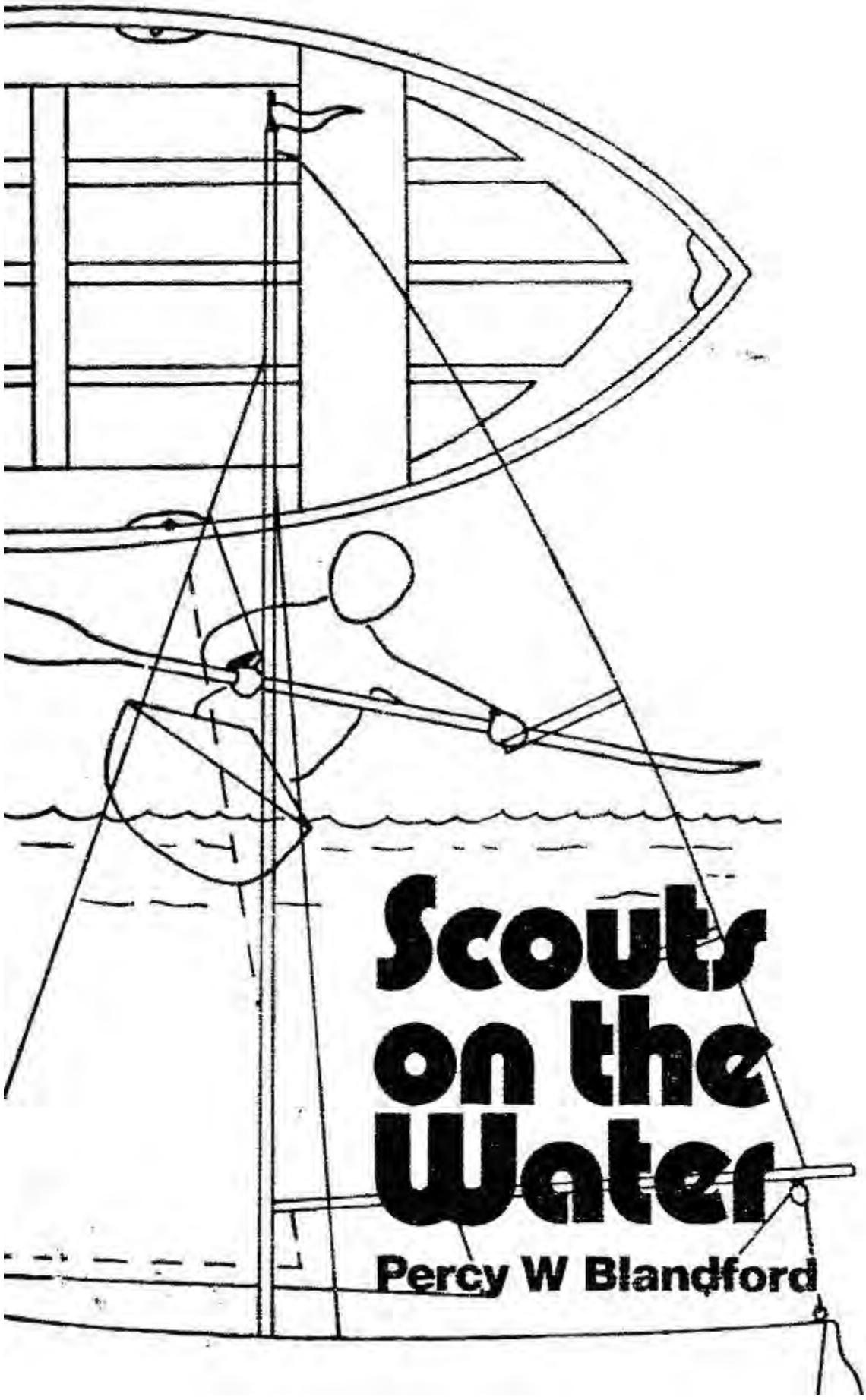

Scouts on the Water

Percy W Blandford

SCOUTS on the WATER

A
Handbook
for
Leaders

by
Percy W. Blandford
with
Illustrations by the Author

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The Editors would like to acknowledge with thanks the invaluable assistance of
Karl Pollak and Ric Raynor in preparing this edition.

It is the volunteers like they who are the strength of the Movement.

Editor's Notes:

The reader is reminded that these texts have been written a long time ago. Consequently, they may use some terms or express sentiments which were current at the time, regardless of what we may think of them at the beginning of the 21st century. For reasons of historical accuracy they have been preserved in their original form.
If you find them offensive, we ask you to please delete this file from your system.

This book was written in England and thus contains English spelling and English terms.

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FOREWORD

In the many years since B.-P. gave us Scouting, all the many activities which attract and interest boys have been used as means to further its objects. Many of these have been easy enough to incorporate in the general pattern of Scouting, but the use of activities afloat has meant a rather greater upheaval. So, if Scouting on the water is to play an adequate part in the life of a Scout Group, Its programme has to be given a general bias towards water activity.

This was obvious to B.-P. in the early days and the Sea Scout Branch came about only a couple of years after the Boy Scout Movement was started. B.-P. himself had experienced some of the attractions of boating under the leadership of his eldest brother, Warington, who took him and other members of the family yachting, but it was probably a trip they made with a canvas boat up the Thames, portaging to the Bristol Avon, across the Bristol Channel and up the Wye, that showed our Founder something of the terrific fun and character training that activity in small boats could offer to boys. Warington helped form the Sea Scout Branch and wrote the first handbook, *Sea Scouting* and *Seamanship for Boys*, which was romantic rather than practical, but anyone interested in taking Scouts afloat today may find reading it a rewarding historical exercise.

In the years since World War II the interest of the general public in going afloat in small craft has grown tremendously. In the lifetime of Scouting up to that war, boating was a very specialized public interest practised by a comparatively small number of people. This was reflected in Scouting, where little outside expertise could be drawn on, and the number of Sea Scout Troops was few, while the number of ordinary Scout Troops which included boating in their programme was negligible. Boating knowledge is now much more general, although it is often confined to that needed to race a dinghy around a reservoir, or some other equally restricted branch of water work. The effect on the public at large is to make water activity, in its many forms, the norm rather than the peculiar interest of the few.

This change of status of boating can have two main effects on the Scouter faced with handling boating within Scouting. Because boating is now more general, he may find boys already more knowledgeable than they used to be and he can call on a far larger number of adults with useful boating knowledge. He is also faced with the need to acquire greater knowledge of the subject himself. As all youth workers know, you get the boy's respect and loyalty far more easily if you know more than he does. In the ordinary Scout Troop it may be possible to bring in the expert to handle activity afloat, while the Scouters stand aside; but if boating is to become a major activity, as it is likely to, the Scouters must be involved, if they are to continue to do their job to the full. If it is a Sea Scout Troop, the fact that the Scouter wears the uniform implies expertise to the boy, and he must get involved.

The trust which a boy puts in the skill of his leaders can be frightening, so much so that we may feel we are not good enough and must give up. Most of us do not, but we make the effort to gain the technical knowledge that will enable us to give the boy the instruction he wants, or at least to talk the same language when he wants to discuss what the imported expert has been teaching. This really brings us to the point of this book.

Why are we in Scouting? The boy joins for the fun and interest he will get out of it. These reasons should also account for part of the reason why an adult joins or stays in Scouting. However, every adult who has accepted a job in Scouting should be constantly aware of what he is doing and why. The aims and methods are given in the first rules of *Policy, Organisation and Rules*. Everything else we do is incidental to the object of making a boy grow up to be a better citizen as a result of passing through our hands. The fact that he acquires practical knowledge and skills that may be valuable to him are by-products and supplementary to the character-building training he gets as he passes through the three main sections of the Group.

Even with this understanding of our aims, all Scouters know they will not get very far towards achieving those ends if they do not provide practical interest in the form of games and activities that appeal to the boy, who has come along full of enthusiasm, anxious to learn those skills he has heard about, to gain some of those attractive badges and, above all, to have a terrific lot of fun.

If Scouting afloat in any of its many forms is to come into Group activity, any Scouter involved who does not start with a background of seamanship of some sort, may feel the whole thing too bewildering.

The aim of this book is to show him that it is not and to provide enough basic knowledge on the many aspects of the subject, at least to get him started on the right lines.

Many of us get a terrific satisfaction out of boating and other water activities. The majority of boys do. This means that a Sea Scout Troop, or Scout Troop that has boats, is usually particularly successful and quite often large. Above all, most of them prove their point in retaining a much larger number of older boys. It is necessary to keep a sense of proportion. Very occasionally technical proficiency becomes the sole object. There is nothing wrong with beating all-comers in canoe slalom or regularly winning local sailing club events, providing furtherance of these causes does not take precedence over everything else. Fortunately there are many Sea Scout Troops around who accompany their successes with things nautical by having a good record of normal badgework and being able to hold their own in general Scouting in their Districts. That is as it should be.

Throughout the book the emphasis is on giving the Scouter information that will improve his own skill and will help him impart skills to boys. It is assumed that the reader either has some knowledge of general Scouting skills or will acquire it from other sources. There is a boys' book dealing with the sea-training badges, entitled *Scout Boating*. That is obviously the book for the boy working for those badges, but the Scouter will also benefit from reading the badgework instructions. Although the two books complement each other, this book is sufficiently self-contained to answer most of a Scouter's boating problems, except that he may find some of the basic things in greater detail in the badge book.

Note. Measures are given in the Metric scale wherever this is convenient. Conversions from the Imperial scale are approximate.

CHAPTER ONE
SCOUT BOATING

There is no generally accepted term to cover all types of craft that can be used afloat. For convenience in this book the word boat is used to embrace canoes, kayaks, punts, inflatables and anything else that floats. In more precise language the word boat may be found to only mean a small open craft propelled by oars or motor, and nothing else. It is probably as well to warn newcomers at an early stage that technical jargon is one of the delights of the boating fraternity. Some of it may be unnecessary, but in most cases a special traditional word is specific and may take the place of a lengthy phrase or description. You have been warned — a glossary of more important nautical terms is at the back of the book.

If a Group wants to introduce boating into the activities of its members there are several things to consider. If it is a Sea Scout Troop boating has to come into it and all snags must be overcome. The one set-up that nobody loves is the Troop attracted by Sea Scout uniform, but which does no boating. If it is not a Sea Scout Group there is always the option of having or not having boats.

Usually, boating means canoeing in the first instance. *Canoe* in Britain usually means a decked craft propelled with a double-bladed paddle. Elsewhere, and more correctly, this is a *kayak* — which is the word to be encouraged. A similar, and often open, craft propelled with single-bladed paddles, is a *Canadian canoe* in Britain, but merely a *canoe* elsewhere.

Modern kayaks have a great appeal to the boy and it is possible he will have met them in school or elsewhere. Kayak cruising is different from hiking or cycling and has a more romantic appeal for alternative ways of making lightweight camping journeys that are an essential part of Scouting. For this reason alone there is justification for having one or more kayaks in a Group. Whether to build or buy is discussed in the next chapter. There is a great appeal in being skipper of your own boat, so the preference shown by the boys will be for single-seaters, although it is possible to make a case for having at least one roomy touring two-seater.

In a complete Group there is a case for first introducing kayaks at the Venture Scout stage. Kayaking is a particularly good activity for this age range. However, it should be pointed out from experience that where this is done, it is not likely to be long before kayaks will be called for in the Troop as well.

Deciding to have kayaks is not all that simple. There are many types and if Scout kayakists are to join in events with others, compromise craft will not be acceptable. Greater detail is given in the next chapter, but there are touring, white water, sprint racing and other specific types today. This means the Scouters who do the selecting, and the Group Council who provide the finance, should read all they can and take expert advice before settling on particular purchases.

An alternative, particularly with Venture Scouts, is to encourage them to buy their personal kayaks. The Group may finance one or two for communal use, but the fleet is built up by individually-owned kayaks. This also has value in dividing responsibility for maintenance.

Storage and maintenance should be considered. Hanging a kayak in the upper part of the Troop room is not really a good idea. It gets dusty and may be damaged. Storage elsewhere is advisable, but even the smallest kayak is sizeable compared with other stores, and seems to get bigger indoors. Maintenance need not be very time-consuming or expensive. Much of the work can be done by boys; properly handled, these chores are good training. Sometimes the need for maintenance is not allowed for in the first enthusiasm of ownership.

The next most likely type of craft in a non-Sea Scout Group is a sailing dinghy. With the modern great enthusiasm amongst the general public for dinghy racing, it is possible that boys, and maybe their parents, may look for dinghy sailing training to be provided within the Group. Owning a racing sailing dinghy is a much bigger undertaking than owning a few kayaks. If the dinghy is to be used with similar craft at a local club, only one is needed, but if the boat is to be used for training within the Group, a second identical boat for it to race against is necessary. This may be justified, but there are many things to be considered before

embarking on purchase or building. There are Sea Scout Troops where each Patrol has a sailing dinghy and this is very good for training, both in using and looking after the craft, but it would be too vast an undertaking for a non-Sea Scout Troop.

Some class sailing dinghies are really racing machines and are expensive and difficult to handle. Such craft should be avoided for Scout purposes, even as a gift. Beware of boats in general as gifts. An outclassed racer or a boat with a serious defect is very difficult to dispose of and giving it to the Scouts may seem a way out for the unfortunate owner. Treat any such offer very guardedly. There may be bits worth salvaging, but you may still be faced with having to somehow dispose of a large chunk of useless hull. In particular, get expert independent advice before accepting a cabin boat. If the boat is in acceptable condition make sure you have somewhere to keep it and can afford its upkeep.

The best type of sailing dinghy for Scout use is a general-purpose semi-racing type, big enough to take three, so that it can be used by an instructor and two trainees. If it can also be used under oars or with an outboard motor and sculled over the stern, it begins to have real training possibilities, particularly for Sea Scouts. The snag with too-specialized a racing sailing dinghy is that it has no other use than racing. It constitutes a rather expensive investment for the Group, providing activity only for the one or two boys who have the ability to handle it.

There can be quite a lot of continuing maintenance with a sailing dinghy, which has to be done as necessary and cannot be left. All of this may be regarded as good training opportunity, as it should be in a Sea Scout Group, but for others it may not fit into the rest of the programme. A neglected sailing dinghy soon deteriorates.

Larger boats are the province of Sea Scouts and some notes on these are in the next chapter. Amongst other ways of getting afloat for all Scouts there are inflatable boats and rafts. There have been great advances in the development of inflatable boats. They have many attractions, particularly as tenders to larger craft, but these are expensive boats. The fact that a deflated boat packs small for storage and transport is attractive, but for general Scouting an inflatable boat needs too much care and individual attention to be worthwhile. An exception might be a Venture Scout Unit interested in sub-aqua swimming, as a large inflatable boat makes a good stable platform to work from.

Scouters should beware of the cheap rubberized fabric inflatable playboats. They may provide fun in shallow water or act as an adjunct to a pioneering bridge-building exercise, but the limitations should be realized. Improvised rafts are rather similar. A well-made raft can be a good pioneering exercise, but too much should not be expected from it. While the boys have their fun on it, the Scouter should realize that he needs to observe the same safety precautions that he would if using a boat.

To have or not to have boats in a non-Sea Scout Group is something that can only be decided by the Scouters and parents concerned. There is expense involved, but this may be justified by the training value resulting. As a rough guide, two or three kayaks may be bought for the price of a Patrol tent, or a modest sailing dinghy might cost twice as much as a Patrol tent. One thing that might prove attractive to the Group Treasurer is the way boats retain their secondhand value very much longer than most other things. In a Sea Scout Group the cost of boats will have to be budgeted for. Even more than in a non-boating Group, a Group with boats of any sort needs the backing of a good Group Council to relieve Scouters of the problem of money raising and possibly to help them with maintenance and instruction. There will also be the problem of transport of boats and boys to the water, so helpers able to carry canoes on roof racks or tow boats on trailers can form an important part of a successful boating Group.

CHAPTER TWO
PRACTICAL CONSIDERATIONS

Fortunately, in Britain nearly everybody lives within a few miles of water that will float a boat of some sort. A canoe will float in a few centimetres, a rowing boat requires about thirty and a sailing boat with its centre- or dagger-board down may need a metre. Canoes may be used on streams only three metres or so wide, while rowing needs at least double that. For sailing to be worthwhile, there should be a fairly broad expanse; either a roomy river or a few acres of lake or reservoir.

Unfortunately, not all water suitable for boating is available. The legal position in Britain is far from simple. Almost everywhere that the tide flows is a public right of way. On most tidal water there is no need to ask permission or pay a fee. Exceptions are harbours, where the harbourmaster should be consulted and he may demand a fee. On all non-tidal water the bed belongs to whoever owns the banks, if no other conditions prevail. This applies to rivers and lakes. The fact that a lake or river is large does not alter the case. The right of passage on the water over the bed is no more or less than the right of passage over dry land. On many rivers a right of way has been established through long usage. On many other rivers occasional boating is tolerated, but you have to remember you are there by courtesy of the land owners.

Canals are man-made and you must pay to use them. On many rivers work has been done to make them navigable by the building of weirs and locks. They are controlled by authorities and licences are required. Many authorities make concessions for Scout craft. Some rivers are free rights of way, such as the Wye, popular with canoeists. Some lakes are free, such as Windermere. Reservoirs are man-made and rights on them are often granted to sailing clubs, some of which have arrangements for Scout boats to be used.

The decision whether to go afloat at all, and if so, in what craft, is very dependent on available waters, although with trailers and roof racks boating at a considerable distance from base is possible. Obviously, local waters are needed for basic training. Having to transport boats even a few miles will soon limit the amount of boating done once the first novelty has worn off, so either the Group needs waterside headquarters or there should be somewhere to store boats near the water.

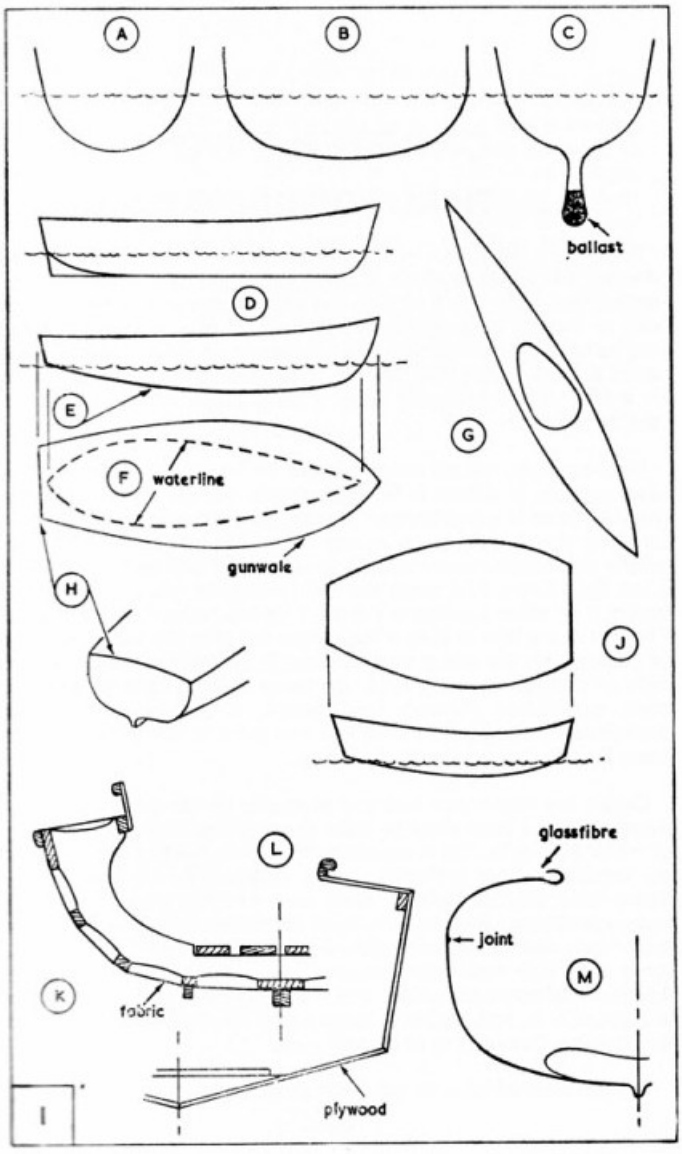
Keeping any boat afloat can be worrying, and with the small craft we are considering, storage out of the water and preferably under cover is advisable. If a well-disposed owner of waterside land cannot be found, storage at commercial rates could be costly. Many canoe clubs have affiliation schemes for Scout Groups. A tie-up with one of these can provide storage and expert tuition. Sailing clubs also often have affiliation schemes, but, as many clubs have waiting lists, links with them are not always so easy. Some education authorities have water training schemes, with provision for Scout craft to be stored and to use their waters. District Commissioners and local Youth Officers should be consulted.

Whatever the local facilities, there will be an urge to cruise elsewhere and take the boats to camp. A two-crossbar car roof rack will take at least two canoes or a dinghy up to about the weight that two people can lift there, say about 45 kg. Any trailer bought should have adequate springing and tyres as there is a tendency to stow gear in the boat and much more than the boat weight has to be towed. Several firms sell kits for trailers. There are legal considerations, so if a helper offers to make a trailer, check that current regulations are obeyed. They may change, but in general the trailer must be sprung, have mudguards and carry number plates and lights at the back that duplicate those on the car. If the trailer is fitted with brakes, usually an over-run type, the trailer and its entire load must not weigh more than the car. If there are no brakes the limit allowable is much less.

Boat shapes

Speed through the water, or ease of propulsion, which is the same thing, depends on length more than anything else. Some boats lift partly out of the water on to a plane if they are the right shape and sufficient power is used, but these are not the craft for Scouting. When the bow wave of a boat not intended to plane is as long as the boat, it is at its optimum speed. Any greater speed is only obtained by effort out of all proportion. Skin friction also comes into it. Minimum skin friction comes with a semi-circular underwater shape (Fig. 1A), but this is very unstable, although it is used for sprint racing kayaks.

To get stability the cross-section is broadened to something like a D on its side (Fig. 1 B). If any normally proportioned craft is offered for Scout purposes check the amount of near flat area around the middle of the bottom, to judge its stability. Of course stability can also be obtained by having a weighted keel (Fig. 1 C). Some larger Sea Scout craft may have this, but small boats depend on their shape for stability.



In side view a long straight keel line (Fig. 1 D) makes the boat directionally stable or able to hold its course. Much rocker to the keel line (Fig. 1 E) makes the boat very manoeuvrable. Rapid river and slalom canoes have considerable rocker. So do sailing dinghies, but touring kayaks and rowing boats are better if their keels are nearly straight.

Boats have many shapes above the waterline. It is the underwater shape that affects progress through the water. If there is a lot of wash behind a boat, it may have the wrong shape or it is badly or incorrectly loaded. The waterline shape, when the boat is properly trimmed should have a shape at the stern only slightly less pointed than at the bow (Fig. 1 F).

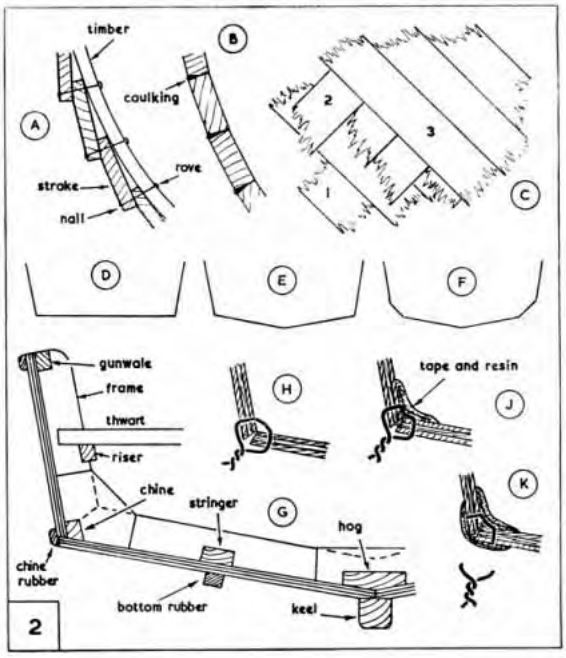
Canoes and some boats are double-ended (Fig. 1G). It is more usual for small boats to have transom sterns (Fig. 1 H) as this gives greater carrying capacity than a pointed stern. Some small boats have a transom, called a bow board, at the bow as well (Fig. 1 J). In both cases the flat part of the transom has to be above the water, so it does not affect the underwater shape. If part of the transom is immersed, due to bad loading, the boat is much harder to row.

In smaller craft the hull is normally open. This gives the greatest convenience and carrying capacity, but if used in waves some spray is almost certain to come in. The most vulnerable part is the bow, and a small amount of decking there turns what was the wettest part into the driest. Side decks give further protection. Fore and side decks are usual in many sailing craft, but they tend to restrict capacity too much in pulling boats.

