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SCOUTING

OUT = OF = DOORS

BY

"GILCRAFT"

ILLUSTRATED WITH FIFTY-NINE DIAGRAMS

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The Editors would like to acknowledge with thanks the invaluable assistance of John and Christine Pickering, Dennis Trimble and Ric Raynor in preparing this edition.

In Scouting, nothing ever happens until the volunteers make it happen.

Editor's Note:

The reader is reminded that these texts have been written a long time ago. Consequently, they may use some terms or express sentiments which were current at the time, regardless of what we may think of them at the beginning of the 21st century. For reasons of historical accuracy they have been preserved in their original form.

If you find them offensive, we ask you to please delete this file from your system.

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FOREWORD

By Lord Hampton

Chief Commissioner, Boy Scouts Association

When I was first invited by the author of this book to write a "Foreword," I had to confess to him that I had not read the yarns as they appeared in The Scout.

So he kindly sent me the manuscript; and I then had to confess to myself that, in failing to read them week by week as they first appeared, I had missed part of my education as a Scoutmaster.

However, here they are in book form, and it is so much more convenient to read a book than to turn up back numbers of a paper.

What I like about these yarns — or talks, or whatever you like to call them — is their simplicity of description. The author has put a wide experience into them; but he has put it in a most interesting way, and one which can be understood by the densest of us.

Also I like the way in which he takes it for granted that those, to whom he is talking, know all about the Patrol System, and practice it in their own Troops as the only really Scouting way of carrying on.

Here are twenty-four chapters of the real thing. I don't know which I like best — they are all so good; but I do know that every Troop Library should possess a copy. I was going to say every Patrol Leader; but that, I am afraid, is too much to hope for.

May I suggest that, in these chapters, Leaders will find perfect material for working up with their Patrols during the time allotted for such work; and further that, if they do this, neither Summer nor Winter will find them hunting round in vain for something to do in the way of good Scouting.

INTRODUCTION

Frequently we are apt to forget that the first thing that the Chief Scout tells us about Scouting is that "By the term 'Scouting' is meant the work and attributes of backwoodsmen, explorers and frontiersmen." In its eighteen years of growth to Rover age Scouting has accumulated such a lot of knowledge and experience that at times there is a danger of its original definition being lost sight of.

Here was a grown man, whose name was already a household word, who had not lost his boyish spirit. He told them in his tales to them, which they eagerly purchased with their hoarded coppers every fortnight from the bookshop or railway bookstall, just those things they dreamt about when they went out together on a Saturday afternoon.

He showed them how they could in play imitate the men who had carried their country's flag throughout the whole world, and he proved to them that even in their play they could prepare themselves to be of use when their time came.

The time of these elder brethren of ours came all too soon; they proved their worth in the Great War. Can we in our time follow their lead? The book that inspired these in their boyhood was *Scouting for Boys*. We hear a lot about it today, but how many of us have really read it, and, what is more, acted it for ourselves? It is in the doing of things that enjoyment lies. Don't be content with reading about things, go and practise them, and then, possibly, you may in time deserve the name of Scout, just imagine how the Scouts of olden times must sometimes shudder when they see the very poor imitation we are making of their job!

So remember that Scouting is an outdoor game. There are some who do their Scouting in hospitals, and a jolly good job they make of it too, and they long for the time when they may be able to get out from under a roof and really do the things they have been learning. But most of you fellows are more fortunate and can get out if you only make an effort. I have heard so-called Scouts say, "Oh! in this town we cannot possibly do anything out-of-doors"; I have known others in just as crowded places who pride themselves on having more meetings out-of-doors than in. It all depends on the fellows, more especially on the Patrol Leaders, so just buck up and don't be done down by the others. Where there's a will there's a way.

Most Troops now have a regular camp every summer, and such a camp is a real necessity to a Scout, but that is not everything. Don't rest content with that; get out at every possible opportunity. That is where you Patrol Leaders come in; it is comparatively easy to gather your Patrol together and take them out, whether it is for a week-end camp, or a Saturday afternoon, or an hour or two in the evening.

