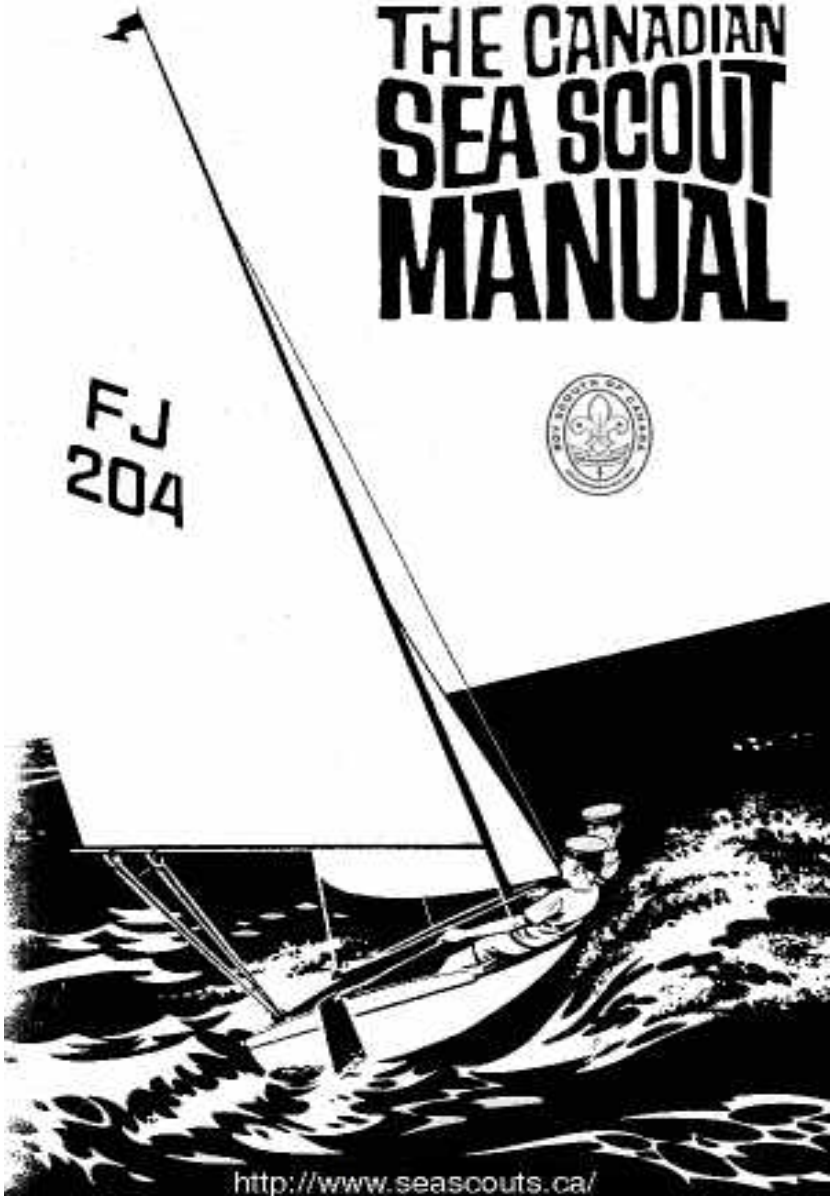
THE CANADIAN SEA SCOUT MANUAL



http://www.seascouts.ca/

Foreword

Sea Scouts are Boy Scouts and Sea Scouting is a branch of the Boy Scout Movement.

The aim of Sea Scouting is exactly the same as that of regular Scouting. The programme is the same with something "tacked on". Sea Scouting has been a part of Scouting since the Movement started. The Founder, Lord Baden-Powell wrote: "When a youngster, I began my Scouting as a Sea Scout", and so we find many references in *Scouting for Boys* to Sea Scouting and to B.-P.'s adventures with his brother Warington, who, he relates was "both a sailor and a boy at heart".

In his message to Scouts in *Sea Scouting and Seamanship for Boys*, Warington Baden-Powell makes this important observation: - "A Sea Scout must be a Boy Scout; therefore I may take it that you have read *Scouting for Boys*, and that you know the Scout Promise and Law and regulations. Sea Scouting is simply a branch of Boy Scouting, but all your work as a Sea Scout is on or about the water, mostly in boats."

"Joining the Sea Scouts" he continues, "does not mean that you are going to take up the sea as a profession; it means that you are going to make boating, sailing, camping, fishing, sailoring and watermanship your pastime for your spare time and holidays".

Sea Scouting offers you plenty of manly adventure, and you will find that your Sea Scout training will be most useful to you when you start to earn your own living. This book is a companion volume to *Tenderfoot to Queen's Scout.* You will need both to complete your Sea Scout training.

It has often been said that a group has to be wealthy to go in for Sea Scouting. This is not so. Very few Boy Scout troops start out with all the equipment they need for camping and it's the same for Sea Scouts. In the beginning you can get along with very little and even build your own boats as you go along. Investigate boat rentals in your districts. Watch the ads in the classified section of your newspaper to see if any old boats are for sale that you can repair yourselves.

Nothing worthwhile has ever been accomplished without effort. If you want your Sea Scouting to be really worthwhile you will have to put effort and enthusiasm into it, combined with loyalty to your Patrol Leader and Scouters.

As you embark upon your Sea Scout career I wish you Good Scouting and Good Sailing.

Chief Executive

Chapter I

The Boat In Canadian History

Seamanship is an old and honorable skill. Long before Noah built his ark, men were sailing the waters of the world in vessels both crude and primitive - the coracle of England, the felucca of North Africa, the junk of China and the dug-out of South America and Africa.

Before even the explorers and colonists landed on these shores the Indians for centuries traversed the rivers and lakes in their birch bark canoes.

More than 1,000 years ago the Norsemen roved the seas, settled in Iceland and Greenland, and eventually sailed along the shores of the North American continent.

Then for four hundred years this continent slept while the explorer sailed elsewhere, and it was not until 1492 when Columbus “discovered” America that the era of exploration was reborn. Five years later John Cabot came to Newfoundland, and less than a century later Jacques Cartier was to make his famous cruise up the St. Lawrence and around what are now the Maritime Provinces and Newfoundland.

From then on, in a steady stream, men came *in* ships - Champlain -- Sieur de Maisonneuve -- the Jesuit Missionaries --Franklin -- the Selkirk Settlers who came through Hudson’s Bay - the explorers who opened up the vast northland as they plied their way “down north” along the Mackenzie -and by boat penetrated deeper and deeper into the great wilderness that was Canada. On their heels came the emigrant ships.

. . . and so today, many Canadian boys can trace their ancestry to those pioneers who sailed across the oceans and seas to start life anew in this land of promise and opportunity.

The reasons you wear the Sea Scout emblem and uniform are many. But certain as the rise and fall of the tides, is the attraction for you of the lure and the love of the sea.

The moment you shove off from land - on ocean, gulf, bay, lake, river or pond you're in a different world. It is this that appeals and gives the great sense of adventure and romance to Sea Scouting.

Seamanship is a natural inheritance of every Canadian boy. Sea Scouting weaves into this inheritance the ideals of Scouting, summed up in the Scout Promise and Law.

Chapter II

The Tenderfoot Requirements

Rule 209, Policy, Organization and Rules

Preliminary

(i) Know the Scout Law and Promise and their meanings in accordance with his age.

(ii) know the following and when and how they are used:
(a) Scout Salute, (c) Scout handshake
(b) Scout Sign, (d) Scout Badge.

Sea Scouts use the naval form of salute, i.e. three fingers as in Scout salute, with palm of hand into face, back of hand out and fingers to touch cap.

Forms of salutation can be traced back to very ancient times. Like other rules of behaviour in society, custom has confirmed the use of the salute both as a form of respectful greeting, and as an aid to dignity and good discipline. As strict observance of good manners is an evidence of good breeding and of a gentleman, so the salute is an evidence of a respectful Sea Scout.

For further information on the Scout Salute and Sign, see *Tenderfoot to Queen's Scout*.

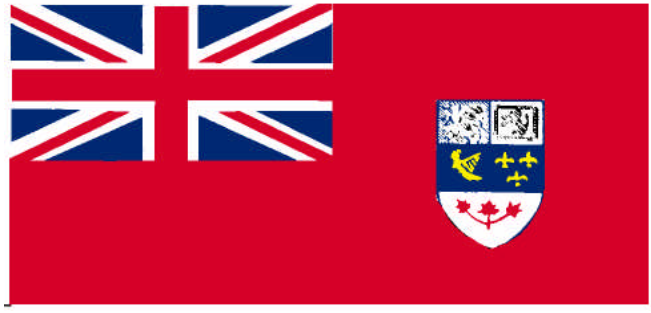
The Union Flag

(iii) Know the composition of the Canadian Ensign and the Union Flag (commonly called the Union Jack) and how to hoist and break them. If a Sea Scout, in addition know the composition of the White, Blue and Red Ensigns and when and by whom these are worn.

For the part of this requirement applying to all Scouts full information will be found in *Tenderfoot to Queen's Scout*.

To Sea Scouts there is a very real difference in the terms "Union Flag" and "Union Jack". Except when it is flown on a Jackstaff which is a small staff on the bowsprit or the fore end of a ship, it should always be referred to as the Union Flag. if worn on the Jackstaff it is then known as the Union Jack.

The Union jack is worn on all Jackstaffs of all Royal Navy vessels when at anchor, but never at sea, except on such occasions when ships are dressed for the Queen's birthday. On Royal Canadian Navy Ships the Canadian Ensign replaces the Jack. At sea the only person who can wear the Union Flag is the



Admiral of the Fleet, who wears it on the main masthead.

Merchant ships of British register fly the Pilot Jack which is a Union Jack with a white border.

The Ensigns

Many years ago in the days of warships under sails, a fleet often numbered over 200 ships, divided into three main squadrons. The van or senior squadron flew the Red Ensign, and the Admiral in command flew the Union Flag at his masthead.

The second, or rear squadron flew the White Ensign and the Vice-Admiral in command had the Union Jack at his foremast. The third, or centre squadron wore the Blue Ensign and the Rear Admiral in command had the Union Flag on

his mizzen mast. By this method it was possible to tell at a glance to which squadron a ship belonged.

As time passed warships became larger and fewer in numbers and the three colours became both confusing and unnecessary. In 1864 Queen Victoria ordered that all British men-of-war should wear the White Ensign; all ships commanded by officers of the Royal Naval Reserve the Blue Ensign and all other British ships the Red Ensign. This system remains in effect throughout the British Commonwealth to this day.

There are however, certain ships other than those specified who may wear the White and Blue Ensigns.

The White Ensign may be flown by yachts of the Royal Yacht Squadron. The Blue Ensign is flown by ships of the Royal Canadian Mounted Police, Marine Division, the Department of Transport and others holding a personal Admiralty Warrant.

Both White and Blue Ensigns are under Admiralty control, as is also the Red Ensign when “defaced”, i.e. bearing some other device in addition to the Union Flag. In such cases it may only be flown by special warrant or permission from the Admiralty.

The Blue and Red Ensigns defaced. may be flown in peace time by members of certain yacht clubs who hold personal Warrants and the Blue Ensign defaced is flown by ships belonging to certain government departments.

Power driven and sailing craft wear their ensign aft when at anchor and from the peak of the gaff when under way.

Raising and Striking Colours. Between March and September colours should be “made” at 8 a.m. and at 9 a.m. September to March. They are always struck at sunset. The Ensign should always be worn when under way.

When hoisted upside down the Ensign becomes a signal of distress or assistance needed.

For all ensigns, in colour, see *Brown’s Signalling.*

Health and Safety

(iv) Know how to clean a wound and make and apply a clean dressing. (See Tenderfoot to Queen’s Scout

Observation

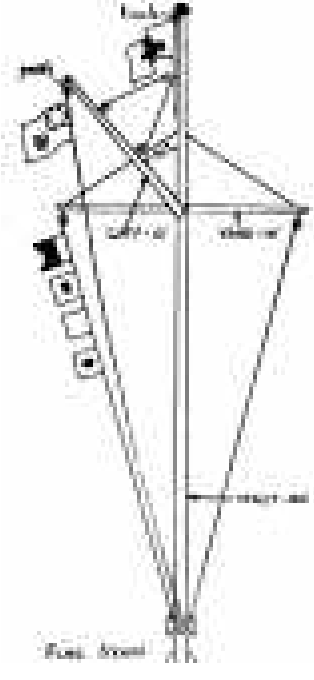
(v) Make and know the meaning of the woodcraft signs given in Camp Fire Yarn 4 of "Scouting for Boys". (See also Tenderfoot to Queen's Scout*)*

Pioneering

(vi) (a) Whip the end of a rope. (b) Demonstrate with rope how to tie the following knots; reef, sheet bend, clove hitch, bowline, round turn and two half hitches, sheep-shank, and explain their uses. (See Tenderfoot to Queen's Scout*)*

Campcraft

(vii) Demonstrate how to make a camp bed using a ground sheet and blankets. (See Tenderfoot to Queen's Scout*)*



(viii) Make any one of the following: Scout Staff, fid, marlin spike, tent peg, pot hook or similar gadget. (See Tenderfoot to Queen's Scout)

When a Sea Scout has completed these requirements he is invested by his Scoutmaster, makes the Scout Promise and is entitled to wear the Scout Badge and Uniform. Particulars of the investiture Ceremony will be found in *Tenderfoot to Queen's Scout*.

A well-proportioned and trim-looking signal mast is a definite asset to any landship or camp waterfront. It can be used to learn flag etiquette and International Signal Code Flag signalling, and to control activities on the water and on land by flag signals.

The illustration shows such a signal mast and has on it some basic measurements for your guidance in constructing one as a project in pioneering and rigging.

The truck halyard is used for the “Scout” flag or Sea Scout burgee (larger).

The peak halyard is the place of honour and is used for the Red Ensign.

The yard halyards are used for various distinguishing (personal) flags and of course, for code flag signaling.

Chapter III

The Second Class Requirements

Rule 210, Policy, Organization and Rules

A Second Class Scout is a Tenderfoot Scout who has completed the following requirements.

Health and Safety

(i) *Know the general rules of health as given in Camp Fire Yarn 18 of "Scouting for Boys." (See* Tenderfoot to Queen's Scout.*)*

(ii) *Demonstrate the six exercises in Camp Fire Yarn 17 of "Scouting for Boys". (See* Tenderfoot to Queen's Scout.*)*

(iii) *Be able to deal with the following First Aid problems:*

(a) Cuts and abrasions, (b) Shock (not electric), (c) bleeding from the nose, (d) Sprains, (e) Stings and bites, (f) Burns and scalds, (g) Blisters, (h) Foreign object in the eye, (i) Avoidance and treatment of sunburn. If a Sea Scout, know how to fasten a life jacket on himself and be able to throw a life-line with reasonable accuracy.

For information on the first part of this requirement see *Tenderfoot to Queen's Scout*.

Life Preservers

Every Sea Scout craft must be equipped with an adequate number of Department of Transport 'approved' life jackets so that frequent practice will thoroughly familiarise the Scouts with the method of wearing them. Latest information on life jackets can be secured from the Department of Transport, Marine Division, Ottawa. A life jacket or a belt should be donned in the same manner as a vest, with the lashings at the front. The cords should be overlapped and tied securely with a reef knot. It is of the utmost importance that a jacket is not too loose for then it becomes dangerous. Either the jacket slips off upon hitting the water or the wearer receives a vicious blow from the front and back

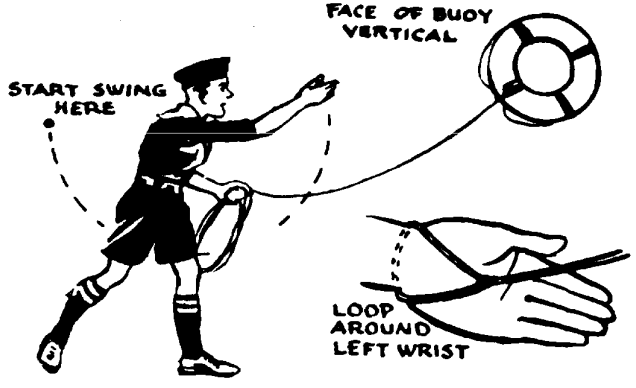
panels. Every Sea Scout should practise donning a life preserver for speed, of course, but never sacrificing safety. Speed and safety can be shipmates only after much practice.

Life jackets carefully stowed, easily accessible ready for instant use is the Sea Scout's way of "Being Prepared".

The Ring Buoy

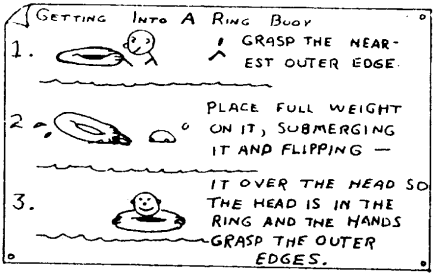
Another type of life preserver often seen is the ring buoy. These are standard equipment along every canal in Canada, and every Sea Scout should know, not only how to throw one on the end of a life-line, but should also know how to use one himself if the occasion ever demanded.

These buoy's are used for "man overboard or for a person struggling in the water of a river, canal or a beach. It is the duty of the nearest man to toss it out immediately. First he must secure the "lemon" or "bitter" end of the line attached to the buoy to his person, either by standing on it, or by looping it about his wrist.



Holding the properly coiled rope in the open left hand, the buoy should be drawn back with the right hand to the level of the shoulder, and then thrown straight out, letting go when the arm reaches shoulder level in front. (See illustration.) Care must be taken not to hit the victim with the buoy.

In some cases ring buoys have a can attached to the ring. This is to be thrown with the ring. It contains chemicals which, when coming in contact with water, instantly flare up, giving a light, not only to the victim to see but to the rescuers also.



Lifeline

Ability to place a lifeline accurately within reach of the person in need is very necessary.

To throw your lifeline, first coil the rope carefully, split the coil, passing the larger portion into the left hand. Swing the right (or throwing arm) back straight two or three times, then let the line fly, remembering to keep the left hand open so the coil will run free. ‘With practice it should be a must for every Sea Scout to drop the end of his line within a foot or six inches of any named object. The best method of learning to throw a line is by constant practice.

For this test a rope 30 to 50 feet in length should be used and the thrower should place the bowline loop within grasping reach of the person in difficulty four times out of five - any kink will spoil a throw.

(iv) Demonstrate the use of the triangular bandage as a large and small sling, and as applied to the knee, head and foot.

(v) Understand the importance of summoning help. (See Tenderfoot to Queen’s Scout.*)*

Observation

(vi) *(a) Follow a woodcraft sign trail half a mile long, (b) Remember sixteen out of twenty-four well asssorted small articles after one minute's observation. (Kim's Game). (See* Tenderfoot to Queen's Scout.*)*

(vii) *Be able to recognize and name six common trees and know the values of their woods for cooking fires (in areas where there are not sufficient trees, the Examiner may substitute shrubs). if a Sea Scout. know the uses of four types of Canadian lumber used in boat construction.*

The first part of this requirement is self explanatory. It should not be difficult in any community to find a person who can identify six trees or shrubs and who can tell their value as firewood.

Lumber for Boat Building

There is no better source of information on this part of this requirement than your local boat builder. He will be able to advise you of the best woods available in your part of the country and what kinds to use for different types of boats and their various parts.

One prominent Canadian whose family has been connected with boats for upwards of 70 years has offered this general information.

For the type of boats most Sea Scouts will use, the first choice and most desirable lumber is White Cedar (sometimes called domestic cedar). Second choice is White Pine. While Red Pine may also be used it has not the lasting qualities of the other two.

For boats with keels the keel should be made of White Oak, with Red Oak and Elm as second and third choices.

White Cedar and White Pine are considered best for planking.

The best canoes are made from Domnestic White Cedar also and are covered with canvas. Oak is used for making the ribs. Second and third choices for canoe building are B.C. Cedar and Cedar Plywood.

Relatively new developments in such products as waterproof plywood, moulded plywood, plastic hulls, fiber glass and wood preservatives should also be investigated.

Pioneering

(viii) Demonstrate correctly the following: Square Lashing and Sheer Lashing; Guyline Hitch and Timber Hitch. (See Tenderfoot to Queen's Scout*.)*

(ix) Demonstrate the safety rules for and the care and use of hand axe and knife. Demonstrate the correct way of chopping fire-wood. (See Tenderfoot to Queen's Scout*.)*

Signalling

(x) Know the Morse or Semaphore sign for every letter of the alphabet, the numerals and the table of miscellaneous signals given in "Tenderfoot to Queen's Scout"*. Be able to send and receive a simple message accurately. For a Sea Scout this must be ship to ship or ship to shore.*

It is a matter of pride with Sea Scouts that they are good signallers, usually in both Morse and Semaphore codes. In this requirement, Sea Scouts are expected to send messages under working conditions from ship to ship or ship to shore. It is obviously more difficult to do this than to signal from two positions on shore. The codes, together with an outline of methods, are contained in *Tenderfoot to Queen's Scout*. Sea Scouts should pass this requirement only under the Conditions set forth.

