motor yacht which has a cabin, and can be used for cruising.

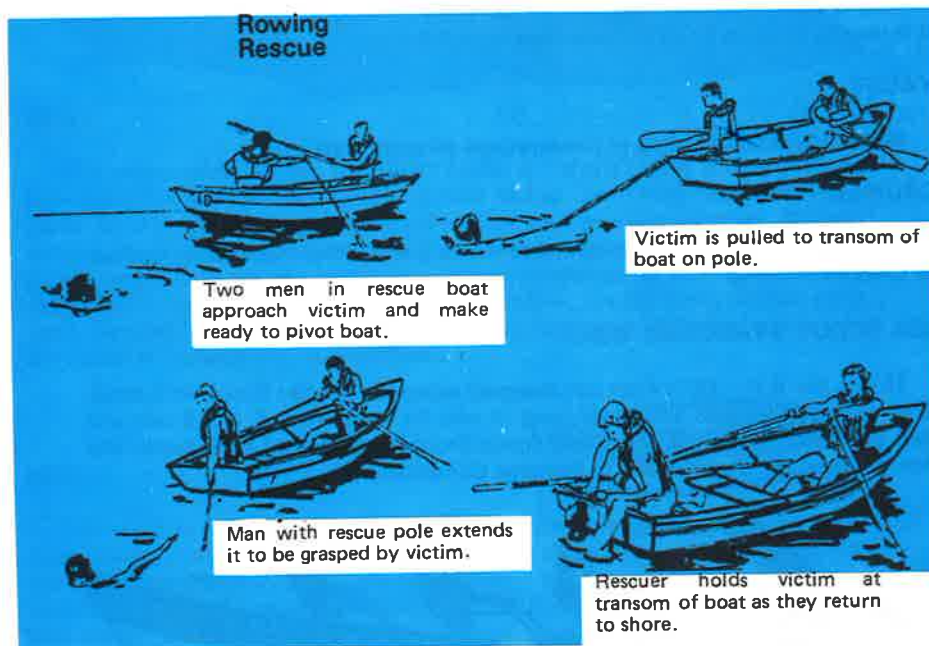
SEA SCOUT STANDARD BOAT

This is the B.P. "18" which was designed especially for Sea Scouts in Ireland. It is made of fibreglass and is 18' long. It may be rowed with 2, 4 or 6 oars and may be rigged for sailing. Many Sea Scout Troops have one of these boats, and they are used for Regattas and in National Competitions.



4. Rescue and First Aid

The knowledge of rescue here relates to rescuing a person from the water by rowing boat. It is normally best to approach the person in the water carefully from the windward side. An oar or a heaving line can be used to extend your reach, and bring the casualty to the stern of the boat. He should be lifted in over the transom, as this will keep the boat steady. A person who has been in the water for a while and is cold, may find it difficult to help himself into the boat, and may require a fair amount of pulling. It is often better to "tumble" him in, head over heels. If you cannot get him into the boat, let him hold onto the transom and tow him to safety. Do not attempt to take a person in over the gunwale, as it is very easy to capsize a small boat by trying to take in a heavy person over the side. If your boat has an engine, either in-board or out-board, it is better to stop the engine along-side the person in the water, in case it should accidentally be put into gear and the person be injured by the spinning propeller. You should practise picking up a man over-board with your Watch/Patrol and have the experience of actually lifting someone in over the transom. It would also be a good idea if every person learning this had to get into the water himself and see what it is like. This of course can be combined with Section 8 of this badge when you have to demonstrate getting into a dinghy from the water.



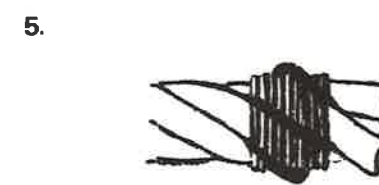
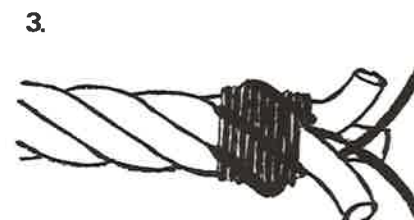
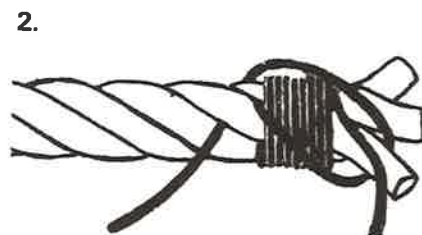
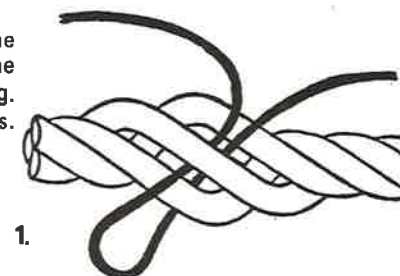
The standard of Artificial Respiration and First Aid required for the Boatman Badge is the same as that in the Frontier Scout Targets, and you should look up your Frontier Target Book for details.

5. Rope Work

The various knots which are mentioned here should be demonstrated if possible afloat, or in using or preparing boat's gear.

Sailmaker's Whipping

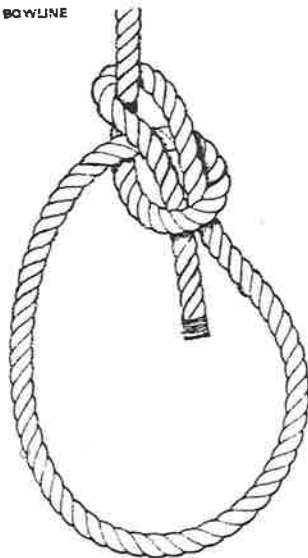
Sailmaker's Whipping is one of the most reliable ways of whipping the end of a rope to stop it unravelling. The stages are shown in the diagrams.



Get Knotted



BOWLINE



The Bowline

The Bowline is used for making a non-jamming eye or loop in the end of a rope. It may be used on a mooring line to slip over a bollard, for attaching jib sheets to the clew of the jib, for rescue or safety purposes when tied around the waist, etc.

SHEET
BEND



DOUBLE
SHEET
BEND

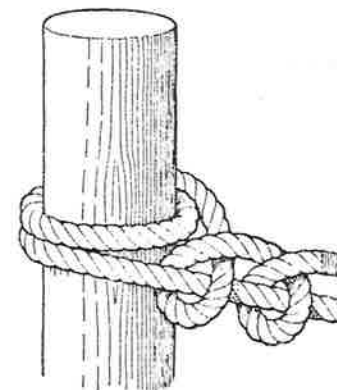
Sheetbend

Sheetbend is the knot which is normally used to join together ropes of equal or unequal thickness.

The Double Sheetbend

The Double Sheetbend is more secure than the sheetbend, especially when the ropes are of unequal thickness.

Round Turn and Two Half Hitches
Round Turn and Two Half Hitches is used to tie a rope to a post or a ring.



ROUND TURN AND TWO HALF HITCHES

FISHERMAN'S
BEND

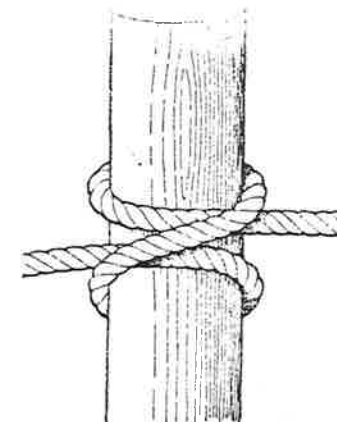


Fisherman's Bend

Fisherman's Bend is similar to a round turn and two half hitches, but the first half hitch passes through the round turn. This is used to attach an anchor line to the ring of the anchor. This should be "sized" to the standing part.

Clove Hitch

The Clove Hitch is a simple knot for tying a rope to a post, and may be used in the middle of a line as well as at the end. A clove hitch remains secure if it is kept under a steady strain, but if the strain is intermittent, it may come loose, and untie. In such conditions a round turn and two half hitches would be better.

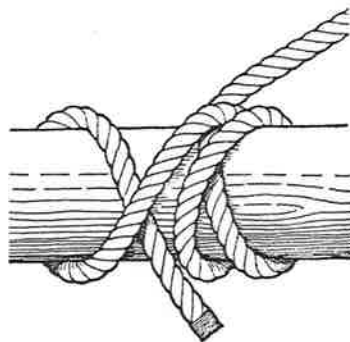


CLOVE HITCH

A Rolling Hitch

A Rolling Hitch is used to tie a rope to another rope or to a spar, when the pull is in the line of spar.

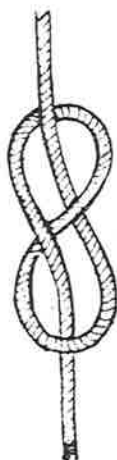
ROLLING HITCH



REEF KNOT

Reef Knot

The Reef Knot is used to tie the reef points of a sail, for first aid and for tying string on parcels. Do not use it for joining ropes together, as it is not always safe, particularly with nylon, terylene or other "man-made" ropes.



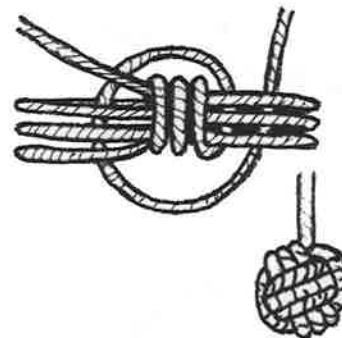
Stopper Knot

Stopper Knot is any knot on the end of a rope to stop it running through a fairlead or pulley. The most useful stopper knot is probably the figure-of-eight knot.

6. Heave a Life Line from a Boat.

All Sea Scouts should be able to heave a line reasonably accurately, and it is important to be able to do this from a boat as well as from land. A heaving line may be used to rescue a person from the water and also for throwing a painter ashore. This can only be learnt by practise and more practise, but the following points should be noted:-

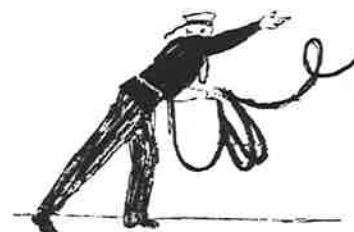
Monkey's Fist



- An unweighted line should be used, although a "monkey's fist" is usually made on the end of the line.
- Most lines are "right handed" and therefore should be coiled clockwise, without overlap, starting from the fixed end.
- The line should be heaved to an object 10 m away with reasonable accuracy.
- Throw the line underhand.



Throwing a heaving line



7. Boat Work

There are three sections here:-

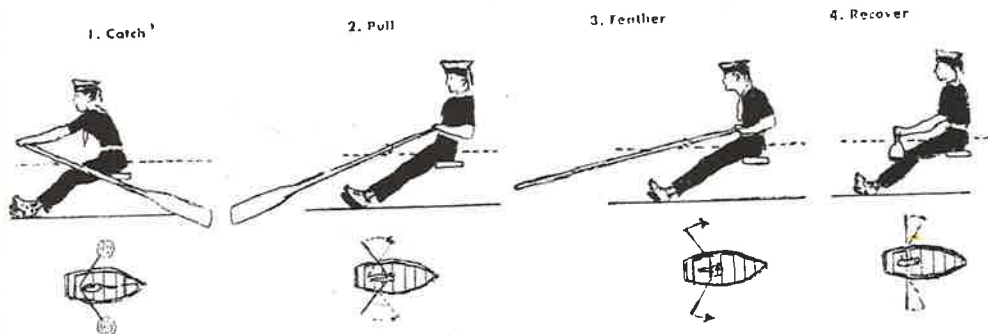
- Row a dinghy single handed.
- Pull in a boat's crew.
- Steer a boat.



You should be able to row a dinghy confidently - row in a straight line, turn by holding water on one side, stop by holding water with both oars, and come along-side without bumping. You should be able to go astern by back-watering. This part of the badge will usually be combined with section 9 (using an anchor). You should be able to manoeuvre the dinghy accurately to anchor, and also to pick up an object from the water.



Getting into boat

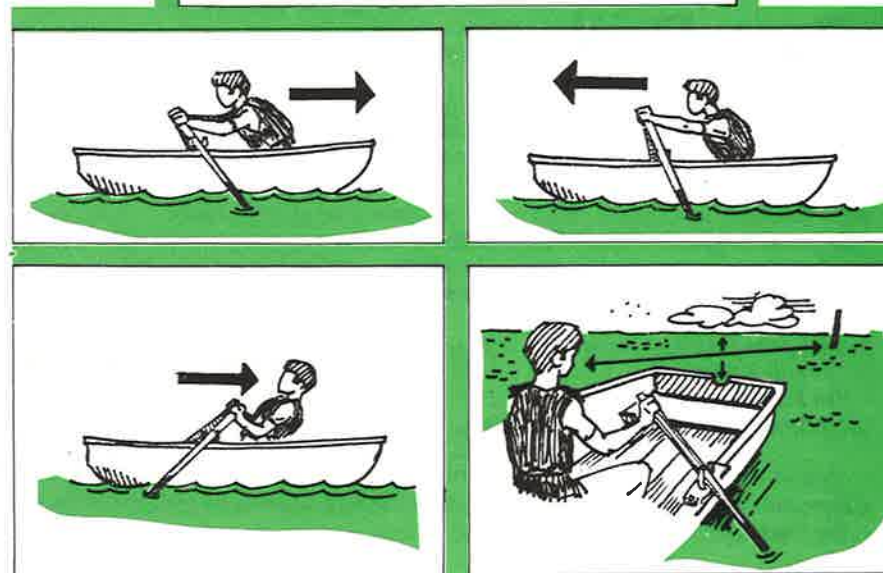
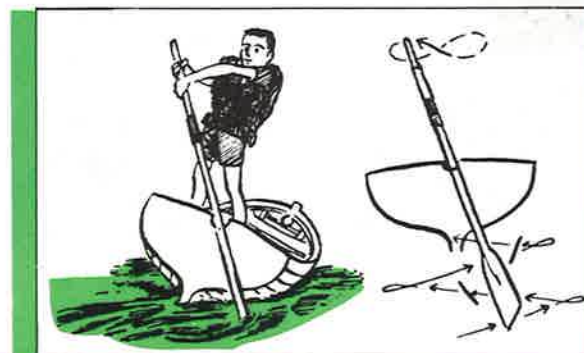


In order to row in a boat's crew you must understand all the rowing orders.

To be an effective member of a pulling boat crew you must be able to row satisfactorily in time with all the other members of the crew, and must behave correctly in the boat and follow the directions of the Coxswain.

When rowing, try to keep your back straight and use the force of your trunk swinging backwards for the main part of the stroke, only bending your elbows when you have lent back as far as you can, and use the arm and shoulder muscles then for that last pull on the oar to help you swing forwards again. Do not bury the blade to start a new stroke. Try to avoid 'sky scraping' or waving the oar blade too high in the air.

Sculling over the stern is a very useful skill to learn. A single oar is placed in the sculling notch or stern spur and moved in a "figure-of-eight" style, as shown in the picture. You can only learn this art by practice. At this stage of your training you will also learn how to steer a boat. This means using tiller or yoke lines, but you will not be expected to cox the boat on your own.





Boat Drill

There are some different systems of rowing orders and it does not matter much which your Troop uses, provided that everyone uses and understands the same system. The drill given here is the one which has developed over the years as the traditional Sea Scout System.

Crew assembles on ship, jetty or steps.

Coxswain embarks first, makes his way to stern of boat and ships the rudder.

"In stroke Oar") The appropriate oarsmen embark one at a time and take their places.
"In 2nd Stroke"	
"In 2nd Bow"	
"In Bow Oar"	

"Stand by Bowman" - Bowman unhitches bow-line, but keeps a hold of it, and does not yet embark. If there is a boat hook provided, he may embark, using the hook to hold the boat alongside.

"Ship Spurs" - oarsmen put spurs in sockets.

"Sight Oars" - oarsmen locate and grip their oars. The bow oars should be inboard of the stroke oars.

"Toss oars" - oarsmen lift their oars up vertically, feathered fore and aft, in line with each other.

"In bowman, push off" - Bowman embarks and pushes off from the wall or slip.

"Down oars" - oars lowered on appropriate sides, so that blades touch the water before the shaft of the oar touches the boat's gunwale. Oars then shipped into the spurs, and held horizontally, blades feathered.

"In fenders" - fenders taken in.

"Stand By" - oars unfeathered and oarsmen lean forward to start rowing.

"Give way together" - all start rowing together, taking their stroke from stroke oar.

Other orders, depending on situation, might be:-

"Give way starboard, hold water port" - to turn to port, or "backwater together" - to go astern, or "give way port, backwater starboard" - to turn to starboard, etc.

"Way enough" - usually given at beginning of a stroke - that stroke is completed and oars are then held horizontally feathered until next order, which will be either "stand by" or "hold water".