Even during the winter nights there is a lot of good Scouting that can be done, if you know your way about. It must be admitted that it is more difficult to do this in towns than in the country, but, as has already been said, it is not impossible, and later on we shall try to suggest one or two lines along which you can work.

Really there is no end to the Scouty things that you can do out-of-doors, but this old climate of ours in Great Britain is a bit of a nuisance at times. However, don't be afraid of the wet, if you have some place in which to dry your clothes afterwards. The wet itself doesn't do you any harm, it is the damp clothes.

In some parts of India where it can be very wet — I've been in one place where they have over five hundred inches of rain in the year — the people take off nearly all their clothes when they go out in it. In fact I have seen two small boys peacefully fishing by the side of a stream without a stitch of clothing between them, and they must have been promoted to the dignity of clothes some years before. The rain was coming down in sheets. It was true that they had an umbrella, but little of it was left except the ribs. It is wonderful how dry you can keep under such an umbrella when you picture it as having been borrowed from the King Emperor himself!

We could now and then, without any harm to ourselves, follow part of the example of these two boys. We cannot divest ourselves of all our garments, but we can, if we keep moving, practise Scouting in the rain without any extra covering other than our ordinary Scout uniform. If the colour of your scarf is apt to run — some do — leave it at home. When you get back have a rub down with a hard towel and you will be as right as a trivet. A trivet has something to do with the grate, so it is warm all right!

Yes, certainly, your Scouters can do something, but you must help and do your little bit too. If your Scouters see that you are really keen to get outside the four walls of your Troop Headquarters they will be only too glad to arrange some stunt or other; but too often, perhaps, they have arranged a jolly good stunt for a Saturday afternoon, say, for the whole Troop and only a couple of fellows have turned up. Many Scouts have yet to learn that they should be loyal to their Troop and Patrol every day of the week and not only on the day and at the hour on which they have their usual meetings.

The Chief, from time to time, reminds us that Scouting is a Brotherhood of Woodcraft and Service. In this book we are only concerned, for the moment, with the Woodcraft side of it.

Woodcraft has been defined as the art and craft of living in the woods or wilds, and necessitates back-Woodsmanship and nature lore, and a knowledge of how to use Nature's resources. In this over-civilised country, especially in those parts where Nature has been ejected by man, we do have to borrow some of the imagination of those two fellows with their tattered umbrella, but that makes the game all the more interesting. Scouting insists on the open-air life in order to attain physical, intellectual and moral health — this is the story of the three "als" that all travel to the same country, "health," and stay there!

The Scout study of Nature involves all branches of the subject, the study of birds and animals, their cries, resorts and habits, the study of flowers and trees, their uses and abuses, the appreciation of beauty in Nature and in Art, and the realisation that God created it all for our benefit. The Scout practice of the open air includes among its branches, pioneering, stalking and tracking, the joys of camping and hiking, fires and cooking, the romances of exploration and pathfinding, the fun of games, the happy companionship of the camp-fire.

If we neglect these, we miss the great appeal that Scouting makes to our imaginations, and we miss the opportunity of thinking out and doing things for ourselves.

And so we are off out into the open where we can breathe fresh air and look wide!

CHAPTER I

PLANNING A CAMP

To enjoy the open air to the full it is necessary to camp. There are various odds and ends with regard to camping which the Scout should know before he ventures out. I do not refer to the annual Troop camp — books have already been written on that subject — but to the casual camp for a day or two with the Patrol as a unit. Many Patrol Leaders do not realise how a Patrol camp helps them to pull their Patrol together, so that it benefits as a whole and can hold its own among the other Patrols of the Troop.