Campcraft

(xi) Lay and light a wood fire in the open, using not more than two matches. (No paper or birch bark to be used.) Cook over this fire a quarter of a pound of raw meat or fish and two potatoes. (See Tenderfoot to Queen's Scout*.)*

Public Service

(xii) Demonstrate that he understands the Highway Safety Rules as laid down in the Traffic or Vehicle Act of his province and any local rules insofar as these affect pedestrians and cyclists. (See Tenderfoot to Queen's Scout*.)*

A copy of the Highway Code for your province may be obtained free of charge by writing to the Department of Highways at the capital city of your

province. A copy of special rules in your community may be obtained from the clerk of your municipality.

(xiii) If he has the use of a bicycle, demonstrate that he is keeping it properly maintained and that he is able to effect minor repairs. (See Tenderfoot to Queen's Scout.*)*

Exploring

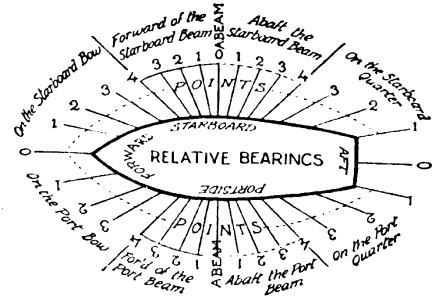
(xiv) Know the sixteen principal points of a compass by name and degree and demonstrate the following:

(a) How to take a bearing in degrees

(b) How to walk on a simple bearing

(See *Tenderfoot to Queen's Scout*.)

Relative Bearings



These are a system of directions as viewed from the ship and relative to her. They are divided, as the compass is, into thirty-two points.

The diagram explains these.

(xv) Take part under authorized leadership in at least three hikes or two short cruises of from four to eight hours each. In addition if a Sea Scout, know howv time is marked on shipboard and how a crew is divided into watches.

Time Aboard Ship

Long before the dawn of the Christian Era, men had gone to sea in ships, and, even previous to that, men had sailed on the inland waters of the great continents. The very earliest records of China tell stories of Chinese ships travelling up and down its great rivers.

Clocks, as we know them now, were not invented until the 14th Century. However, there were various ways of approximating time in the old days, including the sundial, the water clock, and the hour glass. On board ship it was not possible to use the sun dial or the water clock because those called for a solid foundation and steadiness.

So it was necessary to use the hour glass for denoting the passage of time on board ship. History indicates that in the early days, on large ships, the emptying of the sand from the upper to the lower half of a so-called hour glass was announced by the striking of a gong in the central part of the ship.

In those very early days, sand passed from one half of the glass to the other in approximately one-half an hour, and a normal turn at the oars consisted of two shifts of the glass, that is, one hour of time. The gong was struck once at the end of the half-hour and twice at the end of the hour.

When the use of auxiliary sails came into being, the spell at the oars was extended over a longer time - four turns of the glass. This period of time was indicated by the striking of the gong four times, with an interval between the second and third strikes. When the sails entirely superseded oars, the length of time that men on watch (on duty) was extended up to eight turns of the glass, which corresponds to the present length of a watch, namely, four hours. To-day these watches are indicated by the striking of the ship's bell at half-hour intervals, thus making a total of eight bells for each watch. (It is common practice in Sea Scout Troops to strike ship's bells throughout the meetings.)

The passage of time on board ship is now indicated by bells almost universally. It is interesting to note that official time on board English Naval vessels was recorded by hour glasses as late as the year 1859, in spite of the fact that all other nations had long since been using clocks.

TIME SYSTEMS				
12-hour	Bell Time		24-hour Clock Time	
AM and	AM	PM	AM	PM
12:30	1	1	0030	1230
1:00	2	2	0100	1300
1:30	3	3	0130	1330
2:00	4	4	0200	1400
2:30	5	5	0230	1430
3:00	6	6	0300	1500
3:30	7	7	0330	1530
4:00	8	8	0400	1600
4:30	1	1	0430	1630
5:00	2	2	0500	1700
5:30	3	3	0530	1730
6:00	4	4	0600	1800
6:30	5	1	0630	1830
7:00	6	2	0700	1900
7:30	7	3	0730	1930
8:00	8	8	0800	2000
8:30	1	1	0830	2030
9:00	2	2	0900	2100
9:30	3	3	0930	2130
10:00	4	4	1000	2200
10:30	5	5	1030	2230
11:00	6	6	1100	2300
11:30	7	7	1130	2330
12:00	8	8	1200	2400

Sea Scouts are quick to note the absence of the striking of 5 bells in the last Dog Watch. In the year 1797, 5 bells was to be the signal for the Navy mutiny at the Nore. The plot was discovered and the mutiny quelled. The Admiralty decreed that 5 bells in the Last Dog Watch should never again be struck on British vessels and so at 1830, 1 bell is struck adding one to each hour until 2000 when 8 bells is struck.

Watch Organization

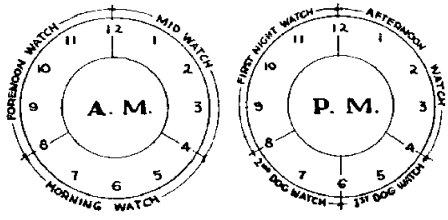
Each division is divided into either two or three watches. Two watches are known as Starboard and Port; three are known as Red, White and Blue.

The watch organization is the working organization of the ship. At any given time there will be a certain proportion of men on duty from each part of the ship. In war time, at sea, a large number of men are always required on duty to man a portion of the armament. In peace time sufficient men are required to provide lookouts, steer the ship, man the seaboats, etc.; thus war and peace organizations may differ. At sea one watch or part of the watch is always on deck by day and night. In harbour all watches are employed during working hours, after which the watch on deck or duty part of the watch is used for any work that may be necessary. This turn of duty lasts for twenty-four hours, from noon to noon.

When hands are required for any purpose, they are piped to fall in. The exact formation of the various bodies of men obeying a pipe varies slightly with the standing orders of different ships.

The purpose of the two dog watches is to make an odd number of watches in 24 hours, thus giving the men different watches each day.

Before being awarded his badge the Second Class Scout must demonstrate his ability to repass the requirements for the Tenderfoot Badge.



Chapter IV

The First Class Requirements

Rule 211, Policy, Organization and Rules

"I don't consider a boy is a real Scout till he has passed his First Class Tests." B.-P.

A First Class Scout is a Second Class Scout who has

(a) been approved as a First Class Scout by the District Commissioner or his appointee, or by the Provincial Commissioner or his appointee in the case of a Group not organized under District authority, and

(b) accomplished the following:

Preliminary

(i) Demonstrate thrift through the proper care and maintenance of his personal belongings and save money consistent with his income.

Health and Safety

(ii) Be able to explain the functions of the principal organs of the body. (See Tenderfoot to Queen's Scout.*)*

(iii) Know the position of the main arteries (names unnecessary) and be able to stop bleeding. (See Tenderfoot to Queen's Scout.*)*

(iv) Re able to recognize and apply first aid to fractured arm, fore-arm and collarbone, and know the importance of not moving suspected fractures. (See Tenderfoot to Queen's Scout.*)*

(v) Demonstrate the proper method of dealing with the following emergencies: Fire, drowning, fainting, gas suffocation, frostbite, electric shock, and breaking through ice. Know Schafer, Holger - Neilson and Mouth-to-Mouth methods of artificial respiration. (See Tenderfoot to Queen's Scout.*)*

(vi) Be able to throw a life-line with reasonable accuracy. (See article on this subject under Second Class Requirements).

(vii) Swim fifty yards, or if a doctor certifies that swimming is dangerous to the boy's health, or where the Provincial Commissioner considers that water for that purpose is not within reasonable distance of the Troop, pass the requirements for one of the following badges: Camper, Handyman, Healthyman, Naturalist, Pioneer, Stalker, Starman or Tracker. (See *Tenderfoot to Queen's Scout.)*

Observation

(viii) Read the meaning of a series of simple tracks made in sandy or other suitable ground. These should include running, limping, carrying a weight, walking backwards. (See *Tenderfoot to Queen's Scout*.)

(ix) Be able to recognize and name from life any twelve common trees and any six common birds. (In areas where there are not sufficient trees the examiner may substitute shrubs. (See *Tenderfoot to Queen's Scout*.)

(x) Using improvised apparatus, such as a Scout Staff, estimate three distances up to half-a-mile, and three heights up to 100 feet. In each case the estimate must not vary more than 10 per cent from the actual measurement. (See Tenderfoot to Queen's Scout.*)*

Pioneering

(xi) Demonstrate the following: back splice, eye-splice, fireman's chair knot, overhand loop, rolling hitch, parbuckling and three kinds of lashings. (See Tenderfoot to Queen's Scout.*)*

(xii) Demonstrate the proper use of an axe for felling and trimming light timber or, if this is impracticable, make a model of a bridge, derrick, etc., of a type approved by the Examiner. ***If a Sea Scout, make a model boat or deck model; help repair Troop craft.***

This section specifically provided for Sea Scouts as an alternative to axemanship, should, like the pioneer model for Boy Scouts, be of a type approved by the Examiner.

Signalling

(xiii) Send and receive a message out-of-doors, either in Semaphore at 20 letters a minute, or in Morse at 15 letters a minute. (Sea Scouts will use Morse). Understand the alphabetical check for numerals. (See 'Tenderfoot to Queen's Scout.*)*

Campcraft

(xiv) Make a camp kitchen with open fire and other necessaries, and prepare therein (a) two of the following dishes: porridge, rice, pancakes. (b) A "damper" of half a pound of flour, or a "twist" baked on a thick stick. (c) Stew or skin and cook a rabbit, or pluck and cook a bird or clean and cook a fish). (See tenderfoot to Queen's Scout.)

Public Service

(xv) Have a general knowledge of the Highway Safety Rules as laid down in the Traffic or Vehicle Act of his province and be able to answer questions and give demonstrations in relation to any part of then; ***and if a Sea Scout, know the rules of the road at sea, or on the Great Lakes and their connecting waterways.*** *(See* Tenderfoot to Queen's Scout.*)*

Rules of the Road at Sea

An international marine board has fixed the rules applying to world shipping so that certain signals, lights and observances are universal throughout the world.

Throughout the world a red light designates the port side of a vessel; a green the starboard; two whistles mean change of course to port; one, a change of course to starboard.

The rights of sailing vessels over steam and another sailing vessel under certain conditions are recognized as well as the rights of a vessel laying cable, trawling, or towing.

The Department of Transport of the Canadian Government has set up certain laws governing the movement of craft on our own coastal and inland waters. Because of the Great Lakes being the largest connected body of water

in the world special regulations have been set up for vessels navigating these waters. It is the Sea Scouts' duty to know the law first in his particular locality and then to observe it.

Steering and Sailing Rules

a) On the road you know that a car coming from the right has the right of way, and on the water there is a similar general rule: when two power driven vessel are crossing, so as to involve risk of collision, the vessel which has the other on her own starboard side (that means from straight ahead to 22½° (2 pts..) abaft the starboard beam) shall keep out of the way of the other vessel.

b) When two power-driven vessels are meeting head on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other.

c) When a power-driven vessel and a sailing vessel are proceeding in such directions as to involve risk of collision, the power-driven vessel shall keep out of the way. Common courtesy also requires that a power driven vessel shall keep out of the way of a rowboat or canoe.

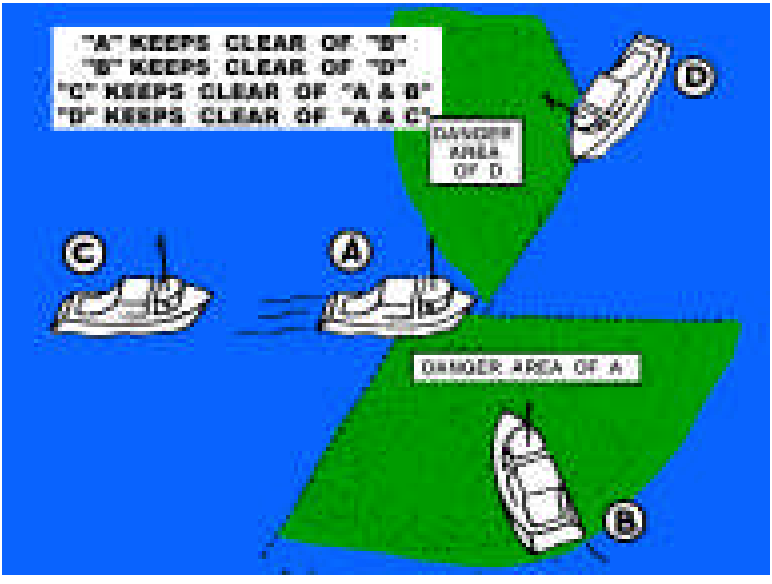
d) When two sailing vessels are approaching one another so as to involve risk of collision, one of these shall keep out of the way as follows:

i) a vessel which is running free should keep Out the way of a vessel which is close - hauled.

ii) a vessel which is close - hauled on port tack shall keep out of the way of a vessel close-hauled on starboard tack.

iii) when both are running free with winds on different sides, the vessel which has the wind on the port side shall keep out of the way.

iv) when both are running free with wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.



e) But always: a vessel overtaking any other vessel (even a sailboat overtaking a motor powered vessel) shall keep out of the way of the overtaken vessel.

Whistle Signals

One short blast means: I am altering my course to starboard.

Two short blasts means: I am altering my course to port.

Three short blasts means: My engines are going astern.

At least five short, rapid blasts to approaching vessel asks "are you taking sufficient action to avoid collision?"

Whistle Signals

Fog signals

Vessel and Circumstance	Great Lakes	Other Waters
Power driven vessel under way	3 blasts at intervals of not more than 1 minute.	1 long blast at intervals of not more than 2 mins.
Power driven or sailing vessel at anchor	Either ring fog bell rapidly for 3 to 5 sec. each minute or give 1 short, 1 long, 1 short blasts in succession.	Either ring fog bell rapidly for 5 sec. each minute or give 3 blasts in succession, 1 short, 1 long, 1 short
Sailing vessel under way on starboard tack	1 blast every minute	1 blast every minute
Sailing vessel under way on port tack	2 blasts in succession every minute	2 blasts in succession every minute
Sailing vessel wind abaft the beam	3 blasts in succession every every minute.	3 blasts in succession every every minute.
Sailing vessel towed	1 long 2 shorts every minute.	1 long 2 shorts every minute.

Any vessel not over 26’ in length may, in lieu of the signals outlined make some other sufficient sound signal at intervals of not more than one minute.

Remember for Power Vessels

When you see the other vessel's green and white light, you are the privileged vessel; the other should stay clear.

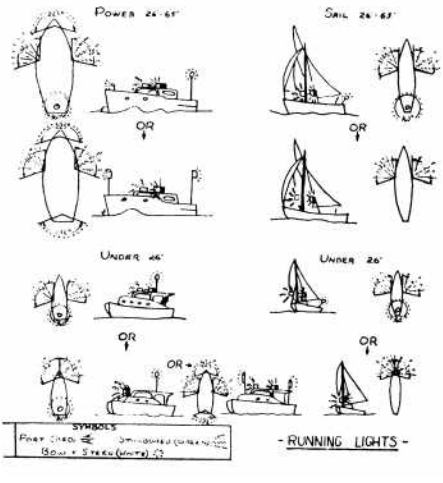
When you see the other vessel's red and white light, you are the burdened vessel and should stay clear.

When you see only white stern light, you are overtaking the other vessel and should stay out of the way.

When you see the other vessel's green and red side lights and white bow light, you are heading straight towards the other vessel. BOTH SHOULD GO TO STARBOARD.

Of course, there are other rules, but these are the important ones, with the exception perhaps, of the one paraphrasing the Scout law that says: "A skipper is not a fool"; even if he is in the right he shall do all that is possible to avoid a collision and shall always show courtesy to all others on land or sea!

When you go on the water, don't forget that the new regulations require that there be at least one approved lifejacket for each person aboard; that if you have a power driven vessel there be a fire extinguisher. Safety afloat is important if you want to remain alive.



The Canadian Shipping Act, Small Vessels Regulations gives the requirements for running lights as shown in the accompanying illustration.

Small rowing boats, canoes, kayaks, etc., do not have to carry lights but are required to have ready a flashlight or a lighted lantern showing a white light, which must be shown in sufficient time to prevent collision.

(xvi) Demonstrate the methods of controlling traffic, both vehicular and pedestrian. (See Tenderfoot to Queen's Scout.*)*

(xvii) If he has the use of a bicycle, demonstrate that he is keeping it properly maintained and that he is able to effect all reasonable repairs. (See Tenderfoot to Queen's Scout.*)*

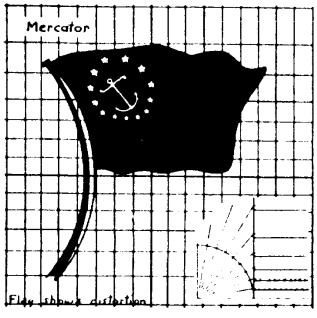
(xviii) Understand the procedure for reporting accidents.

Exploring

(xix) Read and he able to use a topographical map, and if a Sea Scout, a navigation chart. Point out a direction by day and night without the use of a compass. (See Tenderfoot to Queen's Scout *and the following.)*

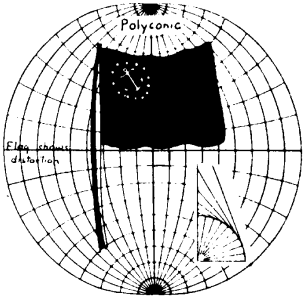
Navigation Charts

A Navigation chart is merely a map of the waters, showing in detail the adjoining land, the depth and character of the land under the surface, navigation aids, and in some cases, currents. It is one of the highest developments of the sign language. It represents upon a flat surface, a section of the spherical surface of the globe. Where a chart covers a vast area, the entire Pacific Ocean for example, a certain amount of distortion is bound to occur. The chart cannot show the true relative positions of all parts of the waters and its shores, and still remain flat. This difficulty is being solved by the use of the Mercator Projection.



The Mercator Projection, used on over 90% of all navigation charts, is a method of making sea charts and maps, by which meridians, the circles passing through the poles, are laid down parallel. As the illustration shows, the surface is somewhat distorted and equal distances are represented, if you go farther away from the equator, by increasing distances on your chart. Therefore, never use the scale of the bottom of the chart to measure something on top (unless your chart represents only a very, very small part in which case the distortion can be ignored). But the Mercator chart has also great advantages: all the lines of

latitude are parallel to each other and cut the lines of the longitude at right angles. Therefore, you can safely plot your course on these charts. The distortion in polar regions is so great that the Mercator chart there becomes useless.



The Polyconic projection is used for most of the Great Lakes Charts. Imagine a series of cone tangent at each degree of latitude on which the earth's surface is projected. Close to the degree of latitude there is very little distortion. The lines on Polyconic charts are slightly curved (but in practice for small distances this is not important.)

Polyconic Projection

Charts for local use

Charts are made and published by the Canadian Hydrographic Service and cover practically every inch of navigable. water in Canada. They are available from the Canadian Government or from regularly appointed dealers at reasonable prices. Chart No. 1 is an excellent index of chart symbols and their meanings.

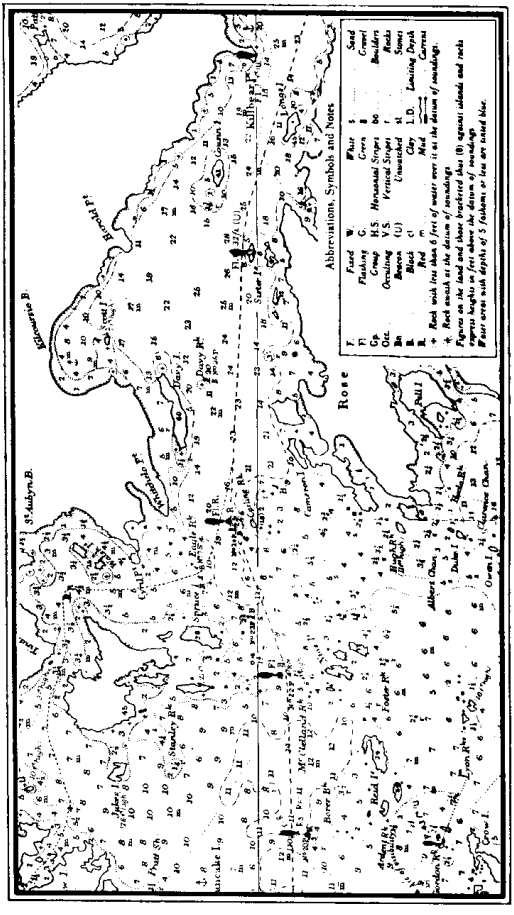
They are made in several scales, the largest scales for close inshore and local harbour work, the smallest for coastal and ocean navigation.