"Hold Water" - all oars in water together, held firmly and kept there until next order, which may be "way enough", or "backwater" or "stand by".

"Backwater together" - all oarsmen row in reverse, following stroke oar.

"Shorten oars" - when passing close to some other vessel or obstruction, the oars are pulled inboard somewhat, so that the blades do not strike. The crew keeps rowing.

"Trail Oars" - when passing very close to some other vessel or obstruction - the loom of the oar is swung completely forward so that the blade trails aft, and comes in close to the boat's side. This is also used when coming alongside for a very short time, when it is not necessary to boat oars.

"Easy Port" - "Easy Starboard" - "Easy all" - oarsmen indicated should pull with reduced effort, but maintain stroke.

When rounding a mark, the rudder will not be sufficient to make a tight turn, so the oars must be used also - e.g. when leaving a mark to port.

"Hard starboard, hold water port" - the starboard side oarsmen pull hard while port side hold water. When the turn is completed, "Give way together" - port oars take up the stroke again.

When coming along side, the Coxswain should judge his speed and not come in too fast. He should be able to stop rowing and not have to hold water because of excess speed. On the other hand, he should have sufficient speed to reach the jetty, without having to take another couple of strokes after he has called "way enough". He must take account of current and wind and come along side head to whichever is the strongest. Practice makes perfect.

APPROACHING JETTY OR SLIP

"Stand by bowman" - bowman prepares to fend off.

"Way enough"

"Fenders out"

"Toss oars"

Bowman holds on as boat comes alongside.

"Unship spurs" - spurs taken out of sockets and placed in boat.

"Out bowman" - bowman disembarks and makes bow-line fast.

"Boat oars, stroke and 2nd stroke")	Appropriate oars put into the boat,
"Boat oars, Bow and 2nd Bow")	blades forward, with the bow oars inboard of the stroke oars.

"Out Bow oar")	
"Out 2nd Bow")	Appropriate oarsmen disembark.
"Out 2nd stroke")	
"Out Stroke oar")	

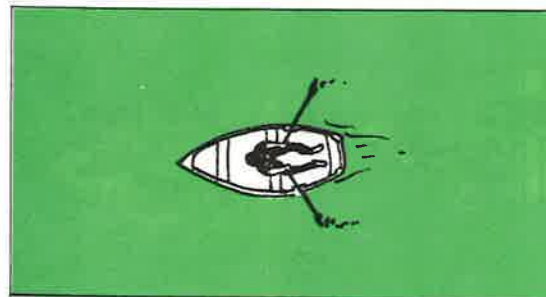
Coxswain then unships and boats the rudder. He disembarks, and checks the bow-line.

If there is no separate Bowman in the crew, the Bow oarsman has to perform the functions of bowman also. When casting off, the rest of the crew will have tossed oars before the Bowman pushes the boat off. Because of wind or current, the Coxswain may wish the crew to start rowing quickly to get away from the slip. In this case, he will already have given the orders "down oars" and perhaps "give" way together" before the Boatman can get to his oar. At the first opportunity the Coxswain will say "way enough", followed by "toss bow oar" and "down bow oar". Likewise, when coming along side, the bow oar will be tossed and boated before the others.

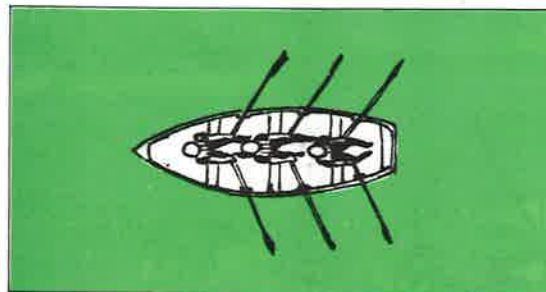
In certain circumstances, particularly if the members of the crew are small, and the oars are heavy, the oars will not be tossed. When setting out, the order will be "ship oars" - the oars will be put out, and placed in the spurs without tossing. Similarly, when coming alongside, "boat oars" will be given after "fenders out", and the oars will be brought directly inboard, blades forward.

The drill given here is for a boat rowed "Skiff Style" - slight modifications may be needed for other arrangements of oars. Note that in "pair oar" rowing, either singly or in "Currach Style", oars are not tossed, and when brought inboard the blades will be aft.

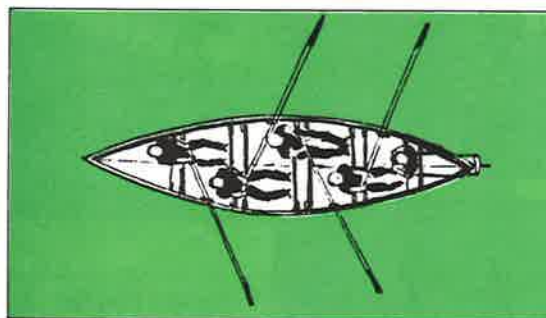
Rowing Configurations



PAIR OAR

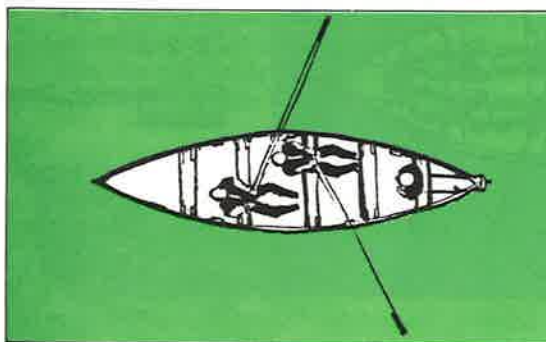


THREE OARSMEN, PAIR OAR, "Currach Style"

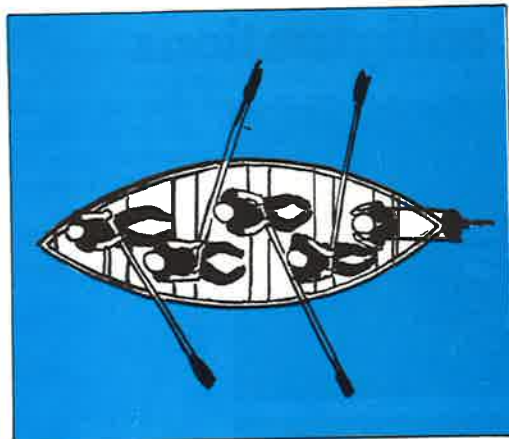


SKIFF

"Skiff Style"

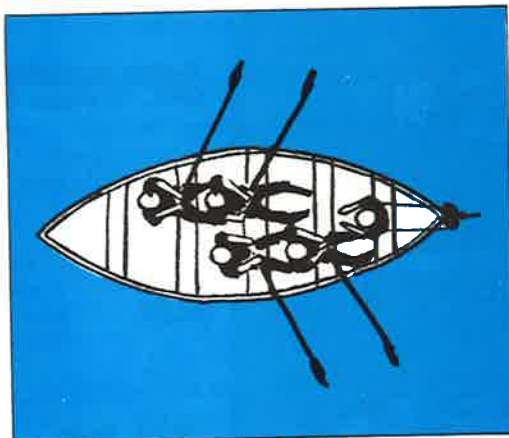


"2 Oar and Cox"

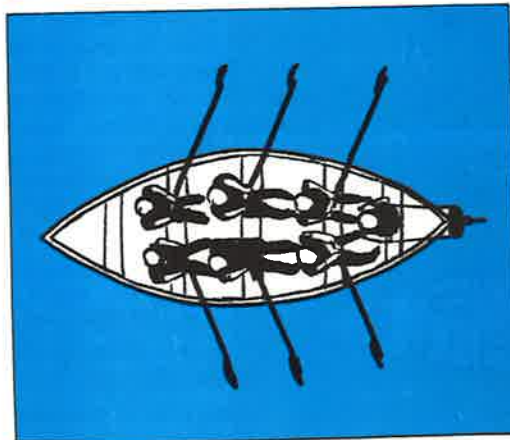


B.P. 18

"Skiff Style"

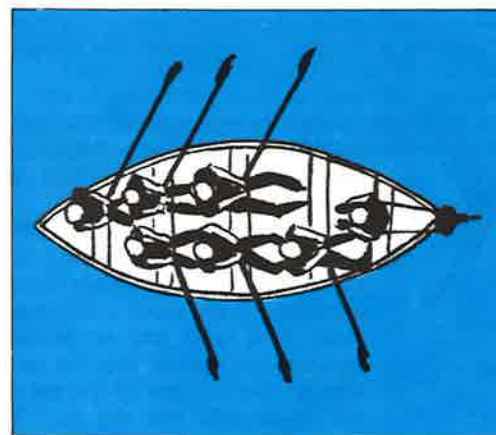


"1-2-1"

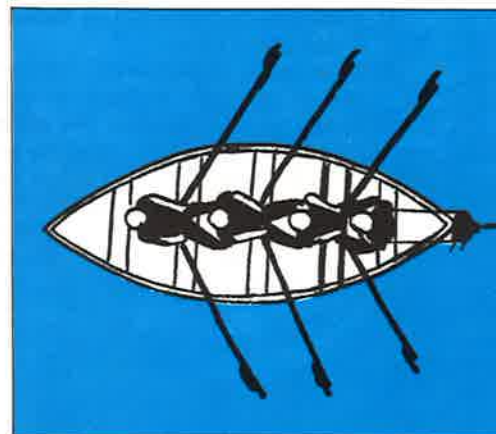


"2-2-2"

Six Oarsmen, Double
banked



"1-2-2-1"



"Currach Style"

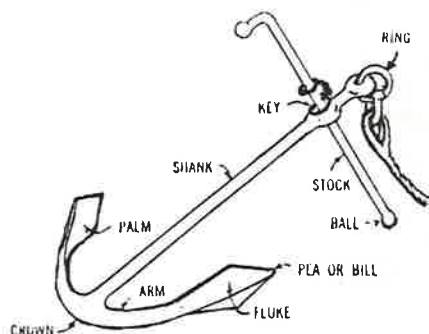
8. Get into a Dinghy from the Water

You have to show that you can get into a dinghy over the stern, both with and without a life jacket or buoyancy aid. This may be done in conjunction with the swimming test mentioned at the beginning of this Boatman Badge Section or with the "Rescue" part of Section 4.

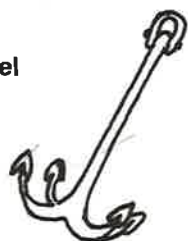


9. Demonstrate how to prepare and use an anchor, and how to pick up an object from the water.

This may be included with "Rowing a Dinghy". Remember the following points:-



Grapnel



- a) Always tie the rope to the ring of the anchor by using a Fisherman's Bend, or using a shackle if the rope already has an eye at the end.
- b) When making up the anchor, which will usually be a Fisherman's type make sure that the stock is fixed in position. If the stock is not in position, or is loose and not properly secured, the anchor may lie on its side on the bottom of the sea and the fluke will not dig in. The anchor will therefore drag.
- c) Make sure that the end of the rope is tied to the boat.
- d) Other types of anchor may be used, and if they are available in your Troop you must know the difference between them. You do not have to know too much about this at present, but if you want to find out a little bit more you could look at the anchoring section of the Coxswain's Mate Badge.
- e) An anchor lies on the ground and its fluke bites into the mud or sand when the pull is horizontal. Therefore a short length of chain between the anchor and the rope, will help to weigh the cable down. You should always let out at least three times the length of rope as the depth of water.
- f) Before the anchor is let go make sure that the vessel is not moving forward. Pay the rope out slowly as the boat drifts backwards to avoid "tripping" the anchor.
- g) You should know if there are any foul anchorages in your Troop's local waters, or areas where anchoring is prohibited.

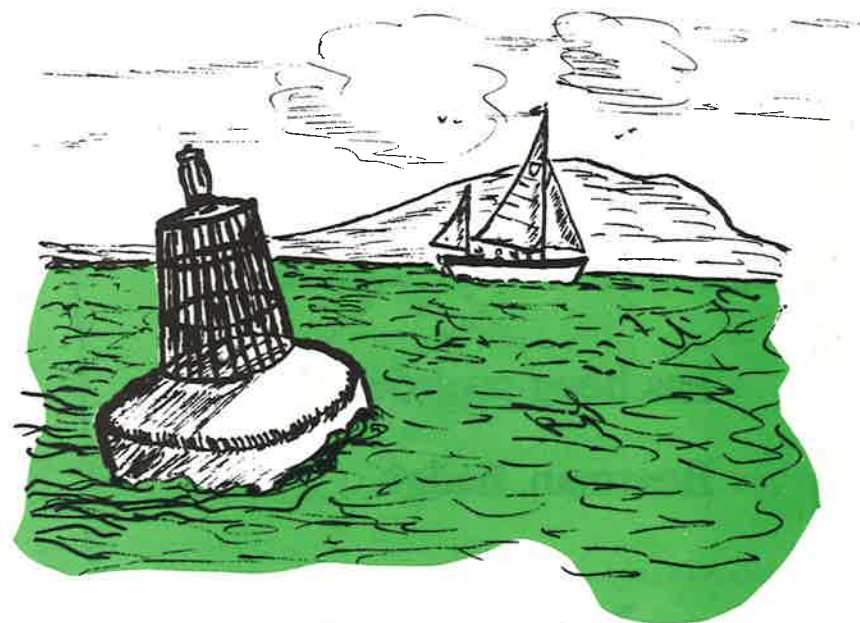


Folding

For the practical part of this test you will probably be asked to make your anchor ready and put it into the dinghy. You will then have to row out to a previously decided position and drop your anchor and demonstrate that your boat can lie to it satisfactorily. You may then be asked to attach a marker buoy to your anchor line, and let it slip and then row away, turn and come back to pick up the marker buoy again and recover the anchor.

10 Take part in a half days exercise afloat.

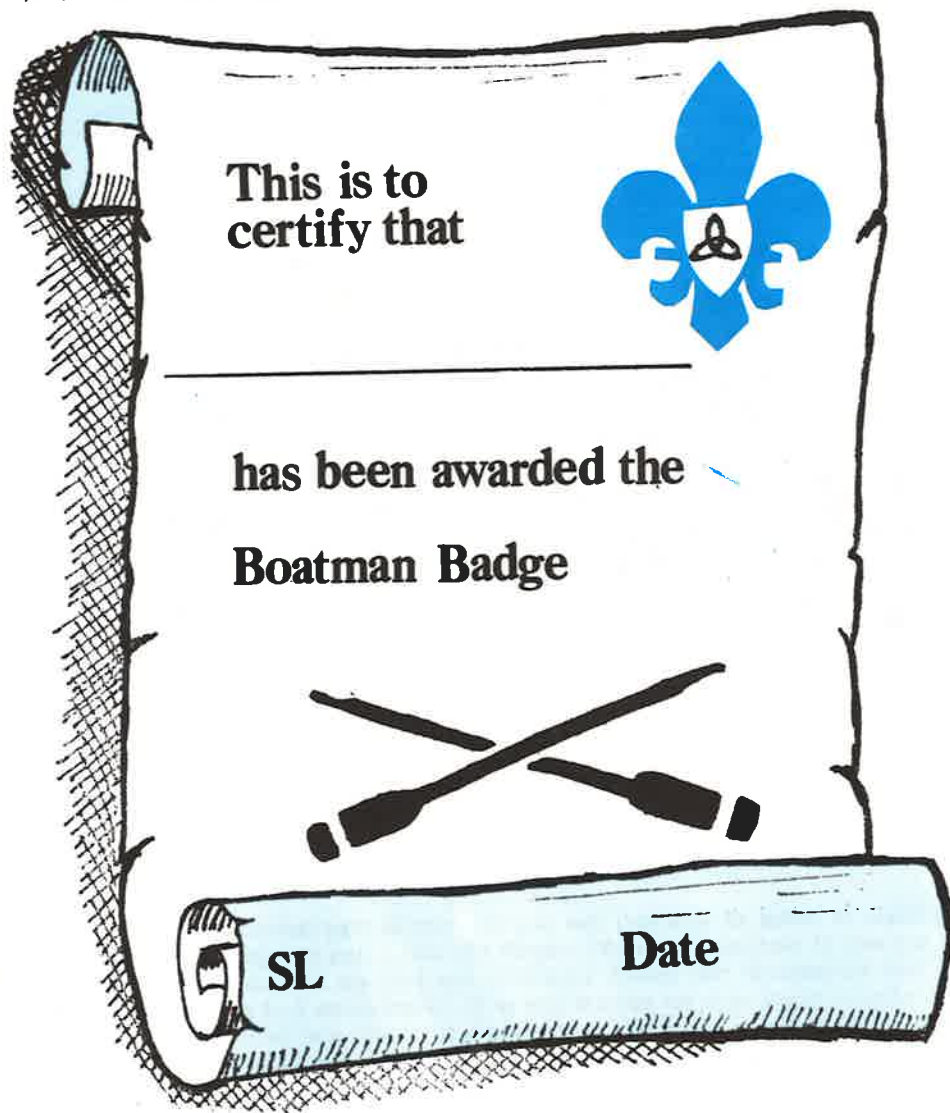
This exercise will involve the skills that you have acquired already. Many different activities may be used for this exercise, and it will usually include a simple rescue operation. It should be an enjoyable climax to obtaining the badge. If your Troop does a lot of water-borne expeditions, any of these may count.