An occasional week-end camp should form part of the programme of every ambitious Patrol Leader. He should take a pride in making all the arrangements himself and there is much to be done before he actually sets out with his Patrol. Of course his Scouter will be there to help and advise him beforehand, but there is no teacher like experience itself, and so the more he does for himself the better.

I do not mean by that that he should be a fool — no Scout ever is, according to the Chief — and imagine that he knows everything when he doesn't. It is never safe to ignore the advice and help of others who have been through the same experiences themselves, but one should not always be dependant on other people's help. Even in comparatively recent years youngsters used to be sent out into the world oversea to places where they were practically alone, and had there to make their own way.

I remember a friend of mine — not yet twenty — who found himself alone in a certain part of lesser known Africa where he was the overlord and friend of several tribes. His experiences were varied, but by sheer grit and good spirits he surmounted all the problems and difficulties that arose hour by hour. Throughout the ages our elder brethren have had to undertake grave responsibilities far above their years, and we too should prepare ourselves for big things.

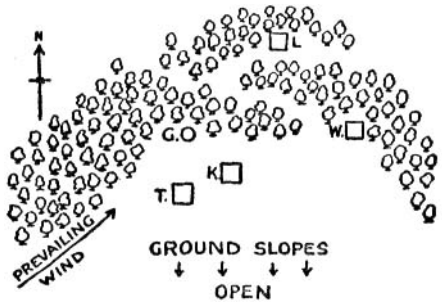
So make your own arrangements, and when completed run over everything with your Scouter to make sure that nothing has been omitted. The first thing to decide upon is a site for your camp. In Great Britain we cannot just take a tent and pitch it down anywhere, that is where the Scouts of other countries are so lucky. In Australia, for instance, Scouts can just go out and camp on the Crown lands where they like, it being understood that they will not abuse their trust.

Have a Patrol council and then select your site. Some of your Scouts may have uncles and cousins in the country who can obtain a ground for you. See the site yourself if possible, and get the necessary permission from the farmer or owner. Then there are your tents and cooking gear to think of. Rescue them from the dusty heap in which they lie and see that they are in order. Any self-respecting Patrol Leader would, as a matter of routine, have done this every month or so.

Food! You mustn't forget that. I have known a Patrol go off for a week-end forgetting that most shops shut on Sunday. It is in these little things that the hard taskmaster, Experience, begins to get a little nasty. You must see that all those who are coming with you have permission to do so. This is a matter that you should see to personally. Call round and see their fathers or mothers about it. Then there is the question of the equipment each is to bring. I could continue a list like this for a long time, but it might frighten the new Patrol Leader to such an extent that he wouldn't dare go camping at all!

One important thing that you must decide before-hand is the object of your camp. True, it takes you and your Patrol out into the open air, but it should do more than that. You may just want to get your Patrol together so that they may know each other better; you may want to practise some Scout work in which your Patrol is specializing; you may want to make a special nature study, trees or birds; you may want to revise the Tenderfoot Tests of all the members of the Patrol; you may want to practise some of the Second Class Tests and, if your Patrol is very advanced, you may even want to practise some of the First Class Tests, or to take a day hike.

I only mention some of the objects that you may have before you to ensure that you are alive to the possibilities that lie in your Patrol camp, and also because your object will help you to choose a suitable site.



This is a diagram of an ideal camp site. The arrows indicate how the ground should slope away from the camp and be quite in the open. The letters stand for the following: T. Tent; K. Kitchen; G. Grease pit; W. Wash Place; L. Latrine. Note the direction of the prevailing wind.

The camp site is of great importance. One often sees a tent pitched in a nice little hollow which collects all the rain from the surrounding field. It is a very coy little hollow until it rains! So avoid hollows and stick to the higher ground.

Talking of water, it is an important thing to see that you pitch your tent near a supply of good drinking water. There is nothing that destroys the pleasure of camping so much as having to walk miles for your water every time you want to cook or have a drink. Some Scouts are so keen on pitching their tent up high above the surrounding ground that they forget about the water and have to fetch it up from hundreds of feet below. So don't go right up on top of a high hill where you are monarch of all you survey.