Kayaks were once nearly all fabric-covered (Fig. 1 K). Many still are, with a plastic-coated fabric substituted for the older painted canvas. Others are plywood (Fig. 1 L). Both of these have sharp angles at the gunwales, but glassfibre canoes are mostly without obvious gunwales; the shape where the deck blends into the hull being called *tumblehome* (Fig. 1 M). If rolling is to be learned, this is a help. Most open Canadian canoes have tumblehome, which facilitates using a single-bladed paddle.

Boat construction

For thousands of years the most popular material for boats was wood. In the years since World War II there has been a change towards the dominance of glass-reinforced plastic — sometimes referred to as G.R.P., glassfibre or resinglass. For Scout boats of any sort, glassfibre has many advantages. It is not completely immune to damage and is certainly not boy-proof, but serious damage is rare and repair is fairly easy. The material does not suffer if left outside or always afloat. Maintenance is minimal.



For the normal method of glassfibre construction a mould is needed. With a suitable mould and the ability to follow instructions, building a glassfibre craft can be tackled without a high degree of skill. There are now a very large number of makers of complete glassfibre craft of all kinds. The advertisement pages of any yachting magazine will provide addresses.

There are still many wooden boats in use. There is an attraction about a wooden boat that may be lacking in the rather clinical appearance of a glassfibre boat. A wooden boat needs a lot more annual maintenance. If it gets this servicing, its life will be at least as long as a comparable glassfibre boat. Many basically glassfibre craft have certain parts made of wood and this gives an acceptable attractive finish.

There are other plastics besides glassfibre. At the present state of progress, none of them have proved satisfactory for Scout boating. Metal boats are unusual in Britain, but in America aluminium alloy is widely used and in the Netherlands steel plate is usual for Scout craft.

Traditionally, small British wooden craft have been clinker (clench or lapstrake) built (Fig. 2A). The planks, or strakes, overlap and are held by copper nails riveted through roves, or conical washers. Inside there are timbers (bent frames) transversely. Boats built this way do not have glue or other stopping in the joints. The depend on close fits and the wood swelling to keep out water. This means that if an old boat is acquired, it will probably be inadvisable ever to let it dry out completely.

The alternative to clinker is carvel (Fig. 2B). This is used for larger boats and yachts, where the planking can be thick enough to take caulking, which is a compound driven in over strands of cotton. A traditional method, used for many coastal lifeboats, has two skins of planks laid diagonally with canvas between. A variation on this using modern materials is laminated or moulded veneer (Fig. 2C), usually with three skins joined with synthetic resin glue, sometimes called hot or cold moulded construction. A large number of class sailing dinghies, such as *Firefly*, have been built this way.

The modern wood material for amateur boat building is plywood, which should be a marine grade-in Britain marked 'BSS1088' and usually obtainable in 8 ft. by 4 ft. sheets and in thicknesses from 3mm. upwards. A panel of plywood can only be curved one way, so boats designed for plywood construction have curves in their length and straight lines in their cross-section.

Boats built in glassfibre may have just about any cross-section.

Some of the more unusual cross-sections are best avoided for Scout boats and the conventional cross-section should be selected instead (Fig. 1B). Clinker, carvel and laminated veneer may also be built this shape. A plywood boat may be flat-bottomed (Fig. 2D), or given a moderate V shape (Fig. 2E), when it is often called hard chine. A double chine approximates more to a round bottom (Fig. 2F), which passes through the water better and is more seaworthy in exposed waters.

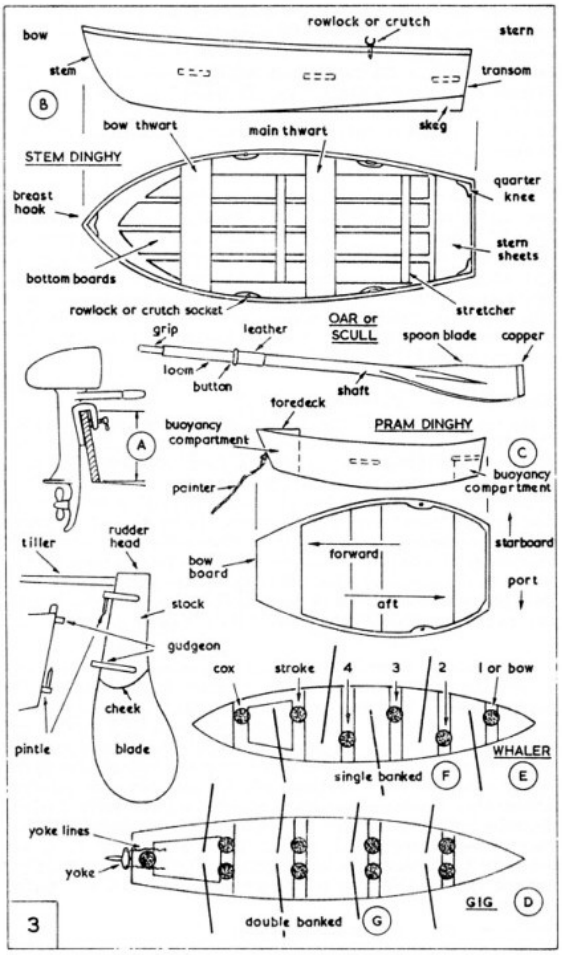
Many plywood boats are built on frames with lengthwise pieces over which the plywood panels are glued and screwed or nailed (Fig. 2G). This is the most robust method. A simpler method of construction, which has proved satisfactory for canoes and dinghies up to about four metres in length is often referred to as *stitch and glue*. Edges of plywood panels are tied at intervals with copper wire (Fig. 2H), then glassfibre tape and resin is applied inside (Fig. 2J). When this has set the wire is cut off outside and more tape and resin put outside (Fig. 2K).

Boat parts

The drawings (Figs. 2 and 3) show the usual names of boat parts that should be known. There are a great many others, but many are obsolescent. Anyone who has a Royal Naval background tends to use some terms in a different way to other boatmen. He *pulls* where other people *row* a boat. His oar passes through a crutch when everyone else calls it a *rowlock*. A rowlock to the RN man is a notch in the side of the boat. To him the floor of the headquarters is the deck, which may be a good term for any Sea Scout Troop to use, but the non-R.N. Scouter may have difficulty in admitting that his boys *go ashore* when they go home from the Scout hut. Take your choice, but temper your choice of terms with the company you keep.

This might be a good point to deal with starboard and port. The explanation helps to impress which is which and may interest the boys. Before rudders were invented, steering was by a sweep or steerboard at one side. As most steersmen were right-handed and had to face forward, this was on their right. The name steerboard became corrupted to *starboard*. As this was the control position the captain had his bunk starboard aft. He still has that position. Because the steerboard interfered with coming alongside a wharf, the other side was brought to the bank when loading and this became the loading board, later corrupted to *larboard*. As it was too easy to confuse the two terms an international agreement decided to alter this to a completely different word, and settled on *port.*

When on board and facing forward, port is to your left and starboard is to your right. An aid to memory is to put the two shorter words together: *left* goes with *port*. The sides of the boat are always the same whatever way a person is facing. That is why the terms are used instead of left and right, which might cause confusion if the listener turned round.



Boat sizes

Canoes are single or two-seaters. Although a two-seater gets two afloat at less cost each, canoeists generally favour being skipper of their own craft, so a very high proportion of a Group's fleet will be single-seaters. White water (rapid river, slalom) kayaks tend to be around four metres long. The better touring canoes are about 4.5 metres. Economy canoes are made down to three metres but the longer tourers are

easier to paddle and have better capacity. Sprint racing canoes are about 5.25 metres long. They may be acquired later if there is a racing interest.

Stability in a canoe is mostly the result of beam — sixty centimetres in a single seater and seventy five centimetres in a two-seater should have reasonable stability. Very much more beam makes the canoe hard to paddle.

In the smaller dinghies of normal proportions anything much shorter than 2.4 metres is only suitable for one, between 2.4 and three metres the boat may take three in calm water or two if exposed. At 3.5 metres, the boat becomes roomy and may have one or two boys pulling and two others as well. For sea use, 3.5 metres is the shortest length advisable. Open boats of up to 5.5 metres are useful training craft. Any of these boats will take an outboard motor, but there is nothing to be gained by overpowering. Up to three metres a motor rated at less than two horsepower will do. Up to 4.4 metres there is no need for more than five horsepower unless it is a very heavy or tubby craft. When sailing, boats of up to 2.7 metres may be single-handed and it is advisable to go up to about 4.5 metres if an instructor and two crew are to be carried.

Outboard motors are described as short shaft or long shaft. In nearly all makes short shaft motors suit a thirty-eight centimetres transom — the distance from the underside of the cramp over the transom to the bottom of the boat immediately below, which is the keel line if the motor is central (Fig. 3A). For a long shaft motor the distance is increased to 50 cm.

Small boats are mostly called dinghies, although on some parts of the English south coast they are *punts*. Elsewhere a punt is a flat-bottomed river boat. If the bow is pointed, it is a *stem dinghy* (Fig. 3B). If there is a transom at the bow it is a *pram dinghy* (Fig. 3C), from the Norwegian *praam*. A longer open boat is called a *gig* (Fig. 3D). A longer double-ended boat is a *whaler* (Fig. 3E). At one time the eight metre Royal Naval Montague Whaler from surplus sources was a good buy for Scouts, but supplies are now few.

By rowing club definition, *rowing* is with one oar per person and *sculling* is with two. This naming may be met, but in general Scout boating, *rowing* or *pulling* is with one or two oars each and *sculling* is using a single oar over the stern. A boat is single-banked when each oarsman is alone on a thwart (Fig. 3F) and double-banked when there are two per thwart (Fig. 3G).

The person steering a boat under oars is a *cox* (short for coxswain, pronounced *cox'n*), but if the boat is sailing he is the helmsman. In sailing club parlance his partner is *crew*, but as the two together are the boat crew, it may avoid confusion to refer to the second boy as mate.

Boat-owning programme

Scout boating often starts in a haphazard way, possibly due to the availability of a boat or an opportunity to use some outside service. There is nothing wrong with this, but it is advisable to have some idea of how the boating interest of a Group should develop and build up, at least over a few years. Boats represent a major section of the property owned by a Group. Obviously choosing correctly and making adequate use of boating property, which is adequately maintained, should be the policy of an efficient Group.

An early consideration is whether to buy complete or build canoes or other boats. Much depends on particular circumstances. On average, materials represent about half the total cost of a complete boat, so building could reduce outlay by that much, assuming the job is within the capabilities of the Group or lay helpers. Not all boats can be amateur-built. Many glassfibre boats suitable for Scouts can only be built with moulds which are not available for amateur builders. If glassfibre construction is contemplated, this will usually have to be restricted to kayaks, for which moulds can be hired from commercial firms or borrowed from schools, some Scout training centres or youth services.

Building in plywood is the usual alternative. Some firms sell kits. These vary in their content and not all provide parts with the same amount of work already done. This may account for differences in price, and details of what is offered should be studied before settling on a particular kit. The *Mirror* dinghy is supplied as a kit in which so much work is done that the builder has little to do other than assembly. Kits for some other boats may contain little more than the specified materials. The alternative is to buy a plan and find the

material yourself. *Stitch-and-glue*, as in the *Mirror*, is easy and is very suitable for kayaks used in Scouting, but a more robust method is preferable for boats which will get hard use.

A big consideration in choosing whether to build or buy complete is time. A first boat, tackled with boy labour, is likely to take a long time. Generally, it is better to get a helper to supervise. If a Scouter takes it on, alongside his other commitments, he may find the whole thing is too much, and the boat grinds to a halt half-built. The resulting frustration could kill boating as a project and do harm to the Group.

What is needed is someone to supervise, who has studied the plans and is constantly aware of the move after the next; he should be able to visualize what is needed at each working session so that materials and tools are there. The maximum amount of work, and the resulting satisfaction, is achieved in a given time. Much more work can be done in long sessions than in short ones of the same total duration. Ten hours solidly working on a Saturday will get much more done than two hours on each of five evenings.

Glassfibre boat building needs only a few cheap tools, which will have to be bought. For plywood boat building, only the basic woodworking tools are needed and it is likely that the handymen of the Group will be able to provide them. Building with marine plywood, waterproof glue and nails or screws does not involve much precision work, there are no joints of the cabinet-making type and the thousands of amateur-built plywood boats in use are evidence that success can be achieved by workers who make no claim to being craftsmen.

To build a boat means space occupied for some time. Glassfibre kayaks can often be built on week-end courses. One of these under a skilled instructor is very worthwhile, particularly if the job is done elsewhere. For other methods of building there has to be a building space large enough to move around the boat and have a bench as well. If the job has to be done in a place also used for other activities the time taken getting out and putting away will eat into the available time to an unwarranted extent. If the boat cannot be allowed its own space for the duration of the job, building from scratch is probably not for you.

There are firms who sell glassfibre hulls, sometimes with kits of wooden parts to complete the boats. These are a good proposition, as you start with much of the job done and work carried out shows a satisfying progress from the start. In most boat building, construction of the hull represents about half the total working time.

If money is available it is probably best to get complete boats at first, so boating may commence as soon as possible. Then any boat building project can be regarded as an end in itself — a training opportunity and not just an emergency exercise to be got through as quickly as possible to produce an end product. There is no virtue in taking a long time, but sufficient time to do the job properly is preferable to a rush job.

That well-used and often misquoted piece by Water Rat about the joys of messing about in boats can be taken a step further. There is a tremendous satisfaction to be got from messing about in a boat you have built yourself.

The assembly of a suitable fleet of boats will depend on many circumstances. Slalom kayaks are useful training craft with reasonable stability and do not take up too much room in storage. However, they are difficult to keep straight and do not make very good progress when touring. General-purpose touring single-seaters might be a better proposition if touring is the main objective. A two-seater is useful as a load carrier and it is worth having for the occasion when a weaker or smaller boy can be partnered by someone stronger to enable him to take part in a Patrol expedition. If the accent is to be on sea canoeing, longer single-seaters should be chosen.

For pulling, a good first craft is a full-bodied 4.25 metre boat. This will have two rowing thwarts on which boys can row singlebanked or pull a pair of oars each. There will be room in the stern for the cox and a passenger and maybe another boy in the bow. This gives training opportunities with scope for changing around and the same boat can be used by three boys with camping kit on expeditions. It is not difficult to fit most of these boats with a cover to allow camping on board. With a notch in the transom, sculling is easier to

learn in this size boat than in a light dinghy. It can also take an outboard motor and be used as a safety boat or tug when there are many boys afloat in a variety of craft.

Dinghies about three metres long give boys good training in handling and are useful for local ferrying. They are usually light enough for car-top transport. One or more of these make good utility craft, particularly if the Group has a waterside base. Dinghies smaller than this may have one-boy uses, but are usually not worth spending much money on.

A Sea Scout Group should aim for at least one pulling boat large enough to take a Patrol. This means a gig, dory or whaler; all of which may be costly new, although a suitable dory is not too ambitious a building project.

Although sailing and pulling or power boat hulls need different characteristics there are several compromise craft which are quite satisfactory. Many sailing dinghies that are not extreme racers are also very good for rowing or outboard motor. Some of the things to observe in choosing a sailing boat are given in Chapter Three but sailing is a very satisfying activity. One of its merits is that it is always possible to learn more and this serves to stimulate and maintain interest-valuable as a training consideration.

If boating is to have much importance in the work of a Group, sailing craft should be included. For training, this means a boat that can carry three. Fortunately there are 4.25 metre craft that sail well and are equally suitable for pulling. Slightly smaller lighter sailing dinghies may appeal to those with some experience, but, in general, the faster and more lively a sailing dinghy, the more is the initial expense and the more expert care is needed to keep it in condition.

Unless there is an exceptional opportunity and all the maintenance costs have been looked into and taken care of, it is unwise to consider larger craft until a Group has many years of satisfactory boating experience behind it. Cabin craft, particularly those that have to be kept afloat, really need the services of a dedicated man, who may use the labour of others, but who makes the care of the boat his responsibility. Collective responsibility of a large craft does not work. If it is a large sailing craft, the upkeep of sailing gear can soon come well beyond the resources of most Groups. There are exceptions and some long-established Sea Scout Groups have had sea-going craft for years, but examination of the circumstances will show that there is usually one man at the root of the project.

Storage

Nothing survives on neglect, but a surprising number of boats have had quite long lives with the minimum of attention. That, of course, does not mean that they would not have lasted longer and remained in better condition if someone had looked after them.

A boat stored under cover will not only last longer, but the work of maintenance will be much less than for one left outside for the weather to play on. The only exception is an old clinker boat, which will remain tight only if kept wet. Glassfibre does not suffer in wet conditions unless the exterior is badly worn. Similarly, it is better not to leave plywood boats exposed to the weather unless the exterior treatment is exceptionally good. In both cases, water may enter and spread by capillary attraction. If this freezes and expands, damage will be done.

Boats are best stored off the ground. Pieces of pole ten centimetres in diameter will make supports that also facilitate the easy rolling of the boat. Canoes and boating gear, such as oars and spars should be stored on racks, but to avoid strain it is advisable to have several crossbars under each piece. If there are several craft, it is advisable to identify all the parts that can be taken out by a colour code or some other method of marking.

Whether inside or out, it is usually best for a boat light enough to be manhandled to be turned over. This stops an accumulation of water or rubbish inside, and most boats rest more comfortably on their gunwales than on their keels. If a boat is stored the right way up, cushioning it with old car tyres is a good idea.

Boats are designed to be evenly supported in water. Localized loads when out of the water can cause strain or damage. Boys new to boating may want to clamber over a boat out of the water or use it as a seat. In planned

circumstances this may be done for training, but for normal storage there should be a rule that a boat out of the water is never climbed on. If the boats are stored ashore between sessions afloat, make it the custom that whoever uses a boat cleans it before it is stored. No excuses are acceptable, but this means time has to be allowed for the chore and cleaning materials must be there. A box or bin of cloths, mops and buckets will encourage observance of the rule.

At one time yachtsmen made a big thing of laying up at the end of the season and fitting out at the beginning. With modern materials and changed attitudes boating is now almost a year-round activity, but there is likely to be reduced use of Scout craft in the mid-winter months. Details of all jobs to be done should be listed and a winter maintenance programme arranged, to avoid the frantic burst of preparation that may have to be fitted in just before the start of another season.

CHAPTER THREE
BOAT HANDLING

There are a great many books dealing at considerable length with handling different kinds of craft and the enthusiast will be familiar with some of them; the instructions in this chapter, however, are intended as guidelines for the Scouter coming new to a type of boating and introducing boys to it, possibly without the help of an expert. If he should be lucky enough to recruit an expert, these notes may help the Scouter to appreciate the instructional methods used. Leaders and Scouts will gain great benefit from formal training within the training schemes of the British Canoe Union and the Royal Yachting Association.

Obviously, safety rules should be observed and these are given at the end of the chapter, where they may be better understood after reading the handling instructions.

Canoes and kayaks

Some schools and clubs teach canoeing in a swimming bath. This has the advantage of allowing capsizing in reasonable comfort, and keeps the trainee within range of the instructor. Against this is the risk of giving a false confidence and sometimes the limited scope takes away some of the feeling of adventure, particularly if the instructor is too baths-orientated. Obviously, if Scouts are able to be given instruction in a swimming bath the facility should be accepted, but training on a canal or smooth river is more likely to be in line with the fun and adventure which boys expect from their Scouting.

Some authorities advocate teaching capsizing first. With the right boy in suitable conditions this may be a good idea, but with other boys it may be better to teach basic technique in a stable canoe first. A timid boy may be frightened off if he is first asked to fall out in cold water. However, it is important that a boy should have experience of dealing with a capsize quite early in his training. As a boy will normally be canoeing in a lifejacket or buoyancy aid, he should do a practice capsize with this on and not strip down to swimming trunks, as is often done. If the lifejacket has inherent buoyancy, plus a means of inflating for increased buoyancy, *never* allow inflation for canoeing. Excess buoyancy may press the wearer up into an inverted cockpit, making exit difficult or impossible. The additional buoyancy also makes swimming difficult and is only intended for use if the wearer is in the water a long time waiting for rescue.

A boy should soon learn to get in and out of a canoe unaided. The risk of a ducking increases as the access point gets higher. It is important to keep the weight central and get into the seated position as quickly as possible. The period when weight is shared between the canoe and the bank should be kept to a minimum-doing the splits between canoe and bank may be entertaining to others, but it is usually unintentional.

From wading, put hands on each side of the cockpit behind the seat, lift one leg in and sit down. Have the paddle gripped in one hand (Fig. 4A). You are away as soon as the second foot leaves the bottom and must be prepared to use your paddle immediately. If the bank is level with the coaming it is possible to put the paddle across and get in with what is almost the same method as when wading (Fig. 4B). Notice the term *wading* — if you use *paddling* to mean walking in the water it could be confused with using the paddle.

If the bank is higher, put the near foot central and well forward in the cockpit, reach down either to the point of the cockpit or to the far side, transfer your weight entirely to the foot in the canoe and put the other behind it as you sit down. The other hand holds the bank only enough to prevent the canoe drifting away. Do not lean on it (Fig. 4C). Have the paddle either in one hand or within reach.

Getting out can be the reverse of the first two methods of getting in, but for a higher bank, position one foot behind the other centrally in front of the seat and use both hands on the cockpit coaming behind the seat to push your weight forward and over the feet (Fig. 4D). At the same time hold the bank, but do not lean on it, until you can transfer your whole weight to it, possibly by sitting on the edge, while using one foot to hold the canoe.

If the canoe has a very small cockpit there may have to be an intermediate stage in getting in or out. The first seated position getting in may be on the back of the cockpit, then the legs are positioned and slid under the foredeck, while your hands on the cockpit lower your body into the seat.

When capsizing deliberately or accidentally the boy should learn to stay with his canoe. If his paddle or other gear has gone adrift he should not leave the canoe to swim after it. If there is much current or wind he may not be able to return to the canoe. The other important thing is to leave the canoe inverted. It is then almost completely full of air if it has made a clean roll over. Any attempt to right it will scoop up a considerable amount of water and release much of the air.

The normal drill, where the bank is not far away, is to get to one end of the inverted canoe, put the paddle along the canoe, if possible, then swim, either pulling (especially if against any current or wind) or pushing the canoe to the bank or into shallows (Fig. 4E). With help at the other end it is then possible to lift the canoe to break the air lock and turn it in the air, then down the right way on to the water. Any water inside can be poured out by alternately lifting opposite ends. If the canoeist is alone, it is usually possible to empty the canoe by lodging one end on the bank.

Two-seater technique is much the same. When getting in and out, both should not move together — one holds while the other moves. In a capsize they can swim at opposite ends.

Double-bladed paddling is not difficult to learn. Sit upright or lean forward slightly — boys tend to lean back. Have the hands at least as wide apart as the shoulders — boys often bring their hands close together. Seating should be high enough for the paddle blades to immerse reasonably close to the canoe without the boy swinging from side to side or rubbing the paddle on the canoe. High seating makes for power, but obviously increases instability, so there has to be a compromise. Feet, and usually knees, should be braced in the canoe. They transmit the thrust.

Too often a beginner pulls the paddle only. Most power is gained by pushing as well as pulling. In this way the forward-going arm almost straightens and the other pulls back until the hand is about in line with the nose. The blade in the water then dips well forward and continues well aft before being withdrawn. Long, comparatively slow strokes are usually more effective than short sharp ones.

Modern canoeists use double-bladed paddles with the blades at right-angles. Straight blades may be used either way, but if the blades are spooned the twist has to suit the hand which the paddler prefers to turn the paddle. For this reason it is probably better to choose straight-bladed double paddles for general use in a Group. Double paddles with joints at the centre are less common today, but those allow spoon-blades to be turned either way. As a guide, if the left blade is pulling and turning is to be done with the left hand, the right spoon blade in the air will be turned upwards.