Navigation Equipment

The chart is wonderfully simple, completely self-explanatory and every Sea Scout should be familiar with the one covering his local waters. To help him use it, the following equipment is needed.

Binoculars, Tide Tables	Parallel Rules, Dividers
Light Lists, Current Tables	Log, Protractor, Watch

Canadian charts show the depth of the water (how much water there is at the date of sounding below mean low water) by inscribing small figures on the water area of the chart. Sometimes these soundings are in fathoms (6 ft) sometimes in feet. The first thing, therefore, to do when you use a chart is to look at the index and see if the soundings are in feet or fathoms, and when the soundings were taken. (In general it gives some indication which will enable you to see if the general water level is higher or lower now than when the chart was made.) Quite frequently the three-fathom or less area is shaded in dark blue



and the five-fathom or less area in light blue. The rest of the water is white. Of course, this information was correct when the chart was made. Before trusting a chart too much, look for the date which you will find on the lower left hand corner, generally. A chart of 1900 is apt to be a little outmoded !!

USA. charts show also many points of interest along the coast, while Canadian charts give some indication of the shore line and a few outstanding points (church steeples, easily recognizable buildings, etc.)

A chart gives you much more information: it indicates what kind of bottom there is under the water by using abbreviations in small letters (See chart p. 28.)

So by arming your lead, and by pulling up a bit of bottom, you can often verify your position. The bottom indication is also useful when you want to decide on a good anchorage.

Aids to Navigation (buoys, lights, beacons and lighthouses and lightships) are also indicated on the chart. They are of prime importance and a section in this book is devoted to this important part of chart work.

Charts have on the four sides the longitude and latitude scales. Remember that one minute (1/60 of one degree) of latitude (found at the right and left sides of the chart) represents exactly one nautical mile (or 1.15 statute - or road miles).

You will find one or more *compass roses* printed on your chart. On a polyconic chart always use the rose close to the area in which you are interested. The compass rose indicates the “true" north and also on an inner scale the magnetic north. The difference between true and magnetic course is called *variation* and this variation is different for various parts of the country. A variation of, say, 7°W means that the magnetic north is 7° west from true north. If the variation is 4° east, the magnetic north is eastwards of the true north. To correct a magnetic course and to translate it into a true course (good chart work is always done by putting on your chart only true courses). First you correct all readings to true, then plot them on your chart, you can use the expression C.E.E.C. (Correct Easterly Errors Clockwise). If your variation is 4° E and your magnetic course is 180°, you correct clockwise, i.e., you add 4° to your magnetic course to get the true course of 184°. if your variation was 4° west, you would, correct counterclockwise and your true course would have been 176°. This correction process is very important, so read the paragraph over once more and try to solve a few problems. Fill in the missing figures:

	Magnetic course	Variation	True Course
1)	160°	5°W	?
2)	90°	?	80°
3)	North	12° E	?
4)	?	7°W	115°
5)	South	3°W	?
6)	?	18°W	352°

Answers: 1) 155° (True), 2) 10° W (variation), 3) 12° (True)
4) 122° (Magnetic), 5) 177° (True), 6) 10° (Magnetic)

It is quite usual that due to iron and steel aboard, the compass of your vessel does not indicate the true magnetic course, and that (for every different heading of the ship) there is a difference called “deviation”. To correct this find the deviation applying to your ship’s compass for that particular heading, correct it (C.E.E.C.) and find your magnetic course. then apply variation for that locality (C.E.E.C.) and you have your true course. Really it sounds very much more complicated than it actually is.

Now that we have discussed charts and courses, what is the practical use of a chart? Briefly, it can do either one of two things for you:

a) it can indicate the course to follow.

b) it can tell you your position.

a) **Where to go (plotting a course)**. *You find first on your chart where you are, then the destination of your trip (or use an intermediary point). Connect the two points with a solid pencilled line (add an arrow to it to indicate the direction you want to travel). It is usual to put under the line your estimated speed (in knots, i.e., nautical miles per hour, or in statute or road miles per hour.) and the time of starting. Now take a pair of parallel rulers and put them along the course line and "walk" your rulers to the nearest compass rose so that the ruler cuts right through the centre of the compass rose. You now read off on the outer scale what (true) direction you want to travel. You translate this (un-correct, that is, do the opposite of correcting) into magnetic course and a ship's compass course, and away you go. You have plotted your course and set your compass direction!*

b) **To find your position:** *There are two basic means: 1) use surrounding landmarks. 2) use bottom (more difficult, less accurate).*

1) With a handbearing compass, sight several landmarks from your position. Correct these bearings into true bearings and plot them on your chart. Where they cross is where you are.

2) In a fog it is possible sometimes to take a sounding (with your leadline) and after a fixed period, another one, and after another fixed period, another one, going in one direction. Then change directions 90° and do the same thing. Change again 90° and repeat, and do the same thing for the last line of a square. Plot these soundings on some transparent paper using the same scale as your chart. Now you move your transparent paper over your chart until you find the same soundings on your chart as on our transparent paper and you have found your position.

Tides

The tide is the daily rising and falling of the sea. The high tide follows closely behind the time of the moon's passage over the Meridian, or, the moon's noon and midnight, if we may borrow a comparison with the sun.

While the moon affects tides the most, the sun also affects them and the highest tides are the spring tides, when the moon and sun are in the same, or opposite quarters of the heavens, or the times of new and full moon.

Neap tides are the lowest tides and occur when the sun and moon pull against each other at right angles, or in the first and third quarters of the moon.

High water is, of course, that state of the tide when the water is highest. Low water is the time between successive high waters when the tide is lowest.

Flood tide is the coming into shore of the water. The tide rises during flood. Ebb tide is the flowing out of the water. The tide lowers during the ebb. The rise of the tide is the amount it rises above the datem plane or mean low water, the point at which all soundings are shown on charts.

The range of the tide is the extreme difference in tidal between the lowest low water and the highest high water. In some places, as in the Bay of Fundy, this is 40 feet.

(xx) *Go on foot, with another Scout, a 24-hour's journey of at least 14 miles outside city, town or built-up area. In the course of the journey, the Scout must cook his own meals, one of which must include meat over a wood fire in the open; find his own campsite and camp for the night. He must carry out the instructions given by his Scoutmaster or Examiner as to things to be observed en route. He must hand in, on his return, a log of the journey, including a sketch-map of his route.* ***A Sea Scout may make his journey partly by water and partly by land***. (In abnormal circumstances or to meet exceptional cases, the District Commissioner may permit modification of the requirements of this section). THIS REQUIREMENT SHOULD BE TAKEN LAST and where possible should be conducted by the District Commissioner or his appointee.

Before being awarded his badge a First Class Scout must demonstrate his ability to repass the requirements for the Second Class Badge.

A First Class Scout wears the badge as shown in Rule 208 (ii)..

Chapter V

The Anchor Badges

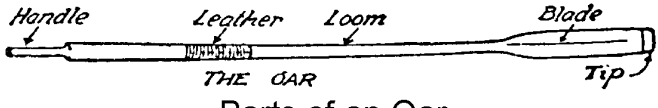
The Red, White and Gold Anchor Badges show that the Scout has developed proficiency afloat as well as ashore. He may work for them while he is taking his Second Class, First Class or Queen's Scout requirements.

THE RED ANCHOR BADGE

(i) *Be a Second Class Scout.*

(ii) *Be able to swim 50 yards wearing socks, shorts and shirt.*

(iii) *Demonstrate his ability to handle a small boat under oars or paddle, the position from which to row or paddle, how to follow a straight course, how to steer, how to pull away from or approach a dock, how to tow and be towed.*



Parts of an Oar

Pulling Boat Routine and Orders

(iv) *Know the commands used in a pulling boat.*

The following routine can be practised indoors, but get afloat as soon as possible. It provides good training for the whole Troop, and in the case of a unit which is preparing for its first season on the water gives confidence to a "green" Crew.

First prepare the boat. Two long benches are used for the sides. Planks, about six or eight inches wide, are laid across from one bench to the other forming thwarts. Three or more chairs are set around in a semicircle across the

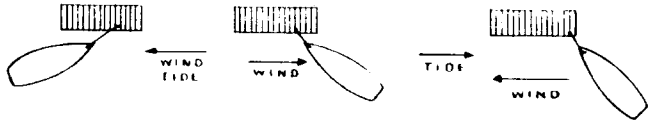
ends of the benches. These become the stern sheets where the Coxswain and leaders sit. Scout staves or long poles are used for oars. Two light ropes are provided for the bow and stern lines. Where benches are not available chairs may be used for thwarts.

The use of oars should be the first step in the practical training of a Sea Scout. The “pulling boat routine” is valuable because it is in the nature of dry-land drill; the Crew becomes accustomed to their places in the boat and to the commands with the appropriate actions necessary.

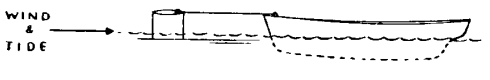
Begin by getting the Crew aboard the boat which is supposed to be tied tip at a landing stage. Tying up consists of passing the mooring lines ashore, a bow line on the end having been tossed over the back of a chair. Once aboard the boat, the Crew take their places on the thwarts, each man seeing after his own oar which is lying on top of the thwarts in the middle of the boat, blade aft. The crutch should be handy for shipping in its proper place. Everything being ready, all the members of the Crew sit erect, facing aft with the arms folded. In the mean time, the bow and stroke, on the inboard side, are holding the boat to the landing by means of their boat hooks (staves may be used on shore). The command for getting the Crew aboard is “Man the boat”. When all the Crew are sitting at attention, the Coxswain takes his place.. If leaders or visitors are to go along the Coxswain invites them into the boat. Embarking, visitors enter the boat first, followed by the Assistants and then the Sea Scoutmaster. On disembarking they leave the boat in this order reversed.

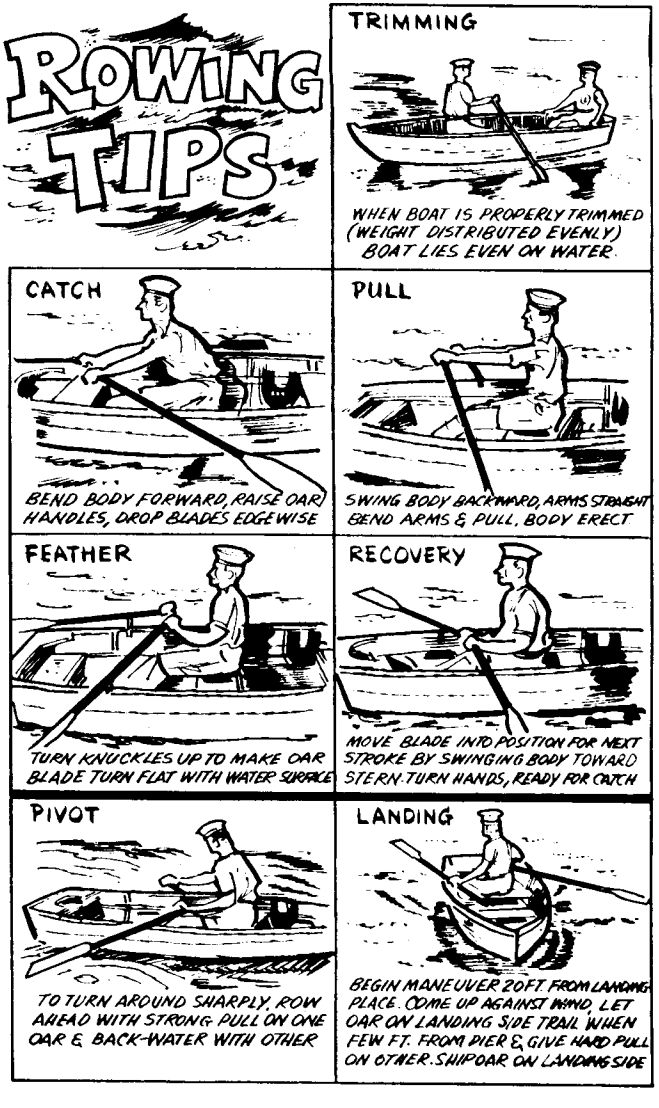
Coming Alongside and Anchoring

When doing one of the above methods of bringing your vessel to rest, the two most important factors to look for are the direction of wind and tide. Always come up against the tide or wind - whichever is the stronger.

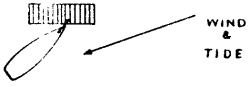


The same conditions apply when tying up to a buoy.




ROWING TIPS
TRIMMING
WHEN BOAT IS PROPERLY TRIMMED (WEIGHT DISTRIBUTED EVENLY) BOAT LIES EVEN ON WATER.
CATCH
BEND BODY FORWARD, RAISE OAR HANDLES, DROP BLADES EDGEWISE
PULL
SWING BODY BACKWARD, ARMS STRAIGHT BEND ARMS & PULL, BODY ERECT
FEATHER
TURN KNUCKLES UP TO MAKE OAR BLADE TURN FLAT WITH WATER SURFACE
RECOVERY
MOVE BLADE INTO POSITION FOR NEXT STROKE BY SWINGING BODY TOWARD STERN. TURN HANDS, READY FOR CATCH
PIVOT
TO TURN AROUND SHARPLY, ROW AHEAD WITH STRONG PULL ON ONE OAR & BACK-WATER WITH OTHER
LANDING
BEGIN MANEUVER 20 FT. FROM LANDING PLACE. COME UP AGAINST WIND, LET OAR ON LANDING SIDE TRAIL WHEN FEW FT. FROM PIER & GIVE HARD PULL ON OTHER. SHIP OAR ON LANDING SIDE

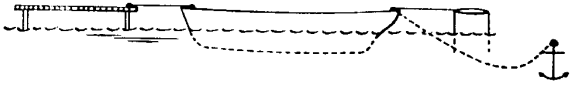
Also; come up from the “LEE” - that is, “the opposite side to which the wind or tide is coming from” - i.e.:



When tied up, keep the rudder turned so that the wind and tide will keep the boat from rubbing or chaffing the dock.

To keep your vessel from swinging around and bumping another wharf, buoy, or boat, put a stern line out to another buoy or wharf, or an anchor.

In rough weather especially, when coming up to a dock or another vessel,



always keep on the LEE side to avoid any damage to yourself or the other boat.

The same rules for docking apply in anchoring, keep to the LEE and come up against the Tide and Wind. Lower your anchor just before you lose way, so that when your anchor has touched bottom you will just be starting to drift with the current. Keep your anchor line snug but do not let the boat drag the anchor. Pay out the line slowly as you drop away keeping the person in charge informed if the anchor is not holding. Pay out enough line so that it will sag in the middle, which allows for an action like a spring and will not lift your anchor from the bottom. If your line does not sag but pulls straight each time; it is wise sometimes to place a weight $^{2}/_{3}$ down the line. Allow about seven times as much rope to run as the maximum depth of the water - taking care that a change of current or wind will not swing you ashore or into other craft and that you have enough water at low tide to prevent you from bumping bottom or becoming stranded.

Towing and Being Towed

Towing and being towed may both be dangerous and one must realize the dangers in order to guard against them. The dangers are chiefly of the towed boat broaching to and capsizing or of running her nose under and filling. It is essential then that the tow rope he able to let go or cut immediately from either end in case of emergency. Knives or axes should he kept handy during these operations.

To Tow:

The tow rope must be made fast at either end with a knot which can be slipped easily in a moment - a round turn with the loop tucked in, highwayman's hitch, or a turn with the end held in hand. It is usually tied a midships so that the vessel can be steered properly. if you are a power vessel take the strain gently so as to avoid breaking the rope or straining something aboard either boat. if more than one vessel is being towed they would be one behind the other - with the larger nearest the towing and the smaller last.

To be Towed:

It is essential to remember that the towing rope must go direct to your bow. To make it fast to the forward thwart or to any other part will make the boat capsize. The painter should not be used. Have the rope ready to cast off should an emergency arise. Keep the weight in the stern and steer in the wake of the towing vessel. When requesting a tow it is usual to stand up in your boat holding up the end of the rope you are prepared to throw. if the other boat takes your hint get well aft in your boat and make ready to steer before he gets under way again.

Boat Commands

Boat orders vary slightly in different areas and with the type of craft used and the size of the crew. It is vital that the boat's crew understand the orders under which it will work before it gets afloat.

The boat is lying alongside the jetty, the oars laid on the thwarts, with blades aft, except for the bow oar or oars, which should be stowed in the middle on the thwarts, with the blade forward.

The crew is detailed to stations by the coxswain on the jetty and on the order "Man the Boat", take their respective seats in the boat. They sit erect, arms folded, chin stays down, eyes in the boat, and do not converse. The bowman and stroke oarsman of the bank of oars that is nearest the jetty remain on the jetty to tend the lines and assist passengers in.

On the order **"Cast off Lines"** the bow and stern lines are taken aboard by the stroke and bowman respectively and they retain the boat's position alongside the jetty by means of the boat hooks.

"Shove Off - Bow and Stern" the stroke and bowman push the boat clear of the jetty stow their boat hooks and take their seats.

"In Fender - Ship Crutches" The Crewmen sitting nearest the fenders flip them inboard and all fit their crutches into the sockets, leaving the opening between the horns at right angles to the gunwales.

"Stand by to Toss Oars" The crew grasp their individual oars firmly and free them so they can be raised together.

"**Toss Oars"** The oars are raised together, taking time from the starboard stroke oar, to a vertical position. The grip of the oar is held in the inboard hand, the wrist of the inboard hand resting on the thigh. The outboard hand grips the oar, back of hand toward the mouth, at mouth level, forearm held horizontally and athwartships. The blades of the oars should all be held, feathered fore and aft, and in line.

"Ship Oars". the oars are lowered into the crutches, taking time from the Starboard stroke. The oars are held, inboard hand on the grip, outboard hand palm down on the loom shoulder width apart, the looms and blades horizontal, the blades feathered parallel with the water and in line. They locate their feet firmly on the stretchers.

"Stand By to Give Way Together" the oarsmen lean forward, change the feathering of their oars to the angle which will draw the blades into the water and give power and control. (This change in pitch is done by flexing the wrists not changing the grip)

"Give Way Together". The oarsmen take three quick short strokes, taking their time from the starboard stroke oarsman, in order to get the boat under way. The fourth and succeeding strokes, are much slower and longer. The power is put into the stroke by the back muscles, not the arms.

In order to give the oarsmen a rest the command is **"Oars"** and is given while the oars are in the water, in mid-stroke. The oarsmen finish that stroke, take one more complete stroke, and stop pulling to rest, with the oars pointing athwartship and feathered, parallel to the water.

When the rest period is over the command to resume rowing is **"Give Way Together"** If the boat is still under way there is no need of the preliminary three quick strokes. If the boat has lost her way entirely this order should be preceded by **"Stand By to Give Way Together"**.

When approaching a jetty the orders are **"Way Enough"**, given when the oars are in the water at mid-stroke. The oarsmen complete this stroke, take one more complete stroke, and feather their oars as at **"Oars"**.

The next order could be **"Stand By to Toss Oars"**. On this the oars are drawn inboard so as to permit them to be lifted from the crutches without lifting the crutches out of their sockets.

"Toss Oars" - The oars are brought to the position previously detailed as **"Toss Oars".**

"Boat Oars" - - the oars are lowered and stowed as detailed in paragraph 1. The crew assume the position as detailed in paragraph 2. **"In Crutches - out Fenders"**.

"Stand By to Come Alongside". The stern and bow oarsman on the side of the boat to which it will be secured. stand by with their boat hooks ready to fend off or hold as required.

A salute is given from a rowing boat by tossing oars and the coxswain faces the person, boat or flagstaff so honoured and salutes.

A boat can be turned very quickly by having the oarsmen on one side **"Hold Water"** or **"Back Water"** while those on the other side continue to pull together in the regular rythm. The orders are **"Hold Starboard"** or **"Hold Port"**. If the boat is not under way the order to reverse its direction would be **"Pull Starboard - Hold Port"** or **"Pull Port - Hold Starboard"** as required.