There is another reason why you should not pitch on top of a hill. Your site will be exposed to the wind, which will hinder your cooking, rip your tent and play other tricks with you.

Your site therefore should be on rising ground but just below the top on the side which is usually sheltered from the wind. In Great Britain it is usually best to face south and so get all the benefit of the sun.

There are also such things as trees to consider. Trees are beautiful things, but at times you want to avoid them. If the weather is wet they drip horribly on your tent and sometimes they have a habit of taking a branch off and throwing it at you. Elm trees do this when you least expect it. In this country, as we have already said, we want all the sun we can get, and so our tents should be pitched out from under the trees, although it is best to have some handy to give us shade at midday if we need it.

In the tropics it is the other way round; there you would pitch your tent under the biggest and thickest tree you could find, taking care first of all that there are no rotten branches above. Even in the tropics, however, there are some trees to be avoided. I remember a store tent once pitched in a beautifully shady spot which was absolutely ruined because the leaves of the trees, under which it was, fell on it and burnt little holes right through the fabric. In those parts the trees hold other dangers besides snakes.

Soil is another consideration, and an important one. If you possibly can, avoid a clay soil, it is wet, cold and very muddy, as I know to my cost. Chalk is better but not really good; a light soil of a sandy or gravelly nature is the best.

There are many other things that you should look to in choosing your site. Wood for the fire, view, space for games, protection from stray cows and inquisitive people, sanitation — a most important point — wind, which should not blow the smoke from the fire into your tent — but the desire not to prevent you going camping keeps me from adding more.

However, get going with it and take your Patrol out. Once you have done it you will want to do so again. If you are an inexperienced camper your Patrol will think more of you if you, and your Second, have a trial run together first. You will gain some experience which will benefit the other members of the Patrol.

One thing more. If you are doing a week-end camp, please do not forget Him who made you and all you see around. If there is a church or chapel nearby go to it and show the people round about that Scouting really stands for something worth while. If there is not, have your Patrol Scouts' Own, which will bring you all together possibly as nothing else will.

Good luck to you and your camping !

CHAPTER II

TENTS AND TENT-MAKING

If you are going out camping your first consideration must be a tent, and a precious possession it will become, its usefulness depending more upon its make and waterproofing than on its size and shape.

There are dozens and dozens of different kinds of tents, and each tent-maker's is the best, which leaves us quite cold and exactly where we started. So, before going on to discuss types, let us consider what requirements our tent should have.

First of all it must be able to withstand the weather conditions likely to be encountered in our variable climate, that means it has to stand up against the wind and to keep out the rain. If it fails to do either it is no good as a tent. It must house the number of Scouts it is built for, that is, it must give sufficient room for all to sleep without being jammed like sardines in a tin, and for their kit as well. Yet it must be comparatively light and cheap.

There are two main types of tents, the conical and the wall. The conical tent is represented by the well-known bell tent which has proved its worth in many campaigns and can be obtained secondhand quite cheaply.

It houses a Patrol comfortably, but it is heavy, weighing with pole eighty pounds.

The Bell Tent. It houses a Patrol but is very heavy.

The other main type is the wall tent, which, as its name signifies, has straight ends, a wall on each side and a sloping roof. It resembles a cottage in shape, and a particular make of it is actually called the Cottage Tent. There are dozens and dozens of various kinds of wall tents of all sizes and shapes, just as cottages themselves vary.

Other subsidiary types, less popular perhaps, are the pyramidal, of which the Miner's tent is an illustration, the semi-pyramidal, which will be mentioned later on when we come to discuss Hiking, and the Wedge or "A" tent which, in the sketch, is shown suspended from an outside ridge rope.