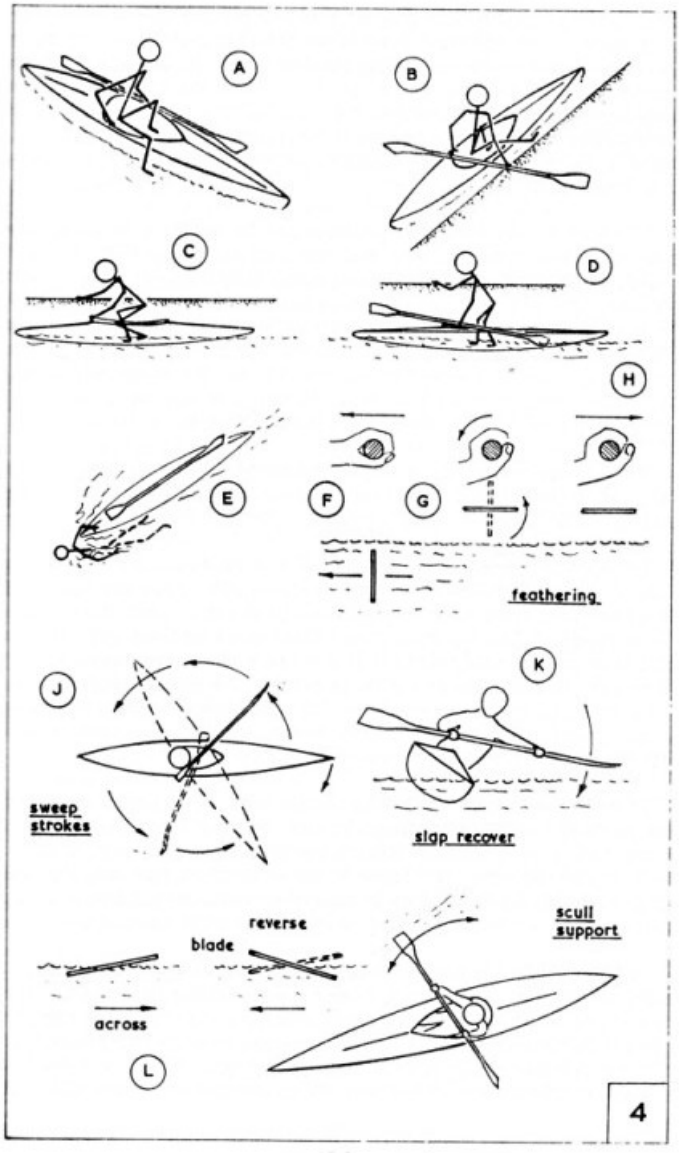
To use a twisted paddle with right-angled *feathered* blades, and assuming the twist is being done with the left hand (choice is a matter of experience and has nothing to do with being right or left handed), reach forward with the left arm and dip the left blade, then make a full stroke that side (Fig. 4F). By then the right arm has gone forward. Lift the left blade and dip the left wrist without releasing the grip on the paddle (Fig. 4G). Meanwhile let the paddle shaft turn in the right hand. Both blades are clear of the water while you do this. Dip the right blade and make a full stroke, with the left hand going all the way forward with its wrist dipped (Fig. 4H). Bring the blade out of the water and you are ready for straightening the left wrist to start the next left stroke.

Maintaining a course and making moderate curves is soon learned by instinctively pulling slightly harder one side or the other. A boy soon has to learn that there are no brakes on a canoe and an amazed expression will not stop him hitting the bank ! The way to stop a canoe is to paddle backwards with fast short strokes. Any attempt to do more than just dip and press the paddle briefly, if there is much way on the canoe, could cause a capsize, so lengthening the braking strokes should not come until the canoe has almost stopped.

This progresses to paddling the canoe backwards, which is done without turning the paddle over. This involves looking over the shoulder, and first attempts are best tackled slowly, as faulty technique may cause a capsize.

Sharper turns than can be obtained by varying paddle pressure are made in many ways. Commonest is to paddle forward on one side and backwards on the other and this is quite acceptable, even if the expert produces fancy strokes, such as the spectacular telemark, which can come later. Greater turning comes from swinging the blade further from the canoe, this being the sweep, using the paddle extended in a semi-circular stroke, back on one side and forward on the other (Fig. 4J).

If a canoeist finds he is losing his balance he can make a recovery stroke by slapping the water hard with the flat of his paddle (Fig. 4K). If he is stationary in a tippy canoe, he can maintain his balance by leaning slightly towards the paddle blade which is being moved backwards and forwards with a slight sculling action (Fig. 4L). With a little practice it is possible to lean any canoe over quite a long way, while supporting and recovering by this method. This is useful training to give confidence, and could pave the way to rolling, which may come later.



If a canoe is brought to a position where it needs to be moved sideways, a draw stroke (Fig. 5A) simply pulls it over. The blade can be returned in the water edgewise. An alternative is to scull. The paddle is brought near upright and the lower hand does little more than act as a pivot while the upper hand manipulates the paddle to cause the blade to cross alternately at an angle under water (Fig. 5B). If the action is used to push, the technique is almost the same as sculling a dinghy over the stern. Reversing the angle can make the blade pull and this is often preferable.

In a two-seater it will be found that the rear paddler has much more effect on turning than his mate. This means the rear paddler must be in charge. The forward man keeps steadily on unless told to do otherwise. The rear paddler controls the canoe by keeping time with his mate, but putting more power one side or the other as necessary. For sharper turns he tells his mate to also vary his power or only paddle one side, or even back-paddle one side while he paddles forward on the other side. Otherwise, all of the strokes possible in a single-seater can be adapted to a two-seater.

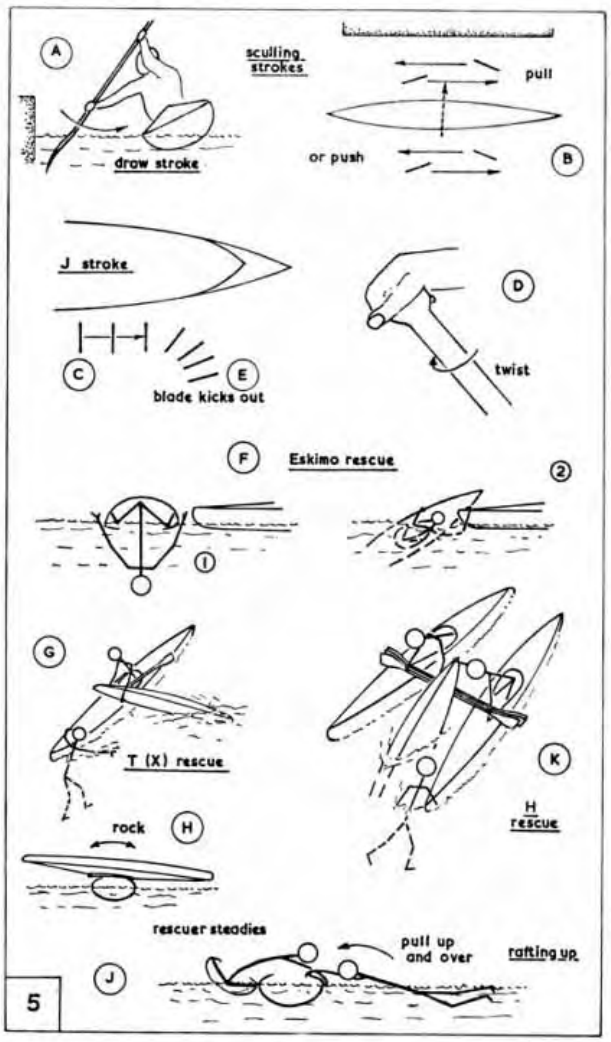
There are a great many special strokes possible in Canadian canoes with single-bladed paddles. Normally paddling is from one side. The expert does not change side to correct the direction of a canoe. When paddling alone the canoeist is only just aft of the centre of the canoe. When paddling with a mate they are at opposite ends and paddle on opposite sides. To offset the turning effect of paddling at one side, the stroke used is called a J or sometimes squaw stroke. At the end of a stroke, which should be parallel to the direction of the canoe and with the blade square across (Fig. 5C), the blade is turned outwards, by turning the hand on top of the paddle over (Fig. 5D), and given a

kick sideways (Fig. 5E). The amount of the kick has to be regulated to suit the amount of correction needed. It is bad technique to have to backwater to correct direction.

By kneeling, an expert can make longer more powerful singlebladed strokes, but for most Scout canoeing it is probably better to use seats. Canadian canoes are stable and a high position is essential.

Canoeist badge requirements mention *H, T* and *Eskimo* rescues. These are deep-water rescues intended to get a canoeist back into his canoe far from shore. In river canoeing and anywhere that the bank is within reasonable reach, it is better to get the inverted canoe there, as already described. Deep-water rescue may be good training and can make a display item, but it should be remembered that for most Scout canoeing it is not needed.

The rescue methods assume glassfibre canoes. Fabric decking would not stand up to the treatment. It is assumed that the canoes have adequate inbuilt buoyancy — which Scout canoes should, in any case. Canoeing offshore should be done in groups of at least three canoes, so two can help a third in difficulty.



An Eskimo rescue has to be quick. A canoeist capsizes, but does not come out of his cockpit. He waves his hands above the surface to show he needs help. Another canoeist brings his bow, or other part of his craft or paddle within reach, and the capsized canoeist grabs and pulls himself up (Fig. 5F).

For the *T* rescue, often called the *X* rescue, the capsized canoeist has come out of his canoe which is upside-down with little water inside. The rescuer gets the inverted canoe with one end pointing across in front of him, while the other man stays in the water with his paddle and holds the bow of the rescuer's canoe. He may then be able to steady the helper's canoe during the next step (Fig. 5G). The rescuer lifts the inverted canoe over his foredeck and works it across quickly. This is important, to get the cockpit above water before it can spill air and pick up more water. With the capsized canoe at somewhere near the point of balance, water can be rocked out (Fig. 5H). If there is much water in the canoe, another helper may lift the submerged end.

Getting the man back in involves *rafting up*. The empty canoe is brought alongside the opposite way round and the rescuer leans across it to steady it. The man in the water gets into a near-horizontal swimming position and kicks himself up and over his cockpit, so his head reaches the other canoe. He can then turn and adjust himself into his cockpit (Fig. 5J).

The term *H* rescue has been given to a method of emptying a canoe by two other canoeists holding it by the ends, like the cross bar of a letter H, between them, but lifting and emptying this way could cause the rescuers to capsize. In a better version, the *H1* rescue, two rescuers make a bridge with the paddles and the inverted canoe is lifted over the bridge, with some help from the man in the water (Fig. 5K). After the water is rocked out and the canoe turned over, it can be re-entered while between the other canoes or from rafting at one side, as in the first method.

Rowing

If circumstances allow, a boy is more likely to acquire correct technique if he starts by handling one oar as part of a two-man crew under a cox-instructor, than if he is let loose alone in a small dinghy. He may learn to deal with the problem of handling a craft singlehanded, with two oars to control and his back to the direction of progress, at a later stage.

Points to watch in rowing are comparable to those mentioned for canoeing. Pulling should be with the whole body — a beginner only uses his arms. The legs should be braced — they play an important part in levering the boat forward. A long stroke is generally more effective than a short one — it is when the feeling of resistance builds up that a little more effort gets the most effect. A beginner may want to lift his oar out at this point, because it is hard work. An exception is an inflatable boat — short sharp strokes are needed because these craft do not carry their way much between strokes.

For a normal stroke with one oar, one hand should be on the grip. This is the controlling hand and should be tight. The other hand on the loom provides more power, but it can be moved and relax on the return. Watch that oars rest at the correct point in the rowlock. A leather gives the location, but boys tend to draw oars inboard; sometimes this is difficult for a small boy to avoid, but wear on an oar can be rapid and serious.

For a long stroke the boy should lean forward and let his knees bend (Fig. 6A). At that point the oar blade should be just above the water. The blade is dipped and the stroke is made when it is immersed enough to have effect, but no more. In smooth water this would not be as deep as in waves. At the end of the stroke the body should be well back, the legs straight and the arms bent (Fig. 6B). The blade is lifted by lowering the arms and taken back ready for the next stroke without being raised excessively. A common beginner's fault is to row with the blade windmilling — going deeper halfway through the stroke and swinging high in the air on the return.

When one boy uses two oars he has to appreciate that each arm is like a separate oarsman. If there is no cox, he must glance over his shoulder occasionally, although using a landmark astern is a help. With any sort of rowing, keeping your eyes in the boat is the rule, but a beginner will need to spend some time looking at the blades, until he begins to row automatically.

Steering with the oars is done by pulling harder on one side or the other for minor corrections. One side may hold water (hold blades vertical in water) or backwater (row backwards). Holding water is also the way to stop the boat. A rudder makes minor corrections, but oar action will be needed as well. A good cox applies the rudder between strokes, when it is most effective and less of a load on the oarsmen.

Much Scout rowing is done without feathering the oars; feathering is turning the blades to the horizontal during the return stroke. This has the effect of reducing wind resistance and it also looks smart. At the end of a stroke the blade is lifted from the water. Then the wrist is dipped without releasing the grip on the oar, in the same way as with the controlling hand in paddling (Figs. 4F, G, H). When the oarsman is working one oar only, he feathers with the hand nearer the crutch, allowing the oar to turn in the other. This position is maintained during the reach forward, then the wrist is straightened before the blade is dipped (Fig. 6C). It is important that both twisting actions should be done only when the blade is out of the water.

Boat orders

It is obviously desirable that uniform orders should be used in pulling boats. Those given here are based on those favoured for single-banked pulling boats at the National Scout Boating Centre and may be easily adapted for double-banked boats. Tossing oars (standing them on end before and after rowing) is a practice probably best avoided with boys, who may be unable to manage a heavy oar in this way.

The assembly ashore before and after rowing should be part of the drill. Cox allocates places and should be satisfied that his crew can conform to swimming rules and are dressed as uniformly as possible, including plimsolls or similar soft-soled footwear. The crew is numbered from the bow. There may be a separate

bowman or he may double as No. 1 oar. The aft oarsman is stroke. Orders are given by cox, but if he is inexperienced, stroke may direct him.

When a boat is under way an order is given while the oars are in the water. The order is obeyed at the completion of the next full stroke after the order is given, except the emergency orders: ***Hold water, Mind your oars*** and ***Trail oars***, which are obeyed immediately.

ORDER	ACTION
Sight your oars	Check oars and crutches ready for shipping.
Let go for'ard	Bowman lets go and replies: *All gone for'ard.*
Let go aft	Stroke lets go and replies: *All gone aft.*
Ship crutches, in fenders	Each man sees to his own.
Shove off for' and (aft)	As required.
Out oars (port, starboard)	Both or one side in crutches, blades feathered.
	Above orders will be adapted according to situation.
Stand by to give way	Lean forward, arms and backs extended to full, in readiness for pulling.
Give way together	Whole crew start pulling. If only one bank is to start pulling, *Port* or *Starboard* is given first.
Hold water	Hold oars firm at right-angles to boat with blades vertical in water to stop way. If only one side, say *Port* or *Starboard* first. Immediate emergency action.
Back water or Back Together	Push instead of pull oars to reverse action together at both or one side. Emergency stop.
Mind your oars	Warning to keep oar blades clear of an obstruction. If only one side, say *Mind your port (starboard)* oars. Emergency immediate action.
Trail oars	Allow oars to trail with blades in water, by passing looms over heads. Emergency immediate action, to pass restricted place.
Easy all	Pull less vigorously, to slow boat. For turning boat, say *Port (starboard) easy*. To resume normally: *Give way together*.
Eyes in the boat	When necessary to regain attention of crew.
Oars	Cease pulling after the next complete stroke. Sit squarely with oars in *Out oars* position.
Gunwale oars	Oars across and rest on looms.
Bow	Bowman boats his oar, blade forward, and stands ready with bow painter and/or boat hook. If necessary: Fend off bow. Bowman may take these actions without special order at *Way enough.*
Way enough	Cease pulling after the next complete stroke. Order given in ample time as bank is approached. Oars are trailed, unshipped and laid in boat with blades aft. Crutches are unshipped and fenders out.

Alongside bowman disembarks and secures. Stroke secures stern. Cox unships rudder. Gear is squared off. Crew ashore by the stern. Muster on quay and dismiss by cox.

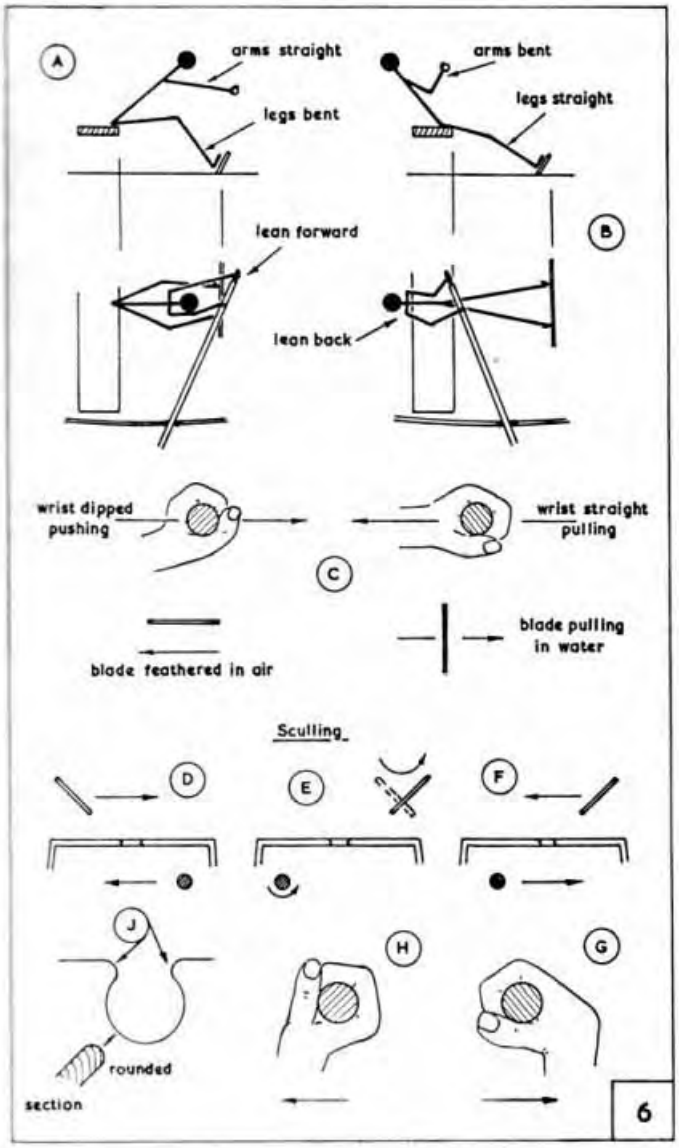
Sculling over the stern

There is a certain mystique about sculling, but it is straightforward if the mechanics of it are understood. It is usually harder work than rowing, so if a pair of oars is available and there is room to use them, rowing is preferable. If space is confined, or there is only one oar, sculling is the way. A boy gets a lot of satisfaction out of sculling through a crowded mooring and a Scouter's prestige is enhanced by being able to scull successfully.

The oar gets its thrust by being levered across the stern with the blade at an angle (Fig. 6D). At the end of the stroke it is turned with the same side aft (Fig. 6E) and drawn back (Fig. 6F). The tendency to move the boat

sideways is cancelled out by the changing directions, but the forward component of the thrust remains. What happens above the water is directed towards making the blade do what is wanted.

The difference between the two angles of the blade is about a right-angle. This effect is obtained by bending the wrist fully forward when pulling across (Fig. 6G) and fully backwards the other way (Fig. 6H). Concentrate on one hand and regard the other as merely providing extra power.



A post on the bank with a rowlock in the top is useful for practising. Sculling cannot be done slowly as the oar floats up. Horns on the notch help retain the oar (Fig. 6J). Get the first angle correct by trial and error. Sculling can be rough on the oar — keep an old one for this job. The point of wear is lower than the leather. As soon as the elements of sculling are mastered, teach standing sideways and sculling with one hand while looking forward. Steer by pulling harder one way or by alternating the blade angle. A light dinghy sculls best with short sharp strokes. As the boat and oar get bigger, longer slower strokes are better. Boat trim is important — get as much of the length in the water as possible, even if it means a lone boy standing well forward and sculling at a long angle. In the smallest dinghy sculling may have to be done sitting, but normally the sculler stands.

Sailing

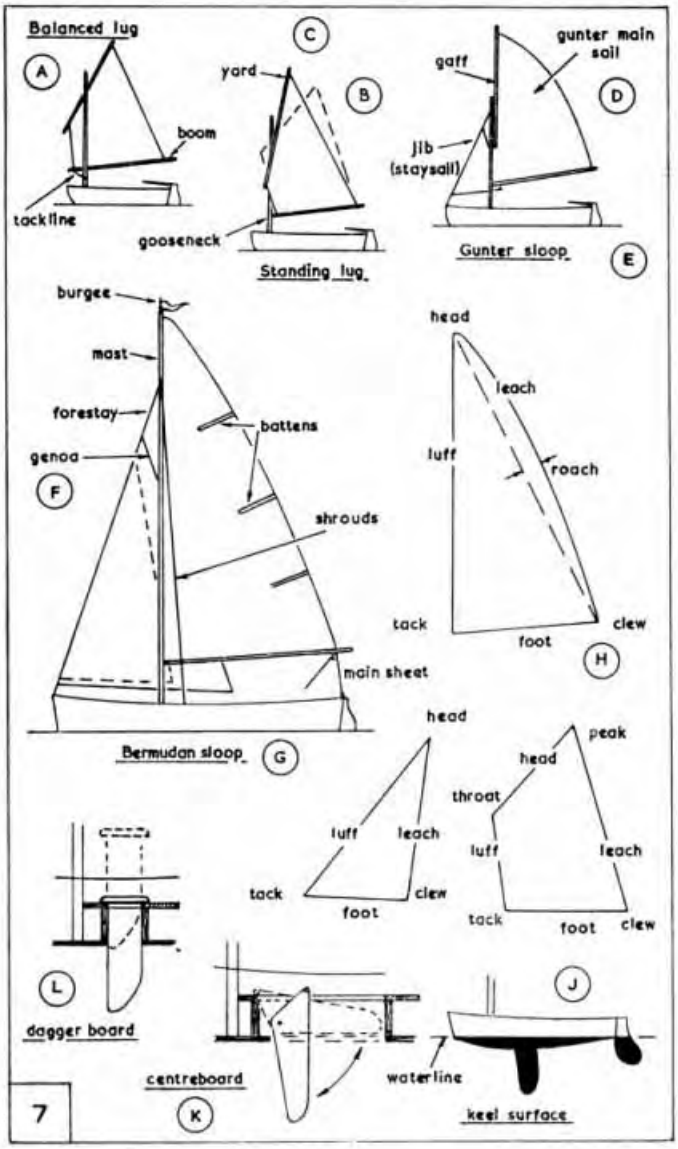
There are probably more books on sailing than on any other aspect of boat handling. Anyone new to sailing will benefit by reading one or more of these, but the Scouter concerned with training boys will need to read discerningly or he may get bogged down in the intricacies of deep-sea cruising or protest cases after dinghy races. The notes here are intended as a guide to the way sailing may go in a Troop and what basic knowledge should be taught.

Sailing boats have a language of their own. Some terms are essential (Figs. 7 and 8), but plain language is better than the confusion of using obscure terms. The basic single-sail boat has a balanced lug sail (Fig. 7A). There are few fittings and all spars will stow in the boat. This is improved by converting to a standing lug, with a gooseneck fitting on the boom (Fig. 7B). The steeper the angle of the yard, the better the performance to windward (Fig. 7C). The ultimate in steepness is to let this spar go straight up the mast. It is then called a gaff and the sail is a gunter (Fig. 7D).

With all of this sail aft of the mast there is room for another sail forward of the mast, making a sloop rig (Fig. 7E). This second sail is nowadays almost always called a jib, although purists will call it a staysail or foresail. A jib with a considerable overlap on the main sail is called a genoa (Fig. 7F).

It is unlikely that a rig with more than the two sails will be used. Racing craft have taken the mast and gaff of the gunter to its logical conclusion and made both into the mast and the sail is then Bermudan (Fig. 7G). A Bermudan mast needs comparatively elaborate rigging and is difficult to store. For Scout boating other than racing, it is usually best avoided.

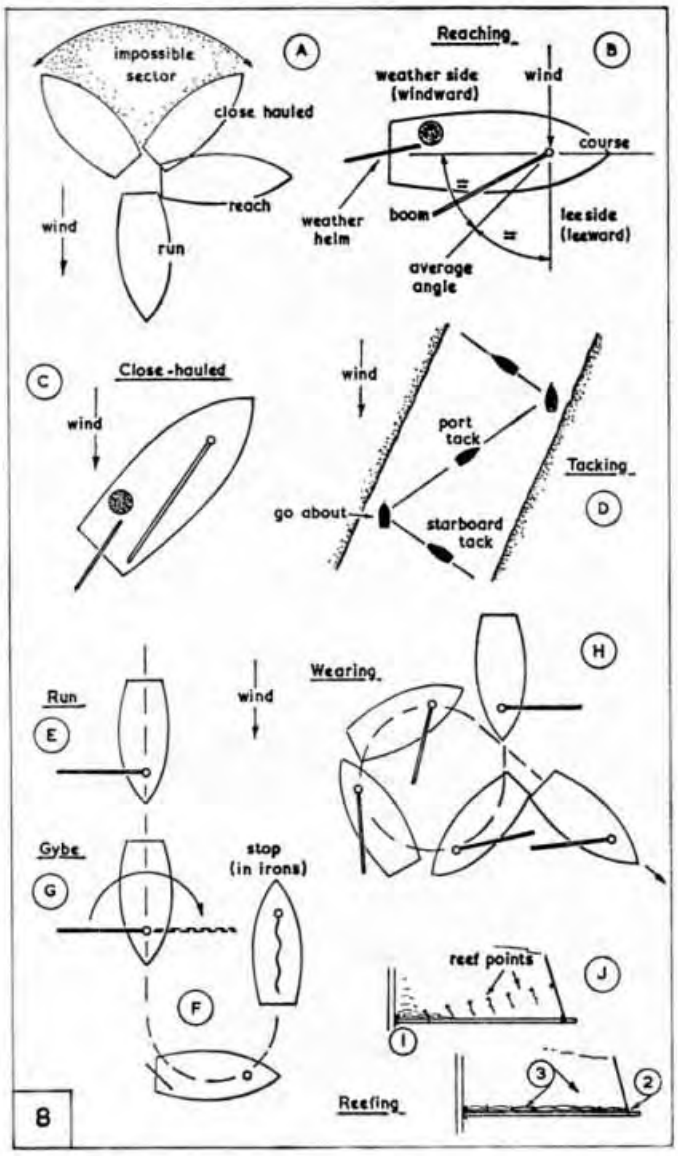
The parts of sails should be known (Fig. 7H). Ropes for hoisting are halliards (halyards — originally hauling the yards of a square rigged ship). Ropes that control sails are sheets.