THE BADGE

When you have completed all the requirements, the Badge will be presented to you, and should be worn in the middle of the left sleeve, below the Scout Badge.



Seamanship Competition

The Junior Seamanship Competition for the Hamill Cup is held every year in September. It is based on the Boatman Badge, and you will find this section of the book very helpful in preparing for it. Many areas hold their own competitions first, and may then send the winning team to the National Competition. Every Sea Scout Troop can enter for this - the age limit is under 14 on 1st June of the year of the competition. Has your Troop entered recently? If not, why not try? Ask your Skipper for details.

Other Training & Activities

Do not think that other forms of boating will be excluded during training for the Boatman's Badge. You will probably be learning some basic canoeing during same time, and where local conditions and arrangements permit, you may start to learn a little about sailing. If you are reasonably good at swimming, why not try the Swimmer's Badge?



SWIMMER'S BADGE

The requirements of this badge are:-

1. Swim at least 200 metres.
2. Dive from the surface of the water and recover an object from a depth of 2 metres.
3. Demonstrate the Breast, Back and Front Crawl, and Side Strokes.
4. Swim on your back for at least 50 metres.
5. Be able to tread water.
6. Demonstrate how to give artificial respiration.
7. Make a display to demonstrate to your Patrol the rules of water safety.
8. Swim 50 metres in light clothing, including plimsolls and undress in the water.

OR

Achieve the Bronze or Silver Standard of the Amateur Swimming Association.

You have already demonstrated that you can swim 50 m in clothing, how to tread water and how to give artificial respiration. You have also learnt the Safety Rules for Swimming and Boating and it should be quite easy for you to demonstrate these, or make a display for your Watch/Patrol. So you only have

to do the first four items to complete the Swimmer's Badge. If you think you can manage it, practise hard and ask your Skipper to arrange to have you tested. If you are a member of a swimming club, show the Badge requirements to your Instructor, and ask him to send your Skipper a note if you have completed them.

SWIMMER'S BADGE

Requirements completed and badge awarded to

.....

SL: Date:

GENERAL SCOUT TRAINING

You will, of course, also be doing your ordinary Scout work, learning camping skills, fire lighting and cooking, hiking and first aid. If you are able to do some canoeing or boating trips with your Troop or Watch, some of these may be counted as part of your hiking total. The First Aid Test for the Frontier Scout Badge has already been mentioned earlier as this is one of the requirements for the Boatman's Badge - when you have done this test, you should have it signed up for both badges.



FRONTIER SCOUT BADGE

Coxwain's Mate



The syllabus for this badge includes a bit more theory but also increases the amount of practical boating which you will do. You will be expected to take a more responsible part in boating activities, and to learn how to be a Coxswain of a boat's crew. The general level of ability expected is that of Intermediate Rowing Charge Certificate, together with some basic

knowledge and experience of sailing. You may take the various Targets in any order you wish, and you do not have to possess the Frontier Scout Badge before starting work on the Coxwain's Mate.

1. Possess the Frontier Scout Badge

The Frontier Scout Badge is awarded for good general knowledge of basic Scouting and camping, which is just as important for Sea Scouts as for all other Scouts. The requirements for the Frontier Scout are given in your **Scout Passport to Adventure**, but you can get credit for some items or activities from the Sea Training Scheme. For instance, boat or canoe journeys may help in the Pathfinder's Section, and you have already had to do First Aid and Artificial Respiration for the Boatman Badge. As well as this, the following alternative Targets are available to Sea Scouts.

- a) In the part of the Frontier Scout called "Our Country", Section (b) relates to the National Flag. For Sea Scout Troops, this test could be expanded to include the correct maritime use of flags, as in Coxwain's Mate (see page 48.). You could then get these sections of both badges signed up together.
- b) In the "Observation and Estimation" part of the Frontier Scout, you may add two more targets to the three given in your "Passport". This gives you a list of five targets, from which you may choose any three. The extra choices are as follows:-

4. Know the main points about the Beaufort Wind Scale, up to and including Force 6. Be able to judge the strength of the wind by observation of the sea signs. (See Page 47.)

5. Be able to identify the following sailing rigs, and ship types - Sloop, Cutter, Ketch, Yawl, Schooner, Brigantine, Coaster, Freighter, Tanker, Passenger Ship, Container Ship, Tug, Light Ship, Pilot Vessel, Life Boat, Naval Patrol Vessel, Mine Sweeper.



Sloop



Cutter



Yawl



Ketch



2 & 3 Masted Schooners



Trawler



Coaster



Lightship



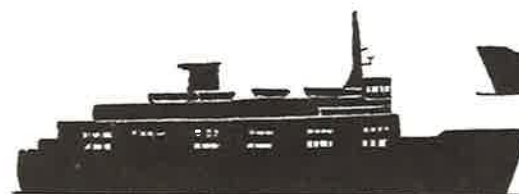
Lightship Tender



Oil Tanker



Tug



Passenger



Ro Ro Freight



Dredger

Container Ship



'Ton' Class Coastal
Minesweeper



P 20



P 31



P 22

Naval Patrol Vessels

SAILING RIGS

Sloop	Single masted vessel, fore and aft rigged, with one jib.
Cutter	Single masted vessel, fore and aft rigged, with two jibs.
Ketch	Two masted vessel, fore and aft rigged, with after mast stepped forward of the rudder.
Yawl	Two masted vessel, fore and aft rigged, with after mast stepped abaft the rudder. The after mast ("Mizzen mast") of a Yawl is much smaller than that of a Ketch.
Schooner	Two or more masted vessel, fore and aft rigged. In a two masted Schooner, the main mast is the after mast, and the fore mast is smaller - this distinguishes it from a Ketch.

All the above rigs are "Fore-and-Aft" rigs (see page 59.). Square Rigged vessels (see page 59.) are occasionally seen nowadays - they are usually training ships.

Ireland has a Sail Training Vessel "Asgard II" - she is a brigantine. You do not have to know about square rigging, but it would be interesting for you to be able to recognise "Asgard II".

Brigantine	Two masted vessel, square rigged on the fore mast and fore and aft rigged on the main mast.
-------------------	---



2. Possess the Boatman Badge

The Coxswain's Mate Training follows on the Boatman training, but you do not have to finish the Boatman Badge before starting work for this grade. If you have learnt enough about a subject, or if you have sufficient experience in one of the sections of the Coxswain's Mate, you may ask your Leader to assess you even though you have not yet finished the Boatman Badge.

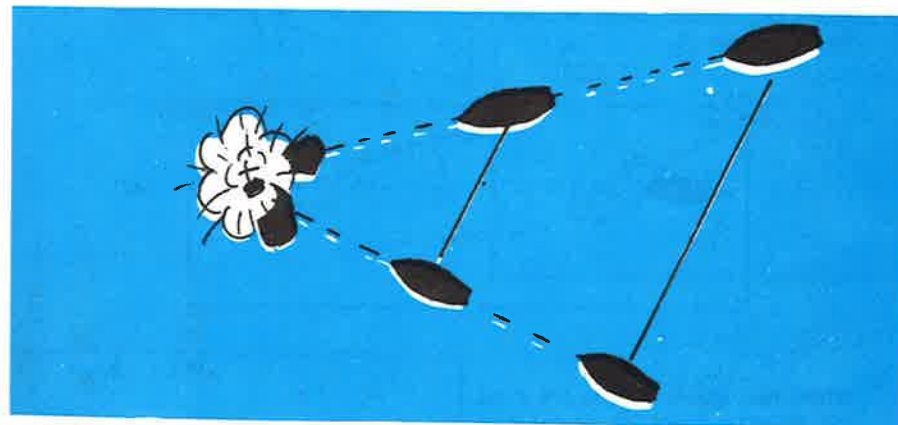
3. Have a knowledge of the Sailing Rules, Distress, Storm, Fog and Danger Signals.

- The **Steering and Sailing Rules** are often known as the "Rules of the Road at Sea". They regulate the movement of vessels, so as to avoid a collision. There are a lot of rules, and some of them are very complicated, but you are not expected to know them all, or in great detail. The following is a summary of the most relevant rules.

NOTE

Risk of collision exists if the bearing of an approaching vessel remains nearly constant. It may also exist even with an appreciable change of bearing, if the approaching vessel is large, or a tow, or when in close range.

"Bearing" means the direction from you in which the other vessel lies. This is measured by using a compass.

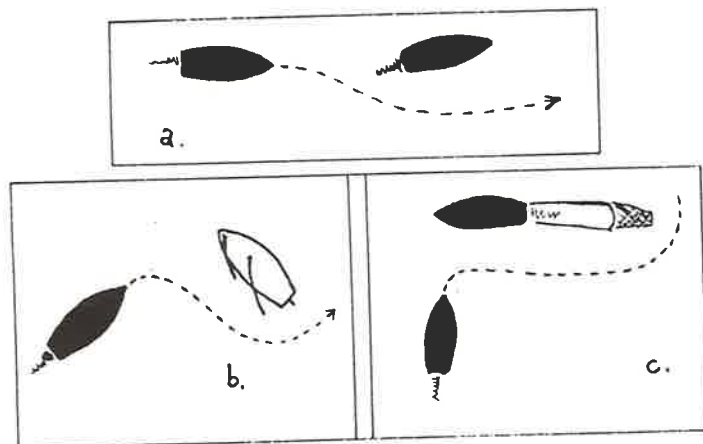


"Not under Command" means that a vessel is unable to manoeuvre because of steering problems. It does not mean that the vessel is completely disabled or in distress.

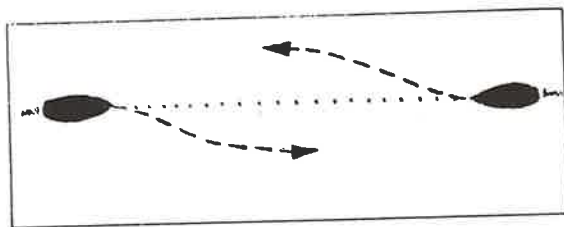
"Restricted Manoeuvrability" means difficulty in manoeuvring because of towing, fishing, dredging, deep draft, etc.

POWER VESSELS

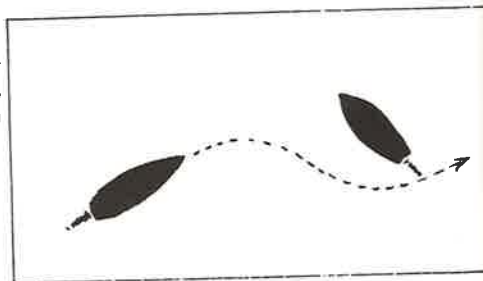
1. A Power vessel should keep out of the way of:-
 - a) Any vessel she is overtaking.
 - b) A sailing vessel.
 - c) Vessels and boats fishing.
 - d) Any vessel "not under command".
 - e) Vessels with restricted manoeuvrability.



2. When two power vessels are approaching head on, the principal is to keep to the right.

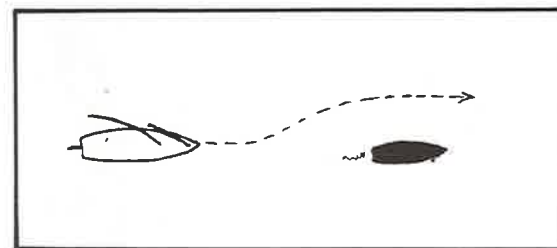


3. When two power vessels are crossing, so as to avoid risk of collision, the vessel which has the other on her own starboard side, keeps out of the way.

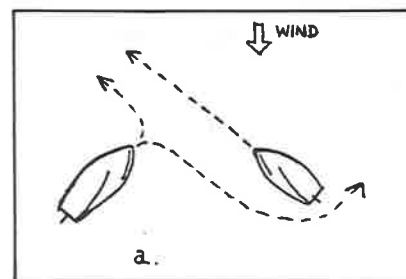


SAILING VESSELS

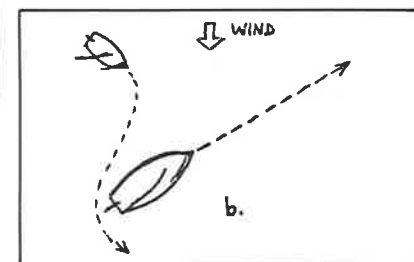
1. A sailing vessel should keep out of the way of:-
 - a) Any vessel she is overtaking.
 - b) Any vessel or boat fishing.
 - c) Any vessel "not under command".
 - d) Vessels with restricted manoeuvrability.



2. When two sailing vessels are approaching one another, so as to avoid risk of collision:-



- a) A vessel with the wind on the port side shall keep out of the way of a vessel which has the wind on the starboard side.
- b) When both vessels have the wind on the same side, the windward vessel keeps clear.



NOTE

For the purposes of the sailing rules the windward side is defined as the opposite side to the mainsail. A vessel with the wind on the port side, unable to determine on which side a windward vessel has her mainsail should give way, e.g. if windward boat is carrying a large Spinnaker which obscures the view of the mainsail.

NARROW CHANNELS

Special Safety Rules:-

- When proceeding along a channel keep well to the starboard side of the channel or fairway.
- Small ships, either sail or power, must NOT impede the passage of larger vessels which are restricted for safe movement by size and draft.
- Fishing vessels must not impede others.
- Anchoring in the channel is forbidden.
- Use caution in any blind bends in the channel.



DISTRESS SIGNALS

There are a number of officially recognised distress signals which are given in the International Regulations for Preventing Collision at Sea. A full list is given in the Coxswain's Badge Section. You should know the most important ones given here.



- A rocket parachute red flare, or a hand held red flare.



- During day-light hours, an orange coloured smoke flare.



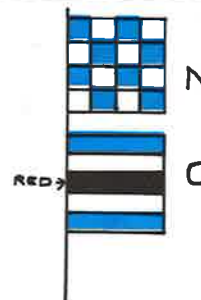
- SOS in Morse Code (.....) made by radio telegraphy or any other form of signalling - light or sound.



- "MAYDAY" signal by radio telephony.



- The International Code of Signal Flags - distress indicated by 'NC'.










- Slowly and repeatedly raising and lowering the arms outstretched to each side.



NOTE - A white flare is used to call attention to your presence, or to answer a distress flare. A white flare itself is not a distress signal.

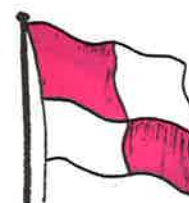
FOG SIGNALS

The following is a list of official fog signals, of which you must have some knowledge. Like the distress signals mentioned above, these will be repeated again in the Coxswain's Badge, when you will be expected to have a more detailed knowledge.


1. A power vessel making way - one prolonged blast every two minutes.  EV. 2 MINS.
2. A power vessel making no way through the water - two prolonged blasts every two minutes.  EV. 2 MINS.
3. A sailing vessel under way, or a vessel not under command, or a vessel restricted in ability to manoeuvre, or a vessel fishing - one long and two short blasts (letter D in Morse) at two minute intervals.  EV. 2 MINS.
4. A vessel at anchor - a bell ringing for five seconds every one minute. If the vessel is longer than 100 metres, the bell should be sounded in the bow of the vessel, and immediately afterwards a gong shall be sounded rapidly for five seconds in the stern. A vessel at anchor may also sound three blasts in succession - short, long, short (letter R in Morse) - to give warning of her position to an approaching vessel.  
5. A pilot vessel on station also sounds four short blasts (letter H in Morse) 
6. A vessel under 12 metres in length is not obliged to give the above signals, but should make some other efficient sound signal at intervals of two minutes. 

DANGER SIGNALS

1. The internationally recognised signal to inform a vessel that she is approaching danger is the letter 'U' in Morse (. . -) by signal lamp or by sound, or by hoisting the International Code Flag for 'U'.