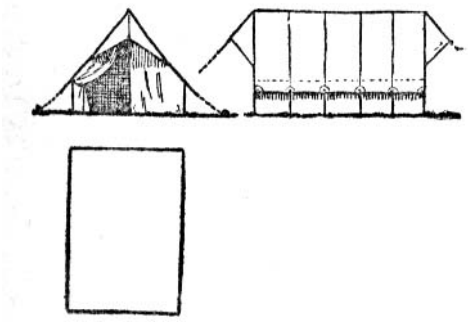
The Miner's or Pyramidal Tent.

The wedge tent. It is shown suspended from an outside ridge rope.

A bell tent will do for your Patrol weekend camp if you have the means to transport it. I should prefer some kind of a wall tent myself, firstly because it is possible to make it, and secondly because it was generally used by explorers and pioneers. The illustration of a wall tent shows one with a fly sheet which is very useful for keeping off heat and rain, but adds to weight and expense and is not absolutely necessary in Great Britain unless you are using a very thin fabric. When arranging for your Patrol camp you will have three choices before you; the bell tent, a wall tent sufficiently large to take the Patrol, or, say, three small tents which between them will take the Patrol. Any of these methods is good, it merely depends upon circumstances which you adopt.

The Wall Tent complete with fly sheet.

If you are starting out to make your own tents, the bell tent drops out as an impossibility and you are left to decide between the other two alternatives. That is a decision you must make for yourself. If you decide on the last, a collection of small tents, you will find some hints about them when we come to talk on Hiking.



The end and side elevations of a tent. The oblong represents the plan. The triangular pieces on the side elevation are hoods to carry away the water from the doors.

So now we are left only with the wall tent. First of all remember that practically all the Patrol tents of the wall type on the market are not sufficiently large to take a Patrol of eight, although many will take a Patrol of six fairly comfortably. It is possible to obtain half-patrol tents which can be pitched separately, or end to end, so as to form one long tent.

None of these Patrol tents is very high, but that does not matter so very much because you don't expect to live in your tent when you go out into the open, and when you are in it there is no particular need for you to stand. You are more out of the way on the floor, and you can be stepped over!

When you set out to make your own tent you must decide beforehand what it is going to look like. Manufacturers'

catalogues will give you many tips, or you may have seen a tent belonging to another Troop which you liked. Select your particular model and then on a sheet of squared paper, which makes it ever so much easier, draw the plan, side elevation and end elevation, as shown in the diagrams in the previous page.

Points you must remember in your design are that the slope of the roof must be steep enough to shed the rain; that the ground space is sufficient to enable the number of Scouts for which the tent is intended to sleep in comfort; that the ground space should be protected from rain when the doors are open — a hood at the end will achieve this — that all the places where there is a pull on the material should be reinforced by strong tapes; that if there is to be no fly sheet it is best to have eaves to carry the water away from the walls. These are shown in the side elevation. Remember the tent should be light, easy to erect and free from unnecessary guys and pegs.

It is necessary to rub in these points. I have seen many home-made tents rendered useless because insufficient slope was given to the roof with the result that the occupants received a gradual shower bath whenever it had been raining for any length of time.

CHAPTER III

MAKING A TENT

When you have worked out the design of your tent to your satisfaction, and what is more, to the satisfaction of the other members of your Patrol, then make a paper model on a scale of an inch to a foot. This will give you a better idea than your diagram of how your tent will look. If you have time and if it is your first attempt at tent-making, it is worth while constructing another model in calico twice as large as the paper one. This will teach you several tips, give you practice in sewing, and can afterwards be used as an exhibit in your Patrol corner.

Well, you are now satisfied that you have the ideal tent in design and model and you come to the stage where the real work begins. The procuring of the material of which you are going to build your tent is the first consideration.

It is impossible, I am sorry to say, to recommend any particular make of stuff as so much depends on the actual tent to be made. All we can say is that the material should be light and strong, and closely and evenly woven, but not so close as to be air-proof. If possible, it should be the same strength both ways, along and across.