A sailing boat has to be given more keel surface — meaning all of the underwater area in side view (Fig. 7J) to prevent it blowing sideways. In a small boat this is helped by a deep rudder and a keel which is either a centreboard swinging up into a case (Fig. 7K) or a daggerboard lifting up and down (Fig. 7L). Remember these prevent drift and do not provide stability in a dinghy. It is the crew, acting as ballast, who do that.

Boys should rig and unrig boats ashore and afloat. Keep the bow into the wind, even when ashore, otherwise the wind may fill the sail and the job becomes unmanageable. This is probably the first lesson in sailing — if the sail is allowed to go free, it will flap like a flag, so in emergency, sheets are slackened. A beginner will tend to hang on, when he should let go.

Sailing is best understood if tackled with a single sail and the use of a jib considered later. Most sailing boats will not sail nearer than about 45 degrees towards the wind. The names given to the other directions are shown (Fig. 8A). Reaching is the easiest direction to sail, with the wind abeam or nearly so. On an open stretch of unsheltered water, the boat is launched and put bow into wind, then the bow is pushed off and the sail hauled in slightly. You are away. With the sail slack you will be spilling wind and sailing slowly. Haul in the sheet and speed will increase, but haul in too tightly and you will feel with your other hand on the tiller that the boat is trying to turn up into wind and you have to steer to correct this. It is just before this point that the sail is set correctly for the course you want to keep. Theoretically the average angle of the sail bisects the direction of the wind and the way you want to go (Fig. 8B), but as you are dealing with a flexible piece of cloth, the boom has to be hauled in further.



To sail close-hauled the boom is brought in as far as possible (Fig. 8C) ; then use your rudder to keep the boat on a course that just does not allow the sail edge to flap. You are then as close to the wind as you can get. If your destination is to windward you get there by tacking, which may mean long and short boards in a confined channel (Fig. 8D). As you go about to change tack, the helmsman gives the order *ready about* and/or *lee-o*; then he pushes the tiller over to turn towards the wind. It is usual to sit on the windward side, moving in and out as ballast, and then change sides during going about, ready to be in position as the sail fills on the other tack.

Sailing away from the wind is called running (Fig. 8E). It may seem easy, but there are two snags with beginners. The only way to stop is to turn the boat into the wind, and there may not be room to do this (Fig. 8F). The sail may be caught aback and the boom swings out of control to the other side. This is a gybe (Fig. 8G). Someone may be hit by the boom and if weight is on the wrong side of the boat there may be a capsize. If direction has to be changed towards the side the boom is on downwind, a safer way is often to wear around (Fig. 8H). The boom changes sides when the sail is empty.

A jib has to be set at about the same angle as the main sail. Although the main sheet should always be held in the hand when dinghy sailing, the jib sheets may be gripped by jam cleats. When the wind gets too strong for the full sail area, performance will be better and safer if the main sail is reefed. In many boats this is a simple roller blind action around the boom, but with traditional reef points, lower the sail slightly, pull down and secure at the tack, then at the clew and finally fasten the reef points (Fig. 8J) with reef knots (where the name comes from).

Safety

Safety is not just a matter of making every boy wear a lifejacket and checking his swimming ability. Obviously, the relevant regulations in *Policy, Organisation and Rules* must be observed, but with water work, as with other activities, the Scouter then has to balance the sense of adventure against the risk; he has to weigh up the weather and water conditions in relation to the activity planned; he has to assess the abilities of those involved and he has to have the strength of will to back down if he thinks that the continuance of an activity is inadvisable. Professional seamen are, by nature, cautious. They will have thought of eventualities and what they would do. *One hand for yourself and one for the ship* has a lot of sense in it. The Scouter has the difficult problem of getting something of the feeling of caution and safety into the thinking of the boy without spoiling the adventure aspect. If the boy thinks it is risky and the Scouter has made sure it is not, the impossible has been achieved.

A Scouter taking boys afloat is not entirely on his own, as Boat and Charge Certificates (*see Chapter Five*) back his decisions and support his actions. If he plans to use strange waters, he should get local advice. A man in a blue jersey leaning on the harbour wall is not necessarily an expert. If there is a Local Water Activities Committee get in touch with the secretary. Try the local sailing club. If you can find no local source of information, ask Scout Headquarters.

Fortunately the use of personal buoyancy afloat is now generally accepted and there should be no difficulty in persuading boys to wear something suitable. But what? In Britain, the uses of the words *lifejacket* and *buoyancy aid* are now fairly closely defined.

A lifejacket will bring an unconscious person to the surface and turn him face up with his mouth and nose in a position where he can breathe. Most carry the British Standards Institute kitemark. Nearly all have some inherent foam buoyancy and provision for mouth inflation. Most buoyancy aids use foam buoyancy and are in waistcoat form. They will keep the wearer afloat, although it is assumed he is conscious and can help himself.

A lifejacket or buoyancy aid should be worn for all dinghy sailing and canoeing. For boating in other craft it depends on the Scouter's decision. Lifejackets should be worn at sea, but for sheltered inland waters buoyancy aids may be satisfactory. In obviously placid inland conditions rowing and motor boats may be used without wearing personal buoyancy, but these garments should be carried in case conditions change.

The inherent buoyancy in a B.S.I.-approved lifejacket is enough to keep the wearer afloat. Make it a rule that air buoyancy is never added until the wearer is in the water (*see the section on canoe capsizing, in Chapter Three*).

For boating activities around a shore base or a larger craft, it may also be advisable to have one or more lifebuoys, ring or U shape, to throw to anyone in trouble. One of these carrying the Group name makes a good sign at camp.

The Boat Certificate will indicate limits of loading, but these will depend on conditions, as more may be safely carried on placid inland waters than on the sea. As a rough guide a normal open boat on the sea may carry two adults if between four metres and 4.5 metres, three adults up to five metres and four adults up to 5.5 metres. In quiet waters these capacities might be almost doubled, particularly for boys rather than adults. For successful sailing performance on any waters, numbers would be about the same as for rowing boats on the sea. In the small rowing dinghy sizes, two boys might manage a 2.5 metre pram dinghy, or three might use a three metre dinghy. For sea use it is inadvisable to have boats less than four metres.

The equipment of a boat for safe handling depends on the circumstances. There should be oars and rowlocks sufficient to handle the craft. In a larger pulling boat there should be spares. All rowlocks should be on lanyards secured to the boat. A sailing dinghy in confined waters might have one or, preferably, two paddles. Even with an outboard motor there should be another means of propulsion. A sculling notch is always worthwhile, for safety as well as other considerations.

Except for local boating there should be a means of bailing. This could be a pump, a scoop-type bailer or a bucket. There should be a bow painter of adequate length and, in most boats, a stern painter or length of rope to use there. A lifeline for throwing is a good training aid as well as a safety item. In Scout boats it is advisable to have the rudder on a lanyard and a peg on a cord to secure the tiller. If a boathook is carried, it should have rounded hooks, not a spike. An outboard motor should have a safety line or chain fastened to the boat.

If there is a motor, there should be a fire extinguisher. If there is a galley, there should be a second one. These should be appropriate types of sufficient size. Check details, but get B.S.I. or other approved types and for petrol or galley fires they should be dry powder, foam or carbon dioxide types.

For cruising offshore there are many other safety items, but for these a specialist cruising book should be consulted. For inland cruising, spares and repair material will be carried. In both cases an adequate first aid kit

should be in the boat. An anchor may be of value on a river to prevent drifting into danger, as well as its more obvious value on open water.

The most important safety factor is the knowledge of the person in charge and training of the boys adequate for the exercise.

Maintenance

There are books on boat repairs, building and maintenance. Fortunately, with modern materials the old-time skills and extensive tool kits are no longer needed. Most jobs can be done with normal handyman equipment. Any plywood used should be marine grade (marked BSS1088 in Britain). Glues should be waterproof boat-building quality (Aerolite and Cascamite are common in Britain). These suit wood. Wood and most other materials can be bonded with epoxy glue (Araldite). For flexible materials there are many adhesives, but no universal one, so check instructions.

Paint should be of the type intended for marine use. Many household paints will not stand up to conditions afloat. The leading marine paint manufacturers offer good free booklets on boat painting. Ordinary paints do not bond well with glassfibre, and polyurethane, or other special types, should be used. The success of a painted finish depends very much on the care given to preparation. It is rarely necessary to strip off all old paint. Any stopping used should suit the paint following.

A useful repair material is waterproof self-adhesive strip about 5 cm. wide. This will adhere to any dry surface. Pieces can overlap and will make a temporary seal for a damaged hull. A cracked spar or oar can be bandaged. Vigorous rubbing with a cloth soaked in methylated spirit will quickly dry a surface.

For repairs to a sail or fabric canoe skin, use sail twine and a sailmaker's needle, gauge 14-17, preferably pushed with a palm (Fig. 9A). A tear in a sail should be repaired immediately. This is the origin of the saying *A stitch in time saves nine*. Close herringbone stitching (Fig. 9B) with stitches of varying lengths does not need a patch on a sail. If it is a fabric canoe, use wide stitches and put on a patch with rounded corners to minimise lifting (Fig. 9C). Herringbone can be used to pull together the edges of a canvas cover on a spar or hand rail (Fig. 9D).

Emergency repairs to wood may be done with self-adhesive strip. Damage to clinker planking is made good with a tingle (Fig. 9E), which is a wood patch, *faired off* at the edges and fixed over jointing compound. Use screws if there is enough thickness to hold them. Galvanized nails may be taken through and clenched (Fig. 9F). The professional way is to use copper nails and roves (conical washers). Each nail is driven through a drilled hole from outside, held with an iron block while the rove is driven on with a hollow punch (wood with a hole in the end); then the end is cut off (Fig. 9G) and the remains riveted over the rove (Fig. 9H).

Broken timbers are most easily repaired by *doubling up*. Make a piece of the same section as the timber long enough to overlap several planks and fix this with nails and roves alongside the broken timber (Fig. 9J). A strut inside may be needed to force the wood to the curve. It may be advisable to laminate with two thicknesses with glue between.

A small hole in plywood may be cut square or round and a slightly tapered plug glued in, then planed level outside (Fig. 9K). Slightly bigger damage has a piece let in with a backing piece behind — all glued, and a few brass shoe nails may be driven through and clenched to hold the back piece close (Fig. 9L).

For larger areas of damage, or to take care of a curve, make the backing piece as an open frame, then fix this before inserting the repair panel (Fig. 9M).

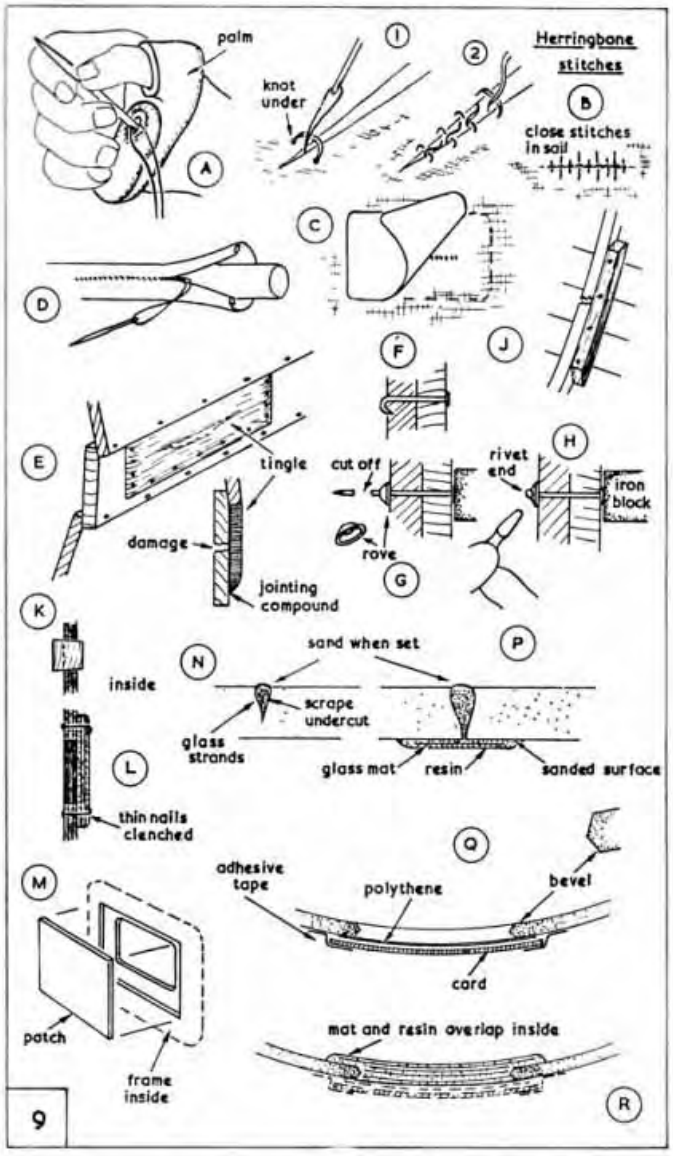
For glassfibre repairs, one of the kits sold for use on cars is a convenient way of buying small quantities of all the materials. Some components have a limited life, so do not keep a repair kit more than about six months. Glassfibre work is done by activating a resin with other chemical supplied, then using this to impregnate glassfibre mat or cloth. Working time is limited once the resin is activated, so check this with the instructions. Resins have to be used above a certain minimum temperature — this is important. Attempting a repair outside on a cold winter day will be unsuccessful.

Cracks in glassfibre are scraped and filled with a mixture of glass strands and resin, then sanded level (Fig. 9N). If the crack goes through there should also be a backing patch of glass mat set in resin (Fig. 9P). New resin will bond to old, but the old surface should be thoroughly sanded immediately before making the repair.

For more extensive damage cut away (drill through for hacksaw blade) and file the edges. If there is a sufficient thickness make a double bevel. Cover outside with polythene sheet backed with card or plywood, held with adhesive tape. Turn the boat so this is downwards, if possible, so that gravity helps (Fig. 9Q). Put a layer of resin in the repair. Lay in glassfibre mat or cloth to make up the thickness, using more resin and dabbing with a brush using a stippling action so that the resin impregnates. Put more glassfibre and resin to overlap inside (Fig. 9R). When set remove the outside supports and sand the surface.

Glassfibre and resin can be used on wood. Glassfibre tape may be bedded in resin along a leaking seam, but the surface must be dry and free from paint. The material can also be used to fill cracks in wood. However, the normal resin is not elastic when set, so it is unsuitable where wood expands and contracts. There are flexible sealing compounds that never completely harden which are more suitable.

Fitting out in the spring is something of a tradition and is a good opportunity for boys and maybe their parents to be involved in getting craft ready for the season, but boat maintenance is better treated as a continuing process. An enthusiast who makes the organising of boat maintenance his particular responsibility can be a great help to the successful running of any Troop which has a number of boats.



CHAPTER FOUR
WATER ACTIVITIES

Although the novelty of merely being in boats will sustain interest in a boy's early days there needs to be a continuing programme of training and activities. Much of the activity of any Troop with boats can be built around things afloat. If it is a Sea Scout Troop they should be. Expeditions, camps, games and much badgework can either be on the water or be related to it.

Canoe cruising

A boy gets a tremendous satisfaction out of going somewhere in a boat. There is a feeling of the explorer or pioneer arriving at a destination by boat, even if it is a place already well-known from the shore approaches. If the expedition involves an overnight camp with equipment carried in the boat the enjoyment knows no bounds. Properly handled, this is a terrific training opportunity.

Cruising in a kayak soon shows up faults of technique, causing unnecessary tiredness, so early training should include trips of an hour or so. Many boys want to give a short burst and then rest — they need to get into a steady rhythm of moderate effort for longer periods. Correct seating, adjustment of footrests and proper paddle handling all contribute to this.

It is unwise to plan an expedition for one boy. For safety reasons there should be two or more. Even a two-seater canoe on a canal might meet snags, but dealing with this could be regarded as training for the boys, where a solitary boy might not cope. Canoe cruising generally is better undertaken by a Patrol or larger number.

There must be an acknowledged leader and another member at the back of the party, otherwise even with only three or four canoes, the leader spends too much time looking back. If no-one is allowed to fall behind the recognised last man, the party is known to be together. This is important on even a mildly rapid river. There could be a system of whistle or other signals between 'tail end Charlie' and the leader. If anyone needs to stop, it is usually advisable for the whole Patrol to stop.

If the party is more than one Patrol, each Patrol keeps together, but need not be within sight of another Patrol. The overall leader has a few assistants. If there is a weir to portage or a rapid which needs attention, he leaves an assistant to direct the others through. The assistant follows on with the tail end man, who may be equipped with repair materials, spare paddles, first aid kit and maybe a flask of hot soup in case anyone has to be cheered up after a ducking. With a large party cruising for several days, Patrols may take turns at being Pilot Patrol, starting out with the leader and providing guides to leave at hazards.

When planning a canoe cruise, distances may be estimated on the basis of five kilometres per hour. Paddling time is likely to be around five hours. Possible distances are affected by any current, which will improve speed, but if there are many rapids — even minor ones — there will be delay due to the need to go through one at a time. Passage of a lock, whether it is passed through or portaged, can take a Patrol twenty minutes.

A canoe cruise has the greatest training value and gives the greatest satisfaction if all gear is taken in the canoes. The alternative is a backing shore party with a vehicle. If there are more boys than canoes, this may give an opportunity of changing crews. It also allows camp to be set up in advance of the arrival of the canoes, which could be an advantage with beginners in bad weather. It also means lighter canoes which are easier to paddle.

A decked canoe has more capacity than most rucsacs, but it is a different shape. Kit should be broken down into many small packages. Bedding and clothing, at least, should be in fully waterproof bags. Stout plastic bags are suitable, but they should be oversize. The neck is tied, then doubled over and tied again. Conventional rucsacs and kitbags have no place in a canoe.

A typical day allows for rising at seven a.m. and getting on the water at least by ten a.m. Breakfast should be substantial. Allow for a light lunch of sandwiches and a drink around one p.m. and expect to get to the next camp site by five p.m., although it could be a little later at the height of the summer. Arrange some shore exercise, such as games or a visit if the boys have been in the canoes all day, and have a substantial evening meal.

Small numbers on some waters can find overnight sites as they go, but on most rivers it is necessary to plan overnight stops in advance. If arrangements are made for food to be delivered at each site, it will not be necessary to carry much in the canoes; but have emergency rations, particularly water. Small numbers may make do with improvised latrine arrangements, but some light fabric screening, cord and sectional cane or tube tent poles, plus a folding spade, should be carried by a group.

Cruising under oars

In many ways the same considerations as those for canoe cruising apply. Two boys may use a dinghy. There should be a rudder to relieve the oarsman of directional problems. Three are a better crew as there can be one or two rowing or resting. If the boat is large enough for a Patrol, there should be at least one spare boy, so there can be changes. More than one boy should be capable of taking charge and handling the boat in a seamanlike way. A larger pulling boat is likely to be cruising on water used by other craft and other boatmen have a right to expect even a crew of beginners to be controlled by someone who knows what to do — apart from other considerations we have the good Scouting image to maintain.

As a mechanical process pulling an oar is a more efficient way of converting human power to boat propulsion than paddling a canoe, but boys find rowing less interesting than paddling and daily distances should usually be no more than for canoeing.

Individual kit should be in sealed waterproof bags, mostly stowed under thwarts. Tents and other general equipment should be arranged so the comfort and movement of oarsmen are not affected. It looks bad if kit is higher than the gunwales. Oars, painters, anchor and other boat gear should not be obstructed by kit.

It is possible to sleep in some boats, using a tent cover, but usually there is not room for all who use the boat during the day. However, where sleeping on board is available, this gives much more flexibility in the choice of overnight stops, as temporary moorings are more easily found than camp sites.

Cruising under sail

There are not many waters inland where a worthwhile cruise can be made in an open boat entirely under sail. However, sail and oars make a good combination. The snag is that sailing gear takes up room, and the number of boys who can sail are less than the number who could travel in the boat under oars only. An attraction of sailing gear is that it is fairly easy to use the boom as the ridge of a tent for accommodation on board at night.

Cruising under power

Handling an outboard motor may be rightly regarded as seamanship on a par with rowing and sailing. Cruising in a power boat has training value, but the snag is that the helmsman is occupied, while others in the boat have nothing to do. It may be possible to use such an expedition for nature study, charting a waterway or some other purpose which can provide occupation for others, but in general depending solely on outboard power for a Scout cruise is inadvisable as it leads to boredom and its consequences.

There is a case for having an outboard motor to supplement rowing a sailing. It acts as an auxiliary and supplements the other means of propulsion. If the wind fails or the crew are tired the motor can take over. It can also get the boat quickly through an unattractive piece of water. It can get a sailing boat out of restricted waters and into those suitable for sailing. Those taking part in the cruise should understand that the outboard motor is secondary and not intended as the main choice.

There is a good case for a power boat with a cruise of mixed craft. A Troop may take a fleet of canoes, pulling and sailing boats on a cruise instead of having a static summer camp. With such a collection of craft of differing capabilities it is vital to have a liaison craft with power. It is used to keep in touch and may take laggards in tow. Although a Scouter may have to be in the boat, this duty provides a chance to lets boys take turns at learning something of power boat handling.

Cruising in larger craft

Not many Groups own cabin craft. If they do, at least one Scouter will know its possibilities and how to handle it. Others may consider hiring (applied to inland craft) or chartering (the same, applied usually only to seagoing craft). Most inland motor cruisers do not have much accommodation, so cost per boy could be high. Some converted canal boats will carry more at comparatively lower costs, although some are only available with professional crew, who have to be paid. Such inland cruising under power can have the same problem of boredom as mentioned for open outboard boats.

A canal cruise provides interest in working locks and the possibility of getting ashore frequently. Handling the boat at locks and other places can occupy several boys. Elsewhere there is little to do on a motor cruise, so a Scouter needs to plan watches and occupy boys with a rota of galley and other workers, and may take an opportunity to get home the realities of knotting, compass and other basics with practical applications close at hand.

For inland cabin cruising under sail the Broads, Windermere and a few other lakes are the only places suitable for sailing for more than a few days. Nearly all sailing cruisers also have engines. At peak holiday periods there could be many other boats to contend with and hire charges then are very high. Such a cruise for Scouts might be better early or late in the season.

Offshore cruising should only be considered by those with experience. Besides the Scouting requirement of Charge Certificates, yacht charterers, understandably, expect proof of ability before letting you take their craft away. There may be possibilities in sheltered tidal waters. Places like Chichester and Poole Harbours and some of the Scottish sea lochs can give salt water experience without being very hazardous.

To give boys experience at sea it is possible to make use of one of the many organisations who offer the Outward Bound type of training afloat, with cruises of a week or more on craft large enough to accommodate many trainees and some professional crew. There are also a number of cruising vessels operated within the Scout Movement itself.

Camping with boats

Having boats at a normal static summer camp adds considerably to the enjoyment of the boys and to training possibilities. To be of value the camp should be on, or almost on, the waterside. Otherwise there are problems of safe storage or daily transport.

A camp near tidal waters may have attractions, but boating may only be possible for an hour or two on each tide. If it is an open coast, weather conditions may prevent boating at all.

An estuary or a harbour may allow boating in any conditions, but some of these places can be extremely muddy. If there is any choice, an easterly-facing foreshore is likely to offer the best conditions as it is sheltered from the prevailing summer south west winds.

This also applies to the larger lakes, where strong winds can make water conditions very rough. If the camp is on a riverside, it is advisable to choose a river that is navigable far enough in each direction for crews to be sent away on overnight expeditions. A navigable tributary adds to interest. If it is a river only suitable for canoeing and the current and rapids make upriver travel impossible, there will have to be transport available to take canoes further up for trips that will finish at the camp.