RED/WHITE

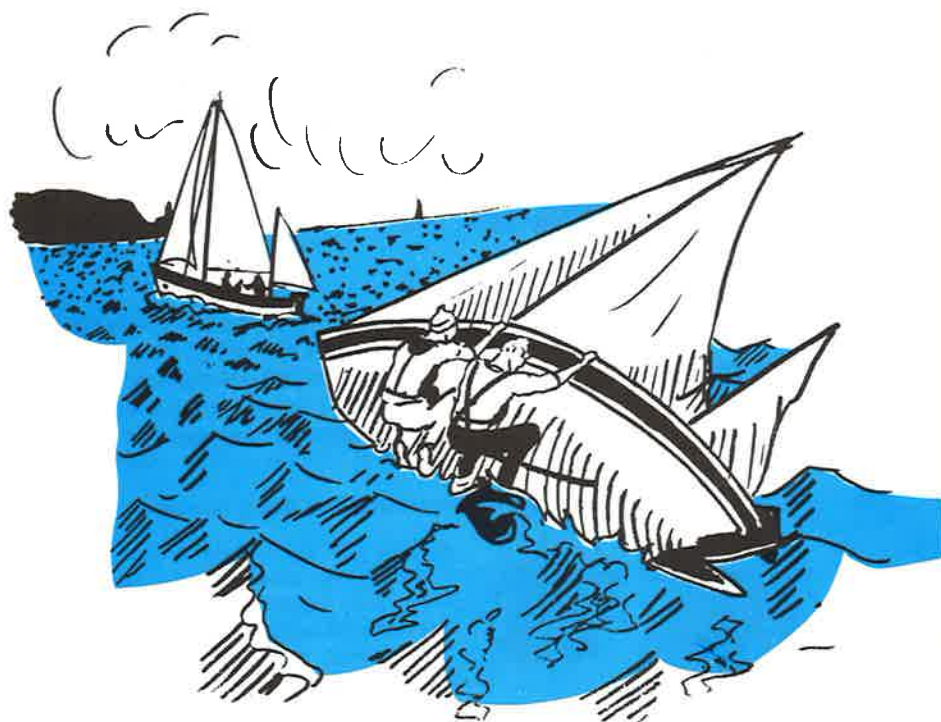
2. In a potential collision situation, the vessel with right of way may sound 5 blasts to call the attention of the other vessel if it seems that the second vessel has not noticed or appreciated the situation. At night a white flare may be used. 
3. On beaches where swimming is dangerous, a red flag is hoisted.
4. Stay clear - diver below.



WHITE/BLUE



4. Understand Capsize Drill



Capsize drill is related mainly to sailing craft, but rowing craft may occasionally capsize.

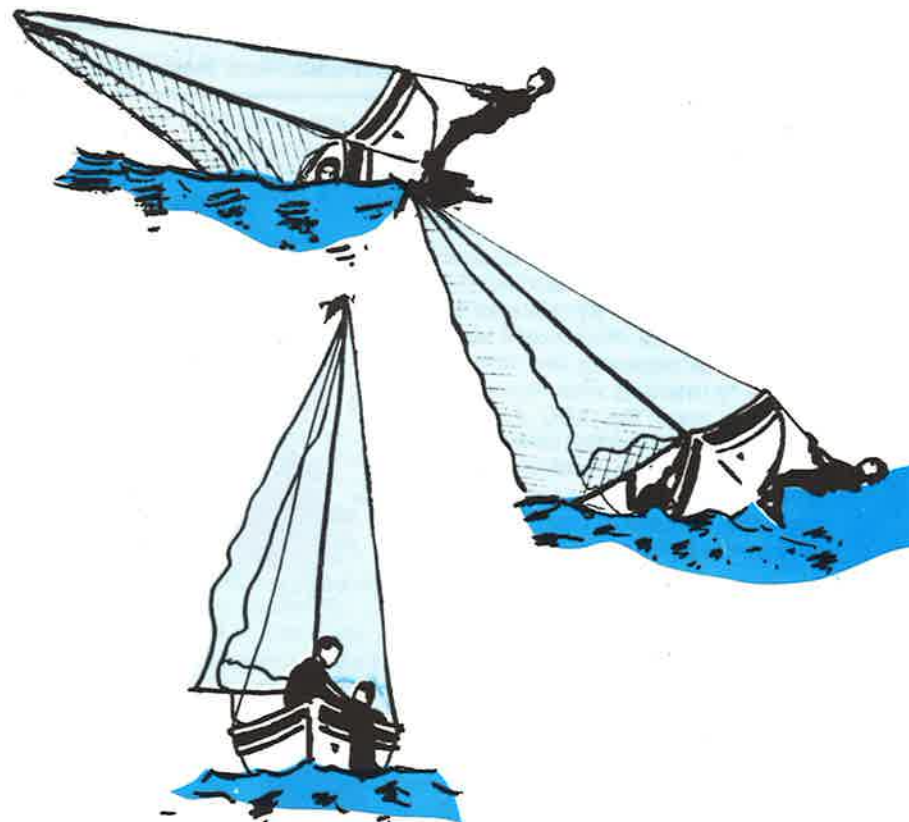
1. Stay with the boat - it is much easier for rescuers to see a boat in the water rather than a swimmer's head.

2. Are all crew present? - is anyone still under the boat?

3. If possible, right the boat. However if a craft has no buoyancy, it may be better to leave it capsized as there will be air trapped underneath and it will float well.



4. Crew members should be roped together or to the boat to prevent anyone drifting away.
5. One person may sit or stand up on capsized boat to signal for help.



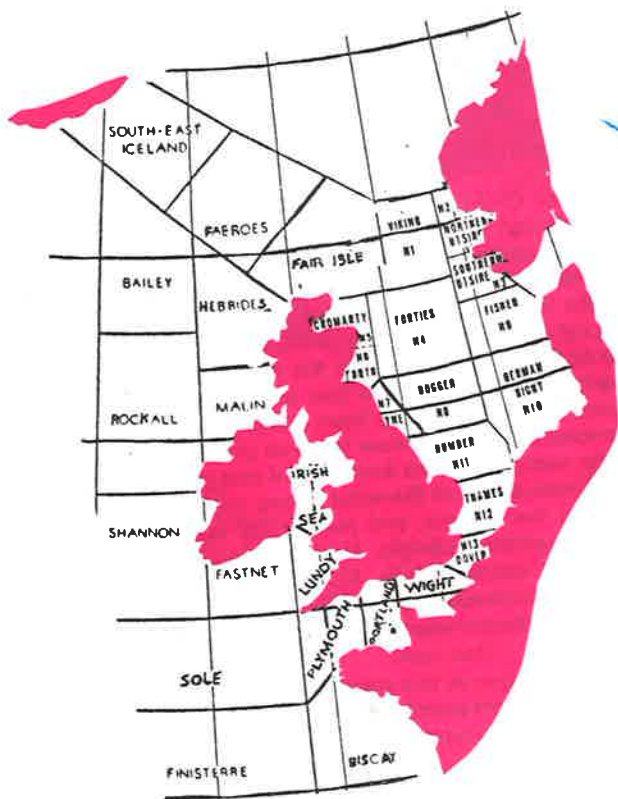
RIGHTING A SAILING CRAFT

The Helmsman must position his crew and arrange for leverage downward on the centre plate and on the upper side of the boat to help right it. The leverage should quickly start the righting process. As the boat starts to come up, the crew member floats into the boat from the opposite side. He is thus 'scooped up' as the boat becomes upright. The crew man helps the Helmsman on board, over the stern. The boat should then be baled out. If the boat has more than two in the crew, the remaining crew member should stay in the water, holding on to the boat at the bow until enough water has been baled out to make her stable. If the top of the centreboard casing is below the level of the water, it may be very difficult to empty the boat, and so the centreboard case may have to be plugged by using a sail bag or even a sail. If the wind is very strong, the mainsail should be lowered by releasing the halyard, and pulling the sail into the boat before trying to bring the capsized craft upright. If a boat cannot be righted, it may be possible to climb onto the upturned hull. At this stage you only need to understand capsize drill, but it is much more useful to experience it in a practical situation, and to practise both as crewman and Helmsman.

Revision of Artificial Respiration at this stage would be a very useful exercise for all Scouts, and particularly some practise at administration of A.R. in the water, and in the cramped situation in a boat.

5.

RTE forecasts are for Irish Coastal waters and the Irish Sea, and the areas are designated by reference to various headlands. You should learn where these headlands are, and so be able to interpret what forecast is for your area. The BBC shipping forecasts use wider sea areas than the RTE forecasts, and therefore will tend to give an average over each area - the actual local forecasts may not be quite as accurate.



RTE Radio 1
0745
1202 (1210 Sundays)
1802
2352

BBC Radio 4
0033
0533
1355
1750

When you are going boating remember that you are most interested in the wind direction and speed. The Beaufort Wind Scale is used to describe wind strength.

This is a very useful way of describing wind strengths and its effects on open waters. The scale is from zero (calm) up to 12 (hurricane). Force 8 is known as Gale Force, but force 6 is often called a **small boat gale**. Here are some details which may help you to identify the wind strength:-

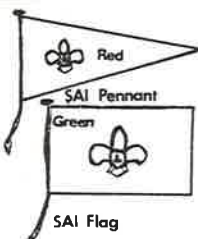
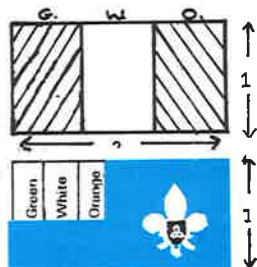
Force	Name	Knots	Description
0	Calm	less than 1	Mirror smooth
1	Light air	1 to 3	Ripples on water
2	Light breeze	4 to 6	Pennant moves. Very small waves
3	Gentle breeze	7 to 10	Light flag extends. Crests on small waves
4	Mod. breeze	11 to 16	Small waves with some white horses
5	Fresh breeze	17 to 21	Moderate waves many white horses
6	Strong breeze	22 to 27	Large waves, white form crests

Force 6 is known as the "Small Boat Gale". You should not normally go out boating if the forecast is for over Force 4, unless accompanied by a very experienced person. There are of course many factors to be taken into account when deciding if it is safe to go boating, and wind strength is only one of these. Wind direction, tide, current, type of boat, and age and experience of crew are also important to consider. Remember that change in direction of tidal current can change the "Sea State" rapidly, even with the wind remaining constant. Wind against tide can make the water surface quite rough.

6. Know how to hoise the correct colours for a Sea Scout Troop, and how to fly the Ensign and other flags correctly afloat.

SEA TRADITIONS

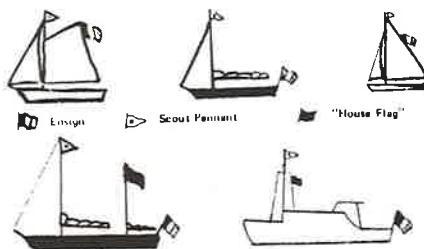
A National Flag at sea is called the "Ensign". The Ensign of Ireland is the Tricolour. However, there is also a special Irish "Yachting Ensign". This special flag is blue in colour, with the insignia the Club or other organisation in the Fly.



Under the Mercantile Marine Act, the Minister for Transport and Power may grant a warrant for such a flag to a club or organisation, and it may then be flown on specified vessels. This special "Ensign" is flown instead of the National Flag - both may not be flown together in the same vessel or from the same mast, or flagpole. The Scout Association of Ireland has a warrant to use such a special Ensign. A special Ensign **must not** be carried on a parade. Sea Scout Troop headquarters and camps may be looked upon as "Land Ships" from the point of view of flag etiquette, and follow the tradition of the sea. On a mast with a gaff, the place of honour where the Ensign should be worn is the peak of the gaff, **not** the mast head. The Scout Pennant

is worn at the mast head. A Troop Flag may be worn at the starboard yard arm, and perhaps the flag or pennant of the Duty Watch, etc., at the port yard arm.

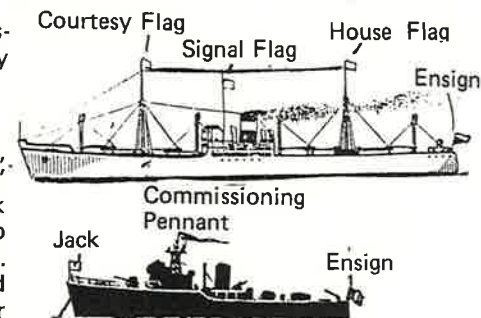
When afloat, the Ensign should be flown from the Ensign Staff astern, which is the the place of honour. In some vessels a large Ensign is worn astern when the vessel is moored or at anchor, and when underway, a smaller Ensign is flown from the peak of the gaff. A sailing vessel when under sail may wear the Ensign at the peak of the gaff (mizzen gaff in vessels of more than one mast). If the vessel is Bermuda rigged, the Ensign may be flown from a point 2/3' way up the leach of the main sail, or from the back-stay or the Ensign Staff.



In yachts and small craft, the Scout Pennant is flown from the main masthead. Any special flag or "House Flag" (e.g. flag of Scout Troop or of some Association such as the Sail Training Association, RNLI., etc) may be flown from the starboard yard arm in a single masted vessel, or from the mizzen masthead in a Ketch or Yawl.

When visiting a foreign port, ships or yachts usually fly the flag of the country being visited at the foremasthead, or on the starboard yard arm. These flags are called **Courtesy Flags**. In Merchant vessels, the **House Flag** (Company Flag) is usually flown from the main masthead.

Warships in commission fly a Commissioning Pennant - this is usually a very long narrow, streamer-like pennant.

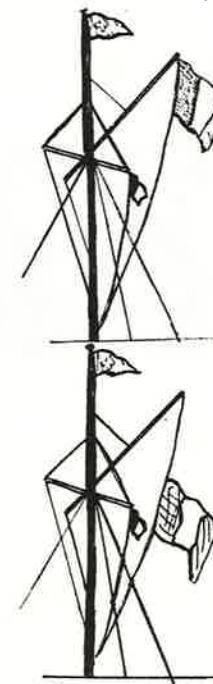


A warship when at anchor or moored, always flies a small flag known as a 'Jack' from the jack staff in the bow. This Jack is always struck as soon as the warship leaves her moorings or weighs anchor. The Irish Jack is a green flag with a gold harp in the centre (same as the Leinster Provincial Flag).

The following are some general guide-lines for hoisting the National Flag or Ensign:-

1. The flag or Ensign should always be hoisted free - it should never be 'broken' from the masthead.
2. Except for special occasions the flag should be flown in the open only between sunrise and sunset.
3. When hoisting the flag, it should be raised briskly, but smoothly to the masthead or peak of gaff, and the top corner of the hoist should be close up. The flag should be lowered slowly and smoothly. Before raising and lowering the flag, the person responsible should ensure that the halyard is clear.

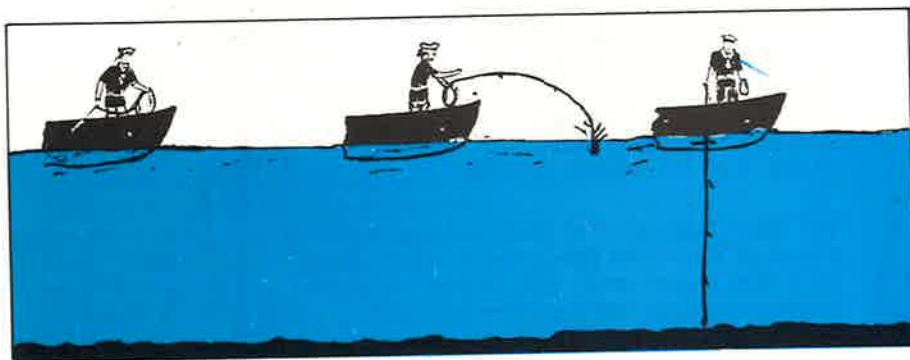
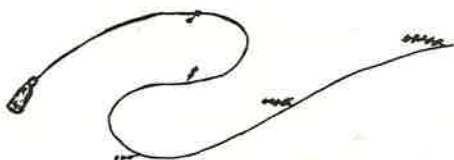
4. The flag is flown at "Half Mast". as a mark of respect for the dead. To fly a flag at half mast, it is first hoisted close up and then slowly lowered to the half mast position. Similarly when the flag is being lowered, it is first raised to the masthead, and then lowered.
5. When the flag is being raised or lowered, Scouts in uniform should salute. If Scouts are present in a body and formally "fell-in", they should be brought to the "Alert", but only the Scout Leaders should salute.
6. The flag should not be allowed to touch the ground, trail in water or become entangled in trees or other obstacles.



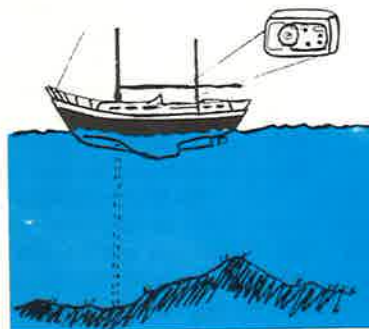
7. Demonstrate how to take Soundings in local Waters

You should learn to take soundings relevant to the local waters and to the craft that you use. In places the use of an oar to find the depth may be the most suitable and in other places a lead-line should be used. It is not necessary to have a full, traditional, 20 fathom lead-line, and a very useful smaller line can be made up for use in shallow waters in a small open boat. Even for a small lead-line, the weight should be adequate to sink rapidly to the sea bed, and should be at least a couple of pounds in weight. The line will be marked in fathom or in meter lengths, starting from the **upper** edge of the lead, giving the "benefit of the lead" to the soundings taken. The marks usually consist of short pieces of rope spliced or woven into the main line, carrying a number of simple thumb knots, equivalent to the number of fathoms or meters.