Some of the other commands used are as follows:

"Hold Water" - The order is given in mid-stroke. That stroke is completed but not a second as in other orders. The oarsmen hold their oars square athwartship with the blades at right angles to the water, then lower the

blades cautiously, into the water taking care not to be thrown off balance by the loom of the oar.

"Back together" or **"Back Port"** or **"Back Starboard"** as required.

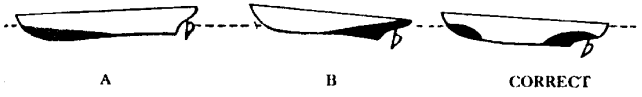
Talking and singing are quite in order, at the discretion of the coxswain. When rowing at the alert, eyes are to be kept the in the boat; no one speaks except the coxswain.

A smart boat's crew is a credit to her landship. This routine can be very smart or disgracefully sloppy. It is a challenge for a Patrol to become really proficient in their boat drill. Each member of the Patrol or crew should be given the opportunity to learn the drill by being coxswain, stroke, or bowman in practice sessions. In this way every member will know exactly what is required of him in whatever position he is needed in the crew.

Stowing Gear

(v) Know bow to stow gear in and keep trim a small pulling boat or canoe.

To get the maximum speed and still be seaworthy in any weather is an intricate job and is a "must" on everything afloat from logs to liners. Boats are divided into two classes - Tender and Stiff. One that is tender can be easily tipped over and does not grip the sea very well. A stiff boat is one that does not tip easily. A vessel that is too stiff is as bad as a tender one. Although vessels can be built tender or stiff, they can readily be changed by displacing weight in the boat. 'When stowing gear, any cargo, or a number of persons in a boat, these conditions should be taken into account as the safety of the boat and its cargo depend on it; therefore a good medium should be found. You should be prepared for any situation you might encounter, and stow your vessel accordingly. Looking at the worst and keeping it in mind will keep you alert for the duration of your voyage.



Many people feel that if a boat does not tip, it will be safe, but the danger of waves hitting it broadside - swamping the vessel or breaking something; the

wind- - if you are sailing snapping the masts, breaking the stays, or tearing the sails is as bad as having a vessel which is too tender and, under the same conditions, tipping it over. Therefore, the vessel should have the weight in it displaced in such a manner that it rolls a little and rides the waves. Weight in a sailing ship should be displaced so that, if a gust of wind hits the sails, the boat will tip and spill the wind, but right itself when the pressure is released.

In the diagram, incorrect weight displacement in “A” and “B” boats will greatly affect the steering. In “A”, it is hard to make the vessel hold a steady course; it veers very fast when turning, is likely to tip if moving fast, and is hard to bring back on course. In “B”, the same conditions are likely, loss of speed from the drag occurs, and the boat is much slower to turn.

Safety Rules

(vi) Know the safety rules for small craft as approved by the Provincial Water Safety Committee.

In olden times ship owners were concerned only for the safety of their vessels and the cargoes they carried. Very little thought was given to the safety of the hard-worked sailor, or the frightened passengers who huddled miserably between decks. A shipwreck or fire at sea in those days was a horrible disaster, with not even a fighting chance for the ship’s people to survive. Nothing like life preservers were carried, no means of signalling were provided; the vessel did not even carry small boats in which an escape could be made; a sick sailor was a dead sailor. In the year 1375 A.D. we find the first crude regulations, made law by Queen Eleanor of Aquitane, wife of Henry the Second, and called “Ye Ancient Laws of Oleron.” These laws gave some measure of protection to life at sea.

Today every nation of the world has its own local laws for sea safety and also subscribes to international laws. Thus, the radio signal S.O.S. means help in any language; certain ship’s lights seen in any part of the world indicate course and intentions, making collisions at sea a rarity.

Our own rules of safety at sea are wisely and carefully written. Even the smallest power boats must carry a life preserver of approved type for every person on board, must have a fire extinguisher, a fog-horn, a whistle, as well as carry a copy of the navigation laws. In some cases, the owner or skipper of the boat must have passed pilot examinations, showing him to be capable of caring for the lives in his charge. Large liners and sea-going freighters must have a

radio, with an operator on duty twenty-four hours each day; a doctor, and approved, easily launched lifeboats always ready and equipped.

Simple Rules of Safety

Let us hope that no Sea Scout ever finds himself in the position of being either the rescuer or the to-be-rescued. If he does, his experience will more than likely be with a smaller type of vessel, a canoe, power boat or sailboat. While these boats should all be equipped with life-saving devices, there are a few rules which, if carefully followed, should make the use of life-saving equipment unnecessary.

Very briefly they are:

1. *Know how to swim.*
2. *Never board a boat unless you can handle her in any situation.*
3. *Never go in for "fooling" or "horse-play" on any boat, large or small.*
4. *Never wear hard-soled shoes on shipboard.*
5. *Watch the weather, tides, other craft.*
6. *Quietly and efficiently obey the orders of the leader or shipmate in command of the boat.*

SAFETY THROUGH SKILL

Sea Scouting insists on safety skill- knowing how to conduct yourself on and around the water. Even if you must take chances in an emergency, such as attempting to rescue a drowning person, the skilful way is the safest way, both for that person and for you. It is your duty as a Sea Scour to know the safety regulations and to follow them; to know the seamanship needed for safety and to acquire these skills.

The handiest equipment you can take aboard any boat is your common sense. It prevents you from becoming a fool who sails on where angels fear to cruise. It tells you how to apply your seamanship. It will do more than anything else to make you reliable.

Obtain a copy of your local council's Water Safety Rules, study them and get to know them. They were designed to make Sea Scouting safe Scouting.

The Sea Scout landship, as well as the actual vessel it uses must be equipped with all time approved and required safety devices. In addition, it should, using the examples on the following pages as a guide, adopt a list of station bills and establish and practise the described drills. The actual mechanics of the drill must be worked out to suit the ship and number of Patrols, physical limitations and purposes. In the well - organized landship, an alarm may be sounded at any time during the meeting and all hands will get to their stations or duties on the double. Afloat, drill should be held often; at least one drill per day. Even on the smallest boat, simple drill can be evolved, best serving the purpose on that particular boat.

Call to stations may be passed as follows:

Drill	**On a Vessel**	**On A Landship**
Fire	Bells, throughout the ship	The ships bell, struck rapidly
Main Overboard	By the cry "Man Overboard."	Same
Abandon Ship	Word passed or piped	Same
Collision	Blast on the siren, whistle or horn	Mouth whistle or foghorn
Lifeboat	Word passed or piped	Same

Station Bills

A station bill is a printed list, posted in a conspicuous place aboard a vessel or on the landship, which tells every man of the ship his station and duty when an alarm sounds. It is the duty of each Scout to do the job he has been assigned. Some of, the more common accidents that may occur either on a landship or on time water are as follows:

Man Overboard

At the cry "Man overboard" life rings are at once thrown over the side by those nearest him. The men off watch but on deck, man the rigging, keeping eyes riveted to the man in the water, ready to report his location by pointing or

arm semaphore, to the boat crew which will go after him. If rescue takes place at night and the life ring is not equipped with an automatic flare, the searchlight is manned and put into play.

Fire

Immediate action is necessary when fire breaks out in a boat. Life rafts are made ready, life jackets are donned, and all fire - fighting equipment is put into operation.

In your Ship's headquarters, you will, of course have a fire extinguisher, or a couple of buckets of water, and a bucket of sand.

Collision

A long blast on the siren. If a hole has been made below the water line then those assigned to it will attempt to make the necessary repairs. All crew members don life jackets.

At collision drill in your Ship's quarters all hands would lie flat until your ship is struck, as the force of the collision sometimes throws people off their feet. It may be necessary to abandon ship.

Abandon Ship

This drill is used when the ship is sinking. Life - jackets are donned, boats, life rafts are lowered, and provisions, valuable papers, logs, etc., are put in the Skipper's boat. Each man has a job to do and when his job is completed he reports to the leader, who gives the order to abandon ship. From the moment the ship is abandoned, each leader is in absolute command of his own boat and upon him alone rests the responsibility for the decisions he makes, and for bringing his crew safely ashore.

Thunderstorms

Very small boats, such as those used on lakes and rivers have special problems of safety. Waves seldom give them much concern but sudden gales, especially thunder squalls, come up very quickly and it is sometimes necessary to ride them out rather than make to safety of land or dock.

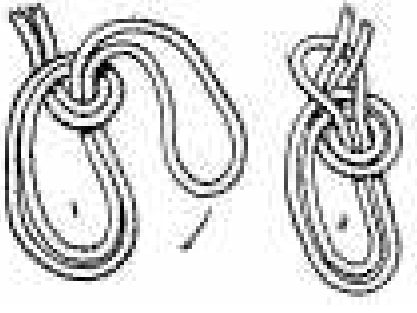
Thunderstorms are usually of short duration and they do not build up any great wave motion so the small boat sailor caught out is more concerned with the wind. It is best not to hang on too long; get ready for the blow, prepare to keep dry and pump or bail and let her blow.

The general subject of safety as applied to Sea Scouting, cannot stop at safety on boats and ships. In swimming, diving, regattas, water meets, at camp, and on landship or afloat, safety must flavour every activity and if necessary, the activity itself give way to safety practise.

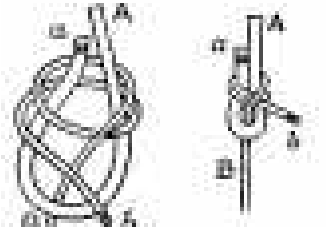
Knots

(vii) Demonstrate his ability to make the following knots: Bowline on a Bight, Double Sheet Bend and explain their uses.

Bowline on a Bight: Like the regular bowline, the Bowline on a Bight forms a loop that will not slip, and is useful for such purposes as slinging a person. Use a long bight of the rope and start by making an ordinary bowline. When you have reached the stage of Fig. 1, open out the bight, and pass the whole knot through it, and pull taut as in Fig. 2.



Double Sheet Bend: Used to tie (bend) two ropes (sheets) together, hence its name. The single sheet bend is used to tie two ropes of equal or unequal thickness. However, when the ropes are wet the double sheet bend should be used. Begin as for single sheet bend. After passing the thinner rope round the back of the loop, take a second turn round the back and under itself, before running it downwards under itself. Pull taut.



A good Sea Scout knows many knots. Develop your knowledge of this

art so that you can tie knots quickly and correctly in any situation or weather.

Help in Accidents

(viii) Know how to get help in case of an accident on or near the water in the area in which he operates.

This requirement requires a Sea Scout to be fully informed of all the sources of aid in case of an accident. He should know the addresses and telephone numbers of the nearest doctors; the nearest first aid posts and coast guard or life guard stations; the nearest boats available; where rescue equipment is kept, and how it is used, and the office of the nearest harbour-master or lockmaster if such exist in his area.

THE WHITE ANCHOR BADGE

When this badge is earned it replaces the Red Anchor Badge. To qualify the candidate must. Pass the following requirements.

(i)Be a First Class Scout.

The Lead Line

(pronounced 'led')

(ii)Know the lead line, its markings and purpose.

In the sea-bed are hills and valleys (shoals and channels), hidden beneath the surface of the sea. Where there is not enough water over the top of a shoal a ship must feel her way round it, keeping to the channel. Hence the need for accurate soundings.

A hand lead-line is used for sounding or finding the depth of the water, up to a depth of 20 fathoms, and at speeds not exceeding 10 knots. The weight or "Lead" consists of a tape red bar of lead, weighing from 10 to 14 pounds to which is bent a 25 fathom length of hemp lead - line. The base of the lead is hollowed out to receive tallow, and the head is shaped into an eye through

which is rove a leather becket. Packing tallow in the base of a lead is called "arming" it, and its purpose is to pick up a sample of the sea bed for examination if required.

The lead - line has a long eye splice at one end and a back splice at the other. it is bent to the lead by reeving the eye splice through the hide becket and passing the lead through the eye, thus forming a cow hitch between the eve and the becket.

The markings of a hand lead - line are as follows:

2 fathoms	two strips of leather
3 fathoms	three strips of leather
5 fathoms	a piece of white canvas
7 fathoms	a piece of red bunting
10 fathoms	a piece of leather with a hole in it
13 fathoms	a piece of blue serge
15 fathoms	a piece of white canvas
17 fathoms	a piece of red bunting
20 fathoms	two knots.

The three different materials, serge, canvas and bunting, are used so that they can be distinguished in the dark by the feel of their texture, either with the fingers or the lips.

Before fitting a new lead-line it should be stretched while wet and measured and marked while still wet, as it will lengthen when dry and so he inaccurate while in use. The markings are measured from the end of the eye splice, thus giving a sounding "the benefit of the lead".

The fathom soundings which are marked are called "marks"; the intervening fathoms which are not marked, that is 4, 6, 8, 11, etc. are called "deeps".

In shallow water and possibly for inland Sea Scout Troops a "boats' lead and line" is most practical. The weight or "lead" weighs three to seven pounds, and the line consists of 14 fathoms of ¼ in. dia. hemp.

The first three fathoms of the line are marked respectively with 1, 2 and 3 strips of leather, and each of these fathoms is marked in feet by 1, 2, , 4 and 5 knots. Thereafter, up to 13 fathoms, the line is marked in the same manner as a ships' lead - line.

Taking soundings, or casts of the lead, is done when the vessel has headway on, the leadsman casting the lead forward and getting the depth as the vessel passes over the lead, resting on the bottom. A method of procedure is as follows: First the lead is armed by the pressing into a small depression at the base of the lead tallow, wax, paraffin or putty. It is to this that particles of the bottom adhere and are examined by the leadsman.

The leadsman grasps the lead about two fathoms from the end, and swings it back and forth parallel with the side of the ship. The lead is sent overhead for two full turns and released at the bottom of its swing forward at a tangent, and almost parallel to the surface of the water. The motion of the swinging lead is opposite the motion of the ship. Swinging a right hand throw from the starboard side, the left hand of the leadsman holds the coil of the line freely forward, so it can run out without hindrance and without kinks. As the line flows out and the lead reaches bottom he grasps the running line with the right hand and pulls it rapidly plunging it up and down to feel for bottom. Feeling bottom he plumbs the line up and down as the ship passes by the lead. He bends over, feels whether the bottom is hard, soft or sticky and at the same the notes the mark above the water. If a mark is directly at the water he calls out that mark as “By the mark 5.”, If slightly under water, “Mark under water, 5!”.

This gives you the general idea. The leadsman sings out the marks and deeps. Sounding should be called out sharp and clear.

Buoyage and Navigation Lights

(iii) In areas where they exist know the system of buoyage and navigation lights in his home waters.

In order to find the way near the coast, the pilot will use extensively all sorts of aids to navigation. Anywhere there are natural aids to navigation: landmarks, islands, cliffs, trees, etc. Close to cities, one often finds structural aids to navigation: tall buildings, towers, blast furnaces, church spires, etc. All form points easily recognizable and can serve to determine your course. Finally, the Department of Transport has set up and maintains a whole set of governmental aids to navigation which can be grouped into two categories:

a) fixed aids: Lighthouses, etc., on firm ground and, therefore, not subject to drifting or disappearance.

b) floating aids: Buoys, etc.

The Department of Transport has crews charged with the maintenance of these aids, but it should be recognized by any pilot that he alone is responsible and the fact that a buoy has floated away, or a light is not lit, or a beacon has blown over, does not excuse him for making a mistake. Therefore, where possible, check one aid with another one, and if in doubt, rely more on the fixed aids than on the floating ones (especially early in the season when the winter ice can play havoc with the floating aids to navigation).

A) **Fixed Aids - Lighthouses** are marked within a red tear drop on the charts. They mark harbour entrances, channels, isolated dangers of prominent locations. If the lighthouse has a radio beacon connected with it, a red circle is inscribed around the “tear drop”. All lighted buoys and lighthouses are described in a yearly publication of the Department of Transport called “Light and Fog Signals”. (Four such books - Newfoundland. Atlantic Coast, Great Lakes and West Coast.) These are very useful publication and a good pilot should have the latest issue for his area -

Lighthouses are generally described on the chart by:

a) its light characteristics.
b) its height in feet above mean low water level at the date of making the chart.
c) its visibility in miles for anyone being 15 ft. above the water line.
d) if it has a foghorn (called diaphone) an indication of the frequency of sounding the horn. The horn is only used in fog.
e) Sometimes the letter (U) which means that the lighthouse is unattended (automatically operated).

The light characteristics of lighthouses (and the same apply to all lighted buoys) gives in abbreviated form the following information:

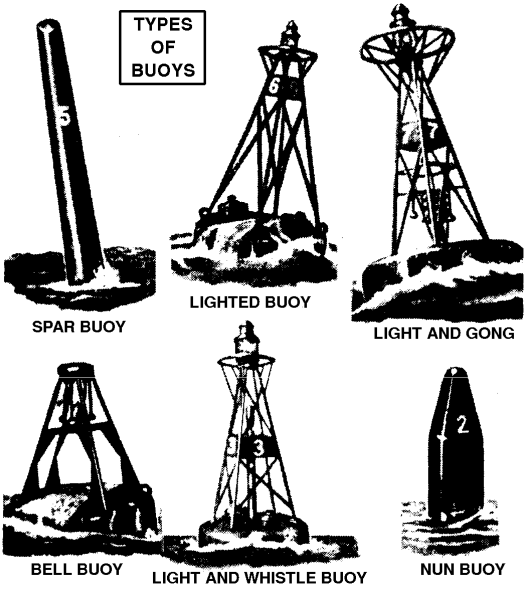
1) colour - - in capital letters (if no indication is given, the light is white)-- **W** or nothing for white; **G** for green; **R** for red. No other colour lights are used.
2) Its own “calling sign” - how often it goes on and off.

Character of Lights

Lights which do not change colour.	Characteristic phases	Lights which show colours in various combinations.
F Fixed	A continuous steady light	Alt Alternating
Fl - Flashing	Showing a single flash at regular intervals, the duration of light being always less than that of darkness	Alt Fl - Alternating flashing.
Gp. Fl - - Group flashing	Showing at regular intervals groups of flashes.	Alt Gp.Fl - Alternating group flashing.
Qk. Fl Quick flashing	Shows not less than 60 short flashes per minute.	
Occ. Occulting	A steady light totally eclipsed at intervals the period of light being equal to or greater than the period of darkness	Alt Occ. Alternating Occulting
Gp 0cc -- - Group Occulting	A steady light totally eclipsed by a group of 2 or more eclipses	

A light described on the chart as: Fl. W 15 sec. 75 ft. 16 m. Diaphone ev. 30 sec. is therefore: A White light, coming on shortly once every 15 seconds, 75 feet high, visible at 16 miles distance, with a foghorn sounding (in fog only) once every 30 seconds.

The list of Lights and Fog Signals will, in addition, tell you what the lighthouse looks like, when it was built, what colour it is painted, etc.



There are also a number of *Lightships* anchored at strategic positions, which are identical to lighthouses in all respects, except that they are anchored always at the same position, rather then being built on dry land.

3) Other fixed aids are beacons (symbol: Bn) indicating the general direction in which to go. Buoys are not always easily visible and in order to guide the pilot, the government puts up generally white (W) beacons. W Bn -- to indicate in what direction to go.

Sometimes two beacons are placed in line, one above the other to indicate a line of approach, and the chart symbol is then "W Bns."

B) **Floating Aids – Spar buoys:** Spars (either red or black) anchored in an upright position: Red spar - buoys are pointed, black ones are flat . Symbols are B or R. Under the Canadian System of Buoyage, the Red buoys

are on the right (starboard) side going into a channel or up a river. Sometimes it is rather difficult to know if one goes in or "out" of a channel, so it always is better to verify on the chart and see to which side of the buoy you should go).

Lighted Buoys - R (Red) Note that they differ from lighthouses by having a triangle or rectangle under the red tear drop.

B (Black) Red tear drop, Black square.

These buoys perform the same functions and are placed similarly as spar buoys. The lighted buoys generally carry flashing lights.

Sometimes buoys are numbered and odd numbers are always given to black buoys and even number to red ones.

On the odd occasion one sees striped buoys:

Horizontal striped black and red buoys (B.R.H.S.) indicate a junction or obstruction in the channel. If starboard side is the preferred one, the top stripe is black. if lighted, this kind of buoy is generally quick flashing. Vertical striped buoy's (B.W.V.S. is a black and white vertical striped buoy) indicate the middle of a channel and should he passed close by on either side. Some buoys have a gong, whistle or bell added to them, or a radar reflector (Ra - Red) and these words are then printed in full below the buoy symbol.