Establish a system. Boats and gear should be brought ashore or moored and equipment checked every night. There should be a rota of users, and part of the use includes cleaning. Have a daily *duty officer*, not

necessarily an adult. A free-for-all attitude to boating could lead to damage and loss during camp. Boating should take place only with the authority of the duty officer.

Competitions and games

A straightforward regatta can arouse plenty of interest, but it needs careful planning to make use of available craft and provide opportunities for all who wish to participate. Unless the sequence of events is carefully arranged to allow for marshalling and changing crews, the programme can become very tedious and uninteresting for spectators.

There should be an *Officer of the day* with overall responsibility, with enough knowledge to settle disputes. Starters and judges should be duplicated. There should be marshals who assemble boys and boats for imminent races. There should be judges who follow each race, either by boat or along the bank. There should be a rescue boat, whose crew has no other duty. If it is more than just a private event within the Group, there should be someone giving a commentary. Results should be displayed on a board. If there is a points system for a Patrol or other competition keep it up-to-date to maintain enthusiasm.

Regatta organisation is complicated if sailing is included with other events. Wind is unpredictable and timing can be upset. It is better to treat sailing as another activity, in another place or at another time. Scout events should be properly organised with correct observance of the usual rules. It may be possible to get a club official to be the *Officer of the day*. Dinghy sailing enthusiasts take their rules seriously. They have a right to expect Scouts to as well.

Besides straight races a lot of fun and training value can be got from other competitions. Care is needed to ensure that excesses of enthusiasm do not lead to neglect of care for boats. Events that could involve raiding or ramming directly between boats are best avoided. Games can be devised in which the boats are used as transport, but struggles in wide games, for instance, take place ashore.

Some ideas, particularly suitable for canoes, but adaptable for other craft are:

1. *Backwards race.* Not too far. Teamwork in two-seater.

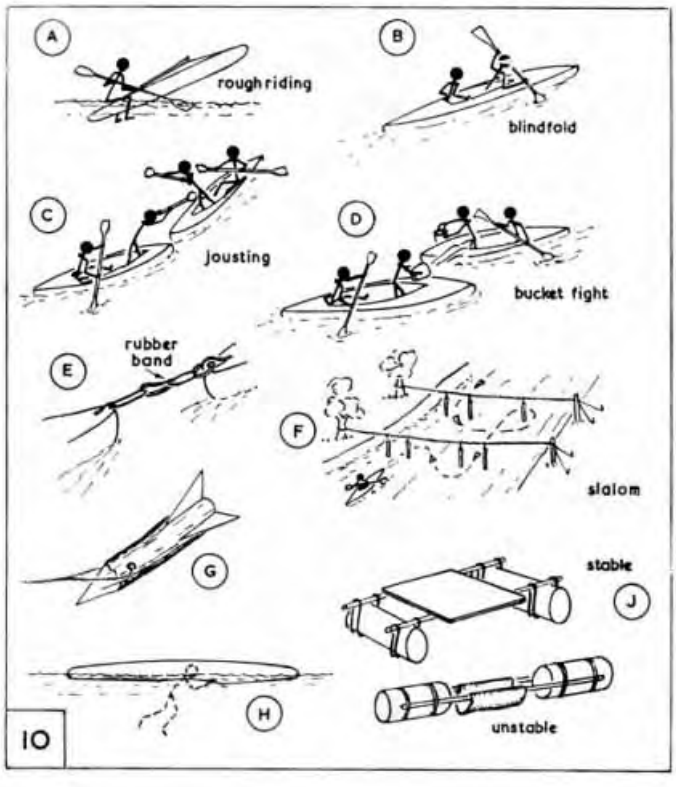
2. *Rough riding.* Single-seater, sit on stern with legs in water (Fig. 10A).

3. *Obstacle race.* Change seats in two-seater. Get out and re-enter. Climb over rope while canoe goes under. Paddle with hands.

4. *Blindfold paddling* in two-seater. Forward boy is blindfold and has paddle. Boy behind is without paddle, and tells his mate what to do (Fig. 10B).

5. *Jousting, two-seater or dinghy.* Forward boy stands with padded pole (Fig. 10C). His mate paddles. Object is to tip opponent to water. Survivor is tackled by next competitor and so on.

6. *Bucket fight.* Similar to jousting, but front boy attempts to pour buckets of water into opponent's canoe until it capsizes (Fig. 10D).



7. *Amphibious race*. Competitors start ashore, run to canoe or dinghy, go around water course and return to run to finish. With single-seat canoes they might carry them.

8. *Paddle ball*. Opposing single craft or teams and large floating ball, to be got over line or through goal. Bat polo is played in swimming baths with special small kayaks. In confined quarters this activity can be rough and hard on kayaks, paddles and paddlers. Treat cautiously.

9. *Pins and balloons*. Fix a long pin, hat pin or steel knitting needle on the bows and chase floating balloons to burst them.

10. *Rubber bands*. Races for pairs of kayaks. Bow of one joined stern of other with a cord and rubber band. Object is to go around course without breaking the rubber band (Fig. 10E).

11. *Tug-o'-war*. Not advised. This can be extremely hard on paddles or oars and lead to breakages. May be fun with hands only or with improvised paddles and rafts.

12. *Slalom*. There is now considerable enthusiasm nationally for white water slalom. Advice from experts should be taken if this is to be tackled, but it is a good training exercise for boys to go around a slalom-type course of hanging poles in still water (Fig. 10F). Time individuals to make a competition.

13. *Whale hunt*. This comes from our Founder. The whale is a log or other float, fitted with fins, for visibility, towed by one boat at the and of a long line, while the harpoonist in another boat tries to hit it (Fig. 10G).

For public display, kayaks offer more scope than other craft. Doing something in unison is always much more effective than a performance by a solitary boy. With beginners simple formation paddling looks good. If two or more canoeists can Eskimo roll alongside each other the audience will appreciate it and if there is an occasional error it is part of the show and not so bad as if a single performer fails. Rescue displays are only effective if there is a good commentary.

Canoeists can capsize, swim their craft ashore, empty and right them. An audience appreciates a race, but take correctness of technique into account. It is possible to capsize without coming up, but remain underneath breathing air inside the canoe (Fig. 10H). When the audience is beginning to wonder what is happening start swimming the inverted canoe to the shore. Two canoeists might change canoes by swimming under water, and roll up to swim them ashore.

Improvised craft

Making a boat of some sort on site can be fun and good training. Sealed oil drums are the usual form of buoyancy. Dixies and baths, lashed to keep their open tops upwards, are also effective. Grass and reeds bundled into waterproof sheets will also work. In designing a raft, spread the buoyancy, so the weight is well within the outline. The catamaran form is better than a compact mass of cans.

As with lifejackets, it is air which provides buoyancy. The buoyancy of wood varies, but softwoods will float higher than hardwoods. A cube of fresh water with sides of thirty centimetres would weigh about twenty-seven kilogrammes. Salt water in the same volume would weigh about twenty-eight kilogrammes. As water will support a weight equal to the weight of water displaced, these are the weights a buoyancy of 2,700 cubic centimetres of air will support. A boy with each foot in a twenty-seven litre dixie would float, if he could keep his balance. A raft supported on two forty-five litre oil drums would support about ninety kilogrammes.

Some raft activities are

1. See who can paddle a two-drum unstable raft furthest before capsizing (Fig. 10J).

2. Test a raft with increasing loads of boys. Add boys' weights to find buoyancy.

3. Anchor a raft with a stone and cook a meal on board.

4. Tug-o'-war between two rafts with improvised paddles.

5. Devise paddle wheels at side or stern, possibly with bicycle pedals.

6. Build tent platform on raft and spend night on board.

7. Make raft with central hole and use for teaching swimming under water.

The earliest British craft still surviving (just) is the coracle. An egg-shaped basket about 1.25 metres by 1 metre with a reasonably flat bottom is about minimum size. Cover with plastic sheet or waterproof canvas. The expert uses a crude single-bladed paddle, with his arm twisted around it for drifting and fishing, or with a *sculling over the bow* motion for travel. See photographs or specimens in museums.

CHAPTER FIVE
SMALL BOAT SEAMANSHIP

Most of the contents of this book may be regarded as seamanship, but there are some practical aspects on which a Scouter, particularly a Sea Scouter, should have a good grounding. Reading specialist books and attending courses will help. Use and practice give a thorough grasp. The information in this chapter and elsewhere in the book provides a basis on which to build.

Equipment

Boating equipment has to be water resistant. Galvanised steel is usually cheapest for metal articles and probably satisfactory for Scout use. Brass is not a good alloy to have in a salty atmosphere and unsuitable for parts that will be immersed, as salt removes zinc from the alloy. Better parts are bronze or stainless steel — both expensive. Most aluminium alloys corrode rapidly in a salty atmosphere. There are salt water resistant aluminium alloys, but they are costly.

Rope has gone through a change. Ignore the advice in older books. Natural fibre ropes are obsolescent, except for sisal, which is a good buy as a practice rope, but it is rough and not sufficiently durable to be of use for long on a boat. Synthetic fibre ropes are stronger for their size, have better resistance to chafe and do not rot. Although their initial cost is higher, their life is considerably longer than natural fibre ropes. Synthetics are made in the usual three-strand form and in several special plaited types. Manufacture of the same basic material is possible in several forms. It is advisable to get boating ropes from a yacht chandler, unless the buyer knows what he is looking for.

The best choice, particularly for rigging a sailing boat, is Terylene, although there are cheaper alternatives. Nylon is the only synthetic which is very elastic, so it serves for mooring and anchor cables, but is unsuitable for rigging. Do not be misled into calling all synthetics *nylon*. You will get the wrong stuff! Stainless steel is a better buy than galvanised steel wire rope, despite its initial higher price.

Fenders, or fend-offs, often get a rough and short life in Scout boating. Rope fenders can be made. Instead of bought plastic fenders, discarded mini and scooter tyres should be accumulated. Those to be taken afloat may have canvas covers, but at the home base use plenty of tyres on the edges of landing stages. Rubber can be cut with a wet knife, but the various modern reinforcements in tyres will need a hacksaw.

Ropework

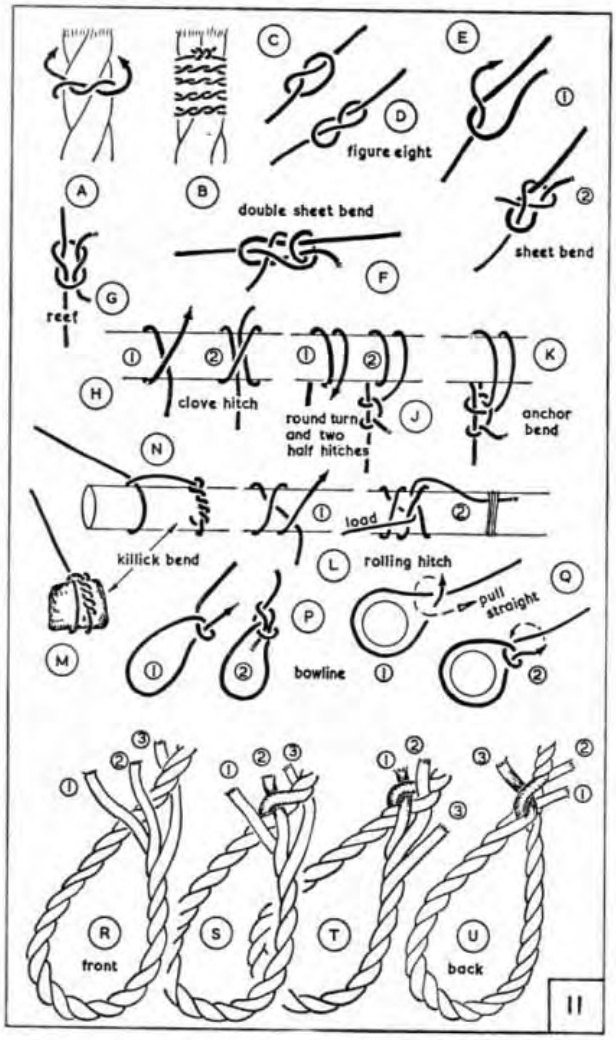
It is in boatwork, more than any other Scout activity, that ropework comes alive and has serious application. Scout boatmen, whether Sea Scout or not, should have a good grounding in the basic knots and their uses. When teaching, it is better to start with uses rather than names.

The ends of synthetic ropes may be sealed with heat, using a match or a cigarette lighter. Roll between moistened fingers. It is unwise to rely on this without a whipping. If a synthetic rope unlays, it cannot be laid up properly again, so prompt treatment is needed. Use Terylene whipping line. It is false economy to use hemp. The West Country whipping is easy to learn and more secure than most others. It is as suitable for plaited as for stranded rope. Put the middle of a length of line around the rope and make an overhand knot (Fig. 11A). Go to the back and do this again. Continue along the rope in this way and make the last knot into a reef (Fig. 11 B). Keep the turns close and go about one centimetre along an average rope. The sailmaker's whipping is good, but only applicable to stranded rope. With synthetics, boys are liable to waste rope by letting it unlay.

To stop a rope pulling through the hand or a fitting, the simplest is an overhand or thumb knot (Fig. 11 C). A better knot is made by going around the back and in the other side to make a figure-eight knot (Fig. 11 D). The common joining knot should be the sheet bend. One rope, thicker if different, is doubled

back and the other worked through it (Fig. 11 E). If there is much difference, go around again (Fig. 11 F). The reef (Fig. 11 G) is not a joining knot unless it bears against something.

Teach a clove hitch by going around a spar or through a ring (Fig. 11 H). Putting two loops over a spar end can come later. Treat it as a temporary fastening unless there is a load on both ends. For the end of a rope, emphasise the strength from the friction of a round turn, then keep the standing part straight to make a clove hitch around it (Fig. 11J). Taking in the middle of the round turn should only be done for making it into a fisherman's or anchor bend (Fig. 11 K), which can be very difficult to cast off after use. If the clove hitch is taught by working around, the rolling hitch is the same with the standing part covered twice, and this resists a pull along the spar (Fig. 11 L).



The timber hitch is a good self-tightening knot, but for boat work it is better combined with a half hitch to form a killick bend. Killick means anchor and the bend is used when a rock is used as an anchor (Fig. 11 M) or for towing a spar (Fig. 11 N).

The bowline is usually the only choice for a temporary loop in the end of a rope. Teach the basic construction (Fig. 11 P). The quick method around the waist can come later (Fig. 11 Q).

Of the large numbers of splices only the eye splice gets much use and then more often around a thimble, so a Scouter should be adept at getting that tight. Teach with fairly stout rope. Seal or whip strand ends and have a whipping at a suitable point. Allow ample length for ease of tucking. If the basic starting position is remembered (Fig. 11 R), with two ends across the lay and the third end behind, the tucking sequence is easy. Tuck no. 2 under a main strand (Fig. 11S). Tuck no. 1 under the next, going in where no. 2 comes out (Fig. 11T). Turn the splice over. Find the main strand without an end under it. Tuck no. 3 under this the same way as the others (Fig. 11 U). Even up the tension and tuck each strand in turn over and under one. Even up after each round of tucks. In synthetics it is advisable to tuck four times. Half the thickness of each strand may be cut away to taper it before a final tuck.

Rolling a splice underfoot is not a good thing to teach. Rolling between boards is cleaner. Boys often tuck along the rope rather than around. Tucking no. 3 in the first round is most likely to be done wrongly.

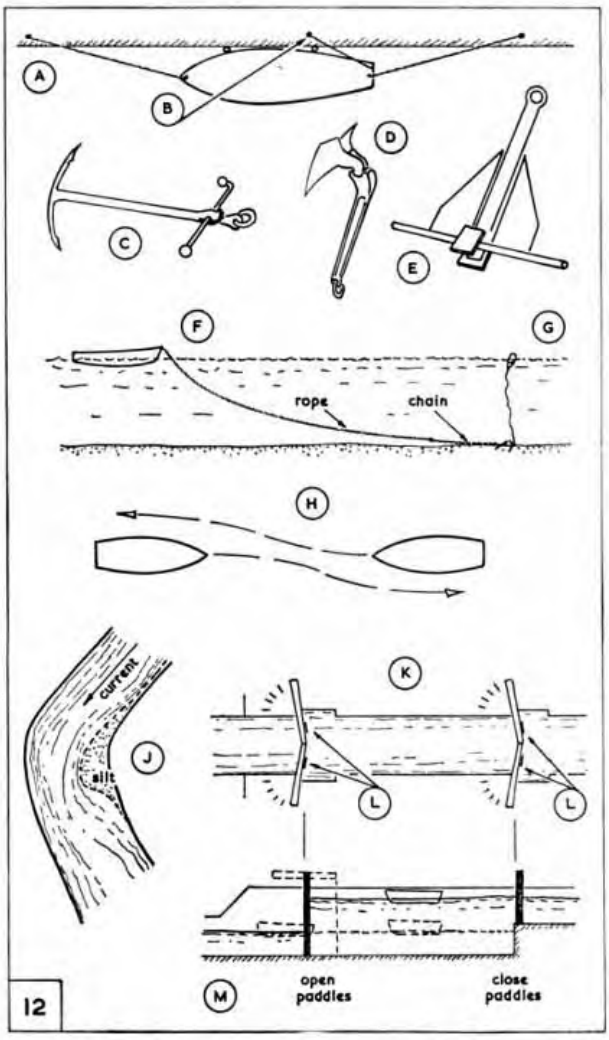
Mooring and anchoring

A boat alongside a bank should have its bow upstream towards any current. On tidal water it should be towards the ebb which is usually stronger than the flood. Carry the mooring lines out as far as possible (Fig. 12A), particularly if there is any rise and fall. If there is much strength in the current a spring from the stern (Fig. 12B) helps to keep the boat steady. With tidal waters and changing directions of flow there may also have to be a spring the other way.

There have been changes in anchors. If the traditional fisherman type is used, have a folding stock for ease in stowing (Fig. 12C), but lock the key or other fastening with wire. For mud and many other bottoms, the

plough type (*C.Q.R.* meaning *secure*) can be less than half the weight of a fisherman anchor for the same holding power (Fig. 12D). The Danforth, and others like it, are also claimed to have similar power (Fig. 12E). Beware of very light anchors, particularly of the folding grapnel type. Although they may be theoretically correct there is a practical lower limit of effective weight at around 3.5 kilogrammes.

The holding power of an anchor comes from a near horizontal pull along the bottom, which causes a fluke to dig in. This is helped by the weight of some chain next to the anchor. The rest of the cable can be rope. At least three times the depth of water should be allowed (Fig. 12F). Boys are often mystified by the method of release. By shortening the cable until vertical the anchor is made to cut its way out. The use of an anchor buoy (Fig. 1 2G) for knowing whore the anchor is and for pulling it out if it fouls might also be taught.



Inland waterways

The handling of one sailing boat in relation to another is covered by a lengthy batch of rules. Fundamentally, a port tack yacht keeps clear of a starboard tack yacht, a windward yacht keeps clear of a leeward yacht provided they are both on the same tack. In relation to craft propelled by other means, the sailing boat has right of way, except that vessels normally keep clear when overtaking. Obviously there must be some tolerance, particularly if the whole river is taken up by dinghies racing. Other craft cannot then be expected to wait indefinitely, but should go slowly by as far out of the way as possible.

If there is much current in a river, craft going upstream may keep near the banks where flow is less, leaving downstream traffic to make use of the centre. If two craft appear to be meeting head-on, they alter course to pass port to port (go to their right) (Fig. 12H). It is not the rule that boats must keep to the right always, as traffic keeps to the left on a road, but obviously if you are on the right you are more likely to be in a position to avoid oncoming craft. Overtaking at either side is permissible, but the craft being overtaken must hold its course.

There are speed limits on most rivers and on all canals. These are mainly to keep down wash, which may damage banks or be a nuisance to other craft. On canals, which are mostly shallow, deep-draught craft can only travel near the centre. Smaller boats should keep out of their way. On a river current swings to the outside of a bend. The inside may silt up to become quite shallow (Fig. 12J).

Locks

British rivers and canals were made navigable by many authorities, so locks are not standard. On some rivers they are staffed, but most locks have to be worked by boat crews. Working their own and other people's boats through locks is an interesting occupation for Scouts, if they understand what is happening and can do the job efficiently.

A lock is a sort of water lift for moving a boat from one level to another by raising or lowering water in a chamber. In most British locks there are gates at top and bottom, meeting in a slight V towards the higher level (Fig. 12K). In the gates — sometimes in the banks — are sliding doors or paddles which can be raised or lowered by gearing to let water through (Fig. 12L). The gearing is usually worked by a crank handle or windlass and this has to be provided by the boat crew. Usually the handle can be hired on the canal or bought from a chandler. Unfortunately not all canals have the same size square shaft for the handle.

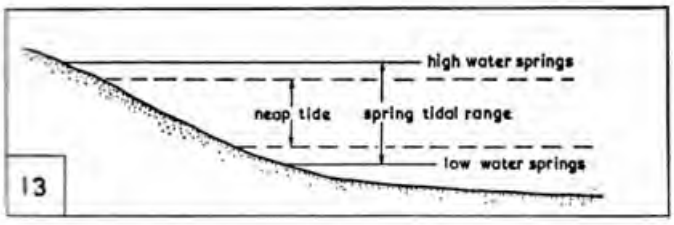
When working a lock, never open paddles at both ends. This merely wastes water. Let water in by raising the paddles at the upper end, with the others closed. Close the top paddles and open the lower ones to let water out. To use a lock, which has water at your level when you arrive, take the boat in, close the gates and paddles at your end, then open the paddles at the other end (Fig. 12M). If you arrive and find the water is not at your level, you will have to bring it level. Gates will not open until the level is the same both sides.

If a boat, particularly a small one, is in a lock at the lower level do not let water in too fast. Have mooring lines fore and aft always, preferably around bollards and back to be held by hand in the boat, so that adjustments can be made. There is no turbulence in the lock when it is emptied, but do not have smaller craft too close below when water is let out.

Tidal waters

Scouts away from the coast sometimes have difficulty in grasping the meaning of tides. A summer camp at the coast should include some basic tidal instruction. Around Britain tide times are about twelve hours and twenty minutes apart. Times are repeated approximately every fortnight. Their movement is affected by the moon.

Just after full and new moon the water rises highest and drops lowest. This is every fortnight and these are spring tides. Midway the rise is not as high nor the drop as low (Fig. 13). These are neap tides. Influences other than the moon also affect tides, so some spring tides may come higher than others. The water is moving as well as rising and falling. The rising tide may be assumed to come in from the Atlantic and to divide to go partly along the English Channel and partly around the west coast. The rise and fall varies between places, from about two metres to upwards of twelve in the Bristol Channel.



The actual movement can be quite fast — too much to be rowed or paddled against — but if the tide is used, considerable distances may be covered. Waves are comparatively local and due to shallow water or the effect of wind. Swell in the form of big rollers comes much greater distances and is most noticeable on exposed western coasts.

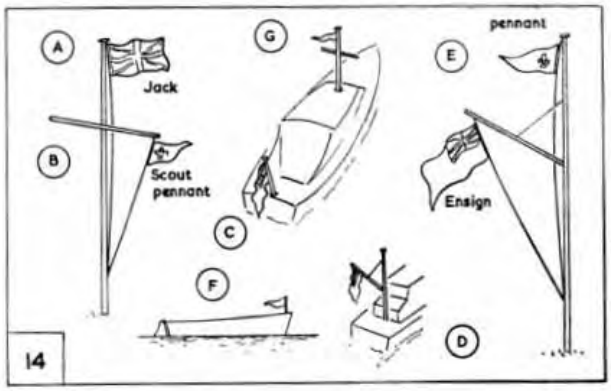
In general the tide floods or rises for the same period as it ebbs or runs out. When it turns there is slack water. The fastest stream is usually at half ebb. Obviously, rocks and shallows are exposed as the tide ebbs, so it is better to explore on a rising tide, then if the bottom is touched the tide will lift the boat off.

Information on tides comes from tide tables, obtainable from a local newsagent, or a nautical almanac, such as Reeds. This supplements a local chart. For even brief inshore boating at a summer camp, these basic aids should be obtained. Tides can run very fast, particularly in estuaries and harbour entrances, and there may be hazards which are not immediately obvious.

Flags

Flag etiquette is a subject in which Scouts should not show themselves at fault. The Union flag (jack) should never be used afloat. When flown ashore it should be at the top of the mast (Fig. 14A). If a Scout pennant is also flown, this should be at the end of a yard (Fig. 14B). Personal or signal flags should also be at the yard.

The national flag of any British subject afloat is the Red Ensign and this should be at the stern (Fig. 14C) or from a gaff (Fig. 14D). Older books show it at the edge of a mainsail, but this is rarely done today.



Afloat, a flag is said to be worn. Ashore, a Sea Scout Group may have a Red Ensign on a gaff and a Scout pennant at the mast head (Fig. 14E). In a small boat there may be a pennant at the bow (Fig. 14F) or at the mast head (Fig. 14G). It is advisable to keep to only an ensign and one pennant afloat, but if you wish to show a club pennant or other flag that could come at the yard. The starboard side is considered senior to the port side.