When heaving the lead from a moving vessel, you should hold the coil of line in one hand and swing the lead from the other in a fore and aft direction, releasing it at the end of a forward swing so that it carries well ahead of the boat. This allows you to take up any slack on the line, and so measure the depth of water when you can feel the lead on the sea bottom, with the line perpendicular below you.



The most modern method of measuring depth is by use of an echo sounder. A sound signal is sent from the bottom of the boat and is reflected back from the sea bed, and received back by the instrument. By timing the transmission of the signal and its reception, and knowing the speed of sound through water, the depth of water may be determined. This calculation is done automatically by the instrument, and the reading in feet, fathoms, or meters is shown on the dial or recorded on a paper scale.



8. Take part in Cleaning and Painting a Boat, and Assist with Repairs to a Boat. Make a Short Splice and Eye Splice.



BOAT MAINTENANCE

This is a very practical requirement, and of course is essential for keeping your Troop's boats in order. In the Boatman Badge you had to understand the maintenance of a boat, and in the Coxswain's Mate you have got to take part in cleaning and painting, and assist with whatever small repairs may be needed. This is a useful contribution to the winter refit and general maintenance of your boats. You will get credits towards the Coxswain's Mate Badge for the work which you do in your ordinary Winter Maintenance Programme. Some Troops have a system whereby a minimum number of hours must be "clocked-in" on work parties in order to qualify for this section. If your Troop does much canoeing, you will find that one of the most important jobs you will learn is fibreglass repair.

Boat cleaning and maintenance may go on throughout the year, but the major maintenance and painting jobs are usually done during the winter. At the end of the boating season, the boat should be taken out of the water and immediately washed down with fresh water, and weed growth scraped off the bottom, mud and dirt washed off and all moveable parts (bottom boards, rudder, oars and spurs) removed and stored indoors). If possible the boat should be stored under cover, or at least upside down. If a tarpaulin cover is put over a boat, it is a good idea to try to keep it raised with some sort of 'ridge pole' and to leave openings, either at bow and stern or under the edges of the tarpaulin for air to circulate around the inside.

When the time comes for work on the boat, all loose pieces of paint or varnish should be removed with scraper, and if the condition of the paint or varnish is poor, may all require to be stripped down to the wood. Be very careful when doing this, and make sure that scouts under your control are not too enthusiastic with sharp instruments, causing damage to the underlying wood. Be very careful about using a blow torch, unless you have been shown how to do this properly. The idea of a blow torch is to burn and soften the layers of paint so that they are scrapped away easily - it is not part of the exercise to burn the timbers of the boat. Do not use a blow torch on a fibre glass craft.

If the condition of paint or varnish is not very good, but not bad enough to be stripped off completely, sand down with some medium rough sand paper first, following with finer sand paper. If the paint or varnish is really in very good condition it may only require a very light sanding down, to 'cut' the surface of the gloss coat, and then is ready for repainting. It is advisable to paint any bare wood with a coat of primer, or in case of varnished boats with a first coat of varnish diluted with white spirit. In the case of a painted boat this will then be followed by one or two undercoats with a very light sanding after each, and then a gloss coat. In the case of a varnished boat, two or three coats of full strength varnish should be applied, with a light sanding down after each coat except the last.

Always make sure that paint brushes are properly cleaned after use, and not allowed to get hard and useless - it is very expensive to have to buy a complete new set of brushes every year.

If you keep your boat on a moorings throughout the summer, you may have to put anti-foul paint under the waterline. This paint contains a poison to keep weed growth down - be careful not to get splashes in your eyes. Always wash your hands well after using anti-foul paint.



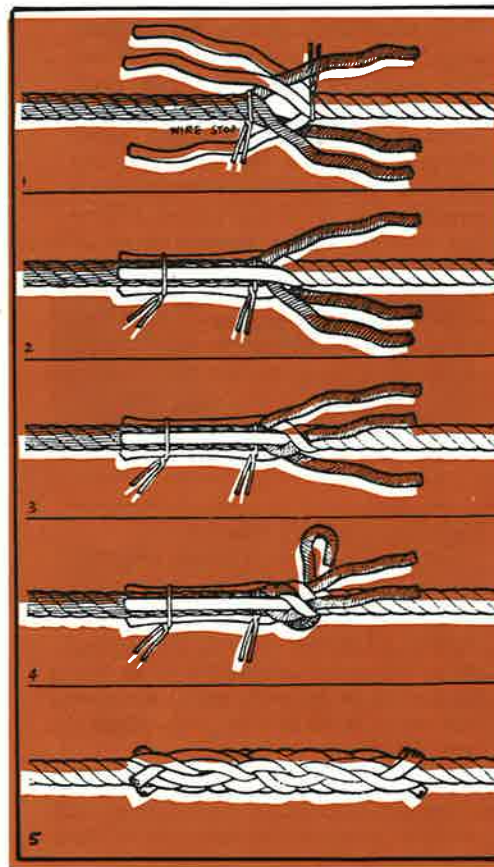
USE TURPENTINE
OR WHITE SPIRIT TO
WASH BRUSHES
AFTER USE



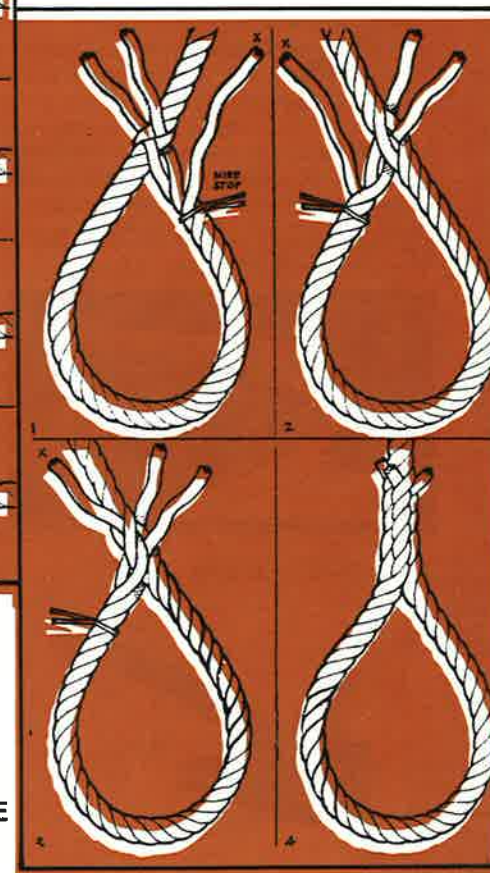
IF YOU WISH TO
USE BRUSH AGAIN
WITH A DIFFERENT
COLOUR OF PAINT,
CLEAN BRUSH
THOROUGHLY WITH
A SPECIAL BRUSH
CLEANER, AND
THEN RINSE
THOROUGHLY IN
CLEAN WATER



Short Splice and Eye Splice are very useful when repairing and maintaining cordage and rigging on a sailing craft. Splicing is an art which cannot be learnt from a book, and requires practical tuition, and practise. Splices should be of a good standard, and if possible relate to the continuing effort of keeping boats and gear in good order. Splices will be used in bow and stern lines, spur and bailer lanyards, halyards, etc.



SHORT SPLICE

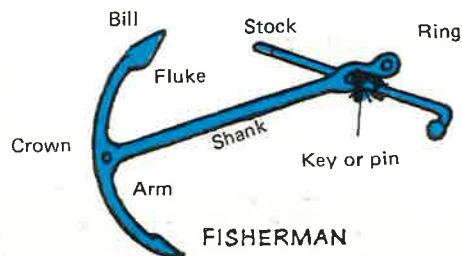


EYE SPLICE

9. Have a knowledge of the many types of Anchors and their uses. Know how to choose a good anchorage.

TYPES OF ANCHORS

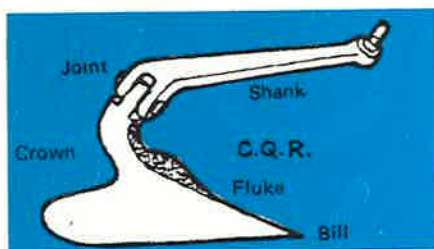
a) Fisherman's Anchor -



This traditional anchor is in many ways the most versatile and probably the most suitable for small craft, although it does not have the same holding power as many of the newer designs. Only one fluke engages and the total area holding in the ground is small. However, it has a great advantage in areas where there is a lot of weed on the ground, as it can penetrate the weed and get a grip where other anchors may not. Before using a Fisherman's Anchor always make sure that the stock is very securely pinned in position, and that

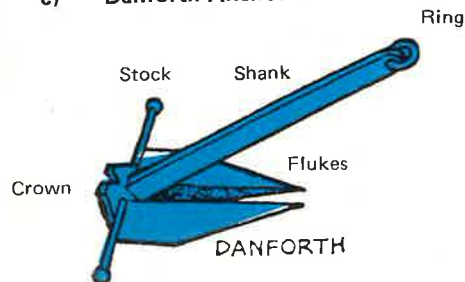
there is no chance that it will fold up. On rocky ground it may get a very good grip in crevasses, but in these circumstances a tripping line should be fitted in case it jams and cannot be retrieved.

b) C.Q.R. Anchor -



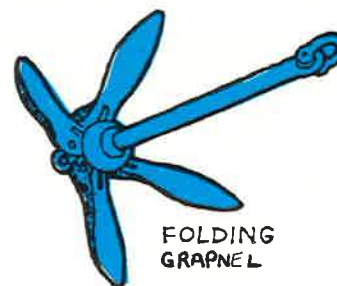
Sometimes called a Ploughshare Anchor it has an efficient hold-for-weight ratio - up to three times more holding power than a Fisherman's Anchor of similar weight. However, it may not easily penetrate into very hard sand or through weed, and may not get a good grip in rock unless it jams itself.

c) Danforth Anchor -



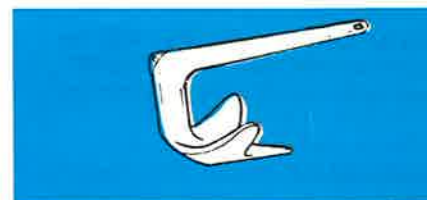
Similar holding power to the C.Q.R. with similar problems as mentioned above. It is a little easier to stow than a C.Q.R. as it lies flat.

d) Grapnel Anchor - (Folding or Fixed)



This is a very useful type of anchor for general use in shallow waters for small boats. However, its efficiency is less than that of a Fisherman's of equal weight. It is easy to stow when folded.

e) Bruce Anchor -

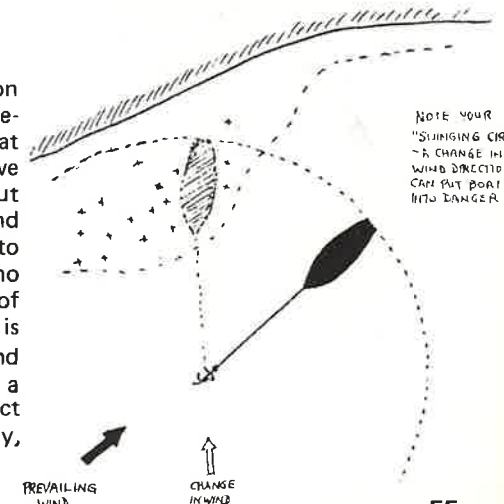


This is a new design first used for anchoring oil rig platforms. Small boat versions are now available. The holding power is better than a C.Q.R. but is really only useful in mud or soft sand, as it cannot penetrate weed or get a grip in hard sand.

As mentioned in the section on Anchors in the Boatman Badge, the amount of cable used should be a minimum of three times the depth of water, and if possible there should be at least two to three fathoms of chain attached to the anchor. In tidal waters, allowances must be made for any tidal rise which may occur when the craft is at anchor, and the amount of anchor cable veered should therefore be at least three times the expected maximum depth of water. In bigger boats and yachts, especially if strong winds are expected, the usual figures for anchor cable are three times the depth of the water for chain and five times the depth for rope.

Choice of an Anchorage

This will depend on the wind direction speed at the time of anchoring, and forecast for the time the vessel will be at anchor. A pleasant well sheltered cove may be ideal in off-shore winds, but could rapidly become uncomfortable and even dangerous if the wind shifted to onshore. In a sailing craft with no auxiliary power, always beware of anchoring in a deep bay from which is may be very difficult to tack if the wind becomes onshore. Never anchor in a fairway or in such a way as to obstruct the passage of craft to or from a quay,

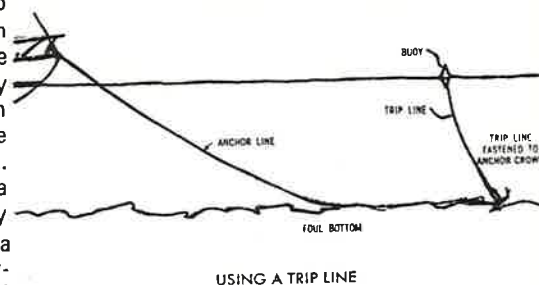


slip, etc. Judge the effect of wind and tide in advance - if your vessel has a deep draft, it may tend to lie more in line with tidal currents (tide rode) rather than lie with the wind (wind rode). This may influence your exact site of anchorage in reference to other craft, dangers, etc. The nature of the bottom is very important. You may not always have much of a choice in the matter, but you should try to anchor where the anchor will get a good grip. Mud gives the best grip, followed by soft sand, then shingle, hard sand and finally rock.

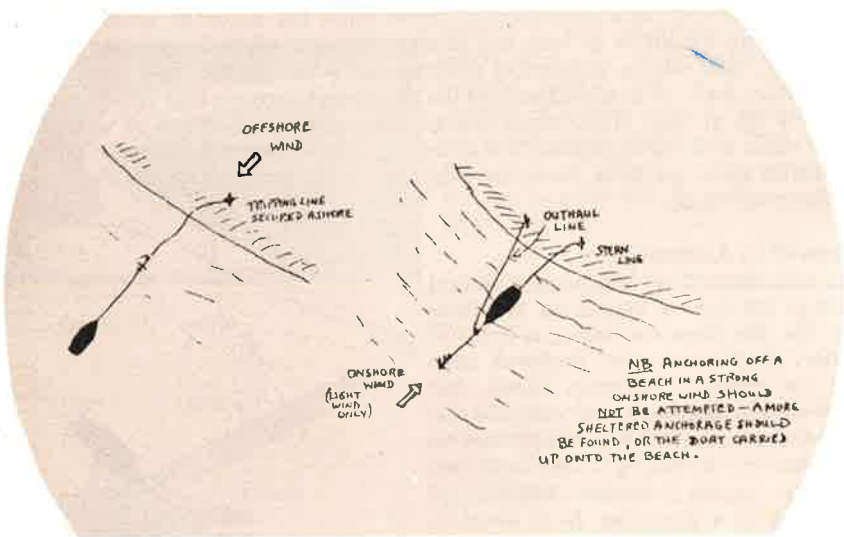
A tripping line should also be used if the ground is littered with old moorings and chains or is rocky.

On an expedition, when camp has been made on a beach, the boat may be anchored off the shore, in a long line, so that it may be used for "hauling off". Various arrangements of anchor and shore lines, and long tripping lines may be used, depending on the tides and wind.

Other points to be considered in choosing an anchorage for a bigger craft depend on whether you wish to go ashore or not, and therefore the proximity of landing slips or access to the shore for small boat or dinghy may be important, as well as the distance from the landing place to any shops or water supply point, etc.



USING A TRIP LINE



10. Act as Coxswain of a Boat's Crew, carry out Basic Manoeuvres, including taking a small boat in tow.

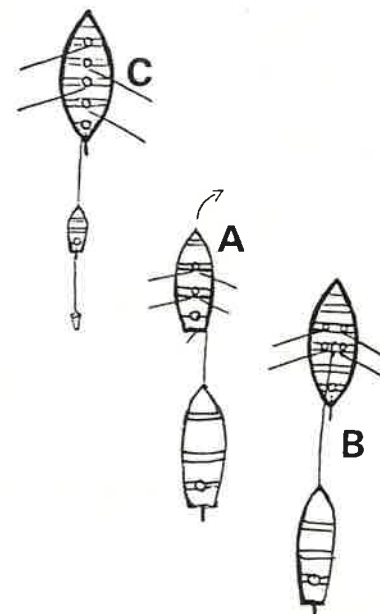
This is a very important test because now you are in charge of a crew as well as of a boat, and learning to take responsibility is a very fundamental part of Scouting. Clear and firm orders are expected, with correction as necessary of any errors the crew may make. There must be no doubt as to who is in charge - the boat can have only one Skipper. Make sure that you check all the correct equipment that should be carried (review the appropriate section in the Boatman Badge) and organise its stowage correctly before leaving the berth or mooring. Make sure that the orders you give are clear and firm, and are given loud enough so that the bowman can hear you. There are a number of different systems of rowing orders, and it does not really matter which you use provided your crew understands the same system. The system of boat drill which is given in Boatman Badge is a reasonably standard form used by most Sea Scouts in Ireland and it is recommended that you follow it. It has developed over the years into a traditional Sea Scout System, and there are certain differences between this system and others which you may see in other books. For instances, tossing oars is done in any four or more oared boat, not just in "double banked" craft. The drill given is that used in a Sea Scout Standard Boat ("B.P. 18") or in a skiff or other craft rowed "Skiff Style". Slight adaptations may be required in other styles of rowing.