CHOOSE YOUR MATERIAL WITH CARE

Then there is colour to think of. White is very conspicuous, and gets horribly dirty at times. Green is attractive but fades very rapidly. Brown or khaki is possibly best as it is not conspicuous and does not fade much.

For strong tents, which are probably what you will want, calico or linen or holland will do, but cotton duck is considered most suitable, and can be obtained in various weights.

For lighter tents lawn is mostly used, but there are various kinds of light cotton materials on the market which are favoured, such as “Kampette,” but these special materials are usually more expensive.

For most tents a “forty-inch” material is best, as two widths sewn together for the roof gives a tent length of some six feet six inches. The real width of “forty-inch” material is generally thirty-nine inches! That is a point to remember.

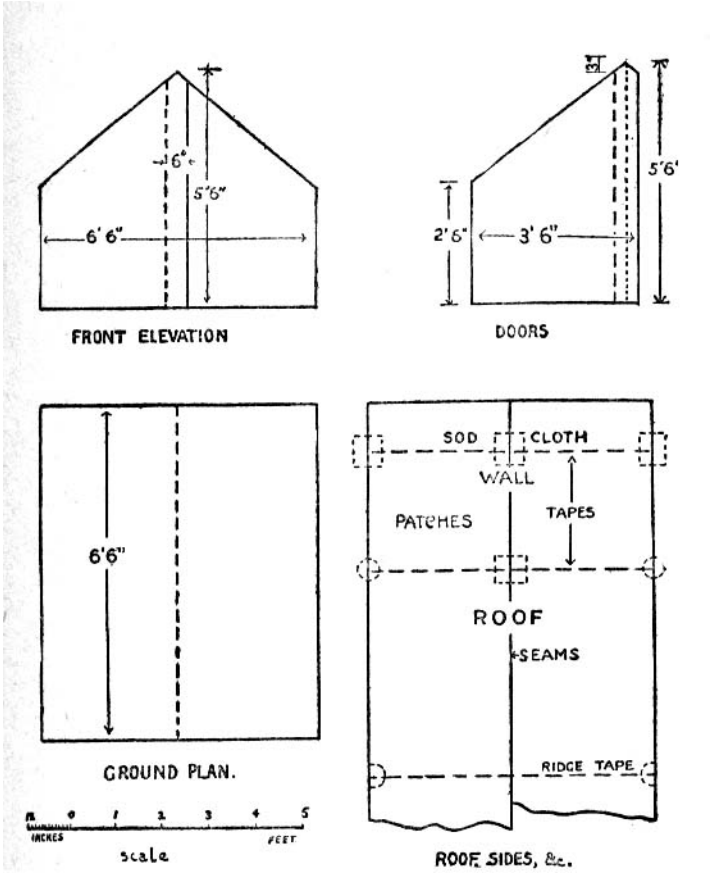
You will have to find out the amount of material you need. The best way to do this is to cut out a strip of paper, old newspapers pasted together will do, to represent the strip of material to be used. Then patterns

of all the parts of the tent should be cut and fitted together one to another on top of the first strip so as to give the minimum amount of waste.

Remember to allow for seams and for strengthening patches of the same material at all corners, at the pole holes, wherever there are fastenings, and wherever guy lines, rings, etc., are attached to the material. It is often advisable to strengthen the whole ridge of the tent.

The doors should overlap by at least six inches, and both the sides and door should be provided with a sod cloth not less than six inches in width to keep out ground draughts.

Sod cloths, or curtains as they are sometimes called, are frequently made of other material such as canvas, but that adds to weight and is not much cheaper. We have already mentioned the necessity for the roof overlapping the walls, but one is apt to forget it in cutting out patterns.



Diagrams showing patterns of a plain Wall Tent without overlap or hood. The positions of the patches, tapes, sod cloth and so on are clearly indicated. You should make a careful study of these diagrams before you set to work.

In plotting out the patterns on the strip of material make as much use of the selvedge as you can, as that will save you hemming. You will now be able to see the amount of material you require.