A small number of Sea Scout Troops are Royal Navy Recognised and they use a Red Ensign defaced with a Scout badge surmounted by an Admiralty Crown on the fly, as well as a special blue pennant. The use of defaced ensigns is very strictly controlled.

International code flags cover the alphabet and numbers. Although they can spell out words, their main use is groups which have meanings in a code book. A seaman of any nationality can look up this meaning in a code book in his own language, so it is a truly international means of signalling. Sailing clubs and others use some of the flags, which have appropriate single-flag meanings.. A Sea Scout Troop should at least have flags with meanings that can be of use to them within the Troop or in passing messages to others. There are books giving instructions in the use of these flags and enough information to serve as shortened code books.

Insurance

As with everything else in Scouting there should be adequate insurance cover if boating is part of a Group's activity. The Insurance Department at Scout Headquarters can advise or the insurance company already handling Group insurance may be willing to extend their cover, but it is unlikely that any existing cover will include rating if it was not originally asked for.

It is important that there should be third party cover. While the damage that a small canoe could do may be thought to be slight, it is possible that the action of a canoeist could cause a larger craft to collide with another or that some other chain of events could occur for which the canoeist could be held responsible. Ample third party cover is comparatively cheap.

With craft kept out of the water it may be satisfactory to include hosts with other property for insurance against loss by theft, fire, etc. but if boats are afloat, marine insurance is necessary to cover the third party risks and possible loss of or damage to the boats. Consult the Insurance Department of Scout Headquarters or write to the firms advertising in yachting magazines stating what craft you have and how and where they are used.

The Scouters' Indemnity Policy, which covers all Scouters automatically without payment or action on their part, has certain limitations regarding boating. A Scouter planning an ambitious cruise or other extensive activity afloat should certainly see that his responsibility is covered as well as the obvious insurance of boys and craft, plus third party.

The Association's facility for insurance of Scout craft is only available where the boat to be insured is covered by a Boat Certificate.

Boat and Charge Certificates

Rules 191 and 192 of *Policy, Organisation and Rules*, cover the formation of committees whose main task is the appointment of examiners for Boat and Charge Certificates. In Appendix VIII, 14-33 and 59-68, classifications and precautions to be observed are detailed. Scouters concerned with boating should make themselves familiar with these rules and see that their boating complies with them. While the

Association wants to encourage boys in boating there obviously has to be some measure of control. A Scouter neglecting or ignoring rules, besides being disloyal, would be in a very difficult position if there was an accident.

Local Water Activities Committees vary in scope and may cover many Districts or even Counties depending on the amount of water and boating in their area, but it is the duty of any Scouter planning boating to discover, probably through his District Commissioner, which committee is concerned. He may have to apply for examination to the secretary of the committee or he may be able to approach an examiner direct.

For the issue of both Boat and Charge Certificates there are five classifications of water, respectively A, B3, B2, B1 and C. Any Scouter may supervise activity on waters of Class C, but for the other classes, Charge Certificates are required. Each boat, or group of three canoes, must be under the command of a person holding the appropriate Charge Certificate. Charge Certificates show details of the type of boat and waters for which they are issued.

There is an exception to this, and that is when the activity is under the overall supervision of a person holding an Instructor Charge Certificate. In those circumstances, the need for others to hold Charge Certificates may sometimes be waived at his discretion. The standards for both Charge Certificates and Instructor Charge Certificates are nationally defined, and the waters are classified according to the standards required to command vessels on them. You can only find out for sure which class particular waters are in by contacting the Local Water Activities Committee in whose area the waters are or by consulting any publication they have produced. Your own Local Water Activities Committee should be able to help you make the contact.

All the standards for Charge Certificates relate to the qualifications of the Royal Yachting Association and the British Canoe Union. In addition to demonstrating their technical competence, candidates for Charge Certificates are assessed on their general suitability and local knowledge. The precise standards, which are liable to change from time to time, are given in an explanatory leaflet Charge Certificate Standards which is available from Scout Headquarters.

This leaflet also gives details of procedures for classifying waters, standards for Charge Certificate examiners, and the type of water you would expect to find in each class.

The standards for canoeing Charge Certificates relate to an international system of grading rivers according to difficulty. These are

Grade 1 (easy). Occasional small rapids and only minor obstacles.

Grade 2 (medium). Fairly frequent rapids, usually easy, with regular waves. Course easy to recognise.

Grade 3 (difficult). Numerous rapids, irregular waves. Course not easily recognised.

Grade 4 (very difficult). Increasingly complicated rapids, with inspection from ashore nearly always necessary.

Grades 5 and 6. Exceedingly difficult even for an expert. Not for Scout canoeing; this is uncommon in Britain.

Any boat, including a canoe, must be examined and issued with a Boat Certificate, which is in force for a period of up to one year. This applies to all craft owned by the Group or to any regularly used by them. Casual hire of boats also available to the general public is excluded. The examiner completes two copies of a Certificate, which gives details of each boat, its equipment and condition. He also indicates the maximum number that can be carried and the class of water on which it can be used.

To gain a Certificate the boat should be sound, clean and well maintained. It does not have to be in showroom condition, but it must be a boat of which Scouts can be proud. There should be equipment for the purpose intended. The two certificates are sent by the examiner to the secretary of the Local Water Activities Committee. He keeps one copy and sends the other to the Scouter concerned. It is the responsibility of the Scouter to see that the boat is presented for examination again before the Certificate expires.

Canoes should have safety lines or loops or handles at the ends. The examiner will indicate the class of water with or without spray cover. Any boat should carry reserve buoyancy. This is particularly important with craft built from glassfibre, which have no buoyancy inherent in the material. One condition of the issue of Boat Certificates is that craft carry Scout Badge plates which can be obtained from a Badge Secretary or Scout Shop — one each side of the bow of a boat or on the fore and aft decks of a canoe.

Charge Certificates are not required for Class C waters. For boating on these waters only the authority of the Scouter in charge is required. He must see that the basic rules for all waters are observed (*see Policy, Organisation and Rules, Parts 1, 2 and 3, Appendix VIII 15-23).*

For all other waters the person in charge must hold the appropriate Charge Certificate issued by the Local Water Activities Committee. For canoeing on waters where a Charge Certificate is required, only the leader of a group of canoeists needs to hold a Charge Certificate, but he should be satisfied that the members of his group are at least up to the standard of the Canoeist Badge.

Charge Certificates are issued for dayboats under sail, cruising vessels under sail, power boats (with power limits), pulling boats and canoes on waters of a particular type and restricted to certain areas. The Certificate can then be endorsed for any other means of propulsion not in the first issue, it can be upgraded to a higher type of water and the area it covers can be increased. As local knowledge may come into it an examiner may limit the certificate to areas he considers appropriate. For the more advanced project, such as a deep sea cruise, a Charge Certificate may be limited to the particular trip and the need for a second person with an appropriate Charge Certificate may be insisted on.

It is not easy to define the requirements for a Charge Certificate nor to say how the examination will take place. Obviously a practical demonstration is desirable, but evidence of past experience leading up to the standard needed will have to be given. There are the qualities of leadership and command and the ability to deal with emergencies, which cannot be assessed by a simple system of marking. A technical knowledge of handling the craft in the conditions expected will be looked for, with a knowledge of waterways, tides or other conditions appropriate to the circumstances. More than one examiner may be involved if an advanced Charge Certificate is wanted.

The value of a Charge Certificate to a Scouter is that he gets an independent assessment of his capabilities and he is able to proceed with the support of a committee which regards him as capable and will be prepared to back up its assessment.

There is no age limit for Charge Certificates. The holder does not have to be a Scouter. Where boating regularly takes place on B class waters there is no reason why Patrol Leaders and other Scouts should not have Charge Certificates.

There are specialist bodies running examinations parallel with those required for Scout boating. In particular there are the British Canoe Union and the Royal Yachting Association. The holding of an appropriate certificate issued by one of these bodies may cover part or all of the requirements for a Charge Certificate. It does not take the place of a Scout Charge Certificate, which is the authority to act for The Scout Association, but a Charge Certificate may be issued on the strength of the other certificate having been obtained.

As the certificate requirements of outside bodies are liable to change and this could affect the relation of these qualifications to Charge Certificate requirements, Scouters who gain any of these certificates may feel satisfied that they have gained knowledge which will be of value to them in dealing with boating for Scouts; but they should follow announcements in SCOUTING Magazine and take note of any amendments to *Policy, Organisation and Rules* to check which Charge Certificate they may be related to.

CHAPTER SIX
SEA TRAINING BADGES

When B.-P. founded our Movement he introduced the system of proficiency badges, which satisfied the desire of a boy to wear badges and gave an incentive to attain certain standards in chosen subjects. The system continues, but in addition to those covering special interests and more general Scouting subjects there is a series of *Sea Training badges*. In the introduction to the section of *Policy, Organisation and Rules* containing details of these badges there is a paragraph:

> *"The Sea Training Badges are available to all Scouts but are recognised as the official training programme for members of the Sea Scout Branch. The standard attained by a Sea Scout Troop may be judged by the proficiency of its members in these badges, which are supplementary to the Scout training programme."*

A Scouter will find that these badges provide a basis for his Troop programme if his is a Sea Scout Troop or one in which boating plays a major part. If the general scheme of Troop programmes over a period includes sections of these badges in a progressive manner the nautical side of the Troop's activities should have a balanced form and the important aspects of seamanship will be taken care of. Obviously, the subjects will have to be dealt with according to the ability and progress of the boys and will have to be related to their advancement in other things, but if the intended progress of each boy is charted and the programme geared to that end, the continuing programme of the Troop is likely to be more stimulating and the interest of the boy will be maintained. In some cases the hoped-for goal may not be achieved, but if only a few boys reach the target, the general standard of the Troop is likely to be higher than if there is a more casual approach.

It is intended that progress should be approximately parallel to the Standards, with Boatman paired with Scout Standard, Coxswain's Mate paired with Advanced Scout Standard and Coxswain with Chief Scout's Award. How this works out in a particular Troop and how it is related to a particular boy may be difficult to forecast, but it is as well to have a norm against which circumstances can be compared. A boy comes into the Troop at eleven years and the programme he follows has to fill his time with things that hold his interest until he is sixteen years. The rules allow an overlap of Coxswain badge into the Venture Scout Unit, but there is the incentive of allowing a boy who has gained the Coxswain badge in the Troop to continue to wear it on his Venture Scout uniform.

In a Troop where every boy gets a fair amount of boating, achievement of a standard good enough for Boatman should not take a recruit more than a year. If facilities are not so good and the time spent boating is not so much it may take a little longer. If the Troop programme takes in the subjects of the badge, it is likely that the boy will find that he can gain the badge without much conscious study or definite preparation. Ideally, the Scouter observes him and calls in an Examiner who tests the boy during normal activities. Usually, less ideally, there will be some preparation for the test, based on activities that have gone before. The less the special training needed, the more satisfied can the Scouter feel with his programme.

For the other Sea Training badges the first requirement is that the boy has reached the appropriate standard in general Scouting. This is important, otherwise there is a risk of the Troop becoming a sort of technical seamanship training unit. Progress towards Coxswain's Mate will depend on the boy, but it should come somewhere between thirteen years and fourteen and a half years. In a Troop with good boating facilities and adequate staff, Coxswain may come at fourteen years, but it could be anywhere between then and sixteen years. While it would be wrong to hold any boy back, there is the problem of what to do with a boy who gets Coxswain and Chief Scout's Award too early. Of course, there are other badges to work for and a boy who is a keen Patrol Leader by then may get all the satisfaction he needs out of using his skills to train others. He may get a Boatman Instructor badge if he is successful in this field.

Other badges

Besides the Sea Training badges there are other relevant ones that should be noted and brought before boys with special interests. The Canoeist badge is particularly appropriate as most Troops with water activities interest usually have more canoes than other craft. The Swimmer badge should be encouraged for obvious reasons and might become the badge that almost all the Troop wears. Two badges that may look rather frightening because of the length of their entries are Boatswain and Pilot.

The Boatswain badge might be brought in as a worthwhile extra for the boy who looks like getting through the Coxswain badge with time to spare. It is a particularly appropriate badge for the boy with a practical bent. The skills involved can be very useful in looking after the Troop's boats, so this badge should be encouraged, particularly if one Scouter or Instructor is especially interested in this aspect of seamanship.

The Pilot badge is rather more dependent on being in the right location, although it is not impossible for a boy normally based away from water other than an inland river. This is the sort of badge in which it is helpful for a Scouter who knows a boy's ability and circumstances to plan a way through the alternatives and present them to the boy as an outline of what has to be done. The whole thing does not then look so frightening.

The Power Coxswain badge is less dependent on circumstances and should be within the reach of many boys. With increasing private ownership of motor cruisers, someone other than a Scouter may be found willing and keen to provide the instruction and experience necessary for this badge. In return boys may usefully serve as crew.

Although the various badges which can be earned within the Movement will provide more than enough for many boys, there are qualifications of outside bodies that should be known about. Some of these can be tackled in parallel with Scout badges. It may be possible to obtain the other qualification without extra work. For sailing, the Royal Yachting Association will issue an Elementary Day Boat Certificate that could be taken in a boy's stride somewhere between Boatman and Coxswain's Mate. The British Canoe Union also has a series of certificates, starting at a lower level than the Canoeist badge. Both bodies have their own panels of examiners. Many Scout Counties have advisers or other liaison people who can provide information on these services. As both bodies run courses and have their own instructors, use of these facilities might be made to provide benefit to Scout badgework as well.

The Duke of Edinburgh's Award Scheme is more appropriate to Venture Scouts, but it may be entered at Scout age. As there is scope for water activity which can be the same as that used for certain Scout badges, work within the scheme could be tackled in parallel with Troop work. Dates are important within the Award Scheme. Something previously done cannot be accepted. Consequently, if the Award Scheme is to be used, a boy should have his record book and get appropriate entries made as tests are passed.

Boatman Badge

A Scouter with boys working for this badge should be familiar with the book, *Scout Boating* which should be also available to the boys. These notes are offered as guidance and as a help to maintaining a uniform standard. Although it is usual in many Scout badges to make allowances for the boy and accept different standards for some things, most parts of the Sea Training badges require the acquisition of technical know-how, and anyone seeing a boy wearing one of these badges should be able to assume that he can perform the tasks signified by the wearing of the badge.

Swimming is obviously of prime importance and the test should be regarded as minimum. Clothing may be light.

Safety plus wind, tide and current tests, will have to be varied according to local conditions, but the boy should realise the importance of ability to swim and know the difference between life-jackets and buoyancy aids, and demonstrate how to fit them. Emphasise their care. An appreciation of local hazards is important — this may be wind, tide, other craft. Equipment carried in a boat should be known and borne out by Troop practice — not just a parrot-fashion list. Action in various emergencies should be taught.

Naming the parts of a boat need go no further than those likely to be used at this stage. Maintenance is best taken care of by involvement, but cleaning and proper storage after each use should be normal. The need for immediate repair should be appreciated, but the boy need only be able to do the most minor repairs himself.

The knowledge of rescue is by rowing boat. Teach speed, avoidance of running down and lifting aboard. Boys should practice being rescuer and rescued. Include the after treatment of keeping warm.

Arrange situations afloat where the knots have to be used, where the purpose rather than the name of the knot is emphasised.

Heaving a line should be with weighted or unweighted lines and a reasonable accuracy over a distance of six metres should be expected.

The anchor need only be a light one suitable for a rowing boat, with a rope cable shackled or knotted, fixed in the boat and coiled ready to run out. The boat should lose way, the anchor should be lowered and not thrown, then the boat should drift back until at least three times the depth has been travelled.

Rowing single-handed should show the confidence that can only come with practice. Similarly sculling should be instinctively done. Pulling in a boat's crew means understanding orders as well as being able to handle an oar. Steering means using a tiller, not necessarily being able to cox.

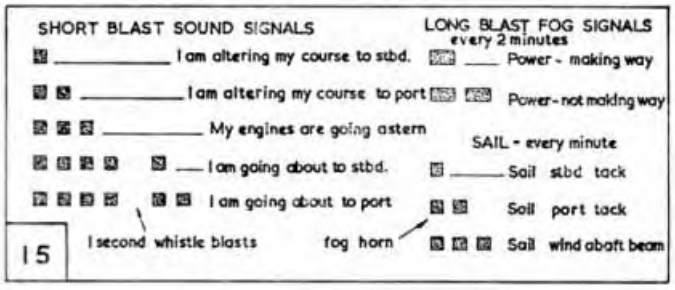
The half-day's exercise should be more than just an out and back journey, but may have something of the wide game about it, with an object to achieve and the required rescue as one of the incidentals.

The note to the requirements about canoeing and sailing experience is rather vague, but the boy should have had an opportunity to paddle a canoe on still water, including getting in and out, and he should have been part of the crew of a sailing boat where he has had an opportunity of appreciating sail setting for different directions of sailing. He does not have to be tested on these things — he merely takes part.

Coxswain's Mate Badge

To a certain extent this is a test of the Scouter or Instructor. If the adult is really familiar with the requirements of the badge, getting a boy through the tests is not difficult.

Instruction in the steering and sailing rules should cover the essentials, particularly those appropriate to local waters, but if these are very confined the boy should also know what to expect if he goes elsewhere and has to deal with commercial traffic, fishing vessels and sail/sail or power/sail situations. Local rules are unlikely to be many, but any relating to local hazards or special situations will have to be observed. Fog and other sound signals for various vessels under way or stopped should be known (Fig. 15).

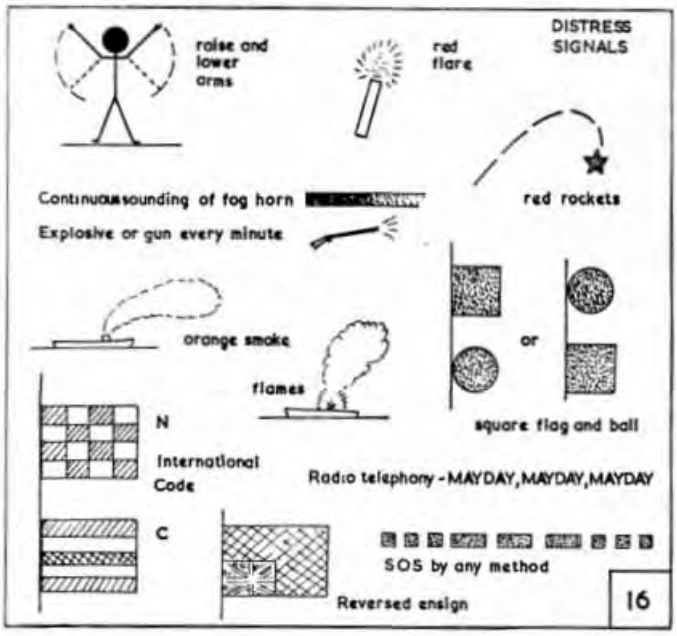


Distress signals are important (Fig. 16).

Capsize drill is appropriate to sailing dinghies — demonstration and practice are the only ways of learning. Canoe capsize should also be dealt with. Resuscitation is soon learned from a demonstration. A local first-aid organisation with a dummy can offer an interesting evening.

Weather signs may still have value, but radio and telephone weather forecasts are usually more reliable and sources available locally, with timing and procedure, should be understood.

Recommended ceremonial is given elsewhere in this book. The use of a bosun's call should be normal in a Sea Scout Troop.



Soundings should be treated as a practical exercise, not as history. Traditional lead line markings might be explained, but need not be learned. The use of a sounding pole or an improvised lead line is more appropriate. The use of echo sounders should be understood.

Cleaning and painting are obvious, but actual work on Troop boats should be included. Careful planning of badgework can make annual maintenance a step towards a badge rather than a chore!

Splicing and knotting extend the work of the Boatman badge and should be treated in the same way. If possible let the splices be for real jobs.

The coxing requirement means doing the whole job, handling the crew as well as the boat, giving instruction to crew members and being skipper from assembling to dismissing the crew.

Rigging a sailing boat means having a knowledge of parts and their purpose, what to put where and how to secure it. The boy should know his way around a sailing boat and its gear.

The sailing requirement means being able to do all that is necessary under a skipper, but not yet to take command of a sailing boat.

Acting as mate in a rescue needs to be organised so there are slight complications to be overcome, rather than a straightforward trip to get a drifting boat and return.

The journey is described as an expedition. As such there should be a purpose and many of the things involved earlier in the badge tests should be included.

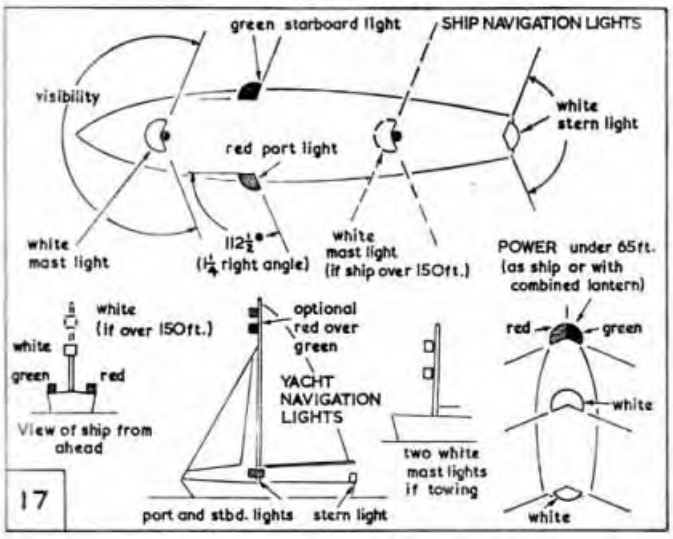
The notes call for motor experience or more canoeing. Basic handling of an outboard motor is most likely. Boys soon learn to manage a small boat under power, but avoid letting them loose with too much power. Chartwork need be little more than an introduction and compasswork is mostly an adoption of that already learned for ordinary Scout tests. Again, subjects covered by notes need to be tested.

Coxswain Badge

For some sections of this badge both the boys and the Scouters might benefit from outside help. Scouters may attend courses and pass on what they have learned, or there may be opportunities for Scouters to take boys to centres where they can work together. It may be possible to bring in local experts, but make sure they are briefed ; it is very easy for enthusiasts to go too deeply into a subject and bewilder their audience.

Disused and outdated charts can often be obtained from yacht club members. There are cheap practice charts to be had. The Royal Navy will supply charts to Qualified Troops. Besides the official charts, some people prefer those published by Imray and Stanford for yachtsmen, as they make more use of colour. They only cover more popular yachting waters, but if one is available for the waters that interest you, the boys may find it easier to follow. Parallel rules of the type that can be *walked* across a chart are probably better for boys than roller or special aids.

Much buoyage is best taught with models. Models help too, with teaching lights (Fig. 17). Besides the navigation lights, the only other one commonly found is the white all-round anchor light. The large number of other light combinations that can be used is likely to be outside the experience of most Sea Scouts. Recognition of buoys (Fig. 18) and what to do in relation to them should become automatic. Local marks are found, even in non-tidal waters. A local yachtsman or fisherman may be able to give pilotage hints, using local landmarks.



The one word *tides* can mean a big mystery to an inland Scout. There may have to be some careful instruction from first principles, but a day or so at the coast should clarify tidal effects.

Beaufort scales may mean straightforward learning, but a tape-recorded radio shipping forecast will put over the practical application.

Many older local people can produce sayings concerning weather forecasting that usually have some basis of fact. In any case, an observation of types of clouds, directions of wind and its strength, with other natural phenomena can add up to local forecasting with reasonable accuracy. Keeping a weather diary helps to appreciate the subject. Making forecasts and checking them with actual conditions is an interesting exercise.

Personal survival has been given much thought and such things as drown-proofing, buoyancy from clothing and ways to minimise the effects of exposure should be followed from recent writings, which do not always go along with older thought.

Repairs need not be very advanced, but the boy should be able to undertake efficiently a few of the repairs mentioned elsewhere in this book, appropriate to the craft he uses.

The rope fender or canvas bag should be of worthwhile proportions, big enough to be of actual use (Fig. 20). Palm and needle sewing needs to be put over as a manly job — quote oldtime sailmakers!