11. Take charge of a Boat's Crew in a Rescue Exercise.

You will be expected to manoeuvre your craft accurately, and some improvisation and ingenuity may be required, depending on the type of rescue which is planned for you. It will probably involve taking a boat in tow and perhaps also picking up someone from the water.

TOWING

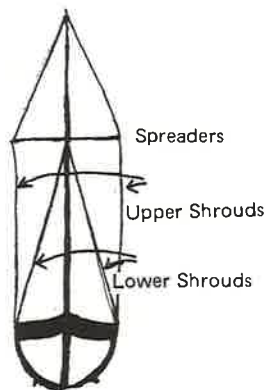
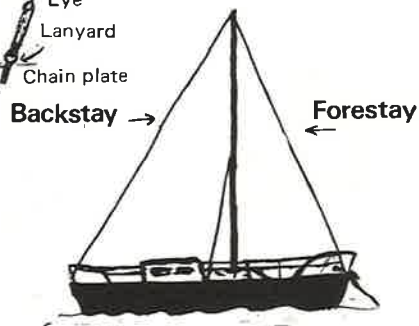
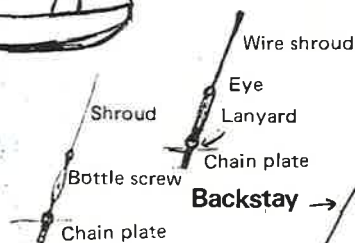
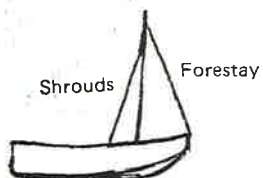
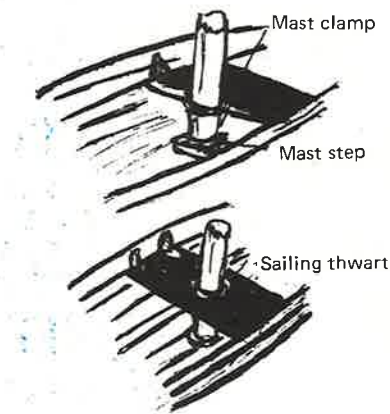
A craft may be towed astern or alongside. In the present context of using a rowing boat as the tug, towing alongside is not practicable. A) When the towed craft is heavy and the towing craft is comparatively light, it may be very difficult to steer if the tow-line is attached to the stern. If the stern cleats are on one or other quarter, then the towing boat will be pulled to that side and considerable use of the rudder may be required to overcome this. B) To try to keep the towed craft under control, particularly if it is tending to yaw or swing a lot, keep the tow-line short, and put one of your crew members aboard the towed craft to steer. C) If there is a strong following wind and the towed craft is very light, some form of sea anchor should be streamed astern to prevent it from overtaking you or striking the stern of your boat.



12. Rig a Sailing Boat and name parts of the gear

When the appropriate, this should include stepping the mast. The knowledge of the parts and gear should be more detailed than that required for the Boatman Badge, and some knowledge of what equipment should be carried should also be known. The boat which is used, should be of a type which is used by the Troop or available to it. It is hoped that most Sea Scout Troops will eventually get one of the Sea Scout Standard Boats (B.P. 18), and that all Sea Scouts will learn how to rig and sail this craft. The standing and running rigging should be checked for any rope wear or weakness, rigging screws or lanyards should be correctly tensioned, and the mast should be perfectly perpendicular or raked slightly aft.

The lower end of the mast (heel) fits into a socket called the **mast step**. Above this, the mast is secured to a thwart or the after end of a short fore-deck by a **mast clamp** or **tabernacle**. Sometimes the mast may pass through a hole in a thwart which is then known as a **sailing thwart**. Support is given to the mast by the **standing rigging** which includes all the ropes which are fitted permanently to the mast and which do not normally move. On a small craft the standing rigging usually consists of a **forestay** and **shrouds**. These are usually made of wire and at the lower end include a **bottle screw** or **lanyard** to adjust the tension. If the mast is very tall, the shrouds may be spread outwards on **cross-trees** or **spreaders** in order to give better sideways support to the mast. The shrouds are also brought slightly aft to brace the mast, and in some larger sailing vessels a **backstay** leads from the mast to the stern.



In a sailing boat the function of a mast is to support sails. Sails take their names from their position on a craft, and from their shape. In the old sailing ships of former days, the sails were rectangular and were mounted on yards, which ran across the ship. These vessels were said to be 'Square Rigged'. Most sailing vessels now a days are 'Fore and Aft Rigged', sails being hoisted in a line before and abaft the mast, this arrangement being more efficient for working to windward.

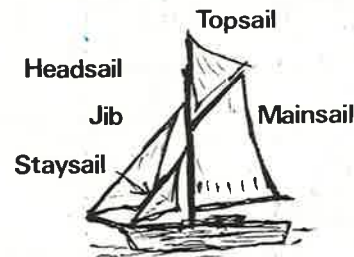


FORE and AFT RIGGED



SQUARE RIGGED

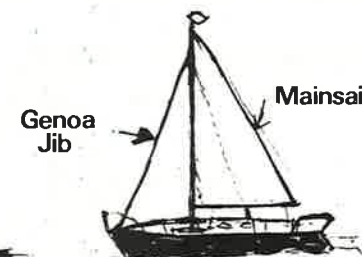
A **head sail** is any sail set before the mast on a single masted vessel or before the foremast where there is more than one. Head sails are always triangular in shape. In small boats the head sail is usually called the **jib**. Where there are two head sails, the inner one is usually called the **staysail**. A very large jib which reaches abaft the mast, overlapping the **mainsail** to a certain extent is known as '**Genoa**



GAFF RIG



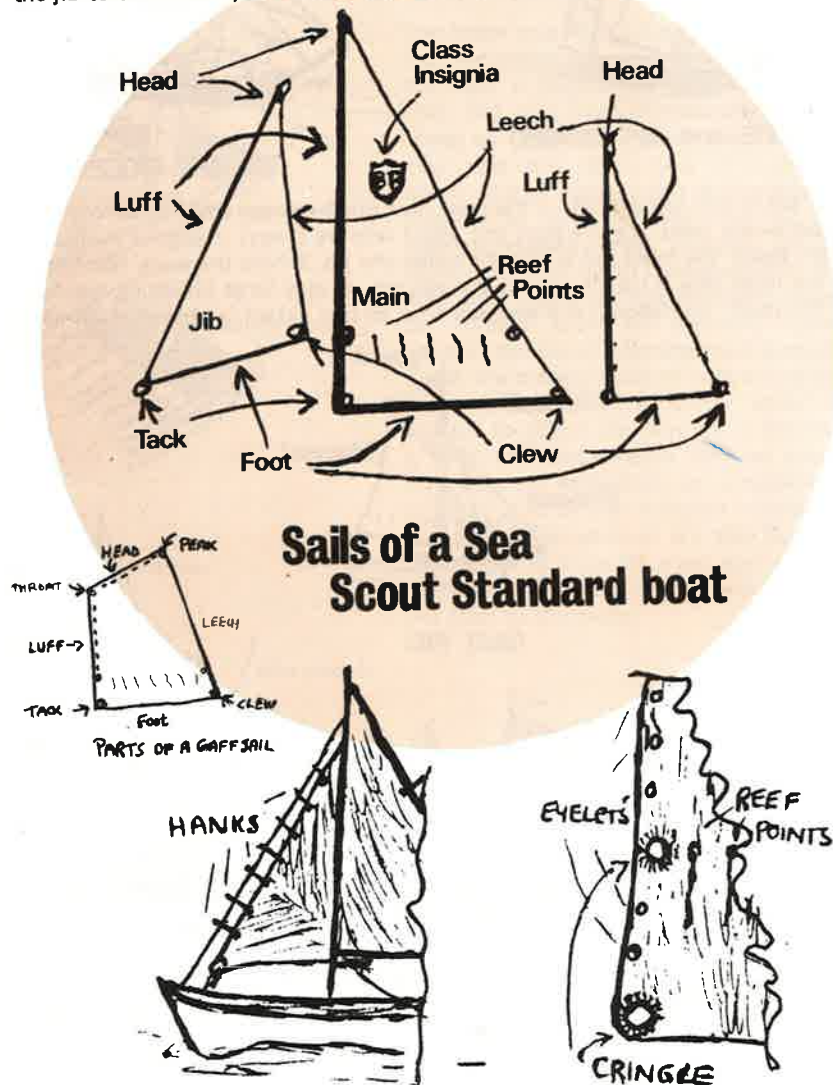
SPINNAKER



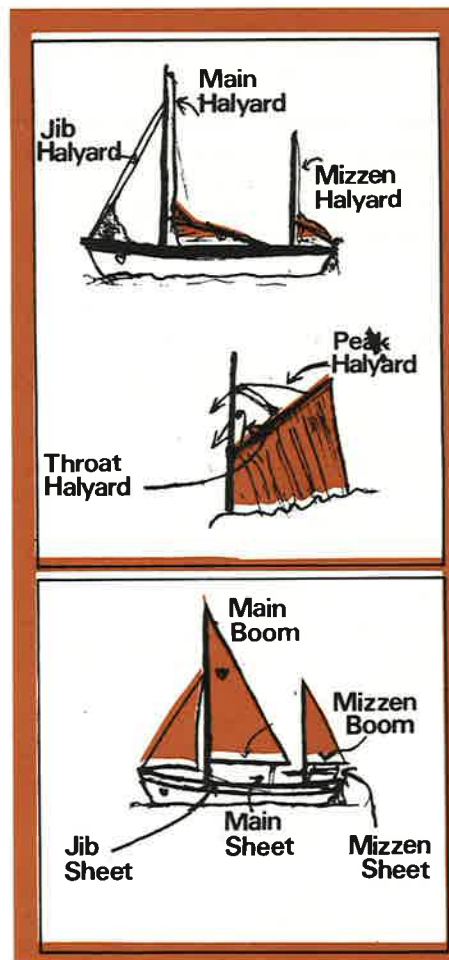
BERMUDA RIG

Jib'. Another sail which is often set when the wind is abaft the beam is large and balloon-like, known as a **Spinnaker**. The mainsail may be either triangular (**Bermuda Rig**) or four sided (**Gaff Rig**). Each edge and corner of a sail has its own name, and there are other names attached to different appendages of a sail.

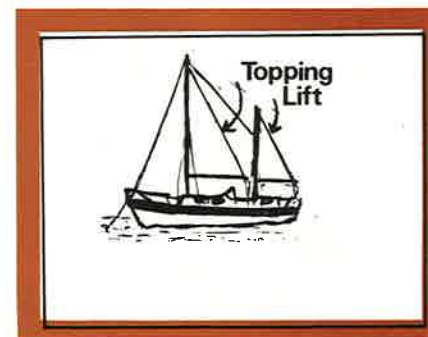
The main names are given in the diagrams. Sometimes sails have two or three rows of short lengths of line fixed to both sides of the sail in its lower part, running parallel with the lower edge of the sail. These are called **reef points** and are used for reducing the area of sail in strong wind (reefing). Most modern sails are made of terylene or some other man-made material. Canvas or cotton sails are now very rare. A bolt rope may be sewn in the edges of an old canvas sail, and always on the port side. Lacing eyelets are small metal eyelets along the edge of a sail to take the lacing for attachment to the mast and spars. The luff of the mainsail may be attached to the mast by means of lacing, or metal slides running in a track on the mast, or a 'luff rope' running up in a groove in the mast. Cringles are large metal rings or eyes fixed into the material at the corner of the sail or at both ends of a line of reef points. The clips used to attach the luff of the jib to the forestay are called 'hanks'.



Sails of a Sea Scout Standard boat



Running rigging includes all ropes that move. A 'Halyard' is a rope which hoists a sail up to its position, and takes its name from the sail, e.g. jib halyard. If a vessel is Bermuda Rigged, the mainsail will be triangular and therefore there will be only one halyard attached to its head. However, if a vessel is gaff rigged, the main sail will be four sided, and the upper edge of the sail will be secured to a wooden spar called a gaff. In this case it will have two halyards, one to hoist the throat of the gaff and the other to hoist the peak - these are known as **throat** and **peak halyards**. Ropes which control the movements of sails are known as **sheets**. In larger sailing craft there may be a rope running through a sheave (pulley wheel) at the masthead and down to the aft end of the boom, known as the '**topping lift**'. The **boom** is a spar to which the foot of the sail is attached.



The **Gunter Rig** is similar to the Bermuda in that the mainsail is triangular, but the upper part of the luff of the sail is laced to a gaff which is hoisted perpendicularly, in line with the mast, and not at an angle to it. This type of rigging is seen on a number of modern dinghies. The mast and the spars are all short and can fit inside the boat when being trailed or stored.

13. Show that you are an efficient member of a sailing crew and be able to take helm, and sail the boat on all points of the wind, including getting underway and coming alongside.

Like most practical activities, sailing a boat cannot be learnt from a book and you will require practical experience for Coxswain's Mate. You will not be expected to sail a boat independently, but to take the helm under supervision. Some knowledge of sailing terms is required and the following may be helpful:

Close Hauled -



Pinching -

The sails are sheeted in well and the boat is sailing as close as possible to the direction from which the wind is blowing. It is of course impossible for a sailing boat to sail directly into the wind. The average boat will sail about 45 to 50 degrees to the true direction of the wind. If you turn the bow closer to the wind than this, the sails will cease to draw and will start shaking. This is known as 'luffing-up'. If you turn the boat head to wind, she will stop, and the sails will shake and flutter in line with the boat. This is known as 'in irons'.

Means trying to sail too closely to the wind so that the sails do not fill properly. You will notice that the luff of a sail will flutter and tremble. 'Pinching' the boat too much may end by being 'in irons'.

Tacking -

In order to make progress to windward a sailing boat must tack, or go about, making a series of zig-zag lines up against the wind. 'Tacking' means going from one tack to the opposite tack by turning bow through the wind.

Port/starboard Tacks -

These mean that the wind is on the port or starboard side of your boat.

Beating -

Is a word used to describe a boat working close-hauled to windward in series of tacks.

Reaching -

This means that a boat is sailing free, with the wind on the beam. The boat may also be described as being 'on a reach'.

A Broad Reach -

Is when the wind is abaft the beam.

Wearing -

A boat 'wears' around when she goes from one tack to the other with the stern to the wind.

Gybe -



This is when the mainsail and its boom go from one side of the boat to the other when the wind is astern.

'Wearing' around means that a 'gybe' must be performed at some stage.

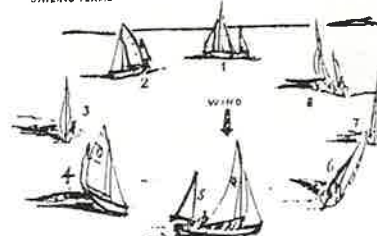
Running -

Is used to describe when the wind is aft.

Goose Winging -

Means to run before the wind with the mainsail and jib out on opposite sides.

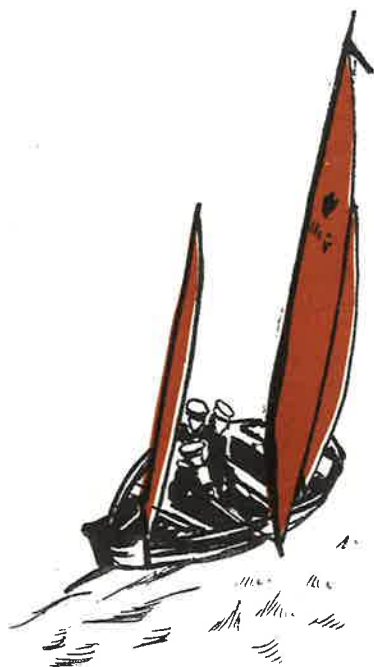
SAILING TERMS



1. Reaching on the starboard tack.
2. Running on the starboard gybe.
3. Gybing from the starboard to the port gybe.
4. Running on the port gybe.
5. Reaching on the port tack.
6. Sailing - close hauled on the port tack.
7. Going about from the port to the starboard tack.
8. Sailing close hauled on the starboard tack.