If your paper patterns are pasted on to your paper strip they will form a guide for cutting out the actual material.

Although the various parts can be sewn together by hand, it is a laborious process and not a very reliable one. A sewing machine is a necessity. Some lucky Troops own one, which is used for many purposes, but usually it will be necessary to borrow one. In both cases the very greatest care must be taken of the machine.

Both edges of any overlapping pieces should be sewn, in addition to the tape reinforcement, where there is a strain.

One important point to remember is that the roof of the tent must be free from any flaws in the material. All the tapes have to be sewn on the inside of the tent. Strong linen or cotton tapes one inch wide should be used for the ridge and the ends turned in two or three inches. The tape should be sewn along each edge. Half-inch tapes will do for the other lines.

After taping, the strengthening patches should be prepared. It is usually best to have them of two thicknesses and their edges should be turned in before they are sewn on. These patches will vary in size and shape according to their position. They should be sewn all round the edges and also have a few rows of stitching across them to hold them firmly to the main pieces of material.

We have given diagrams of the patterns of a plain wall tent without overlap or hood with the positions of patches indicated, and you should study these carefully.

Supposing your tent is now more or less complete, you will have to make the holes for the pole spike to go through and for the guys, etc. For the former, good brass rings sewn in all round are best, but any oxydised metal that does not rust will do. The guys should be spliced into rings taped on to the line where the roof meets the walls, and made perfectly secure. Similarly, rings should be taped to the bottom of the walls and doors, or loops of stout cord can be attached to eyelet holes reinforced by metal rings.

This is a very inadequate description, but it will have to do, since a more complete one would occupy pages and pages.

Don't forget about the tent poles, runners for the guys, and pegs. If possible, make these for yourself, too. The wood you use should combine lightness with strength. Ash is good for the poles, since bamboos do not grow in Great Britain.

HOW TO WATERPROOF YOUR TENT

If your tent has been well designed and well sewn it should shed the rain quite well, provided no one rubs up against the roof or sides when it is wet. It is better, however, and not very difficult to waterproof it.

The following recipe has been used successfully for many years by members of the Camping Club:—

Boil half an ounce of isinglass in a pint of *soft* water until it is quite dissolved, and strain through a piece of linen into a second saucepan. Dissolve quarter of an ounce of white Castile soap in a pint of water, strain as before, and add to the first solution. Dissolve an ounce of alum in two pints of water, strain and add.

Stir and heat the combined solutions over a slow fire until the liquid simmers, when it is ready for use. The solution should be applied while still hot to the outer surface of the tent with a small flat brush or small mop, care being taken to work it well into the seams.

It is desirable, of course, to erect the tent for this operation. This quantity is sufficient for about eighty to one hundred square feet of material.

Another method of proofing which is very simple, but is apt to make the tent air-proof as well as waterproof is as follows.

Dissolve one pound of paraffin wax in one gallon of petrol, benzol or benzine. Apply with a rag mop to the erected tent, or totally immerse the tent in the mixture.

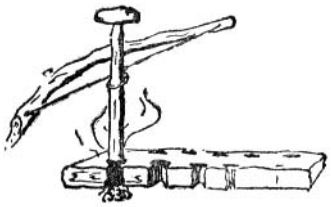
In proofing a tent one should be careful not to overproof it, which is worse than not proofing it at all.

Just to show what a Scout can do, here is a picture of a tent that was designed and made by a Scout and which is now on the market as the "Tinker" Tent.

CHAPTER IV

HOW TO MAKE A FIRE

Thousands of years ago fire was of such importance to the primitive man that it was worshipped as a god. It is of just the same importance to us today, whether it is ordinary fire, or "disguised" as gas or electricity. To the camper the old wood fire is still a necessity, and it is interesting to practise some times one or two of the methods that were used to make fire before matches were invented.