Channels and Land marks

(iv) Know the locations of the main channels and the chief landmarks in the area in which he operates.

The main channels are, of course, marked by buoys described in the previous test. The Sea Scout should be able to describe to the examiner these channels, and should be able to identify landmarks ashore, such as churches, radio towers, hills, etc., which will aid him inn approaching the channels as he comes toward land.

Minor Repairs

(v) Be able to make minor repairs to his Patrol or Troop craft and its gear.

Everything perishes with time but the life of all things can be prolonged by proper preservation and care.

Boats, ships, their gear and equipment, need constant care. Vessels used by Sea Scouts get considerably more wear and tear than vessels privately owned, and therefore, need more attention to keep them safe and seaworthy.

Let us start within the boats first. The annual spring overhauling is the time to make any repairs that are necessary. No matter how small the repair it should be done before the boat is put in the water. Paint and its allied products are the best preservatives to use on wood, if applied correctly. Before painting, be sure that your preparations are thorough. If the old paint is hair-cracked or chipped it means the surface oils have dried out of the paint and the paint has lost its power of preservation. Before applying fresh paint, thoroughly sand down all parts to be painted, flake out all joints to be assured that you have removed any loose caulking or seam filler. Always pay particular attention to corners which the sun and air cannot get at.

If dry rot is discovered it must be immediately cut out as it will spread and destroy a whole ship if not completely eradicated.

When all scraping, sanding and repairs are done the hull should be washed down with turpentine or a like product to remove flaked paint, dust or grease. When this is finished apply the priming coats. Many dealers sell specialized paint for marine work but keep in mind that the first coat should contain plenty of good lead and linseed oil so that this may soak in below the surface, making the pores of the wood impervious to water. It is always good practice to lightly sand down between coats. It gives them a better base. The last coat should be high gloss good quality hard finish paint. When painting your craft the decks should be left until last; you will walk on them and mar the work if you do them sooner.

Masts, gaffs, booms and all spars in the rigging of a ship should not be painted as paint will hide the defects which, if not caught in the, may become dangerous.

When working on these, scrape down to the wood then make a thorough inspection to make sure there are no splits, cracks, or rot - never take a chance on these. If there is any doubt in your mind about them standing more than the strain to which they are going to be placed, repair or remove immediately. A breakage under sail is very dangerous and may be disastrous. When the scraping is completed and you are ready to go ahead, use a good oil wood filler first. Rub this down when dry and apply one or more coats of good spar varnish.

Next comes the balance of your standing rigging. Shrouds and stays should be thoroughly checked, particularly at the splices or buckled joints. After this has been done make sure that all loose ends of wire are well whipped then give them a good coat of spar varnish.

Now for the running rigging. All blocks and halyards should be checked. Make sure the spindle in your blocks is sound and secure. Halyard line should be twisted open so that the centre core may be checked for brittleness. It is better to change a weak halyard line than take a chance with an old one.

Sails should be thoroughly checked and all minor repairs made. The care of sails is quite important. Never stow sails when they are wet.

Small pulling boats should be treated like the larger ones, treat the oars or sweeps as you would masts, gaffs and booms.

Canoes - Check all nails, rivets and screws. If any of them have worked loose take them out, put in new ones, setting the replacements in a good heavy coat of spar varnish. If your canoes are of natural colour treat like the hulls, as previously outlined.

Kayaks - Inspect the canvas carefully, particularly the joints and where it passes over the ribs or frame. Remove all worn or doubtful portions; sand down lightly and give a good coat of special canvas paint.

All equipment and gear on any vessel, whether it is a small pulling boat or a large sailing vessel, must be cleaned regularly. The use of proper preservatives on the equipment will greatly increase its usefulness and its life span.

Maintenance of Craft

(vi) Have done his share of the overhaul and maintenance of his Patrol or Troop craft.

It is not enough to know what needs to be done and how it is done. Every Sea Scout is a member of two teams, the Patrol and the Troop, and your Scoutmaster will qualify you for this requirement only when you have made your personal contribution to the overhaul and maintenance of Patrol and Troop craft.

Building a Boat

Sea Scouts can learn a great deal about boats by constructing their own craft.

There is far more to building a boat than simple, hammering, sawing and painting, and Sea Scouts will find it essential to follow professional plans, or the detailed instructions which come with a knockdown parts kit. The advice of expert builders and designers should be sought before and during the building of the boat. The importance of **following the plans, in every detail**, must be emphasized because the lightest error in construction might mean faulty, and even dangerous, performance of the ship.

When the Scouts have had the experience of building a boat, using professional plans, they may want to try designing their own, with the help of a competent boat - designer and boat-builder, who should be asked to act as advisers during the building of the boat.

A few of the best books on the subject are:
Building a Small Boat, by Clifford Bradley (Macmillan).
Amateur Boat Building, by William S. Crosby (Rudder Publishing Co.).
Boats Anyone Can Build, Popular Science Publishing Co.
.*Small Boat Building*, by Edwin Monk (Charles Scribner's).

Follow a Chart

(vii) Be able to follow a chart of the area in which he operates.

In First Class *Requirement (xix)* you have learned what a navigation chart is and the meaning of the various symbols used. - This is not a duplication of that requirement, but a practical application of it. The only real way to complete this requirement is to go out with your examiner and to follow a chart in your area to his satisfaction. The First Class *Requirement (xix)* is theory. This requirement is practice based on that theory.

Types of Craft

(viii) Describe three types of craft.

There are many types of boats or ships which can be used in Sea Scouting, from the kayak to the yawl or schooner. The size and type of boat depends upon locality, the ages of the Scouts, the size and, of course, the financial resources of the Troop.

Suggested types of boats are listed below, together with the uses to which they may he put.

Boats	Used for
Kayak, small pulling boat, canoe, small sailing craft, such as sailing dinghy, sharpie, etc.	One to four boys.
Patrol Boat or larger pulling boat, cutter, sloop, ketch, etc.	Crew or Patrol boats carrying from four to seven boys.
Large sailing craft, yawl or schooner, etc.	Rover Sea Scouts only, but Sea Scouts may sail in them on the invitation of the Rover Crew

A few of the simpler rigs are primarily sail arrangements intended for boats that cannot be seriously rated as efficient sailing craft. ‘While there are many variations, the standing lug, balancing lug, spritsail and lateen rigs are hardly more than makeshift arrangements that can be set up on rowboats or canoes so they can make some progress, usually when the wind happens to be blowing in the direction to be sailed. A possible exception to this is the lateen or lug rigs on canoes. Some canoes really sail with lateen rigs and even balanced lugs will give reasonable results.

The basic single-masted rigs are the cat and the sloop. The cat rig always has but one sail and this is set abaft the mast. No true catboat has a sail forward of the mast. The sloop and its sisters, the knockabout and the cutter - has two or more sails, some hoisted abaft the mast and others located forward of the mast.

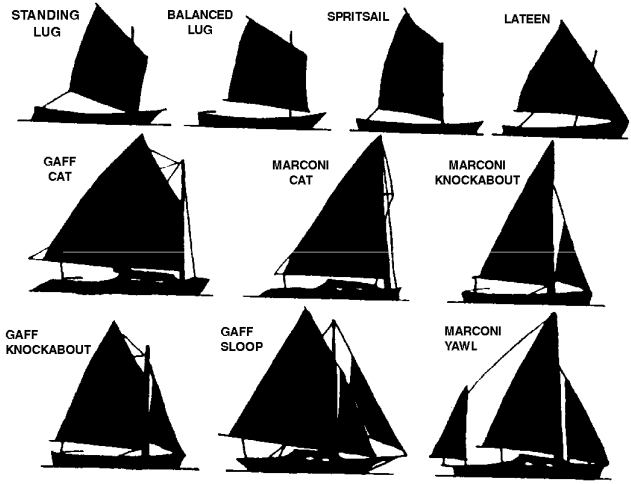
It is necessary to set up definitions to show the differences between the true sloop, the knockabout and the cutter. In each type, there are borderline cases where they may overlap. We will describe the characteristics of the types, leaving it to a matter of opinion when the differences are so slight that even experts disagree.

The most popular type of rig is the knockabout. The mast is stepped somewhat forward of amidships. Under normal canvas, there is a mainsail hoisted abaft the mast and a single triangular jib rigged forward. The forestay is attached to the deck close to the stem. There is thus no rigging or canvas that extends forward of the bow (except certain light racing sails that may blow far enough forward to have portions of their areas ahead of the boat). The mainsail may be gaff-headed or jib-headed (Marconi).

In the sloop, the mast is located in almost the same position as it would be in a knockabout. The mainsail arrangement is the same but the jib - there are often two or more jibs - extends forward of the bow because there is a bowsprit attached to the deck to allow rigging to be carried well forward of the hull. Summed up, the knockabout has its forward sail entirely within the hull length while the sloop has its head sail carried ahead of the hull on a bowsprit.

The cutter is called a sloop by some European yatchsman. It looks like a sloop because it has a bowsprit. Closer examination shows that the mast is stepped further aft. Some cutters have their masts amidships. The mainsail is similar to the sloop, being either Marconi or gaff-headed, but the large expanse of area forward of the mast is filled with not less than two, and often three, headsails. On cutters with gaff - headed mainsails, topsails can be carried.

The yawl has all the appearance of either the sloop or the knockabout - usually the former - with the exception that way aft there is a second mast (the mizzenmast or jigger) carrying a sail of relatively small area. This mast is set abaft the rudder post, just about as far aft as it can be placed. It should be stressed that the main and mizzen sails on a yawl or on a ketch may be either Marconi or gaff-headed or a combination of both.



Types of Sailing Craft

The ketch, like the yawl, has two masts, main and mizzen, but the after one is set well forward of the rudder post, is larger than the jigger of a yawl, and carries a sail of considerable area.

The schooner - a rig fast disappearing - has been called a “ketch in reverse”. That is, the two masts are arranged so that the mainmast, carrying the largest sail, is stepped slightly abaft amidships, while the foremast is smaller and with less sail.

A couple of “trick” rigs are the cat-yawl and the cat ketch. A cat-yawl is a two masted boat with the characteristics of a yawl except that the mainmast is stepped further forward and there are never any headsails. A cat-ketch is similar except for the proportioning and positions of the masts. Most two masted canoe rigs can properly be rated as cat-ketches.

Outboard boating is growing rapidly in Canada as a wholesome outdoor sport, and is an area which is packed with natural interests for boys. In outboard boating a boy can find an outlet for many practical desires - operation of a motor, care and minor repairs of motors, fishing and camping in out of the way

places and a host of other activities closely related to boating and water. It should be remembered that Sea Scout craft are primarily for training purposes, and should not be acquired with the idea of making them pleasure craft for a series of cruises.

Policy, Organization and Rules provides carefully thought out rules in respect to Sea Scout craft and their operation. Local Water Safety Committees also issue regulations of a local character. These must be obeyed at all times.. No craft may be acquired or constructed without obtaining the approval of the Water Safety Committee.

These rules and regulations are made by men with long experience with boats, and are not intended to curtail Sea Scout activities but to ensure that every safety precaution is taken for the protection of Sea Scouts themselves.

Parts and Uses of Anchors

(ix) Know the parts and uses of three types of anchors.

Many designs of anchors are available for boat use. The principal types are illustrated and all have features in their favour, but it should be emphasized that no anchor is effective to the extent it can be lowered and forgotten. The purpose of an anchor is to attach the boat or ship to the land beneath her. There are three elements entering into the art of anchoring. These are:

1. Proper ground tackle.

2. Selection of anchorage within good holding ground, maximum natural shelter, sufficient depth of water, and enough swinging room.

3. Seamanlike use of ground tackle.

There are six types of anchors that will most likely be used for Sea Scouting:

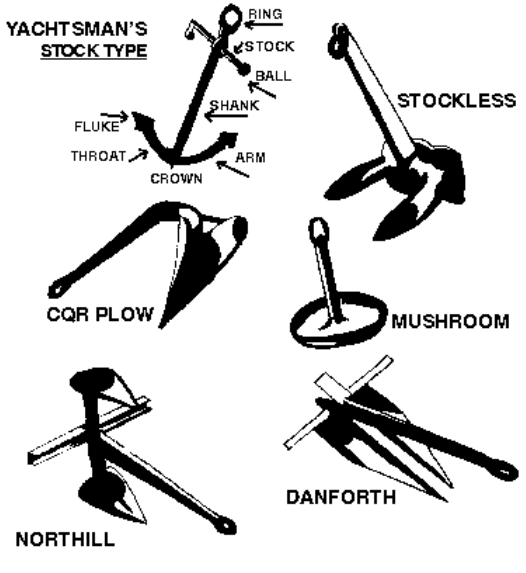
1.Yachtsman’s Stock type. 2. Navy Stockless. 3. C.Q.R. Plough. 4. Mushroom. 5. Danforth. 6. Northill.

The Yachtsman's Stock type is a forging with either a metal or wooden stock. The shank is the main stem of the anchor and that is the most important part. The arms branch off from the bottom of the shank and form the holding element. They are slightly curved and branch upwards. Where the arms join the shank is the crown. The arms are tipped by flukes or palms.

The stock of the anchor is at right angles to the upper part of the shank and is also a right angles to the plane of the arm. Just above the stock on the upper part of the shank is the anchor shackle or ring to which the anchor cable is attached.

The Stockless Anchor

This anchor is so called because, unlike the Yachtsman's Stock type it has no stock. It is widely used and is an easier anchor to handle. It is essentially a two part anchor with a shank and arms, and the arms are pivoted to swing on either side of the shank. The palms may he tripped to point the flukes downward when the anchor drags on the bottom.



The C.Q.R. Plough

This anchor consists of a shank and a single blade from which this anchor gets its name. (Shaped in the form of a plough

The Mushroom Anchor

This is the popularly accepted anchor for permanent mooring. In mud it not only buries itself deeply, so that the weight of the mud in the bell adds to its holding qualities but it actually sets up a suction condition, making it extremely hard to break out. For a home port mooring. unless the bottom is boulders or thick weed the Mushroom is recommended. For a small boat or sailboat it is ideal.

The Danforth Anchor is a variation of the Stockless with broad, sharply pointed flukes. A form of stock protrudes from the base of the anchor around which the flukes can rotate.

The Northill Anchor has a retractable angle iron piece which when in use locks into position at right angles to the arms. When the anchor is aboard this is unlocked and swung into position alongside the shank.

(x) Have a working knowledge of the International Code of Signals.

(xi) Demonstrate ability to repass requirements for the Red Anchor Badge.

THE GOLD ANCHOR BADGE

When earned, the Gold Anchor Badge replaces the White Anchor Badge, and to qualify for it the Scout must:

(i) Be a Queen's Scout.

(ii) Hold the Rescuer Badge.

(iii) Hold two of the following Proficiency Badges: Coast Watchman, Pilot, Signaller, Rigger.

(iv) Hold two of the following Proficiency Badges: Boatman, Weatherman, Starman.

Requirements for all the above Proficiency Badges may be found in *The Boy Scout Proficiency Badge Reference Book* available from your local Scout office.

(v) Demonstrate his ability to repass the White and Red Anchor Badges.

(vi) Hold a Charge Certificate.

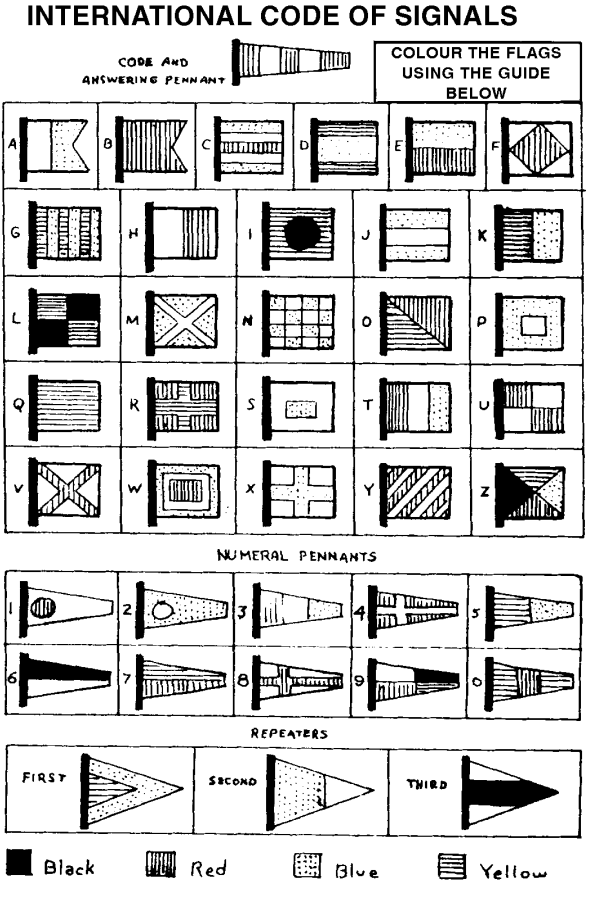
Boatman

Coast Watchman

Rigger

The International Code Flags prescribed for flag signalling consist of 26 letter flags, 10 numeral pennants, 3 substitutes or repeaters and a code and answering pennant.

Every Sea Scout Troop should have a set of these flags and make themselves efficient in the use of them.



For full information on how to use the International Code of Signals, see *Brown's Signalling* (See Appendix I.).

Chapter VI

Ceremonies and Traditions

Sea lore brings to Sea Scouts many customs and ceremonies. These are not only colourful but they also carry the message of respect for the great achievements of the seamen of the past.

The purpose of these ceremonies and traditions is to point out the values of respect for others rights, for others' duties, for teamwork. Respect also covers the connection between authority and responsibility - the Sea Scouts responsibility - the Sea Scouts respect for authority, and the leader's respect for his responsibility to the Troop.

Saluting the Quarterdeck

At troop meetings and on formal occasions, whenever either a Sea Scout or a Scouter comes aboard a Sea Scout Land Ship, he salutes the Quarterdeck, thereby carrying out a custom of the sea that began centuries ago. At the very beginning on man's adventure, he realized the many dangers which confronted him. Before venturing out he offered up prayers to his God asking for protection on his perilous voyage.

In the early days of Christianity, it was the custom to place upon the mainmast of large vessels a statue of the Virgin Mary or the patron saint of the ship, or perhaps a Crucifix. Every seaman upon coming aboard a ship either took off his hat or made the sign of the cross as a form of salute.

It was not until many centuries later that the large ships carried the flag of their countries. In the fourteenth and fifteenth centuries, national flags were flown on the ships of the maritime nations. With this custom a universal rule became effective requiring every man coming aboard to salute the flag. However, no rule was established which forbade these seamen from doffing their hats and making their customary sign or form of salute to the statue of a saint (usually the seaman's patron saint - Saint Nicholas) before they turned to salute the flag.

Sea history tells us that before the Renaissance many of the great ships, particularly those from Spain and England, erected small chapels on the after part of the ship and men, passing by the chapel saluted.

Today all naval officers and men are required to face aft and salute in the direction of the quarterdeck upon coming aboard the vessel. In some cases where the vessel is large enough and there is a definite quarterdeck outlined, a second salute is given upon coming onto the Quarterdeck. The officer of the Deck and all officers on the Quarterdeck return all salutes.

The use of Flags on the Ship

A flag is a piece of bunting, similar material or nylon, one of several recognized shapes or colours, which is flown from a staff or cord for use as a standard, ensign or signal.

Sea Scouts are principally concerned with the use of flags as ensigns or signals. A knowledge of the correct usage in respect to flags is an essential of good seamanship, since flags are used more extensively at sea than on land.

The average boy coming into a Sea Scout Troop knows little about flags other than the Union Flag. The Troop is a good place for him to commence learning something about ensigns and signals and the correct use of them. The Union Flag is the only flag which may properly be flown from a masthead or flagstaff ashore. The Canada Shipping Act prohibits its use afloat on merchant vessels and yachts. However, since some Sea Scout troops use their headquarters as the deck of a ship in harbour, we may make use of the nautical etiquette of flags and wear an ensign as our proper national colours.

Colours are the Ensign, the Burgee, the private signal and the Pilot Jack. The Canadian Red Ensign is the proper national colour for all Canadian merchant ships, yachts and Sea Scout Troops (excepting certain Yacht Clubs). The Burgee, triangular or swallow-tailed in shape is the distinguishing flag of a Yacht Club, and is worn by members of it. The private signal, usually swallow - tail, but sometimes rectangular or triangular, is the distinguishing flag of the owner of a yacht, or, in the case of Sea Scouts, of the troop concerned. The Pilot Jack is the Union Jack with a white border one - fifth its width.