14. Form part of a crew for a water borne expedition of not less than twenty-four hours duration, to include a night spent in camp.

This expedition may be by canoe or in a pulling, sailing or motor craft. The leader of this expedition would normally be a more senior scout or watch leader who is completing his Coxswain Badge. If possible all members of the crew should have some jobs to do in the organisation and execution of the expedition. It will often add interest to the expedition if there is some purpose attached to it - certain information to be obtained, tasks to be performed, etc. The keeping of a log with photographic or perhaps tape recorded evidence will add much to the interest and value of the exercise. The leader will, of course be responsible for most of the planning, but all the crew should be involved, and there should be a spread of responsibility. Different members should be in charge of boat stores, safety equipment, food, navigation, etc. In a properly planned expedition, many of the Scouts will be using the experience not only as credit for the Coxswain's Mate Badge, but also to help towards other badges. For instances, the person in charge of cooking may be working for the Camp Cook badge. The person who deals with navigation may be using the journey for credit for the Navigator Badge, or for the Pilot Badge. Those who are working for the Explorer Scout may use it as one of the expeditions in part three - "Exploring" - of that Badge.



THE BADGE

When you have completed all the requirements, the Badge will be presented to you, and replaces the Boatman's Badge on the left arm.



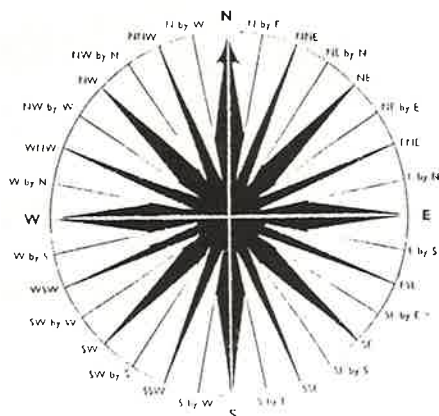
SEAMANSHIP COMPETITION

The National Senior Seamanship Competition for the Sir William Fry Cup is one of the most important competitions in the Sea Scout calendar. It usually takes place early in September each year and is open to teams of six Sea Scouts, under 17 years old on 1st June of that year. The competition is based on the requirements of the Coxswain's Mate Badge. All Sea Scout Troops may enter - why not try?

Although knowledge of the compass is not essential for the Coxswain's Mate Badge, it is advised that some compass work afloat should be started at this stage. You have already become familiar with the use of a map and compass ashore, as part of your Frontier Scout Targets. Some knowledge of the compass is required for the Fry Cup Competition and so this section is included here.

THE COMPASS

From ancient times man has used various names to describe different directions. We take the North as the main point of direction, and the other main directions are derived from it - South, East and West. These four points are known as the "Cardinal Points". In between the cardinal points are the "Half Cardinal" - North-east (NE), South-east (SE), South-west (SW) and North-west (NW). Inserted between the cardinals and half cardinals are the intermediate or three letter points. In the intervening gaps are the sixteen "by" points. This gives a total of 32 named points of the compass. The use of names of points of the compass is very restricted in modern times - usually only the cardinal or half cardinal points, or occasionally intermediate points will be used in practice. Much greater accuracy is obtained by using degrees. Since it consists of a circle, the compass is divided into 360 degrees, starting at the North, and so very accurate compass bearings or directions may be given by using degrees. Each point of the compass is equivalent to $11\frac{1}{4}$ degrees.



The compass was invented when people discovered that a piece of magnetised iron when suspended or balanced would point towards the North. In fact, it does not point towards the True North, but towards the "Magnetic North". The Magnetic North pole lies in the arctic regions of Canada, and moves slightly each year. In Ireland, therefore, the compass needle will point slightly to the west of True North. This difference in the direction of True North and the direction that the compass needle points is known as the "Magnetic Variation". This variation will change in different parts of the world and it may also change slowly with time. Charts or maps will give the local magnetic variation for the year in which they were printed. For practical purposes it may be assumed that the magnetic variation anywhere in Ireland or its coastal waters at present is approximately 10 degrees west of True North.

Because the essential part of a compass is a magnetic needle, you must be very careful not to allow any other magnet, or any iron or steel near a compass when it is being used, as this will cause the needle to be deflected away from its proper position pointing towards the magnetic north. Any local interference with the magnetic needle by some other magnetic force is known as "Compass Deviation". In a wooden or fibreglass boat there should be no difficulty about mounting a compass clear of magnetic influences, if it is kept well away from an engine or any metal fittings. Be careful not to leave a jack knife, box of tools, tins of beans, or any such objects near the compass.

There are many different forms of compass, but the simplest one which you will learn to use in Scouting is probably the "Silva" compass. This is very useful for ordinary compass work on the land, and for orienteering. It can also be useful for small boatwork if it is taped down on one of the thwarts in front of the helmsman, so that the central line and arrow are directly on the centre line of boat. In order to steer a compass course you should first adjust the movable ring on the compass so that the correct figure in degrees is in line with the centre line, and then so steer the boat that the compass needle stays in line with the north point on the moveable ring. There are special marine compasses, in which the needle is mounted underneath a card, and the whole card moves. In this case there will be "Lubber's Line", and the compass should be so mounted that this line is in the centre fore-and-aft line of the boat.

In order to steer a compass course, point the boat so that the correct figure for the course as marked on compass card comes opposite the Lubber's Line.

There are special hand compasses made which have sighting devices so that you can take compass bearings of other objects, and thereby help to find out your position. Compass bearings and compass courses are always given in degrees, using three figures. If a bearing is under 100 degrees, a 0 is put in front of it, and when speaking, the figures are given independently - forty five degrees will be written as 045 degrees, and will be spoken as "zero-four-five-degrees". One hundred and eighty degrees will be written as 180, and spoken as "one-eight-zero-degrees".

Degree equivalents and opposite points:-

N (000°)	NE (045°)	E (090°)	SE (135°)
S (180°)	SW (225°)	W (270°)	NW (315°)

Other Training and Activities

As was the case during your Boatman Badge training, you will be undertaking many other activities and training when you are working for the Coxswain's Mate Badge. The rules state that you must have the 'Frontier Scout' before you can get the Coxswain's Mate, but this does not mean that you cannot work for the two together. You do not have to obtain the Frontier Scout Badge before starting on your Coxswain's Mate work. Indeed, as you can see from some of the things already noted, you can work for some parts simultaneously. Most Scouts will find that they will complete the Frontier Scout Badge before the Coxswain's Mate.

During the time of the Coxswain's Mate training, groups which are active in canoeing should be able to increase canoe experience up the level of Canoeist Proficiency Badge.

If your Troop is lucky enough to have access to outboard or inboard power craft, you will probably also be able to gain some experience in their management, and perhaps be able to start working towards the Power Helmsman Badge. You may also start to do a little bit of basic chart work, with some compass work afloat.

EXPLORER SCOUT

GENERAL SCOUT TRAINING

Information on the Explorer Scout Badge can be found in the Explorer Scout Target Book.



CANOEIST

1. Swim 50 meters in clothing suitable for canoeing including plimsolls, but without the use of a life jacket or buoyancy aid.
2. Know the Canoe Safety Rules.
3. Have a general knowledge of canoes and canoe equipment including life jackets and buoyancy aids. Be able to make a simple repair.
4. Demonstrate in use the following knots: bowline, round turn and two half hitches, double sheet bend, fisherman's bend. Be able to whip the end of a rope and know how to treat the end of a man-made fibre rope.
5. Demonstrate how to launch a canoe and know how to enter it and get out of it correctly from a slipway, beach or river bank, and water of knee depth.
6. Capsize a canoe while wearing a spray cover, bring to the shore without flooding and with paddles, empty and relaunch.

7. Demonstrate the correct paddling techniques by paddling around a course chosen by the examiner. Demonstrate backpaddling, stern rudder, draw stroke, sculling, forward and reverse sweep strokes and slap support.

8. Demonstrate both a "H" and another type of rescue, both as rescuer and as person rescued.

9. Know how to load and secure equipment and stores in a canoe for a short expedition, ensuring that the equipment remains dry.

10 Fulfil one of the following:-

a) Take part in a weekend canoe camping expedition of at least 15 miles. All equipment to be carried in the craft, and a high standard of camping must be attained.

b) Take part in and complete at least 2 competitive canoeing events (Irish Canoe Union recognised).

c) Attend a weekend training course on some special aspect of canoeing, (e.g. white water surfing etc.).

Note - The above tests are designed for kayaks. If other canoes are to be used, application for alternative tests should be made to National Headquarters.

Canoeist Badge

Requirements completed and badge awarded to

.....

SL: Date:

BOATING RULES

SCOUT: The term SCOUT refers to members of all sections of the movement, including Scouters. The term 'Boats' and 'Boating' include the use of canoes, except where otherwise made clear.

SCOUTERS

RESPONSIBILITY: Before allowing a SCOUT to take part in any boating activity, the Scouter-in-charge must consider the age, experience and reliability of the SCOUT, and the ability and experience of himself or any other person in charge of any part of the activity. The Scouter should always take whatever precautions a prudent parent would observe for the safety of his/her own sons/daughters.

BASIC RULES

1. All person in charge of boating must know and understand these Boating Rules, and also any local Rules and Warnings issued by Harbour or Navigation or other Local Authorities or by a local Sea Scout Committee relating to the waters concerned.
2. All persons in charge of boating must consider the weather conditions, existing and forecast before undertaking any activity afloat.
3. All persons in charge of boating must inform themselves of the details of tides, currents, hazards and dangers which may be found in the waters concerned.
4. **Swimming** - NO SCOUT may undertake boating activities unless he can swim at least 50 yards in shirt, shorts and stockings and thereafter remain afloat for 2 minutes.
5. **Dangerous Clothing** - Knee or thigh boots or other dangerous clothing must not be worn in boats.
6. **Lifejackets** - An efficient lifejacket or buoyancy aid must be carried for each person in the boat, and these must be worn when operating in low visibility, rough weather, or broken water. Lifejackets or buoyancy aids must be worn at all times in open sailing craft, or canoes. In fully decked sailing craft, lifejackets need be worn only when ordered by the person in charge of the craft. When canoeing outside 'Enclosed Waters', lifejackets, rather than buoyancy aids must be worn.

NOTES

- a) Lifejackets must conform to B.S.I. specifications of 13 lbs. of permanent buoyancy, inflatable to 35 lbs buoyancy.

- b) Buoyancy aids must conform to S.B.B.N.F specifications, or equivalent, and those with a collar are preferred.
 - c) For canoeing in 'Enclosed Waters', buoyancy aids specially designed to I.C.F. specifications are satisfactory.
 - d) Before each event the Scouter-in-charge must check each lifejacket and buoyancy aid for buoyancy and general condition, including lacing or straps. He must ensure that lifejackets and buoyancy aids are worn and securely fastened.
 - e) Lifejackets and Buoyancy Aids must be tested twice a year as detailed in 'Lifejackets and Buoyancy Aids', where details of types and specifications will also be found (see 'Scout Leaders' Handbook).
7. **Safety Harnesses** must be worn in fully decked sailing or motor craft by all those on deck at night or in rough weather.
 8. **Lights:** lights must be carried when operations may not be complete before dark. Small crafts in darkness must have a white light for display to prevent collision. Vessels under power, and larger sailing craft, require the regulation white, green and red lights. (Regulations for preventing collisions at sea).
 9. **CHARGE CERTIFICATES:** Any person in charge of a boat must hold a Charge Certificate for the type of boat and area of water in question. These certificates are issued by the Sea Scout Advisory Panel. Certificates are available for rowing, sailing and power craft, and canoes, in different categories of water. When a craft is in charge of a person not a member of the Scout Association of Ireland, a Charge Certificate will not be required, however, it is the responsibility of the Scouter-in-Charge to satisfy himself that such a person has the necessary knowledge, skill and experience, before allowing SCOUTS to sail with him.

10. **BOAT CERTIFICATES:** Any boat owned by, or on long term loan to, a Scout Group must be covered by a Boat Certificate. These are valid until 31st March after the date of issued. Boat must then be re-examined before further activities are undertaken. Certificates are issued by the Sea Scout Advisory Panel on the recommendation of examiners appointed by the panel. In respect of boats, other than the above, the Scouter must satisfy himself that the boat is seaworthy for the purpose for which it is to be used. In all cases he must ensure that the boat carries all necessary equipment, that it is not overloaded, and that it is stowed so as not to hinder its free working.

11. **Classifications of Waters:** Boating waters are divided into 5 different categories, and this classification is closely linked with the Charge Certificate system.

- a) **Enclosed Safe Waters** - suitable for basic instruction and practice. Elementary Charge Certificate required. Limits of the area to be laid down by the Scouter-in-charge, and must lie within the ordinary 'Restricted Waters' of the Group. The area designated as 'Enclosed Safe Waters' for one type of craft (e.g. canoes) need not necessarily coincide with that for another type. (e.g. sailing craft).
- b) **Restricted Waters** - suitable for more advanced instruction and practice. Limits of the area are laid down for each group by the Sea Scout Advisory Panel, in consultation with the Group and local experts. SCOUTS should NOT boat outside this area without an appropriately qualified Adult Leader. An Intermediate Charge Certificate is required here.
- c) **Day Cruising Waters** - suitable for day cruises and expeditions, and require an Advanced Charge Certificate.
- d) **Coastal** - require special Cruising Charge Certificates.
- e) **Offshore** - require special Cruising Charge Certificates.

CANOEING

There are obvious differences between canoeing and other forms of boating, and the above Rules do not cover the safety aspect of canoeing satisfactorily. The following extra rules are therefore required in addition.

12. SCOUTS must not canoe except in groups of at least 3 canoes.
13. **Enclosed Waters:** All rivers up to International Grade 3, canals and other designated areas are termed Enclosed Waters.
14. **Winter Canoeing:** Except in Enclosed Waters, no canoeing is to take place between 15th October and 1st April. No deviation from this rule is allowed without the permission of the District Commissioner or person or body authorised by him.
15. **Condition of Canoes:** Boat certificates are not required for canoes. The Scouter-in-Charge must, before each activity, check each canoe for soundness of hull and deck, securely fixed and adequate buoyancy, and handgrips, lines or bow and stern loops. **The provision of effective handholds at bow and stern is essential.**

16. **Rescue Craft:** For all competitive canoe events outside 'Enclosed Waters' suitable powered rescue craft must be provided. (An inflatable would be ideal). In other non-competitive activities the Scouter-in-Charge should consider the advisability of providing rescue craft, bearing in mind the weather conditions, and experience of participants. Where a suitable rescue craft is available, and in close company, the general rule concerning groups of at least 3 canoes may be relaxed at the discretion of the Scouter-in-Charge.

17. **Competitive Events:** All competitive canoe events must be notified at least seven days in advance to the Secretary, Canoe Sub Committee at N.H.Q., and the District Commissioner. Where appropriate, Harbour or River Authorities should also be notified. Effective communications must be established between all the organisers and marshals, and in no circumstances may any of these officials participate in the event. The chief organiser must be in effective control at all times.

CRUISING

Extended cruising, or cruise-camping, outside the normally recognised Day Cruising Waters of the Group require a Coastal or a Yachtmaster's Certificate. Even day cruising must be properly planned and organised, and unexpected eventualities guarded against. These extra rules apply to Cruising.

18. The Scouter-in-Charge must make put a provisional Sailing Plan beforehand, and obtain the permission of the District Commissioner, or other person or body appointed by him for the purpose (this does not apply to cruises or expeditions within the 'Day Cruising Area').
19. The Scouter-in-Charge must run through a carefully prepared check-list before setting out on a cruise, and ensure that the correct standard, spare and emergency gear appropriate for the particular craft and cruise is all aboard and correctly stowed.
20. The Scouter-in-Charge must consider with particular care the age, experience and reliability of the SCOUTS concerned, and also the age, ability and experience on waters concerned, of himself, or of any other person who will be in charge of any part of the proposed activity. He should make sure that the parents of all SCOUTS taking part are fully briefed on the pain of the cruise.

21. Immediately before setting off, the local Harbourmaster or Gardai, or authorised Scout official or contact man, must be informed. Similarly, return to home port or completion of the cruise must likewise be reported. It may be advisable to report progress during the cruise, particularly if changes have to be made in the Cruising Plan.

22. Distress signals - 2 hand flares and 2 smoke signals - must be carried.

23. The part must include 2 competent persons over 17 years of age, of whom the Skipper may be one.

24. Where necessary, the Scout Personal Accident Insurance, and Scouters' Indemnity Policies must be extended to cover the cruise.