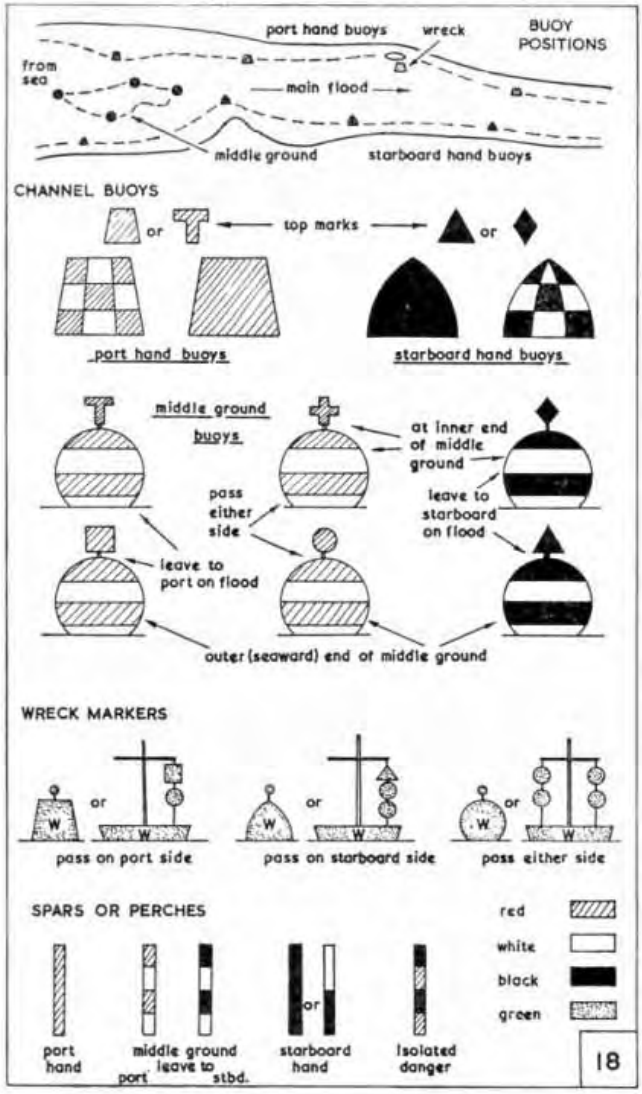
Passing a message assumes some form of signalling, other than radio telephony. International Code Flags could be used. Morse code by lamp has an appeal and the code has other applications. Semaphore with flags or two Sea Scout caps is easiest to learn.

Single letter hoists of International Code Flags vary in importance. There is little point in learning those with meanings never likely to be met by the boy, but he should know about ten that he might come across (Fig. 19).

The boat and crew for the distress call and compass course are not specified. They may vary according to availability and local waters. A pulling boat could be used. A sailing boat involves complications in having to sail according to the wind which may not allow directly sailing on the plotted course. A power boat might be more appropriate for the test on open waters.

Taking charge of the preparation of a boat for sailing means a complete understanding of what is involved, taking precautions and correcting errors of others. Something more than a rather basic dinghy is envisaged. Ideally, it should be a larger open boat or a small sailing yacht.

The sailing requirement calls for the ability to take charge of a sailing boat and do everything necessary with it, without getting into such difficulties that help has to be called for. It is assumed that the boy is taking charge of a crew as well, so he has to behave as a competent skipper rather more so than he did with his crew in a pulling boat for the Coxswain's Mate badge.

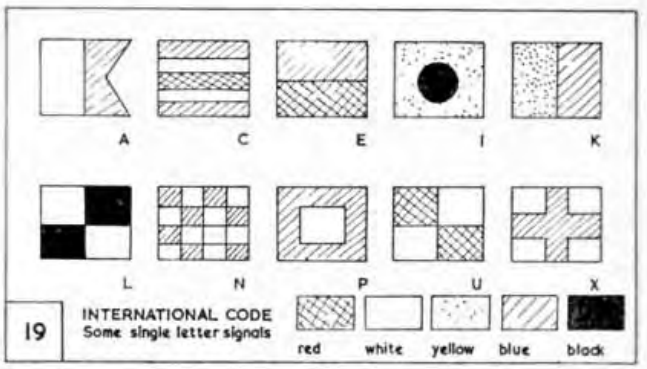


The sea anchor is a test of ability to improvise, but the boy should understand that the object is to provide something at the end of a rope to restrict the drift of the boat. Actual conditions that call for a sea anchor are unlikely and the situation will have to be imagined. Heaving to with a sailing boat can be learned in moderate conditions and finding the best way for a particular boat makes a useful exercise for the test.

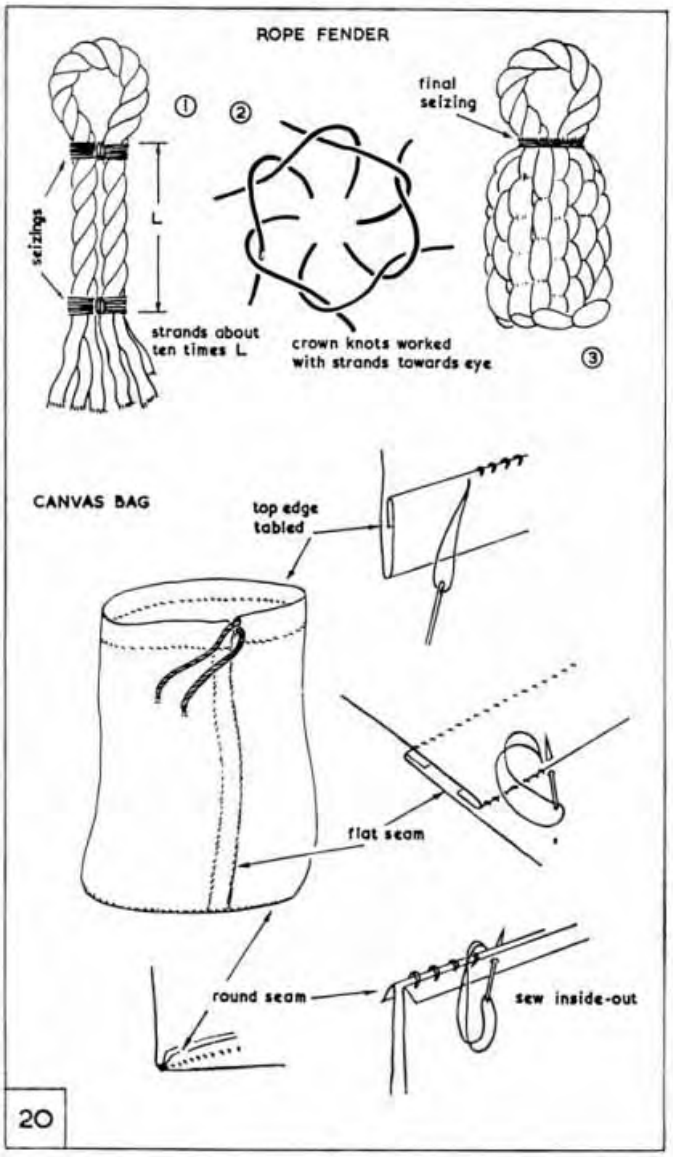
Keeping watch on the man overboard, while turning a sailing boat to pick him up, is something that has to be practiced many times. As it is something that could have real application for the boy, it is a manoeuvre to be learned thoroughly.

The expedition probably marks the culmination of a boy's nautical training in the Troop. As such it may be built up into something important, with prestige attached. Advance planning, mainly by the boy, should look at all aspects. The test should be set by the Scouter, with certain required objects, but at this stage the boy should be able to make all the plans to get the desired results. The Scouter should know all that is planned — he is still responsible.

The canoeing alternative takes care of the requirements of inland Scouts. It should not be allowed to become a simple way out, but should be something more than a there and back trip on placid water. Include a survey of camp sites, moorings, best ways of portaging or shooting weirs. Camp kit should be carried.



The notes call for more experience in power craft, with firefighting and the use of flares, with some navigation and offshore cruising. This is to whet the appetite and show something of further steps. For the Scouter, it is a case of making use of what opportunities occur, but for a boy who has achieved this standard, a place on one of the yachts or sailing ships, providing offshore sailing experience for boys, might be subsidised or awarded by the Group Council.


ROPE FENDER
final seizing
①
②
③
seizings
L
strands about ten times L
crown knots worked with strands towards eye
CANVAS BAG
top edge tabled
flat seam
round seam
sew inside-out
20

CHAPTER SEVEN
THE SEA SCOUT TROOP

Despite its special interests a Sea Scout Group is not something apart from other forms of Scouting. There have to be a few modifications, but in general the organisation and fundamental purpose and activities are the same as in any other Group. A Sea Scout Group is part of a District and has the same relationship to it as any other Group. The words *Sea Scout* may appear in the Group title, but this is not essential. As the addition or removal of these words if the Group changes its status involves complications of registration, it may be considered advisable to have a title without them, although the inclusion of them leaves no doubt of the Group's activities.

Cub Scouts in a Sea Scout Group do not have any special nautical training. They do not wear anything different from other Cub Scouts. Cub Scouters may wear Sea Scouter uniform. Obviously, there will be some interest in what is going on in the rest of the Group, and there may be a nautical flavour to part of the Cub Scout programme. There is no deliberate exclusion of things aquatic and it is to be expected that swimming will be encouraged. There may also be occasional activities combined with the rest of the Group, but it is policy to keep actual training in boating as something to look forward to when the boy moves up into the Troop.

Training in boating, seamanship and all that goes with these things comes in the Troop and carries over into the Venture Sea Scout Unit. As much of the more ambitious activity afloat is likely to come at the Venture Scout stage, a Unit within the Group is likely to be more effective in providing attractive and effective training than a District Unit where the young man's interests will have to be worked into a programme to suit those from other Groups as well.

If a new Sea Scout Troop is to be formed, the District Commissioner should be consulted. He will have the necessary papers and deal with the formalities of registration. Besides the matters that affect all Scout Groups, particularly concerning meeting place and staff, he will have to be convinced that there is a good prospect of the Troop being genuinely active in Sea Scouting. The provision of boats and boating facilities must have been thought out, and the Scouters must include amongst themselves men competent to handle the nautical side or willing to undertake training on courses known to be available. A Group which wears Sea Scout uniform, but does not engage in Sea Scout activities, should not be allowed to be formed and, if in being, should be converted to ordinary Scouting.

It is permissible for there to be one or more Sea (or Air) Patrols within a Troop which is not otherwise specialised. It is possible for there to be a Venture Sea Scout Unit in a Group where the Troop is not Sea Scout. Both cases cater for specialised interests. If some boys are interested in boating and the others are definitely not, the Sea Scout Patrol may work. Having such a small unit as a Patrol in Sea Scout uniform may be effective in some circumstances, but experience has shown that eventually it is either abandoned or the whole Troop becomes Sea Scout. The idea has value where a Troop is unsure which way to go, but is better not regarded as a long-term arrangement.

As a Group may contain more than one Troop, it is permissible for one of these to be Sea Scout and the other(s) not. Logically, there could be a follow-on into two Venture Scout Units, or two sections of one Unit. Where staff are available and the boys numerous, as in some school Groups, such a specialised stream within the Group can be very successful and long-lasting — much more so than just a Patrol within a single Troop.

Whether to be Open or Sponsored is affected by the same considerations as with other Groups, but Sea Scouting has greater involvement than with other Groups. Finance looms larger and the boats and other gear bring problems of storage. All of this needs to be understood by the sponsoring authority if difficulties later are to be avoided. A Sea Scout Troop will not develop as it should if it has to clear all its gear away after a meeting in a church hall, even if there are ordinary Scout Groups able to achieve reasonable success in these circumstances.

If an existing Group is to be changed, or any part of it, the arrangements are local. The Scouters should be agreed and the parents concerned should be agreeable — they will have to provide new uniforms and may be involved in raising money for boats and equipment. The case is then put to the District Commissioner, who will have to be satisfied that the scheme is feasible, in the same way as with the formation of a new Group. If he agrees, the change can go ahead. Normally he will get advice from his Assistant District Commissioner (Water Activities), if there is one, or from the Assistant County Commissioner (Water Activities) or other specialist appointed at County level, but the responsibility of approval is with the District Commissioner. There is no requirement of alteration of registration at Headquarters, unless there is to be a change of title. The only indication of change to anyone higher than District level may come at the completion of a census form. However, Sea Scouts are comparatively few and widely spread. It is not only courteous to bring in the appropriate Commissioners and advisers when a Group is to be changed over or a new Sea Scout Troop formed; their specialist know-how can be of considerable use to those involved. It is the reason for them holding their appointments!

Because of the wide geographical spread of the small number of Sea Scout Groups (not more than ten per cent of all Groups) anyone new to the activity should enquire about available sources of help. There will be a Water Activities Committee, probably at County level. Besides their purpose of arranging Boat and Charge Certificate examinations, most also act as organisers of events, courses and specialist activities. In some places there is another committee representing several adjoining Counties that arranges combined activities of boating interest. Apart from the value of the event itself, there is the benefit to boys and their leaders from being able to meet others who share common interests and problems. As most Sea Scout Groups are usually the only ones in a District, they will get their normal Scouting interest at District level, but they will find their special interest stimulated by attending meets, regattas, courses and other gatherings with other Sea Scouts. Check with your District Commissioner what specialist looks after Sea Scout interests. He is your link man with these other things.

Headquarters

Much Scouting is done in accommodation that is far from ideal, but it is as well to have some idea of what seems most suitable for your circumstances. There may then be gradual progress towards it, oven if the goal is never completely reached. For most Groups the ideal would be a waterside headquarters, with ample accommodation for all activities and a boathouse included. There are such places in existence, so it is not necessarily an impossible aim, even if the way there is far from clear.

The idea of a guardship, where the Troop meets afloat, may have a romantic appeal. There are practical problems that usually rule it out as the sole headquarters. If some sort of craft that has been mobile is chosen, it needs to be of considerable size to allow room on board for the usual activities. A barge or purpose-built static craft may have more room in its more boxlike hull, but it lacks some of the romance even if it does have the attraction of being afloat. Another objection is that the Cub Scouts cannot meet there.

Owning a guardship afloat can bring insuperable problems of upkeep. Moorings have to be paid for. If it is away from the bank there may be worry about its security in bad weather. The idea of ferrying boys to meetings gets less romantic when there has to be so much ferrying that not much else happens during a meeting. Having the guardship alongside a bank may get over this problem, but it increases the problem of security when the boat is unoccupied.

Such a guardship will almost certainly have to be a boat that has seen much service and is past its prime. Maintenance of such a craft can be extremely expensive. The bottom will need treatment periodically. Even having the boat hauled out to do the work with your own labour can be very costly. If the boat eventually has to be disposed of, there may be no-one willing to buy and the cost of breaking up will have to be met. There are Sea Scout Troops successfully operating with no other headquarters than a guardship, but they are few. Such an undertaking should only be entered into by experienced Scouters after taking expert advice.

There are circumstances where some sort of guardship may be used to supplement shore accommodation, particularly if the shore headquarters is away from the boating water, but the amount of trouble and expense involved should be understood before embarking on such a scheme.

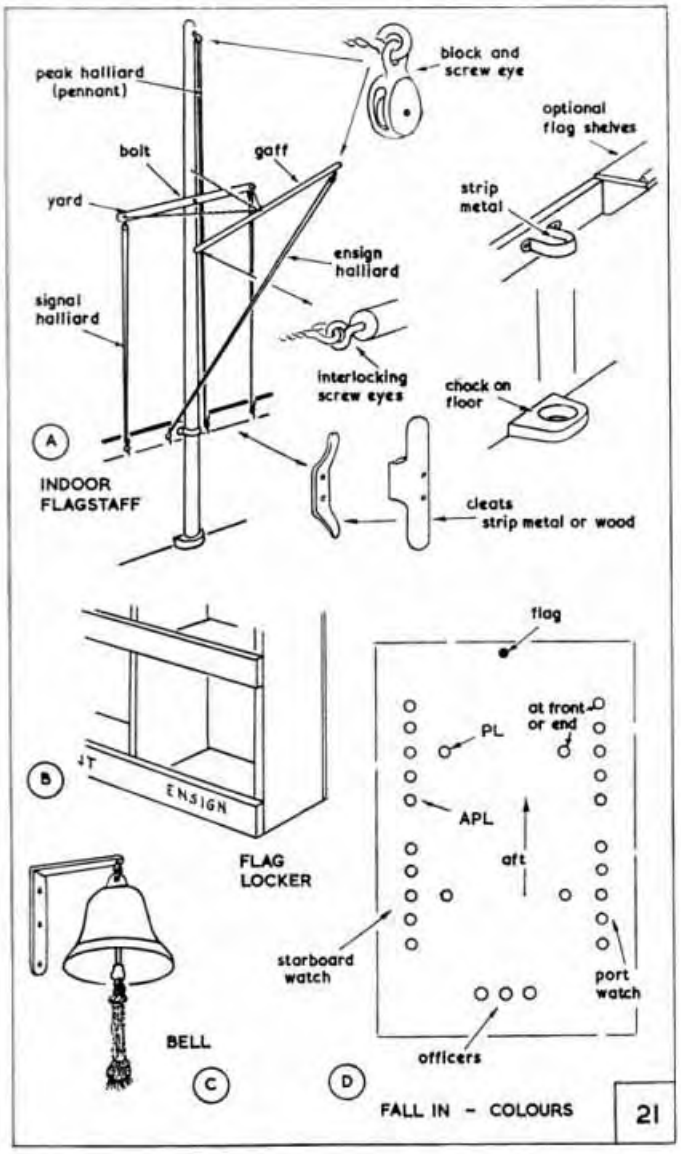
Although boats may not suffer from exposure to the elements for short periods, they will last longer with less need of maintenance if they can be kept under cover. Ideally there should be boat storage and workshop space included in the headquarters. Storage space under the Troop and other rooms is often possible. However, if this is on the riverside, the possibility of flooding should be borne in mind.

Other considerations are the same as for any Troop — a main hall large enough for the whole Troop, at least one room for Scouters, Venture Scouts and others, plus ample space for storage of general and camping gear.

If the normal meeting place has to be someone else's hall, there is a good case for also having smaller premises near the water, which can serve as the boating headquarters and act as store and shelter. Even in a hall that has to be cleared every time, there should be boxes, lockers and screens to help provide atmosphere. How far you go depends on the goodwill of your landlords.

Atmosphere

A Troop meeting should take place in surroundings that are both Scouty and nautical. There will have to be display charts and similar nick concerned with standards and other general badgework, together with things that suggest a connection with water and the sea. How far you go with nautical names depends on circumstances. The Troop room floor should be the deck, the kitchen will be the galley and the Scouters' room will be the wardroom. The flag staff, which carries a red ensign, should be at the centre at one end. This is aft, so the other end is forward and the two long walls will be port and starboard. Reference to these directions during activities will help to impress their meanings.



Patrol corners offer opportunities for the boys to provide nautical decorations. If they can have rooms, or cabins, there is considerable scope. Some Troops mark off a quarter deck, which should be aft, used by the Scouters. This has some point if it can be done without using up valuable floor space, but it is better left out if it gets invaded in the hurly-burly of games. Having a red and green lamp at the port and starboard sides, helps in learning colours. Something like a navigation light in a light board can be improvised. A binnacle and compass lend atmosphere, but in most Troop rooms does little else, so should not be included if it will impinge on otherwise useful space.

It is the custom when boarding a Naval vessel to salute the quarter deck. In practice this means facing aft and saluting towards the ensign. In many Sea Scout Troops it is the custom for

everyone on arrival at the shore headquarters to salute, facing the ensign aft. This is a mark of respect for the flag, the Troop and its headquarters. It is not a salute to anyone in particular and is not returned by anyone.

Some people consider it appropriate to describe Scouters as officers in a Sea Scout Troop. *Skipper*, for the Scout Leader is usually right, but what to call the assistants is not so easy. *Mr. Mate* does not usually go down well for the second in command. *Bosun* may be used for the Scouter concerned most with practical seamanship. Patrol names are probably best kept in the Scouting tradition, but there is an advantage, both in atmosphere and organisation, in dividing the Troop into Port and Starboard Watches, so it is best to have an even number of Patrols to keep the watches balanced.

Sea Scouts have a smart uniform and they take a pride in behaving smartly. There is also a pride in belonging and this is often evident when they realise that they are part of a smart turnout in the public eye.

Ceremonial

Flag ceremonial, or *colours*, at beginning and end of a meeting differs from the usual horse-shoe of an ordinary Troop. The flag staff, whether indoor or outside, should have halliards to the peak for a pennant and to the end of a gaff for the ensign. The flags are attached to the halliards and left hung over their cleats ready for hoisting (Fig. 21 A). Flags are not made up for breaking, as is customary in ordinary Scout Troops. Before the beginning of a meeting, the flags are prepared by the Duty Patrol, without waiting for instructions. These, and International Code and other flags, are best stored in a rack or locker (Fig. 21 B).

Another contribution to atmosphere is a ship's bell. If the real thing is unobtainable, one can be improvised from a school or other hand bell (Fig. 21 C). During the Troop meeting a member of the Duty Patrol keeps time with the bell — a job for the Assistant Patrol Leader. Details of ship's time should be posted near the bell. Use the 24-hour clock:

Midnight to 4 a.m.	*0000 to 0400*	*Middle watch*
4 a.m. to 8 a.m.	*0400 to 0800*	*Morning watch*
8 a.m. to noon	*0800 to 1200*	*Forenoon watch*
noon to 4 p.m.	*1200 to 1600*	*Afternoon watch*
4 p.m. to 6 p.m.	*1600 to 1800*	*First dog watch*
6 p.m. to 8 p.m.	*1800 to 2000*	*Second dog watch*
8 p.m. to midnight	*2000 to 2400*	*First watch*

In the 24-hour clock speak the time in hundreds, thus 8 p.m. is *twenty hundred* and 8.30 p.m. is *twenty thirty*. The dog watches are short so as to make an odd number of watches, then port and starboard watches of a crew keep watches at different times each day.

Time is indicated by striking the bell every half-hour during each watch, the number of strokes indicating the number of half-hours passed in that watch: one bell at half-hour, two bells at one hour and so on up to eight bells at the fourth hour. The only difference is with the two dog watches which go 1, 2, 3, 4; 1, 2, 3, 8. The bell is struck to one side only in pairs, with any odd stroke at the end, thus three bells is *ding*, *ding*, pause, *ding*.

During the span of the usual evening meeting, bells will be:

7.00 p.m.	*1900*	*2 bells*
7.30 p.m.	*1930*	*3 bells*
8.00 p.m.	*2000*	*8 bells*
8.30 p.m.	*2030*	*1 bell*
9.00 p.m.	*2100*	*2 bells*
9.30 p.m.	*2130*	*3 bells*

The boy on bell duty normally calls the time, such as "*Three bells, Skip*". The Scout Leader replies "*Make it so*", and the boy sounds the bell.

Sea Scouts fall in in two lines facing to the centre, or inboard at the appropriate side. Some Troops favour having the Patrol Leader in front of his Patrol, while others have him at the aft end (Fig. 21 D). The Assistant Patrol Leader may be at the other end. Allow gaps between Patrols. Leaders fall in at the end opposite the flag.

The Troop falls in with the boys standing at ease. They are called to this position by the Leader or Duty Patrol Leader piping the general call on a Bosun's call (see Fig. 22) and calling "*Troop fall in!*" or "*Ship's company fall in!*".

Then "*Troop*", or "*Ship's company, Attention!*". The accent is on the last syllable for a smart response. Boys do not stamp their heels in a military fashion — imagine the effect on the watch trying to sleep below in a ship. "*Facing aft, right and left turn!*" All boys face the flag.

Orders vary between Troops. There is nothing wrong with this, but it looks smart if actions are taken with the minimum of orders two members of the Duty Patrol march to the flags. Two others may go with them to pipe the flags up, or they may pipe without moving from the lines. The boys hoisting the flags do this slowly while the bosun's calls make the *Still*. As the ensign reaches the top everyone salutes, taking their time from the boy at the aft end of the starboard watch. The two boys on the flags give the halliards a couple of turns on their cleats, step back a pace and salute. As they drop their hands, everyone else does. The bosun's calls sound *Carry on* and the flag boys march back to their places.

"*Troop, inboard turn*" then "*Stand at ease*", and the meeting has got off to a good smart start. Avoid keeping boys at attention for long. If inspection follows, as it often does, each Patrol Leader calls his Patrol to attention and returns them to at ease afterwards.

At the end of the meeting the ceremony is very similar. Keep notices brlef and have prayers before the flags are lowered. Some Troops salute the flags coming down. Some do not. Ordinary Scout practice is generally not to salute, but saluting seems to be fairly common Sea Scout practice. Bring the boys facing inboard, then, "*Facing aft, dismiss*".