Flags are made of wool bunting or nylon. It is correct to call all flags "bunting". In conversation and when giving orders remember the following: ---A flag is worn not flown. A flag is "made" not "hoisted". A flag is "struck" not "hauled down". Bunting is made flying free and not broken out as in the case of the Union Flag ashore. When making colours they are to go up smartly, when striking they come down slowly. In Sea Scouting, colours are made at the first parade of the day and usually struck at sunset. Of course, in the Troop the meetings usually take place in the evening and in theory colours should not be made. As a compromise between theory and necessity, we make our colours at the commencement of the meeting and strike them at the close.

When at anchor the Ensign is worn at the ensign staff at the stern, or taffrail; the Burgee at the main masthead; the private signal, at the main starboard spreader.

Note: Do not wear any two flags used as colours on the same halyard.

Code signals are hoisted at any time when there is enough light for them to be recognized and at any point where they can be best seen. Signal halyards are usually rove through blocks attached to the yardarms or spreaders.

"Dressing ship" is an ornamental display of flags flown in addition to the regular colours, when the ship is at anchor. Signal code flags are the only flags which should be used for this purpose.

Side Boys

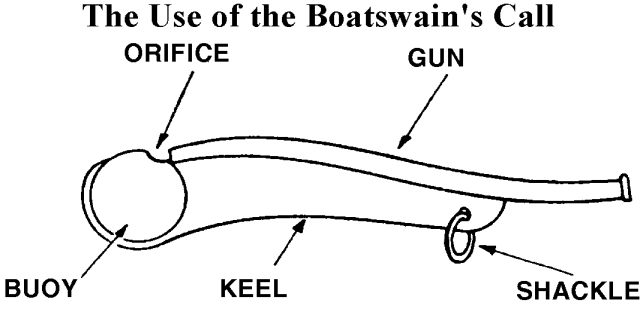
"Side Boys" is the term applied to a detail of Sea Scouts, in charge of the Troop Leader, which falls in at the gangway as a Guard of Honour- to receive distinguished visitors.

The tradition of having side boys in the ceremonial originated in the custom of posting a guard or side-party to keep unwelcome visitors from coming on board a ship. In the Navy today, a side-party is told off to keep the sides of the ship clean; to prevent boats being tied up alongside, and for ceremonial purposes to form a guard of honour for important visitors.

Piping the Side

This is the survival of an old custom of European navies. Centuries ago, when ships were under the command of court favourites rather than practical seamen, these worthies considered themselves too good to walk on board the ship. Accordingly they were hoisted aboard in a chair. The motions of the chair were controlled by the bos'n's pipe with the calls "Hoist away", "Lower away" and "Secure". In the Side Boys of today and the Bos'n and his pipe we see what is left of the custom.

The call is piped twice. The first pipe is given as the visitor arrives, and the second as he "comes aboard."

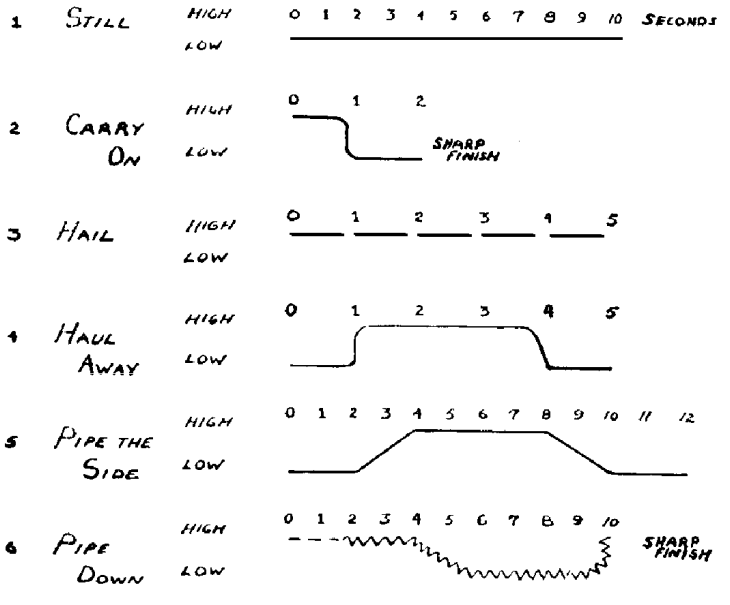


Parts of the Boatswain Call
(pronounced bo's'n)

As far as English ships are concerned, the Bos'n's Call can be traced back to the days of the Crusades 1248 A.D. Probably owing to the fact that it has always been used as a method of passing orders, it was in former days also an honoured badge of rank. In English ships and fleets as far back as 1485 A.D. it is known that it was the badge of rank of the Lord High Admiral of England, who was at that date John De Vere, Earl of Oxford. It also can be traced as having been worn in action and used by Sir Edward Howard, son of the Earl of Surrey, who as Lord High Admiral was killed in action with the Chevalier Pregent de Biodoux off Brest in 1513.

It was in memory of this event that a Whistle of Honour was presented by the Queen Mother of France to the officer who commanded the French galleys on this occasion. There are also other instances to be found of the whistle having been used as a badge of rank up to the year 1562, when it was still worn by the Lord high Admiral of England. From this time onward it reverted to its original use, and was employed as a method of passing orders. About 1671 we find it referred to as a "Call", and it is by this name that it has become known.

The expression "To Pipe" really refers to the act of singing out the order required, in conjunction with the use of the "Call", but nowadays the entire procedure is generally known as "Piping". The Parts of the "Call" are named as shown in the sketch.



PIPING CHART

A “Call” can be tuned by scraping away and enlarging the wind edge of the orifice in the “Buoy” until the “Call” will sound if the mouth of the “Gun” is held directly to a moderate wind.

Now let’s have a look at the diagram of the “Call”. The call held between the index finger and thumb. The thumb should be on or near the shackle. The side of the buoy rests against the palm of the hand, and the fingers close over the gun and buoy to control the air coming out of the buoy. There are two main notes, the “high” and “low” and there are two tones which we are going to concern ourselves with. These are marked on the chart as a straight line for the plain and a wavy line for the trill.

The plain low note is obtained by blowing steadily into the mouth of the gun with the hole of the buoy unobstructed by the fingers. The plain high note is made by closing the fingers around the buoy, but take care not to touch the edge of the hole or the end of the gun. The trill (wavy line on chart) is produced by vibrating the tongue while blowing the call, as in rolling the letter ‘R’.

Chapter VII

The Sea Scout Troop

"Sea Scouts. Having in my own boyhood been brought up by my brothers with a good deal of sea-going work on board various small yachts we owned from time to time, I realized the extraordinary value of this training."

B.-P.

Troop Headquarters

The meeting place of a Sea Scout Troop may be known as a Landship. Just how you will equip your landship will depend on size of the room in which you meet, the storage space and the funds available.

As nearly as possible it should be arranged to represent the deck of a vessel. What kind of a vessel will depend on what the Court of Honour decides. They may choose the replica of the deck of a steamship, naval vessel, sailing vessel, frigate or other ship.

It is not advisable to have too elaborate a set-up which would eat too deeply into Troop funds for the initial installation and for maintenance, nor which would involve a great deal of time for the duty Patrol to set up each meeting.

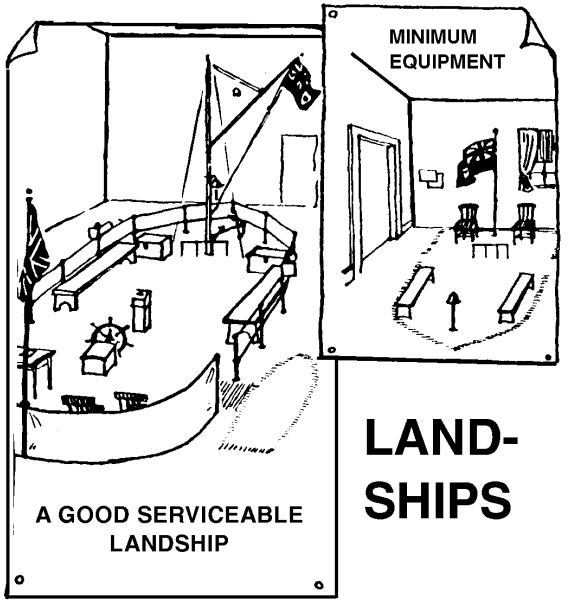
The sketches will give you some ideas for laying out your "deck". The plainest of landships is simply an outline of a ships deck marked on the floor with chalk. within the confines or boundaries of this deck the Troop activities take place.

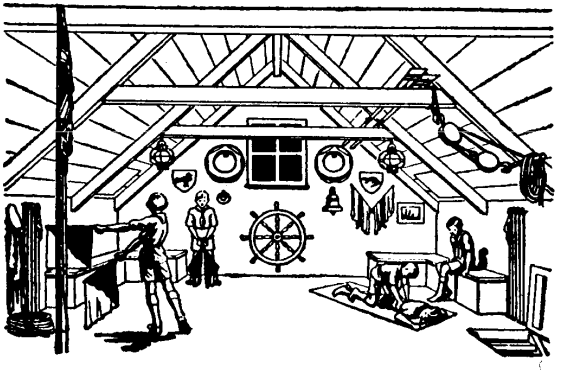
Equipment

To carry out adequately the Sea Scout programme your landship will need to be equipped with the following minimum equipment:

A ship's deck outline.
A mast with yard arm and gaff.
A Union Flag (Jack), a Red Ensign.
A Ship's bell, Port and Starboard gangways.

Seating arrangements for Patrols and Scouters.





Ship's Log.
A copy of this Manual for each Scout.
A quarterdeck railing, a Compass, Rope.
A copy of Tenderfoot to Queen's Scout for each Scout.

The mast, gangways, seating and railing can be of the simplest design.

In older established troops to the items listed above may be added:

Stanchions and rails or ropes.	Ship's Wheel.
Bow or Jackstaff.	Ship's Compass.
One or more masts.	Deck fittings.
Ship's Riding Lights.	The Bridge.
Flag Locker.	Small Boat forms.

Sea Chests, stocked with rope, tools, canvas, etc.

The value of this gear is in the creation of "seagoing" atmosphere. They also assist in acclimatizing Scouts for shipboard customs, directions, etc., and lend colour to Sea Scout ceremonies and displays. However, a good Sea Scout Troop can be operated with a minimum of gear and its absence should prove no bar to an imaginative and keen group of Sea Scouts.

We stress this latter - the use of the imagination as being of much greater importance than a lot of fancy fittings. B.-P.'s adventures as a boy were not glamourized play evenings in halls or headquarters but practical activities and fun wherever he happened to be and with whatever was available.

THE SEA SCOUT PATROL

The Patrol is the unit that makes Scouting go.

A patrol is a team, with all fellows playing the game of Scouting, all of them working toward the same goal - - "All for one, one for all."

Each Sea Scout Patrol has a name of its own. if you join an old Patrol that name will have a lot of history and plenty of tradition behind it.

The Patrol does not stand alone. It is part of a Troop. And just as certainly as the Patrol belongs to the fellows in it, the Troop belongs to the three or four Patrols that make it up. Every Scout is proud of his Troop. He wears a neckerchief with the troops colours. On his right sleeve he carries the number of his Troop.

He does his best so that the Troop, in turn, will be proud of him.

The way in which Patrols and Scouts help their Troop -and themselves at the same time - is by getting behind the troop Scouters and backing them up in their work to make the Troop a real Sea Scout Troop.

Outside of Troop activities, the Sea Scout Patrol does plenty of things on its own. It always has a lot of interesting plans under way, whether Patrol Meeting, hikes, camps, good turns, stunts, making tents, fixing up Patrol Den.

Patrol Meetings are held once a week, in the homes of the boys, or in the Patrol Den in the Troop's meeting room. Some Patrols meet more often. It is at the Patrol meetings that the fellows help each other to advance in Scoutcraft. It is here that all the projects they want to do are planned. It is here that friendships grow.

Patrol activities fall generally into six categories: (1) training for activities on which the troop will be working; (2) training for personal advancement; (3) group interest activities, e.g., woodwork, gadgets, making personal or Patrol equipment; (4) straight-fun, quizzes, Kim's games, non - athletic games; (5) athletic games - hockey, swimming, baseball, football, etc.; (6) good turns.

Within reason, it matters not so much what a Patrol does so long as they do it together and some balance is maintained between the six categories.

The Patrol plans ahead. They know definitely what they are going to do for the next two or three months, and have a general idea of what they expect to accomplish after that. Members should not spend all the time planning and dreaming about the Patrols "Great Future". Decide on the things that are immediately ahead - swing into action.

Every Patrol should have a Patrol Box or Sea Chest. The Sea Chest has to stand up to pretty rough handling. At the same time it should be possible for two Scouts to carry it. Let's take a look at some of the things which may go into the chest - it will help you to decide the best how to make use of the interior.

Signalling - flags, buzzer sets, cards, etc.

Mapping - charts, protractors, rules, dividers, compasses. First Aid - bandages, splints, etc., for practice.

First Aid Kit - - (for real use only).

Sundries - Paper, pencils, thumb tacks, elastic bands, glue, chalk, crayons.

Games - tennis or softball, etc.

Rope work - knotting ropes (one per Scout), each at least six feet long, lashings, twine, laid rope for splices, etc.

Cleaning - clothes brush, shoe brush and polish, mirror, container including needles, thread, buttons, pins, etc.

Books - record books, books on Proficiency Badges, “Scouting for Boys”, “Tenderfoot to Queen’s Scout”, “Sea Scout Manual”.

Your Sea Chest should be painted in your Patrol colours and might bear the Patrol emblem.

Be proud of your Patrol and your Troop. Assist your Patrol Leader to make your Patrol one of the best in the Troop.

Chapter VIII

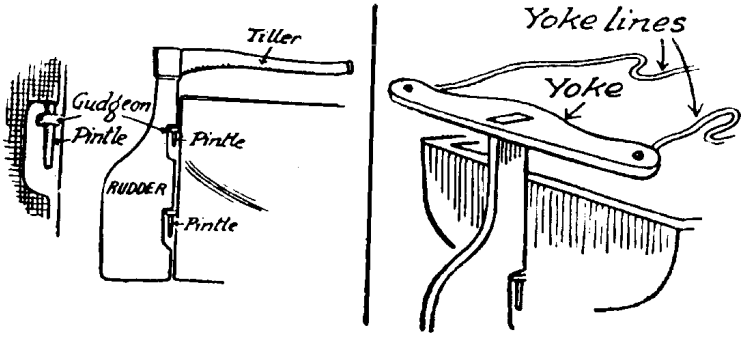
The Boat

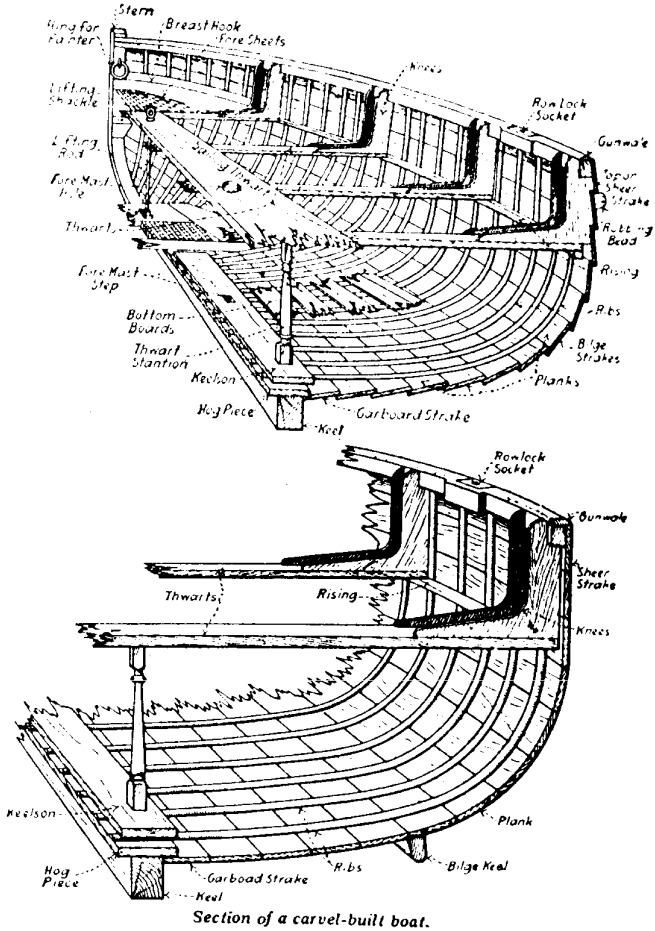
Many boats are built of wood and consist of the framing, namely the keel, the stem, the stern post. This forms the backbone and ends of the boat. Branching out from the keel are the ribs. These are at right angles to the keel and give shape to the hull.

The Parts of a Boat and Ship Fittings

Apron: A piece of elm fitted on the inside of the stem, shaped to take the run of the planks and to which the ends of the planks are secured.
Bilge: The round of the ship's bottom near the keel.
Bottom Boards: Pieces of wood fastened together and laid over the bottom of a boat as flooring.
Bow: The fore end of the boat.
Cleats: Pieces of wood or metal secured to the sides of the boat for belaying sheets and halyards to.
Companion Ladder: Steps from above to the cabin.
Counter: The overhanging portion of the stern.
Crutches: In single banked boats the weight and thrust of the oars is taken in metal "crutches", which are shipped in socket plates fitted inside the gunwale.
Deadwood: A piece of oak worked into the fore and aft end of the hog, strengthening the junctions of the stem and stern posts with the keel, and to which the lower planks are fastened.
Fairleads: These are provided at the ship's side to protect howser from chafe and all fittings to which ropes are secured are suitably rounded for the same reason.
Galley : the ship's kitchen.
Garboard Strake: The first range or strake of planks laid upon a boat's bottom next to the keel throughout the whole length of the boat. The edge of this plank is let into a groove in the side of the keel which is called the rabbet of the keel.
Gudgeons: Eyes which are driven into the stern post and into which the pintles of the rudder are shipped, attaching the rudder to the boat. The lower pintle is usually one inch longer than the upper one.

Gunwale: A square piece of wood running round the inside of the boat at the top.
Hog Piece: A piece of elm worked on and secured to the inside of the keel front fore deadwood to after deadwood and to which the garboard strake is fastened, as well as the floors and timbers.
Keel: The lowest part of the boat; it forms the backbone on which the boat is built.
Keelson : A piece of wood at the middle line of the boat running along the top of the hog and above the floor; it extends for about two - thirds of the length of the boat, to which the mast steps are secured, and into which the thwart pillars are stepped.
Knees: Pieces of wood shaped as required and used for securing the thwarts to the sides of the boat.
Mast Step: A piece of wood secured to the keelson into which a square or oblong hole is cut into which the heel of the mast is fitted.
Mast Clamp: A metal fitting attached to the thwart for securing the mast.
Oarlocks: Metal oar fittings, secured to the oar shipped in metal sockets for rowing.
Painter: A piece of rope spliced into a ring, secured to the apron and stem of the boat; used for making the boat fast.
Pintles: Vertical pins on which the rudder ships and turns.
Risings or Stringers: Pieces of wood worked fore and aft the boat to take the ends of the thwarts.





Section of a carvel-built boat.

The clinker construction (top) has planks overlapping with no caulking. A carvel-built boat (bottom) is smooth outside, the seams where the planking butts being caulked.

Row locks: Spaces cut into the boat's washstrake to work the oars in.
Rudder: Either of wood or metal, hung on the stern post (by pintles and gudgeons), by means of which the boat is steered. It is fitted with a lanyard for securing to the boat.
Running Hook: A hook fitted into the bow of the boat to which the tack of the foresail is shifted when running.
Scupper: An opening to allow water to run off the deck.
Shutters: Pieces of wood which fit into the rowlock spaces. They are shipped whenever the oars are not being used except when the boat is hoisted as a sea boat. They are fitted with lanyards. Though shutters is the correct designation for these fittings they are sometimes referred to as Poppets.
Spar: Any mast or boom.
Stern Post: Is the after continuation of the keel, scarfed into the same, on which is hung the rudder by means of pintles and gudgeons.
Stern: The after end of the boat.
Stern Sheets: Is the platform extending from the after thwart to the athwartship stern bench.
Stretchers: Pieces of wood laid athwart the bottom boards and fitting into sockets against which the oarsmen place their feet.
Tack Hook: A metal hook on the stem for hooking the tack of the foresail to.
Taffrail: The rail round the ship's stern.
Thole Pins: Pins, often wooden, shipped in the gunwale of a boat instead of a rowlock, to work the oars with.
Thwarts: Benches fitted across the boat on which the oarsmen sit.
Tiller: A long piece of wood or metal fitting into the rudder head for working it.
Transom: A board fitted to the after side of the stern post to which the after ends of the side planking are fastened.
Yard: A spar across a mast. (The yard-arm is the end of a yard.)
Yoke: A crosshead or wood or metal shipping on the rudder head, to which the yoke lines are attached for working the rudder.