RELAXATIONS

Under certain circumstances Rules 4 and 9 may be relaxed at the discretion of the Scouter-in-Charge. Each relaxation of a rule must be a deliberate decision taken at the time, and valid for that particular activity, time and circumstance. No such relaxation should be allowed to become a 'blanket' relaxation or to be seen as setting a precedent. If there is no person present who is competent to relax a rule, then the rule must stand. A 'competent person' would be an adult Leader with at least an Intermediate Charge Certificate.

Rule 4 - Swimming - this rule may be relaxed and permission given to a non-swimmer to go boating in 'Safe Enclosed Waters', provided that he wears a lifejacket, and the Scouter-in-Charge takes into account the type of boat, reliability and skill of the person in charge, and the weather conditions prevailing. **This rule must never be relaxed for canoeing.**

Rule 9 - Charge Certificates - In 'Enclosed Safe Waters', and in 'Restricted Waters', this Rule may be relaxed for training purposes, provided that a competent Scouter or Instructor is nearby, or sailing in company, and is in effective control of the activity.

RESTRICTIONS

A Scouter may at any time restrict the area of operation of SCOUT's Charge Certificate, until he feels that the SCOUT has the necessary experience and self-confidence to operate throughout the area in all weathers.

GENERAL

In all cases, Scouters should ensure that boats carry all the necessary equipment, that it is not overloaded, and that its appearance will not bring discredit to the Group to the Movement.

EXPLANATORY NOTES ON THE CHARGE CERTIFICATE SYSTEM

The Scout Association of Ireland issues Certificates to appropriately qualified, competent persons to take charge of boats of various classes, or canoes, in different types of waters. Charge Certificates are available in three different grades - Elementary, Intermediate, Advance - and may be issued for rowing, sailing, power boating or canoeing.

Elementary Certificates

Elementary Certificates are intended for Scouts of twelve to thirteen years of age, and signify that the holder has a level of competence to look after himself in a specified small craft or canoe under ideal weather conditions, and within very strictly defined limits - "Enclosed safe waters". The canoeing Elementary Certificate also means that the Scout may paddle in "restricted waters" and Grade 1 and Grade 2 rivers when accompanied by a person with an Intermediate or an Advance Certificate.

Intermediate Certificates

Intermediate Certificates are intended for Watch/Patrol Leaders, fourteen to seventeen years of age, and adult leaders with limited experience, and signify that the holder is competent to take charge of a boat and crew, or of a small group of canoes, in wider areas of water which have been defined for each group i.e. "restricted waters". The possessor of a canoe Intermediate Certificate may also paddle in "day cruising waters" and "open waters" and Grade 3 rivers, when accompanied by a person with an Advance Certificate.

Advance Certificates

Advance Certificates are intended for adult leaders and more senior Venture Scouts, and signify that the holder is competent to take charge of a craft and crew in "day cruising waters" or on Grade 3 rivers, when the other canoeists hold Intermediate Certificates.

Instructor Ratings

Are additional qualifications available to those with Advance Certificates.

Charge Certificates for Cruising

These may be obtained in sailing or motor boating, and are available in two categories - coastal and off-shore. The standards required are those for the Coastal and Yacht Masters' Certificates of the Irish Yachting Association.

Training

The Scout Association of Ireland will endeavour to provide training courses for Charge Certificates for adult leaders where ever there is a sufficient demand, but it is the responsibility of the local group to arrange for instruction and assessment of its own scouts.

Examiners

Examiners for Advance Charge Certificates and Instructor Ratings are appointed by the Sea Scout National Team. A scout may be examined for an Elementary or Intermediate Certificate by a Scouter who holds the Advance Certificate for the same type of craft. Any enquiries or recommendations about the Charge Certificate scheme, the boundaries of 'restricted waters' or 'enclosed safe waters', arranging examiners, etc. should be made to the Secretary of the Sea Scout National Team at National Headquarters.

Boat Certificates

All boats owned by or in regular use by Scouts should be examined by an expert once a year. Certificate is then issued in respect of each craft, which is valid until 31st March of the following year. If a boat suffers damage sufficient to make it unseaworthy during the time covered by the Certificate, and is then repaired, the Scout Leader in his own interest should have the boat re-examined.

Classification of Waters for Boating

The following definitions are intended as a guide to the type of waters to be expected in each category. Please note that the term 'enclosed safe waters' and 'restricted waters' are relative, and may apply to quite different areas of water depending on whether canoeing or other forms of boating are in question.

It is obvious that conditions of certain waters may vary considerably, in different weathers and tide conditions, and may therefore have a different classification. Under certain circumstances an area of water may have to be excluded from use. The Leader of any group which has such an area of 'difficult' water in his normal sailing or cruising area, must make sure that all Charge Certificate holders appreciate the dangers and recognise the conditions which cause the trouble. An area of water sheltered from the prevailing wind may be an ideal example of 'enclosed safe waters' but may be quite unsuitable with the wind in the opposite direction. The Scout Leader in charge must ensure that everybody knows the conditions under which classification of a particular area of water may change.

a) 'Enclosed Safe Waters' - sheltered inland waters, rivers, canals and small lakes, and other sheltered waters where currents and tides create no danger. This area will be defined by the Group.

b) 'Restricted Waters' - for rowing, sailing and power boating, the sea up to one mile off shore, but excluding any more dangerous waters closer inshore, e.g. tide races, 'overfalls', etc. More sheltered parts of estuaries, large inland lakes. For canoeing

this category includes more sheltered parts estuaries, large inland lakes, and rivers of Grade 1 and 2.

c) 'Day Cruising Waters' - for boating includes the sea up to three miles offshore, and up to fifteen miles along the coast in either direction from the Group's normal base, but excluding any more dangerous waters close inshore. For canoeing, it includes exposed parts of estuaries, local coastal waters and rivers of Grade 3.

d) 'Coastal' - the sea up to ten miles offshore, but excluding any more dangerous waters inshore.

e) 'Offshore' - passages out of sight of land.

Grading Rivers

For canoeing purposes, rivers are graded as below:-

1. Easy - occasional small rapids, waves regular and low. Correct course easy to find, but care is needed with obstacles like pebble banks, protect work, fallen trees, etc. especially on narrow rivers.

2. Medium - fairly frequent rapids, usually with regular waves, easy eddies, or whirl pools. Course generally easy to recognise.

3. Difficult - rapids numerous and with fairly high irregular waves. Broken water eddies and whirl pools. Course not always easily recognisable.

4. Very difficult - long and extended stretches of rapids with high irregular waves. Difficult broken water. Eddies and whirl pools. Course often difficult to recognise. Inspection from the bank always necessary.

5. Exceedingly difficult - long unbroken stretches of rapids with difficult and completely irregular waters. Submerged rocks, very difficult whirl pools and very fast eddies. Previous inspection absolutely essential.

6. The Absolute limit of difficulty - all previously mentioned difficulties increased to the limits of practical ability. Cannot be attempted without risk to life.

Scout canoeing parties should not undertake expeditions on rivers of Grade 4 or above without special permission. Permission will not be granted unless all members of the party are exceptionally experienced and well qualified.

Equivalent Qualifications

The standards required for the three grades of sailing certificates are equivalent to Stages 1, 2 and 3 of the Training Scheme of the Irish Yachting Association. The requirements for the Intermediate Certificates in sailing and power boating are also so designed that they are exact equivalent of the appropriate Proficiency Badge.

The Irish Canoe Union 'Canoeist Certificate' is equivalent to the Elementary Charge Certificate in Canoeing, and I.C.U. 'Club Canoeist' is equivalent to the Intermediate Certificate. An I.C.U. 'Canoe Leader Qualification' is equivalent to an Instructor Rating. The requirements for the Intermediate Canoeing Certificate are also so designed that they are the exact equivalent of the Canoeist Proficiency Badge.

Important Note

Scout Leaders and Charge Certificates Examiners should note that possession of a Proficiency Badge in the appropriate type of boating does not necessarily mean the issue of a Charge Certificate automatically - it is

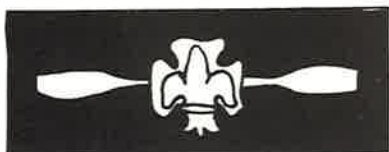
evidence of technical skill and theoretical knowledge. But equally important parts of the assessment of a person for a Charge Certificate are his level of responsibility and his local knowledge.

Charge Certificate Log Books

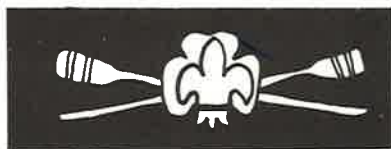
The S.A.I. publishes separate Log Books for the Boating Charge Certificates and for Canoeing Charge Certificates. These are available through the Scout Shop. These Log Books contain the Boating Rules, and Explanatory Notes on the Charge Certificates Schemes as well as the requirements for the various Charge Certificates. Space is provided for examiners to sign up the various sections as they are passed and a space is also provided for recording boating or canoeing experience. The Log Books are so designed that when the requirements for a Charge Certificate are completed, the Book then becomes an application form and may be sent directly to the Honorary Secretary, for Charge Certificates, National Headquarters who will issue the Charge Certificate and return the Log Book appropriately stamped.

CHARGE CERTIFICATE BADGES

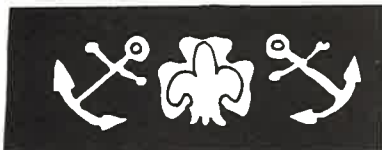
Canoeing



Rowing



Sailing



Power



Badges are awarded for Intermediate and Advanced Certificates. The colour of the Scout Badge in the centre indicates the Grade:-

Red - Intermediate.
Green - Advanced.
Green Border - Instructor.

A maximum of two badges may be worn.

FOCLOIRIN BEARLA - GAEILGE

Stroke Oar

2nd Stroke

2nd bow

Bow Oar

Bowman

Coxswain/Helmsman

Stand by

Ship Spurs

Sight Oars

Toss Oars

In bowman, push off

Down Oars

In Fenders

Give way together

Hold Water!

Give way starboard
hold water port

Way Enough!

Backwater together

Shorten Oars

Trail Oars

Easy!

Fenders Out

Toss Oars

Boat Oars

Unship Spurs

Uimhir a h-aon

Uimhir a dó

Uimhir a trí

Uimhir a ceathair

Fear tosaigh

Stiurthóir, fear stiurtha

Réidh

Sporanna isteach

Lámha ar maidí

Maidí suas

Isteach fear tosaigh, brú amach

Maidí Síos

Fiondair isteach

Ar aghaidh le chéile

Coimeád uisce!

Ar aghaidh deasbhord,
coimeád uisce clébhord

Sos!

Ar ais le chéile

Gioraigh maidí

Maidí siar

Go bog!

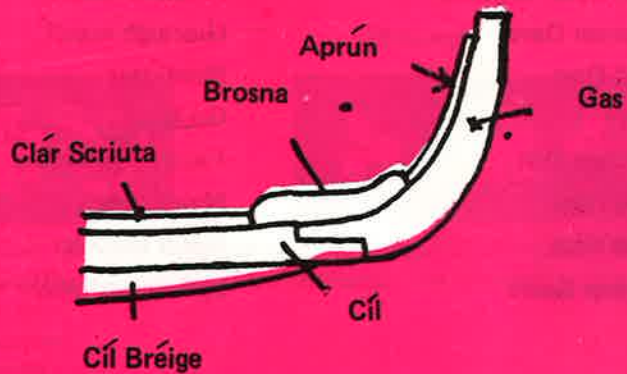
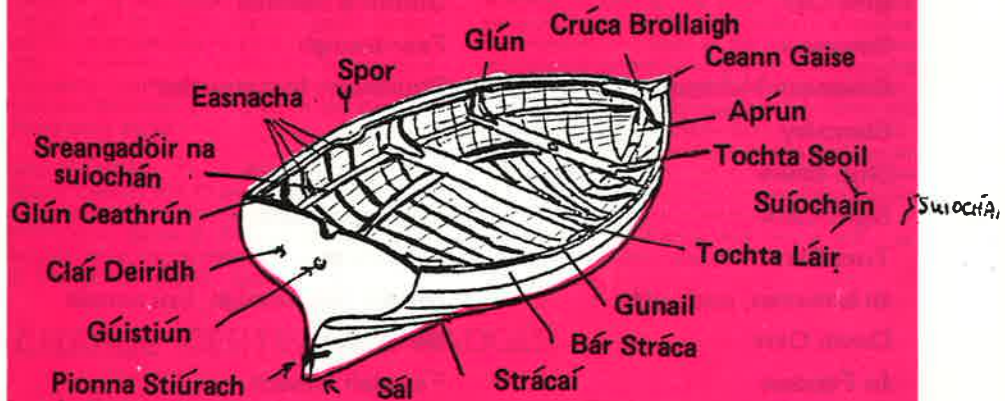
Fiondair amach

Maidí suas

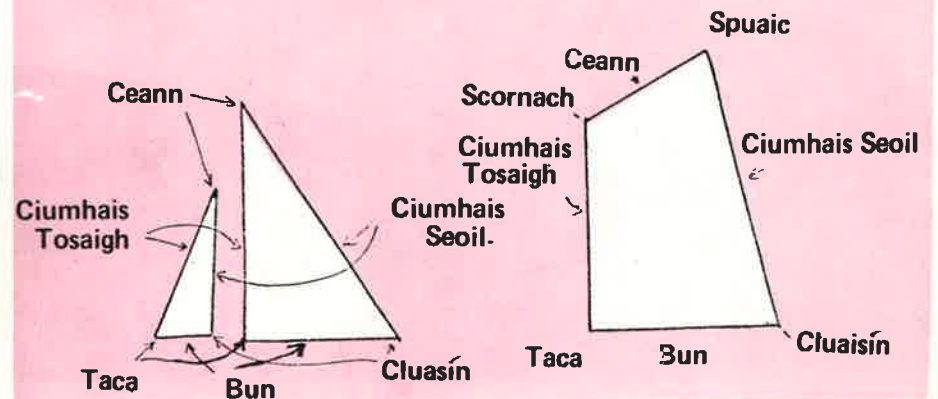
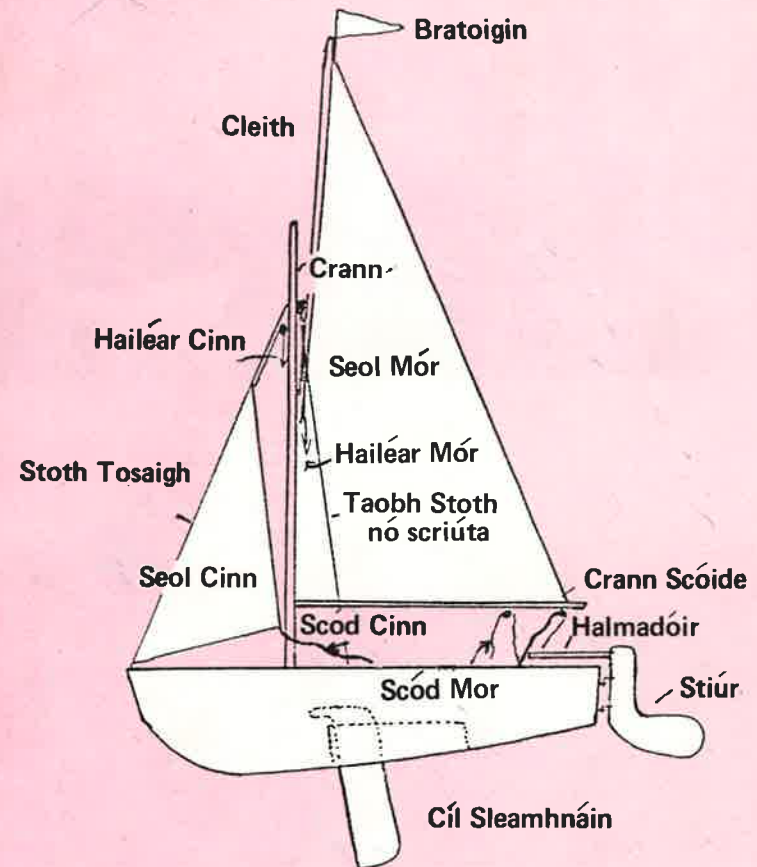
Maidí isteach

Sporanna amach

CUIDEANNA BÁID



CODANNA BAID SEOIL



NOTE



National Sea Training Centre Albatross



For further information contact:-

The Booking Officer,
'National Sea Training Centre Albatross',
c/o 66 Lower Leeson Street,
Dublin 2.

Phone: (01) 608111/611989

Cumann Gasóga na hÉireann
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ASSOCIATION OF IRELAND

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66 Lr. Leeson Street
Dublin 2

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SATURDAY - 9.00 am to 3.00 pm

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SCOUT REQUIRMENTS**



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