Bosun's call

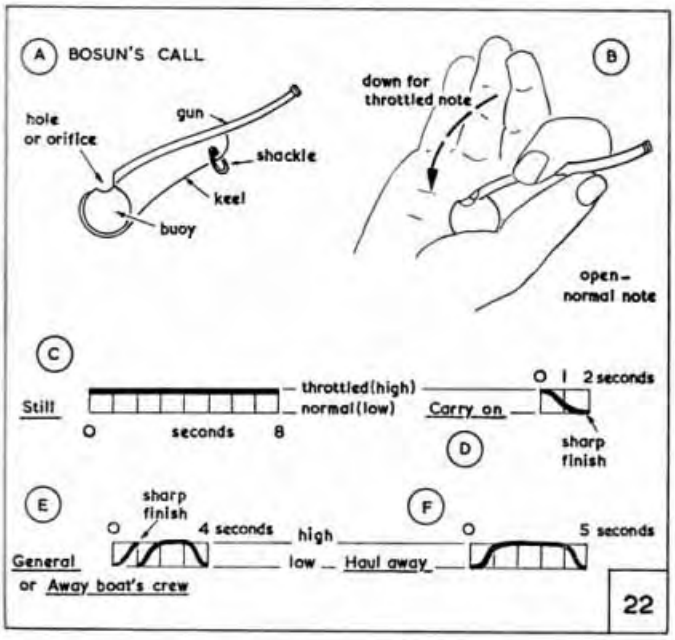
Use of the bosun's call (not *pipe* — that is the message it gives) is good practice in a Sea Scout Troop and it appeals to the boys. If the boys are to master it, at least one Scouter should be adept in its use for the basic pipes. Explain to the boys how the call evolved as a means of passing messages with a note that could be heard through the wind and all the noises of a sailing ship. Of the many pipes, only three are of general use in a Troop, but they should be efficiently made and frequently used. Quelling a Troop engaged in noisy activity should never be done by shouting, otherwise what is the point of having a bosun's call? The *Still* is a high-pitched note, held for 8 seconds, if you can manage it. This means what it says and is followed by *Carry on*, which goes from high to low in 2 seconds, and is the signal to resume whatever you were doing.

Of more use to the Scouter is *Away boat's crew*, which is also used as *General call*. This is quickly low to high, pause, then low to high and back to low — rather like an owl saying *to-whit, to-whoo*. This is a call for silence, then a spoken order or message is given. Follow with *Carry on* if appropriate.

The bosun's call has its named parts (Fig. 22A). It is held in either hand with the thumb pointing up the keel and the first finger gripping. The other three have to be moved together (Fig. 22B), so in the closed position they make a sort of sound box over the hole. When the call is blown with the fingers raised, the normal low note is produced. With the fingers correctly closed, the throttled high note is produced. It is necessary to blow fairly hard, and some practice is needed to get the pure throttled note right first time.

To make the *Still* (Fig. 22C) have the fingers throttled and blow steadily. Eight seconds is difficult to sustain. When breath is running out, put your tongue over the end of the gun. The note will falter if your last breath slackens! If two or more are piping the still together, one can start after the other, so there is a good chance of eight seconds being reached.

There is no difficulty in the two seconds of the *Carry on*, but snap off the brief high to low with the tongue (Fig. 22D). Use your tongue while you change from high to low in the *General Call* (Fig. 22E).



If a distinguished visitor is to be welcomed there is a ceremony called *Piping the side*. Four or six boys with bosun's calls form a guard of honour so the visitor has to pass between. The pipe used is *Haul away*. This dates from the days when the visitor was hoisted on board in a chair and the pipe controlled the men hauling on the rope. Although the basic pipe is of five seconds duration (Fig. 22F) it may have to be extended to suit the occasion — a case for staggering starts and finishes of individuals, to ensure enough breath! If your visitor is unaccustomed to this treatment you will have to brief him; anyone in uniform stops and salutes before passing between the ranks, while anyone in civilian clothes stops and removes his hat briefly. If he is not wearing headgear, he merely halts briefly.

Other pipes may be found in *The Admiralty Manual of Seamanship Volume 1*. The warbled note required for some pipes is made by rapidly changing between high and low. The trill is made by going through the action of 'rolling Rs' while blowing.

CHAPTER EIGHT
PROGRAMMES

Although much Sea Scout training will take place outside, normal Troop meetings for perhaps half of the year will have to be held indoors. The problem then for the Scouters is the organising of a programme that packs as much useful and interesting material into the available time, while giving a balanced programme that appeals to the boys. Obviously, there can be a great variety of programme layouts and it is unwise to stick slavishly to a set pattern, but it is useful to have a standard programme plan on which to base your variations.

Any programme needs to be a mixture of instruction, training games, recreational games, leadership training and competition. A boy enjoys a tightly-packed programme and the discipline that goes with it. There may be a small place for boys to be left to their own devices, but in general the boys' time during a Troop meeting should he controlled, even when he thinks it is not. Gaps where the Scouters have to pause to think what to do next must be avoided. A fair number of boys in a fairly small space, left to amuse themselves, may produce undesired results, unless it is a remarkably well trained Troop.

The programme for one meeting is not an isolated thing. It should he part of a series. The Scouters and Patrol Leaders should agree on a general theme for a period. It is important that all concerned know their part in it. There may be circumstances when someone has to be asked to run a game at short notice, but it is unfair and a sign of bad planning to ask someone on the spur of the moment to go and talk to the Troop for ten minutes, probably because the Scout Leader wants time to think what to do next!

How much the Patrols Leaders are involved in the meeting depends on their ability and training. If a boy has been with the Troop several years, it is likely he can be entrusted with the running of a game or a compact bit of instruction to the Troop as a whole. Some boys may never be capable of this, although they may be skilled at a subject themselves. However, even if the instruction period they tackle is not very successful and the Scouter finally wishes he had done it himself, the experience may have done good to the particular boy.

As with other branches of Scouting, trained Patrol Leaders can ease the work of Scouters, so time allowed for such training apart from Troop night can pay in the long run. It is important for the Scout Leader to use his assistants properly. They should know how they fit in and they should have jobs to do. They should know at least a week ahead what they have to do on Troop night. In a general way, they should know for several weeks ahead. An assistant who knows that he is to put over, for instance, all angles on anchoring during a series of three meetings, and that he will be responsible for a recreational game and a training game at each of these meetings, will then have to devise an inter-patrol competition on anchoring for a fourth meeting, will certainly feel that he is needed, will make sure he is there, and will have the satisfaction of knowing that he is playing a vital part in the Troop. If the Scout Leader finds he is doing just about everything himself, he should stop and think. Even if manpower is short, as it too often is, is he making the best use of what he has? Even if he has no adult help, he has his Patrol Leaders. Part of their training is to be given responsibility.

Programmes have to start somewhere. The following is a typical basic programme. It could be arranged in many other ways. This one has the merit of having worked for many years, sometimes as presented and sometimes as the basis for a complete upheaval that bore little relationship to the original. About every six weeks the Troop abandoned this sort of programme for one evening completely devoted to one theme, possibly nothing to do with badgework or even Sea Scouting, like a visit to a Fire Station or an evening of films. Every three months, Cub Scouts met with the Troop, for a basically Scout evening, with the Scouts showing the younger boys what goes on in the Troop.

7.15 *Fall-in, flag.*
7.20 *Patrol corners.*
7.35 *Game, recreational.*
7.45 *Inter-patrol competition.*
7.55 *Game, training or recreational.*

8.05 *Troop instruction.*
8.20 *Game, training.*
8.30 *Badgework.*
8.45 *Optional.*
8.50 *Fall-in, flag, prayers.*
9.00 *Dismiss.*

Too often Troop meetings start late, possibly with the excuse that so-and-so is not here yet. This has a cumulative effect — others cease to bother to get there on time and the whole thing gets later. Make it a rule to start promptly. This means Scouters should be early enough lot preparations. The formal opening of the meeting can include inspection, but this should not be too long drawn out and may be varied with Scouters sharing the job or occasionally Patrol Leaders being allowed to inspect their own or other Patrols. If there is a Competition running, announce inspection marks then.

Patrol corner time should produce progress, otherwise it is wasted time. Subs may be collected then, entered in a book and taken to the Scouter responsible,, but if this is found to cause too much interference with Patrol training, some other method of collecting may be devised. With the ideal Patrol Leader, he will organise the time in corners for instruction or preparation for tests, discussion of activities and a multiplicity of other things. A less-experienced boy will need some prompting. Separate Patrol Leader training can be directed towards this. Suggestions for subjects to cover can be given. Much of this time can usefully be employed in revision, particularly if hints are dropped about the probable content of the competition later.

The game that follows can be a general type that is purely fun and preferably sufficiently active to subdue high spirits. Sometimes Patrol Leaders are withdrawn at this stage to be briefed on the competition.

The inter-Patrol competition should test the ability of the Patrol as a whole to work together. Quite often it will be on the theme of the Troop instruction of the previous week, and may well be set by the Scouter or other person responsible for that session. Avoid the school examination approach. Make it practical if possible: join ropes into a continuous length with certain knots, not more than one knot per boy; follow a compass course and find the distance and bearing of the start from the finish; from the special code sheet issued, do whatever the flags hoisted indicate; the Patrol Leader has been struck dumb, but he can pass on the message he has been given in Morse code; draw the shape of a boat on the deck, then each boy in turn collects a card with the name of a boat part and puts it in the right place.

The game that follows may be recreational if that is the mood, or it could be of training value, either expanding what was in the competition, particularly if the results were poor, or on some entirely different subject.

While it is good policy for boys to learn by doing and for Patrol Leaders to pass on instruction, there is a great deal of technical content in Sea Scouting that may suffer dilution on the way to the boy if passed on by any but direct means. Because of this, it is worthwhile having a direct training session for the whole Troop. This is not necessarily always *sit down and listen*, but boys may handle equipment after being told about it and much use can be made of models. The rule of the road at sea is an example. Boatshaped pieces of wood or card, with chalked coloured lights, are more effective than elaborate models. Similarly, buoys carved from corks and chalked channels and sandbanks are all that are needed for simple pilotage. A simple compass on a boat shape which can be turned to head on the course found on a chart gets chart reading started. Sculling over the stern can be taught on the edge of a table. Canoe Eskimo rolling can be taught with a boy hanging over the end of a table, with someone holding his legs. Weather maps can be plotted from taped shipping forecasts.

Boys join us because they expect to earn and wear badges. Most boys who are given the opportunity to do this remain enthusiastic long enough to be effective Scouts and benefit from their time with us. A Troop with a good badge record is unlikely to have much of a leakage problem. Therefore, the weekly programme must include an opportunity to make badgework progress. Much depends on available instructors, but ideally the same boys go to the same instructor over a period of several weeks, and that instructor knows he is to be responsible and can plan the work accordingly. Patrol Leaders can be used for instruction, particularly if they

are experienced, but there has to be some compensation in provision of opportunities for them to make progress in their own badgework, possibly at some other time.

The optional period may be used for a game, but it is also an opportunity for a gather round when Skipper deals with such things as a coming camp or a District event. This is better than spending a long time with notices with the boys standing formally at the end of the meeting.

Inter-Patrol competition

A running competition between the Patrols has value. If properly organised, the boys like it. Particularly at the younger Scout age, a boy will do anything for *points*. It is unwise to continue a competition too long, otherwise a Patrol dropping behind gets disheartened. Six weeks is reasonable. There may have to be some experimenting to get the right relation of marks. Bring the Patrol Leaders into this. In general, be positive, giving marks rather than taking them off. An exception might be smartness at inspection, the assumption being that the boy should be smart and loses marks if he is not. Give marks for parts of Standard and other badge tests passed, with further marks for complete badges. Include marks for the weekly competition. Do not got too complicated. Have a chart kept up to date and displayed. Announce the position at the end of each meeting. At the end of a series, award the trophy on the spot. Saving up such things or the issue of a badge, until a parents' night or other occasion, is bad policy.

Indoor games

Games are an important part of Scouting. There are a large number of publications devoted to Scout games and most of these are just as applicable to Sea Scout Troops as to other Troops. Most of them need no adaptation, but a Scouter does not need much ingenuity to allot some of them to include a nautical theme.

Relays have their value in getting over a piece of instruction and they enable Scouters to see weaknesses. If every boy has to tie a knot in turn, points where instruction has been inadequate or a boy was inattentive will be seen. This sort of game may be varied by having the boys go around a circuit with a task at each base. If they cannot do it they go to the *pits* for instruction, then return to tackle the base again. Coloured plastic buckets make buoys for racing around. A relay where a man at the base holds up a red or green card to indicate which way to go round, helps in teaching port and starboard colours. International Code flags can give instructions. Using oars, paddles and other gear as equipment for games helps with atmosphere. The Patrol astride an oar, with their backs to the direction they are to go, can be coxed around a course by one boy facing forward.

Having port and starboard watches gives you readymade teams for games needing two sides. Vary this by having games between Patrols, with winners playing winners and losers playing losers. Games where players are eliminated for failing should be used sparingly. A game where they stay in, but are penalised in some way, is better. If everyone starts at a wall and has to make the semaphore letter called, anyone who cannot do it moves forward a pace each time. They will work harder to avoid further movement. The winners are those at the back. This sort of arrangement gives better over-all training than any system of eliminating.

Provision of games facilities for small numbers may sometimes be of value for the occasion when a few boys are present or they cannot all be occupied in a particular event. Marking the floor for deck quoits is a good idea. Making quoits is a useful activity. A board with a row of standing pegs can be used for practicing heaving a line, with a higher score for getting between the middle pegs than between outer ones. There are nautical card and board games to be had — some recreational and some for teaching code and flags.

A good Scouter always has a game or two ready. In general, it is not good policy to ask boys what they want to play — at least not too often. They are likely to come up with the ones they remember, which probably means what was played last week. The loud voices are likely to come from the heavyweights who did well in the games where brute force counted. Besides preparing recreational or training games that are known to be required at a meeting, each Scouter should have another of each in reserve. To maintain a variety this means there must be a reasonable library of books of games available to Scouters. It may be a good idea to keep a

log of games played. Besides preventing too frequent an appearance of particular games, this will also serve as a reminder later.

Scouter training

A Sea Scouter like any other Scouter is committed to undertaking certain training following his appointment to help him in the running of his Troop. This is the same training whether the interest is in land, sea or air. All Sea Scouters should certainly do their best to complete their training up to the stage of receiving a Wood Badge. A Scouter owes it to the boys and their parents to become as fully trained as possible. Obviously, being a volunteer and doing a job sparetime, the time that can be spared for training will be limited, but Scouting is a hobby to the Scouter and he will enjoy this hobby more if he is skilled in it.

Details of Wood Badge Training are published locally. Most Counties issue training diaries each year, giving details of weekend and other courses. A similar diary of nationally organised courses is published by Headquarters. Technical training has to be taken outside of Wood Badge Training and often takes place at centres where there is an apparent need. Availability can usually be discovered via the Assistant County Commissioner (Water Activities) or the secretary of the Local Water Activities Committee.

In London, H.M.S. Discovery, alongside Victoria Embankment, is used for many Sea Scouter courses. Originally Scott's Antarctic exploration ship, she became the property of The Scout Association in 1937, then because of excessive upkeep costs she passed to the Royal Navy. However, periods are still available for Scout use.

One of the most useful places for a Sea Scouter to obtain training end experience is at the National Scout Boating Centre, near Marlow. A programme of courses is published each year. Details of other similar centres and courses can be obtained from Commissioners and Secretaries.

A useful way for a new Sea Scouter to get training is to visit an established Sea Scout Group, possibly taking part in a series of meetings and activities. This could be both a pleasant way of learning and one of the cheapest. It could also be of benefit to the other troop if they are short of manpower.

Education authorities in many places have centres for training in water activities. Usually they have professional qualified staff. You are a member of a recognised youth organisation and just as entitled to the services and facilities as youth club leaders and teachers. Information comes from your local Youth Office. Courses are likely to be in canoeing or sailing. Rowing and motorboating are not as well organised and courses are unlikely to be found. Education authority courses are usually aimed at particular qualifications. This is a good thing. A certificate that shows you are capable is likely to become increasingly valuable.

The Royal Yachting Association and the British Canoe Union operate excellent training schemes in their respective sports. The certificates which can be gained form the basis of the Scout Charge Certificate system. To encourage their use by Scouts there are proficiency badges which involve them. In both schemes there are suitable courses run throughout the country which are organised by Local Education Authorities, the Sports Council, Clubs, commercial concerns, schools and of course Scouts.

Your Scout County Water Activities Committee should be able to inform you of local facilities and also of the National Sailing Centre at Cowes and other Sports Council facilities, and other Scout facilities. In cases of difficulty you should contact the Headquarters of the organisation concerned. The R.Y.A. publishes a list of their recognised teaching establishments, and the B.C.U. operates less formally, using local coaching organisers.

A difficulty with dealing with some of the water activities that are not strong enough to have any or very few paid staff for their organisations, is in contacting them, particularly if the address is that of a voluntary secretary, who may change. This is taken care of by the Sports Council, formerly the Central Council for Physical Recreation. They are in touch with these bodies and do, in fact, provide offices for some of them at their own address. If specialist information on water ski-ing, surfing, underwater swimming or other water

activity outside of the main ones is needed, the Sports Council may be approached for details of the national authority, if any.

The fact that a Scouter is a volunteer does not mean that he should be expected to pay his own expenses. He may wish to, but he should not be hesitant in asking for expenses to which he feels he is entitled. For courses there are often grants to be had. In the first instance ask the District Commissioner. Some Groups and Districts pay for their Scouter's training. Some Education Authorities have funds available for adult leader training expenses. It should be possible to get part or all travelling and other expenses, as well as fees, reimbursed.

Royal Navy Recognition

The Ministry of Defence (Navy) has for a long time shown interest in and appreciation of the value of Sea Scouting by granting recognition of one hundred Sea Scout Groups. Such Groups are described as *Royal Navy Recognised*. At one time they were described by the now out-dated term of *Admiralty Recognised*. As the number of Groups granted recognition is limited, the standard is high and there may be a waiting list.

Application for recognition is made through The Scout Association. The Group must be financially self-supporting and adequately staffed with warranted Scouters. The Group must have a minimum of twenty-four Scouts. A District Venture Sea Scout Unit may obtain recognition with a minimum strength of 12 Venture Scouts.

Initial and further inspections are carried out annually by a Naval Officer. If granted recognition, the Group is given the privilege of using the special pennant and an ensign defaced with a Scout Badge. Each member of the Group wears a special blue Naval crown badge. The Group gets an initial issue of certain stores. The Scout Association receives a capitation grant, which goes into a fund on which Recognised Groups can draw for contributions towards such things as boats and equipment. Members of Recognised Groups may also be granted privileges such as visiting ships and camping on government land.

Although the R.N. Inspection lasts only a short time, the Group has to produce evidence of training during the previous year, particularly nautical badges gained and boating done. There is a formal inspection, during which the Inspecting Officer may ask questions concerning the subjects of badges worn and generally look at the smartness of turnout. Procedures and ceremonials described in this book are all of the types acceptable at an R.N. Inspection.

If it is a summer inspection the Group will be expected to demonstrate its activities afloat. If it is a winter inspection indoors, it is usual for much of the programme to be taken up by demonstrations at bases. While evidence of being a good Scout Group is expected, it is nautical skills that are particularly looked for. The Inspecting Officer will give his comments immediately and say if he is recommending to the Admiral Commanding Reserves that the Group should be recognised.

Although a note is taken of any boys who have joined the Royal or Merchant Navy there is no commitment and a Recognised Group has no Royal Navy involvement.

Deep Sea Scouts

Deep Sea Scouts are covered by Rules 99-101 in *Policy, Organisation and Rules-Parts 1, 2 & 3.* A pamphlet on *Deep Sea Scouts*, obtainable from Headquarters, gives more information. Sea Scouters should be aware of this lesser-known part of the Association in case any boys leave to go to sea. Deep Sea Scouts register directly with Headquarters, but usually also keep in touch with their home Group. Broadly, the branch allows a Scout between 16 and 65 to maintain a connection. In ships where there are sufficient members meetings may be held, but other Deep Sea Scouts find much of interest by making contact with local Scouts at ports visited. There are Port Commissioners to help visiting Deep Sea Scouts. A registered Deep Sea Scout carries a membership card and may wear a special badge on a wrist strap.

Regattas

Apart from a chance to race, regattas provide an opportunity for Sea Scouts to get together. There are several regattas arranged on a regional basis and usually an annual National Regatta towards the and of the season. Even if a Scouter may feel that none of his Scouts is capable of racing to a high enough standard, attendance merely as spectators may be worthwhile. There are also occasional national competitions.

For those interested in canoeing events, The Scout Association takes part in and organises long-distance and other races. Details are obtainable from the National Scout Boating Centre, Longridge.

GLOSSARY

The language of the sea is vast and many of the words used are obsolescent. The terms listed here are a selection of those which a Scouter may meet and should understand. See also Chapters Two and Three for the names of the parts of a boat and sail gear.

Abeam	In a direction at right-angles to the fore and aft line of the ship.
Abreast	Level with.
Adrift	Broken from moorings.
Aft	From any point on board towards the stern.
After part	The rear half of a ship.
Ahead	Directly in front. Going forward through the water.
Aloft	Above deck, in rigging.
Alongside	Side by side and touching.
Amidships	Centre of boat.
Astern	Directly behind. Making sternway.
Athwartships	Across the boat from side to side.
Atrip	Anchor just broken out of ground.
Avast	Instruction to stop.
Awash	Level with surface of the water.
Aweigh	When the anchor is broken out from the bottom.
Back	Wind change anti-clockwise.
Ballast	Additional weight to trim the boat.
Bar	Shoal across entrance to harbour or river.
Batten down	Secure hatches, skylights, etc.
Beam	Greatest width of ship.
Bear down	Move towards.
Belay	Make fast a rope.
Below	Inside the hull below decks.
Boat, to	Take something out of position, such as 'boat a rowlock'.
Boom vang	Term of American origin for kicking strap.
Bottom	The part of a hull below the waterline.
Bows	The forward part of the hull around the stem.
Brace	Rope used to control spar.
Bring up	Come to anchor.
Broach	Swing a vessel running to a broadside position.
Bulwarks	Ship's sides above deck level.
Buoyancy	The force that supports a floating object. Sometimes applied to the material used.
Burgee	Alternative name for pennant.
Cable	The rope used on an anchor. One tenth of a nautical mile.
Carry way	Continue to move through water.
Cat	Term of American origin for boat with single sail.
Con	Direct the helmsman.
Course	Direction being travelled.
Crutches	Metal fittings to take oars. Rowlocks.
Davy Jones Locker	Sea bottom.
Decks	Horizontal surfaces of ship. Part underfoot.

Draught (Draft)	Height of waterline above lowest part of hull.
Ease	Slacken.
Eddy	When the current turns back on itself.
Fall	Hanging end of a rope.
Forecastle	(pronounced foksl) Forward part of upper deck.
Fore part	Front part of ship.
Forward	From any point in ship towards bow.
Freeboard	Height of gunwale or deck above water.
Gather way	Begin to move through water.
Guy	Controlling rope on spar.
Hard	Hard part of shore used for hauling boats out.
Hatch	Opening in deck.
Hawse pipe	Pipe through which anchor cable runs.
Haystack	Canoeing term for a standing wave in a rapid.
Heel	Incline boat to one side.
Junk	Old rope.
Jury	Temporary replacement such as a jury mast.
Kicking strap	Line from boom to bottom of mast to prevent boom from lifting (boom vang).
Knot	One nautical mile (6,080 ft.) per hour.
Launch	Drag along. Put in water. An open power boat.
Lee side	Sheltered side.
Leeward	(pronounced 'looard'). Direction away from wind.
Leeway	Blowing sideways.
Line	Common name for rope on board ship.
Luff, to	Bring a sailing boat closer to the wind.
Make, to	To reach destination. Increase of tidal range.
Man	Take up position.
Oarlock	American name for rowlock.
Pay off	Go away from wind.
Pay out	Let line run.
Pendant	Alternative name for pennant (pronounced the same).
Pennant	Small triangular flag.
Pooped	Overtaking seas come over stern.
Port lights	Small strong round windows.
Pound	Part of canal between locks (reach on river).
Quant	Pole used for punting a yacht.
Quarter	Part of hull between side and transom.
Quarter deck	After part of upper deck.
Quarter, on the	Viewed over the quarter.

Ratline	Light lines forming ladder rungs on shrouds.
Reach	Part of river between locks or hazards (see pound).
Rowlock	Notch in side of top strake for oar. Metal or plastic crutch for oar.
Run-off	Additional water in river due to rain or melting snow.
Scuttles	Thick glass in port lights.
Ship, to	Place an object in position, such as ship crutches.
Snub	Check suddenly.
Steerage way	Moving through water with sufficient way to be steered.
Sternway	Backwards through water.
Stopper	Large standing wave, particularly below a weir.
Superstructure	Parts built above upper deck.
Una	Semi-obsolescent term for rig with single sail (see Cat).
Under way	Moving through water.
Under weigh	Weighing the anchor.
Unship	Remove something from position.
Vang	Restraining rope from gaff or spar.
Veer	Change of wind clockwise. To pay out or move away from.
Waist	Remainder of deck between quarter deck and forecastle.
Wake	Track of boat immediately astern.
Water-logged	Full of water, but still afloat.
Weather side	Side of ship towards wind.
Weather, to	To pass safely by or through.
Wind, to	Turn a boat in a canal.
Windward	Side or direction wind is coming from.