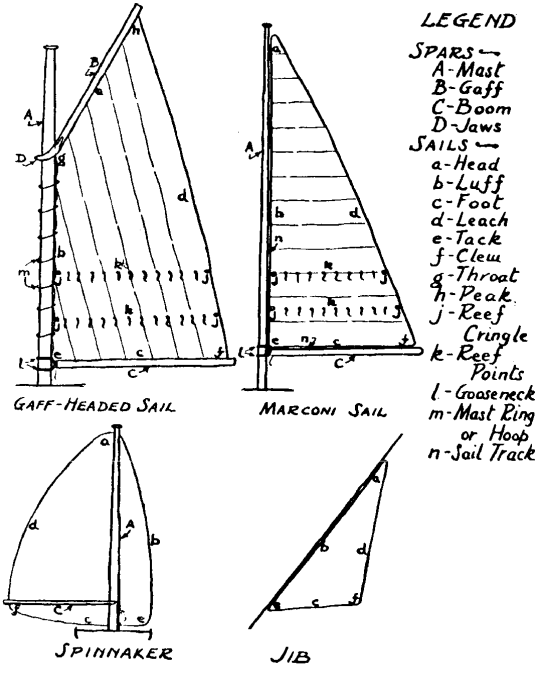
Sails

Rigging of Sailing Craft

Types - - these are broadly divided into two classes: "Square-rigged" and "fore and aft". Square sails are bent to yards and are dropped or hoisted; fore and aft sails are bent to gaffs and booms and have their leading edge attached to a mast, always on the centre line of the hull.

Fore and Aft Types

The simplest of all rigs is a pole-masted boat, with a single sail, commonly called a catboat. With the mast placed further aft and headsails or a jib added it becomes a sloop and with slight other variations a cutter. Two-masted vessels of the fore and aft types fall into the classes of ketch, yawl and schooner, though a schooner may have as many as six masts.



The parts of a sail are:

Head: The upper edge,

Leach: The after edge.

Luff: The foremost edge, **Foot:** The lower edge.
Peak: The upper after corner, **Clew:** The lower after corner.
Cringles : Grommets of various sizes worked into the corners of the sails and at each end of the reef.
Eyelet Holes: Worked into the head of the sail and through the sail for stopping up reefs.

Rigging

Running Rigging: Includes all ropes, wires, etc., employed aloft which work through blocks, or which are used to shift the position of spars and other gear. Flexible steel wire rope is used wherever a wire rope is to bend easily around the sheave of a block, etc. Flexible wire ropes contain more hemp and less wire than rigging wire, and, in consequence, are less strong, size for size.

Standing Rigging: Always stand permanently in place to support the masts and spars of a ship. The strongest steel wire rope is employed, of a type which does not bend easily. Each length of rigging wire is fitted to the exact length required with an eye splice in each end, holding a thimble, or iron ring grooved on the outside to take the wire. The object of the thimble is to prevent the wire from bending round too sharply and to protect the wire eye from chafe. These eyes can then be connected wherever required by shackles. Remember: "Where there's a shackle there's a thimble." A shackle is an iron "U" formed into a "D" by means of a bolt or pin which screws in place through the ends or lugs of the "U".

The wire ropes supporting a mast are called *stays*. The strongest stays supporting the mast athwartships are called *shrouds*, while those supporting it in the fore and after direction are called *fore stays* and *back stays*. These stays are shackled to the deck at the ship's side and are set up taut by rigging crews.

Chapter IX

Cruising for Sea Scouts.

Cruising, to most boys, brings visions of graceful yachts with billowing white canvas, polished brass work gleaming in the sunlight and a uniformed crew doing the work. To others it conjures up a picture of a small boat, manned by two or three boating enthusiasts exploring the sea coasts or river banks; creeping into little bays to camp for the night.

Think of those early Canadian navigators and explorers - LaSale, Frontenac, Champlain, MacKenzie and many others - who opened up this vast country, mapped and explored it. They ventured forth into the vast unknown in small open boats and canoes; they camped ashore each night; they made maps and kept logs.

Every Sea Scout, where possible should make part of his First Class Journey by water (and Rover Sea Scouts obtain the Rambler's Badge by boating or canoe trips).

Cruising should be an objective of every Sea Scout Troop. Cruising covers such a wide range from power driven or sailing boats with cabin and sleeping accommodation, to the tiny canoe or small open pulling boat with no sleeping accommodation aboard.

Both the large cruising type of vessel and the cabin type of sailing boat are out of the question for most Sea Scout Troops.

Of course there are many different views about cruising. Some like to cruise only and not camp, while others never seem to manage a cruise but do camp every year. The ideal target would seem to be the achievement of a combination of both camping and cruising, or the Cruise-Camp during the course of which the Sea Scouts travel by boat during the day and camp ashore each night. They may even stay in camp two or three days to explore the surrounding countryside and perhaps visit historic spots; then back to the boats and on to another objective.

This type of Cruise-Camp presents ideal opportunities for mapping or exploring expeditions, the making and use of gadgets, the practising of pioneering, and for campfires. And, incidentally, after a hard day's run in the boats, followed by pitching camp and preparing the evening meal, a well planned short camp-fire peps up all hands. And what an opportunity, beside the river or lake to revive the old sea songs and chanties, and to talk of things dear to the hearts of Sea Scouts.

This type of cruising does not call for a large outlay for boats or equipment. It may be done in kayaks or small open pulling boats. Neither does it call for elaborate camping gear. Small shelter tents take up little space aboard - or shelters can be improvised from brushwood or from the boats and sails and old tarpaulins.

This kind of cruising is hardly suitable for coastal Troops, where of necessity sea-going craft must be used. but as the majority of Sea Scout Troops in Canada are inland Troops this form of cruising is dealt with in this manual.

One of Canada's better Sea Scout Troops has gone in for this type of cruising for a number of years, using small open flat-bottomed pulling boats ranging in size from 12 to 25 feet in length. This Troop found it gave ample play to the use of the Patrol System.

The method of operation is to divide the cruise into four stages.

The Planning Stage: This starts, usually in January when the Court of Honour studies charts, log books of previous cruises, determines upon the destination of the cruise and sets the dates. Important too, in this stage, is to figure the approximate cost to each boy, so that he will have ample time to raise the necessary money.

The Preparatory Stage: In this stage, letters are sent out to parents giving full particulars of the proposed cruise, destination, course and cost; a camp

bank is opened and Scouts are encouraged to save regularly; boats and gear are checked and overhauled; week-end camps and evening boating practices are arranged to give new hands practical experience and old hands a refresher course. Arrangements are made through the Commissioner to notify all other persons concerned in the cruise, and to obtain the Commissioner's permission to hold it.

Patrols are allotted to the various boats; Patrol and individual gear is checked and each boy allowed a predetermined weight of gear to carry with him. Instruction is given in carrying and distributing gear.

The Cruise itself: This would seem to be the final stage, but there is one more when the cruise is over - stage four which will be dealt with after this Section is complete.

The Cruise itself is run by the Court of Honour, which meets briefly each evening with the Cruising Troop-in-Council, and with the Skipper having the final decision.

Cruise Opportunities: The possibilities for such a cruise are numerous - small river towns are visited; local history is absorbed; Scouting, if the cruise is well disciplined, gains many new friends; the Scouts learn by practical experience good camping and boating techniques (and one day of practical experience is worth many months of theoretical learning).

Without losing sight of the traditional titles used in Scouting a judicious use of Sea terms and customs adds the reality and romance so dear to the hearts of boys. The striking of bells in camp as in ship's time; the use of watches, on deck and below, for duties; the use of such terms as "Boatswain" for the Scout in charge of ropes, tents and kindred gear; "Coxswains" for the boys in charge of the boats; "Purser" for the one who keeps the log, the accounts and purchases supplies; "Quartermaster" for the boys who act as navigators for each boat and who plot and chart each day's run.

Incidentally, this particular Troop has found that, while the cruise is run by' the boys, it is well to have, in addition to the cruise master, one adult assistant leader for each eight boys. These may be drawn from the Sea Scouters of the Group, Rover Sea Scouters or Group Committeemen.

Experience indicates that the ideal length for a camp-cruise is from ten to fourteen days. However, if it proves impossible to get afloat for this length of

time, a six-day, four-day, or even a week-end camp-cruise can be just as useful and successful. It will be found that boys learn an extraordinary amount of practical seamanship and camping in this time.

Each boat crew (Patrol) is divided into two watches, the watch on deck, and the watch below, with each taking it in turn to cook, clean boats, select Patrol campsites, etc.

To speed settling in, when the Troop camps ashore at night, the cooks from each Patrol cook over a central fire. On a short cruise each Patrol (boat crew) handles its own cooking with provisions being Purchased centrally in bulk at various towns and farms along the course of the cruise.

It is not practicable in small, open boats to carry large supplies of fresh food, but each boat carries a reserve supply of canned goods in case of storm or other reason preventing the boats from reaching the proposed port of call on schedule.

If the cruise includes one or more Sundays, provisions should be made for the boys to carry out the religious duties of their own denominations. It is not difficult in river cruising to arrange that the troop be at a port close to a church on Sundays. if, however, this proves impossible, a Scouts' Own should be arranged.

And the mention of the religious duties of Scouts brings to mind the necessity for starting and ending each day with prayers.

The cruise will present endless opportunities for brushing up on various forms of instructional or badge work. For instance, one Patrol may do rope work (splicing, whipping, etc.) necessary on the cruise, and thus see its practical uses. Another Patrol may handle signalling, and if more than one boat is on the cruise excellent opportunity is presented for ship-to-ship signalling and for the use of the international Code Signals. *Brown's Signalling,* available from the Stores Dept. or your local Distributor will be found an invaluable aid in this work. It illustrates the Code flags in actual colours.

It is a good idea to make each member of the cruise directly responsible for some item of gear, or for some specific duty in addition to whatever he is required to do as a member of his Patrol or watch.

Here must be stressed a most important factor. The success of the cruise, the safety, comfort and well being of all members depends on good discipline being maintained and of all hands pulling together for the good of the whole.

The Sea Scout who is not prepared to submit to the discipline of the cruise should not burden the cruise with his company.

At the end of the cruise the home port should be reached early in the afternoon, as there is always plenty to do before formal dismissal. Boats have to be thoroughly cleaned, gear has to be checked and landed, boats and gear stowed away or trucked back to the base. This is where the Patrol Leaders can shine, and see that the spirit of the Patrol is maintained until every last bit of cruise business is completed.

The Skipper will make a final inspection before prayers and flag-down to bring the cruise to its official close.

The Sea Scout cruise is a wonderful training ground for leadership, and it is on the cruise that the Scout will show his true qualities, his ability to control his temper under adverse conditions; his alertness to meet any emergency; his ability to keep his head when the going is rough. Of such qualities are real leaders made.

It is worth reiterating that no cruise, even a single-day cruise, can be successful unless carefully planned. The responsibility for planning lies with the Court of Honour and Sea Scouters, but once the plans are made, it is the duty of every Sea Scout to carry out the tasks assigned him to the best of his ability.

If All Cannot Go. If it should prove impossible for all the members of the Troop to take part in a cruise, part of the Troop could do the first stage by boat, while the rest of the Troop head for the destination by bicycle, bus or train. Then for the return journey the procedure might be reversed.

Rules for the Cruise. All Sea Scout cruises in Canada are operated under the boating rules laid down in Policy Organization and Rules and by the local rules drawn up by the Water Safety Committee in your district. No cruise is permitted unless the leader in charge has been issued with a Charge Certificate and a Boat Certificate, no matter how experienced the Scouter, Rover Sea Scout or Sea Scout may be.. No cruises longer than 24 hours may he undertaken until permission has been obtained from the District Commissioner or the Water Safety Committee.

These rules and regulations are set up, not to make it more difficult to operate a cruise, but to ensure that every possible safety precaution has been taken.

No matter what rules are drawn up, however, still the most important safety factor is good discipline on the part of every Sea Scout. Sea Scouting has no place for the boy or leader who cannot promptly forget self and obey orders. A well disciplined boat crew seldom runs into trouble.

In addition to the safety factor, a well disciplined Troop is a wonderful advertisement for Scouting. The sloppy, badly trained, ill disciplined boat crew, with its badly kept boat, its members noisy and objectionable, not only brings Scouting as a whole into disrepute, but especially the Sea Scout section of the Movement.

Summing Up

Boats should be carefully checked and gear inspected. It is a wise precaution to carry extra oars. It is amazing how oars seem to break when far away from a source of replacement. Extra oars can also be used as tent poles.

Camping gear should be carefully checked. Small tents are more easily transported. Improvised shelters may be made if you do not wish to carry tents, but every Scout should know how to build such a shelter before starting on the cruise.

Permission to camp should be obtained at any stopping place and care should be taken to observe all “No Trespassing” or “No Fishing” signs.

Fresh water sometimes presents a problem. Always take purifying tablets with you. Halazone tablets are recommended. If purchased in 1,000 lots they are very reasonable in cost, If such a purifying agency is not immediately available, boil all water before drinking.

The gear each Scout may carry must be carefully planned so that boats will not be overloaded.

Important to remember is that your nightly camps during the cruise must conform to the health rules laid down by the Department of Health in the Province in which you live.

It is not practical to specify the type of boat to use. A boat suitable on a canal or small river might be quite unsuitable at sea or on the Great Lakes.

Shallow river work calls for flat-bottomed boats. For sailing on lakes or open waters centreboards or keels are called for. Consult your local boatmen and be guided by their advice.

Excellent charts are available of Canadian navigable waters. Remember that the Rules of the Road, as given elsewhere in this manual were invented for the safe passage of all who travel on the water. Learn them before you sail. Make sure you know which craft has the right of way. The fact that some other boatsman does not obey the rules does not release you from your obligations to obey them.

Last Word. Is cruising dangerous? The answer to that is that all things, even crossing a street, may be dangerous. Your duty is to take all precautions. Do not overload your boats. Train yourself to handle your boats. Obey orders promptly. Never stand up or fool around in a boat. Above all always keep your head. The number of serious accidents in Sea Scouting through the world has been very small because Sea Scouts are alert and use common sense.

Sea Scouting is fun and cruising is fun. it is adventure and romance. Let us continue to make it so.

Troop First Aid Boxes should include these supplies:

24 tongue depressors.
24 swab sticks.
1 eyeglass.
6 Vivo tubes.
1 1 oz. absorbent sterile gauze.
2 1 oz. absorbent cotton.
12 sterile Jisco pads.
12 sterile Telfa pads 3” x 4”.
12 sterile Telfa pads 2” x 3”.
3 2” gauze bandages.
2 triangular bandages
2 rolls ½” adhesive tape.
1 roll 3” Elastoplast.
1 pkt. 100 Band Aids (waterproof)
1 pc. 12” x 12½” plastic sheeting.
1 bottle body rub
1 bottle calamine lotion.
1 tube Poison Ivy Ointment
1 scissors.
1 pointed tweezers.
1 pkt. needles.
1 thermometer.
1 kidney basin.
1 card safety pins.
1 bottle green soap.
1 small bottle oil of cloves.
1 jar Noxema cream.
1 bottle Kaopectate.
1 small bottle castor oil.
100 Halazone tablets.
14oz. Boracic Acid powder.
1 tin Golden Eye ointment.
50 A.S.A. or Aspirin tablets 5 grains.
50 Cascara Sagrada tablets, 5 grains.

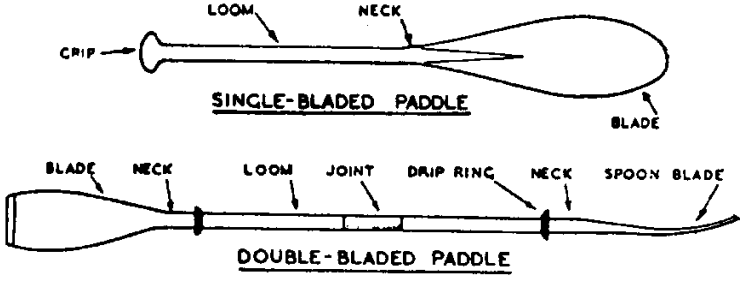
1 pkt. baking soda.

Chapter X

Canoeing

Most of us are now accustomed to modern methods of transportation - streamlined trains, high-powered automobiles and stratosphere planes. This article deals with a means of transportation which has been in use for hundreds of years - the canoe. In early times our lakes and rivers were our highways, and the canoe was the fastest, lightest means of travel.

Today, the canoe is used primarily for pleasure trips and relaxation, and while, to the experienced canoeman, it is a safe and dependable means of transport, to many people it is an untrustworthy and dangerous craft.

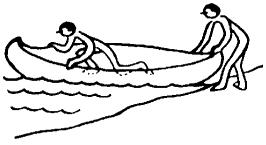


The next few pages outline basic procedures for handling a canoe skilfully and safely - useful for those who have the opportunity to learn by doing, with an experienced canoeman, or for those who must start learning by themselves.

HANDLING A CANOE

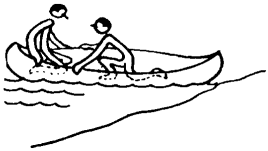
Launching

The canoe is lifted, never dragged; and is put in water end first and then floated out. Stern end is usually put in the water first.



Getting into Canoe from Shore

Bow is held steady by the bowman, so that canoe does not grind on the shore. The sternman gets in and moves to position, feet in the centre, weight low, hands on gunwales.



When sternman is in position bowman then gets in and moves toward the centre of the canoe until it floats. He then turns and takes up his paddling position - kneeling.

Entering from Dock or Landing

Keep weight over the dock, place other foot in centre of canoe, then transfer weight gradually to canoe. Keep low with hands on gunwales.

Paddling Positions

The recommended paddling position is kneeling. With tail-end braced against a seat or thwart. Knees are well apart to give added stability. Remember, *this is the recommended position*.

Single Paddling

Paddle from the bow thwart position if the wind is not strong with the stern of the canoe leading. if the wind is strong, and it is rough, paddle from the centre position, so that there is no high point for the wind to strike and blow around.

Double Paddling

With wind. Both paddlers kneel in regular paddling positions one to the bow and one to the stern. (See solid figures above).

Against wind or across wind. Bowman moves back nearer the centre a foot or so, and the sternman moves forward to the centre likewise. (See dotted figures above).

PADDLING STROKES

Hand Positions

The hands should be well apart, with the one nearest the water just about 3-6 inches above the blade. This gives more leverage than if the hands are close together and allows the arms to remain much straighter.

Always keep your knuckles up and do not develop too much arm movement in your strokes. Let the arms be almost straight and make your body do the work.

Blisters

A word here about blisters. Do not grip your handle too tightly. Spitting on the hands or wetting the hands only serves to promote blisters. If blisters develop remember the correct first aid procedure. Do not break blisters. If they do break wash with soap, and keep them covered until proper medical treatment can be applied.

Strokes

"J" Stroke. Rear face of the paddle turns to the top with pressure to the outside thereby keeping the canoe on course. Paddle is turned gradually throughout the stroke.

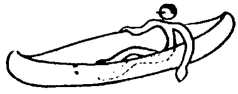
Sweep Stroke. This stroke may be done either forward or back. Paddle is kept near the surface and swung wide to enable the paddler to make a sharp turn. 90^{o} angle is recommended.

Diagonal Draw Stroke. Paddle is put in the water, well outside the canoe and well forward. As the paddle is pulled back it is also pulled towards the canoe and therefore the canoe continues its forward motion, but moves sideways towards the paddle also.

Pull-over Stroke. Paddle is put flat in the water away from the canoe and by drawing straight toward the canoe, the canoe is pulled to the side.

Push-away Stroke. This stroke is the exact reverse of the Pull-over and in either case the recovery of the paddle can be through the water or over it.

Sculling Stroke. Paddle is kept in the water and with a backward and forward movement, keeping the blade at an angle of 45^{o}, with pressure on the inside face of the blade, canoe can be moved towards the paddle and with pressure on the outside face of the blade, canoe can be moved away from the paddle.



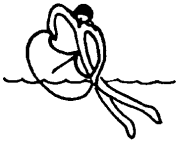
Loss of Paddle

In the event you have the misfortune to lose your paddle, sit on the bottom and holding the gunwale with one hand, reach out and paddle with the other hand going with the wind and the tide towards the nearest shore.

To Change Positions - Go in to Shore

Getting Out of Canoe Into Water

Hands on the gunwales, and with a rear vault, kick the feet over the side. Keep control of the canoe. Do not jump out of the canoe if the wind is blowing briskly as you may not be able to overtake the canoe. Jump out on the lee side.



Getting Into Canoe from Water

Hands on the gunwales. With a strong leg kick, boost yourself up, and, keeping the weight on the far arm with the elbow high and outside balance weight on near gunwale. Then slide your tail end in over the gunwale to a sitting position in the bottom of the canoe.

Support When Capsized

Never leave the canoe or small craft. It is your support. A canoe or row-boat is made of wood and cannot sink.

On one end of craft when the canoe is upside down.

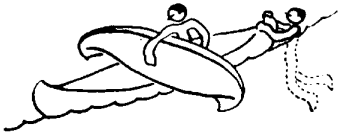
If there are two, the canoe is sometimes used as support by holding on across the canoe. One person holds the wrists of the other until tired and then the other holds on. Do not clasp hands. Both may tire at the same time.

A better way to use the craft as support is to turn it upright although level full of water. Putting hands on centre bottom (not on the gunwales) swim over the side, and sit on the bottom. Brace legs under seats or thwarts and paddle with hands to the shore.

Shaking Out Canoe

A canoe level full may be one-half emptied by getting it moving forward and then pressing down and forward on one end. (Then steadying canoe from the side, if you have something with which to bail you may empty the canoe). However, the skill known as shaking out is done by one-half emptying the canoe then moving to the centre of the side and with a lifting and pressing motion you start a wave moving backward and forward in the canoe. As the wave runs toward you, try to push the near gunwale under the wave, thus spilling some of the water out. (Caution: Do not press gunwale below surface of the water as you will only take in additional water).

Timing is much more important than strength. Breathe in as you lift and breathe out as the water splashes in your face.



Righting a Capsized Canoe Over a Second Upright Craft

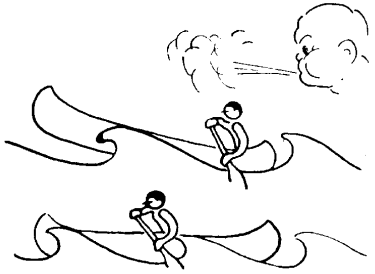
Put paddles and gear in upright craft. Swim to end of upright canoe to steady it. Capsized canoe is lifted slowly (right side up) by one end to drain about one-half and then is turned over the gunwale of the upright craft. In this position it will completely drain, then turn over and slide back into the water.

Quartering

Quartering is the method of paddling in a heavy swell or large waves, the bow of the canoe, instead of meeting the waves head on, meets them at an angle of 45^{o}. Meeting the waves broadside merely invites an upset. Quartering

cuts down on the pounding the canoe takes if going into the waves head on. The sternman will always have his paddle on the lee side. Both men should keep their paddles flat on water to maintain balance.

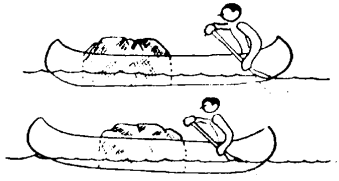
Don't canoe in heavy weather - this information is provided for your benefit should a storm break after you have commenced your journey.



Canoeing in Heavy Winds

With a brisk breeze it is almost impossible to turn a canoe in the wind. Don't put your weight in the stern, as in the upper sketch, because this tends to make the bow very high and the canoe hard to handle. There is also the danger of waves coming over the stern and swamping the canoe.

Keep your weight in the centre. This gives more control and the canoe rides better.



Loading a Canoe

In the upper sketch the bow is too heavily loaded and makes for difficulty in handling. The lower sketch is correct, with the bow slightly higher. Load securely lashed in sometimes prevents loss in case of capsize.

In loading a canoe be careful to place the load dead centre athwart the craft. Trim the boat (balance) and allow five or six inches of freeboard (distance between the top of gunwale and water line).

Chapter XI

Nautical Or Sea Terms

Every Sea Scout must be familiar with the language of the Sea, which may sometimes seem a little quaint to landlubbers, but which has grown up through the long years. (See also Chapter 8, The Boat.)

The Parts of a Ship

After part: The rear half of the ship.

Amidship: Where the fore and the after part meets.

Fore and Aft Midship Line: The line dividing the ship from stem to stern.

Fore Part: The front half of the ship.

Hull: The main body of the ship.

Port Side: The left hand side of the ship when facing towards the stem.

Starboard Side: The right hand side of the ship when facing towards the stem.

Stem: The extreme end of the fore part.

Stern: The extreme end of the after part.

Surfaces

Aft: From any point in the ship towards the stern.

Athwartship: Across the ship from side to side.

Bottom: The sides around the hull below the water line.

Bows: The hull surfaces in the fore part which are rounded to meet the stem. (Starboard and Port.)

Decks: Horizontal surfaces of ships.

Draught: The height of the waterline above the lowest part of the keel.

Forecastle: the fore end of the upper deck between the bows.

Forward: From any point of the ship towards the bows.

Freeboard: The height of a ship's deck above the water line.

Quarterdeck: The after part of the upper deck.

Ship's Side: The sides around the hull above the water line.

Superstructure: Any part of the hull which is built above the upper deck. The decks below are called the *main deck, middle deck, lower deck, platform deck*, etc., according to the size of the ship.

Upper Deck: A deck exposed to the weather.

Waist: The remaining deck between the quarterdeck and the forecastle.

Describing Position

Below: Inside the ship between the decks.

Hatch: A square opening in the deck.

In: A seaman serves "in" a ship.

Ladder: That which gives access to the deck above.

On Board: When a seaman joins a ship.

General Terms

Beam: The width of a ship measure athwartship at the widest point of the hull.

Bulkheads: Walls in a ship.

Deadlights: Port hole doors for darkening a ship and keeping it watertight.

Deck: Underfoot (floors).

Deck Head: Overhead (ceiling).

Ports: Ship's windows.

Scuttles: Thick glass of ports.

Positions of Outside Objects Relative to the Ship

Abeam: Directly at right angles to the fore-and-aft line.

Abreast: Level with, in line with.

Ahead: Directly in advance.

Alongside: Side by side, and touching.

Astern: Directly in rear.

Movement of Objects on Board

A seaman speaks of going ‘forward’, ‘below’, ‘on deck’, and ‘aloft’, i.e., anywhere in the rigging of a mast. He uses the same expressions for shifting an object, always reckoning in terms of the ship: thus, he may shift an object ‘aft’, or further forward’, or ‘inboard’ or ‘nearer the ship’s side’.

To Fend: To prevent a boat, etc., striking against anything that might endanger her.

To Fleet: To shift the position of.

To Launch: To drag an object along.

To Lift and Launch: To lift the weight clear before each heave.

To Ship: To place an object in position.

To Unship: To remove it.

Movement of the Ship

Ahead: When she is moving bow first.

Adrift: Broken from moorings.

Afloat or Waterborne: Floating on the surface.

Astern: When she is making sternway.

Awash: Level with the surface of the water.

Aweigh: When the anchor is broken out of the ground.

Ballast: Is any additional weight at a particular point which is required to trim her.

Broadside: When she is moving sideways.

Course: The direction, by compass, in which she is travelling.

Gather Way: When she begins to move through the water.

Heel: The angle between her masts and the vertical to the earth's surface as she inclines to one side. A permanent heel is called a *list*.

Lee Side: The sheltered side of the ship.

Leeway: When under way amid being blown sideways by the wind.

Ship's Head: The direction in which her bows are pointing.

Steerage Way: When she is moving with sufficient way to be steered.

Tide-rode: The position of the vessel at anchor when, owing to the wind and tide setting in different directions the vessel takes up a position heading between the two.

Trim: Describes the condition the ship floats in water. Normal trim depends on buoyancy, and she may be trimmed by adjusting the position of weights in the hull until she floats level.

Wake: Part of the track immediately astern of her.

Water-logged: Full of water but still floating.

Weather-side: The side of the ship facing the wind.

Miscellaneous Terms

Avast: To stop. "Avast heaving."

Back: A change in direction of wind anti-clockwise. (W.S.E.N.)

Belay: To make a rope fast; but not to hitch or tie it.

Bilge Water: Water collected in the bilge.

Blue Peter: Code flag to signal departure.(Letter P – Papa)

Brace: Rope used to swing a spar about.

Broach: To swing a vessel running before the wind broadside to the wind or at right angles to the course. A most dangerous thing if the sea is heavy.

Davy Jones' Locker: the sea bottom.

Donkey-engine: A small deck engine used for working the windlass.

Gaff: Spar to which fore and after sail is bent.

Hawse Pipe: the pipe through which the anchor-cable runs.

Hawser: A rope.

Jury Mast: Temporary mast rigged to replace one lost.

Larboard: An old term for port.

Man: To take your position.

Patent-log: An instrument towed astern for ascertaining the rate at which the ship travels.

Pay: To "pay off" is to let a vessel go away from the wind. To "pay out" a line is to let it run. To pay standing rigging is to cover it with tar or pitch.

Ratlines: Light lines secured across the shrouds, forming a rope ladder.

Tonnage: There are four types: gross tonnage is the internal capacity of the vessel as expressed in terms of 100 cubic feet; net tonnage is space used for cargo; deadweight tonnage is actual carrying capacity; displacement tonnage is the weight of the volume of water displaced by the ship.

Vang: Ropes leading from a gaff to ship's side to steady the gaff.

Veer: A change in direction of the wind clockwise, (W N.E.S.)

Chapter XII

Rover Sea Scouts

During your training as a Sea Scout, you have learned to enjoy and appreciate as well as understand the outdoor aspect of your country, with particular emphasis on the waterways. You have learned, among other things, to handle and repair various types of craft, to work rope and to appreciate something of the legends and traditions associated with the sea. More important, you have developed confidence in your judgment, ability and initiative under varying conditions. When you reach Rover Sea Scout age you stand on the threshold of one of the most interesting periods of your life. The opportunities to apply what you have been learning for the past few years will increase greatly henceforth and the knowledge you have gained will be of inestimable value in the decisions you will have to make.

"Just what can I expect in Rover Sea Scouts?" you query. Let us look over some of the possibilities with regard to programme, bearing in mind that there is always room and desirability for imaginative innovation. The planning of any intelligent programme is limited only by the imagination and enthusiasm exhibited by the planners.

The motto of Rovering is "Service". What could fit in better with this principle than the operation of a Rover Sea Scout Rescue Service? A suitable rescue craft could be located at your sailing base ready to assist in case of emergency, its maintenance and operation being carried out on a unit or district basis. Moreover, the actual rescue training could quite feasibly be further expanded so that the Rovers would be prepared to render assistance on the water in the event of disasters such as floods. Well-trained and efficient Crews would certainly be invaluable to the community at such times.

Nearly everyone is attracted by thoughts of the mysterious and unknown. Few of us do not mentally accompany explorers past and present as we read of their exploits in strange and unknown areas of our world. Canada is a young land wherein explorable areas still exist aplenty. Could you not then give rein to that exploring "instinct" by organizing expeditions to little-known lakes and rivers? There need be no hesitation about the Crew's departing from the frequented waterways, provided that a competent and experienced person is in

charge of the party. The opportunity may present itself for you to exercise that penchant for charting or navigation which you have possibly not been able to really try out previously. Or again, maybe the bulk of your boating experience has been gained in dinghies or whalers and you could increase your knowledge of and skill with canoes by using them as your means of transport on the expedition. One of the main things to keep in mind is that you should obtain some practical experience in waters other than those of your home locale. Only in this way can you possibly gain all-round boating experience.

International visits by water would make an excellent addition to the programme of any Rover Sea Scout Crew. Several Crews have, for example, travelled the inland route to New York City in past years. The chaps who participated in these ventures have never forgotten them and many are the tales which are still circulating to this day. You are certain to benefit tremendously by the exchange of ideas and opinions with members of the Scout Brotherhood in foreign lands, who are working for the same ideals and principles to which you adhere.

A vital service to the community which the Crew could incorporate into its activities is the teaching of boat and water-safety to youngsters and adults who are interested. Tragic accidents occur every year which could have been avoided in many cases by the exercise of proper knowledge and caution. Your training has made you a valuable instructor whose efforts to educate the public in these matters might well be the means of saving a life.

So the list of activities for Rover Scouts goes on; the possibilities are practically inexhaustible. No mention has been made, for instance, of such projects as boat construction, nautical displays, regattas and a host of others. Rovering is the consummation of the training you have already received. It is an inspiring adventure which demands active participation if it is to be thoroughly enjoyed. Your Crew can build up a sense of comradeship and co-operation which you will value highly throughout life. There is one important thing to keep in mind at all times; however, and that is the fact that you amid your chums in the Crew are entirely responsible for the type of programme on which your unit is based. If you want it to be successful, interesting and worthwhile, then it will be. Remember that your Rover Leader serves as a guide and advisor.

There you have the challenge and it is up to you whether you wish to accept it. Tackle it with all the enthusiasm you can muster and we can assure you that you will enjoy GOOD ROVERING – GOOD SAILING.

Every Sea Scout, Rover Sea Scout and Sea Scout Leader should read and must comply with the Water Safety Rules as laid down in *Policy, Organization and Rules*.

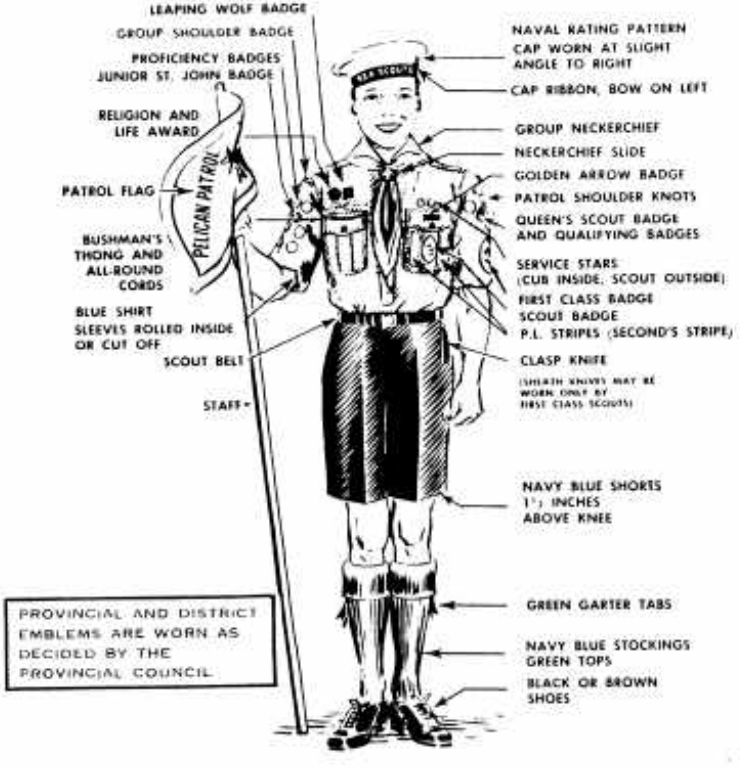
The Sea Scout Uniform

The rule governing Sea Scout uniform is Rule 125 of Policy, Organization and Rules, and reads as follows:

Cap
Regulation naval rating pattern, ribbon inscribed “Sea Scouts”

Shirt
Regulation navy blue, Sea Scouts Canada badge above right pocket At the discretion of the Court of Honour, regulation T-shirt may be worn when appropriate instead of shirt.

Shorts, long trousers or bell-bottoms
Regulation - navy blue.
Choice determined by the Court of Honour for the Troop, or at the discretion of the Court of Honour , determined by each Patrol for its own members.


LEAPING WOLF BADGE
GROUP SHOULDER BADGE
PROFICIENCY BADGES
JUNIOR ST. JOHN BADGE
RELIGION AND LIFE AWARD
PATROL FLAG
PELICAN PATROL
BUSHMAN'S THONG AND ALL-ROUND CORDS
BLUE SHIRT SLEEVES ROLLED INSIDE OR CUT OFF
SCOUT BELT
STAFF
NAVAL RATING PATTERN CAP WORN AT SLIGHT ANGLE TO RIGHT
CAP RIBBON, BOW ON LEFT
GROUP NECKERCHIEF
NECKERCHIEF SLIDE
GOLDEN ARROW BADGE
PATROL SHOULDER KNOTS
QUEEN'S SCOUT BADGE AND QUALIFYING BADGES
SERVICE STARS (CUB INSIDE, SCOUT OUTSIDE)
FIRST CLASS BADGE
SCOUT BADGE
P.L. STRIPES (SECOND'S STRIPE)
CLASP KNIFE
(SHEATH KNIVES MAY BE WORN ONLY BY FIRST CLASS SCOUTS)
NAVY BLUE SHORTS 1" INCHES ABOVE KNEE
GREEN GARTER TABS
NAVY BLUE STOCKINGS GREEN TOPS
BLACK OR BROWN SHOES
PROVINCIAL AND DISTRICT EMBLEMS ARE WORN AS DECIDED BY THE PROVINCIAL COUNCIL

APPENDIX 1

Bibliography

Following is a list of books crammed with the history and lore of the sea.

Two Years Before the Mast ..... Richard H. Dana
Bird of Dawning ..... John Masefield
Captains Courageous..... Rudyard Kipling
Moby Dick .. .. Herman Melville
The Lively Lady..... Kenneth L. Roberts
Treasure Island..... Robert Louis Stevenson
Long Wharf ..... Howard Pease
Heart of Danger..... Howard Pease
Captain Blood ..... Rafael Sabatini
The Sea Witch..... Alexander Laing
Lubbbers Afloat ..... Thomas J. Keane
New Chum ..... John Masefield
Rough and Tumble on Old Clipper Ships..... Robert Ramsay
Sailing to See..... Irving Johnson
Room to Swing a Cat ..... Frederick J. Bell
Cruise of the Conrad ..... Alan Villiers
Stormalong.. ..... Alan Villiers
The Pilot..... James Fenimore Cooper
20,000 Leagues Under The Sea..... Jules Verne
Westward Ho. ..... Charles Kingsley
Yankee Sails to China ..... Lois Maloy
Cruise of the Snark..... Jack London
Cruise of the Cachalot..... Frank Bullen
Logbook for Grace ..... Robert C. Murphy
Whale Hunt. ..... Nelson C. Haley
White Sails and Spindrift..... Frank H. Shaw
Mutiny on the Bounty..... Nordhoff and Hall
Beat To Quarters..... C.S. Forester

Following are accounts of long voyages in small boats:
Sailing Alone Around the World..... Joshua Slocum
Around the World Single Handed..... Harry Pidgeon
Single-Handed Passage ..... Edward C. Allard
The Wind is Free..... Frank A. Wightman

Venturesome Voyages..... J.C. Voss
Cruise of the Teddy ..... Erling Tambs
10,000 Leagues Over the Sea..... W. A. Robinson
Gallions Reach ..... H. M. Tomlinson
Across Three Oceans ..... Conor O'Brien
Cruise of the Amaryllis..... George Mulhauser
Sailing All Seas ..... Dwight Long
Wind Aloft, Wind Alow..... Marin-Marie

Reference Books

Piloting, Seamanship and Small Boat Handling, Charles F. Chapman, Motor Boating, New York.
Ships at Work, A. C. Hardy, Chemical Publishing Co., New York.
Modern Wonder Book of Ships, Norman Carlisle & Eugene Nelson, John C. Winston Co., Philadelphia.
How to Design Small Sailboats, E. C. Sichert, Dodd, Mead & Co., New \ork.
Ship Model Building, Gene Johnson, Cornell Maritime Press, New York.
Ship Model Making, F. Armitage McCann, Norman W. Henly Publishing Co., New York.
Sailing Made Easy, Rufus G. Smith, Dodd, Mead & Co.. New York.
Junior Skipper's Handbook, Arthur H. Baldwin, Random house, N.Y.
The A.B.C. of Boat Sailing, Herbert Stone, Yachting Publishing Co., New York.
Navigation the Easy Way, Carl D. Lane and John Montgomery, W W. Norton & Co., New York.
Elements of Navigation, W. J. Henderson, Harper & Bros., New York.
Meteorology For All, Irving Kahn, Barnes and Noble, New York.
The Star Atlas, S. S. Rabl, Cornell Maritime Press, New York.
The Canoe and You, Ronald H. Perry, J. M. Dent & Sons Ltd., Toronto
Camp Cookery, Horace Kephart, MacMillan Co., New York.
Outboard Boating Skills Pamphlet, Evinrude, The Boy Scouts Association.