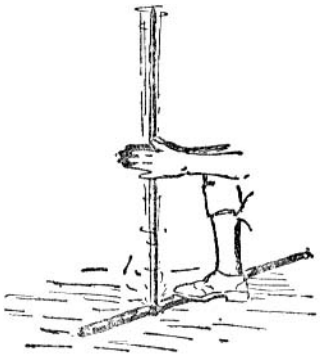


A bow fire-making set. The apparatus is easy to make.

There are several ways of making fire by friction that are still used by primitive people throughout the world. These methods all depend upon the same principle, but differ in details. A method which is quite familiar to many of us now is that in which a drill and bow is used. This has already been fully described in *Spare Time Activities* — and I will not repeat what was said there, but on this page you will see an illustration that shows you the materials required. These can easily be made, and one Troop I know makes quite a lot of money in producing these fire-making sets for sale. The method illustrated has been used extensively in many parts of the globe, more especially in North America.

A more difficult way, however, was, and is still, used in Africa, Australia, China, India and the South Sea Islands, in which instead of a bow and thong being employed to rotate the spindle, it is twirled between the palms of the hands. The spindle used is quite long and thin.

To twirl it you grasp it between your palms at the top end and roll it round and round from side to side. As you exert pressure your hands will gradually slide down to the lower and thicker end. When they have got to the bottom you have to rapidly transfer them again to the top, and that is where the chief difficulty lies. It takes a great deal of practice to obtain satisfactory results.



In Australia the natives use two pieces of stick to make fire. Some practice is required to twirl the spindle in the right manner, though it is not very difficult.

In Australia, instead of using a block of wood for the platform on which the spindle rotates, the natives have another long piece of stick, but it is notched in the same way. They carry the two sticks together fixed into a handle at the top. My own specimen has the knob, or handle, studded all over with little red lucky beans which are stuck into a sort of mixture of clay and treacle. The sketches show you what the sticks look like when they are carried, and how they are used.

Perhaps the simplest way of making fire by friction is that known in America as the "Plow " — we spell it "Plough" (p. 28). This merely consists of a platform with a channel cut in it and another stick which is rubbed rapidly up and down the channel. A good deal of rubbing is required. This method is still used in

An Australian fire-set. The knob, or handle, is studded with lucky beans stuck into a mixture of clay and treacle.

various islands in the Malay Archipelago, more especially in New Guinea. There is still another method of fire by friction which is a great favourite of mine. I have never used it myself, but this is the story of how I met it I was stationed in the wilder parts of North-East India. One night an urgent message came in that the followers of two rival chiefs were having a little private war of their own over some valuable paddy lands that were situated right in the heart of a thick and wide belt of jungle some fifty miles away. Naturally I had to set out at once by bike.

The first ten miles or so were easy going along a metalled road. Then the road became *katcha*, that is, it was just an earth road thrown up above the level of the fields. Soon I had to discard my bike for a native pony. He had the curious double trot that you frequently find in native *tats*, and so we got along well for the next twenty miles, which brought us to the edge of the jungle. Here I found an elephant waiting for me. I had not been out long and this was my first experience of elephant riding.

A Scout making a fire by the Plough Method. He is rubbing a stick up and down a channel cut in a "platform." A good deal of rubbing is necessary!

Day had broken and I was very pleased at the prospect ahead of me, but I had had quite enough of that elephant by the time we reached our destination and was as stiff as a board for several days! As was usually our luck the fight was over by the time I got there, and all that remained to be done was to gather up the corpses and try to find out who had killed whom. As evening closed in, and I was thinking of starting off for my headquarters again, I realised that I was very hungry indeed.

Green coconuts had supplied drink throughout the day. There was no habitation for miles, but the local *Chaukidar*, a sort of rural policeman, said he would make me a curry. He was very ancient and wizened. In those parts a man was appointed the local guardian of the peace as a sort of old-age pension. The appointment rested with the local people, and so they did not want too energetic a fellow on the job.

The *Chaukidar*, and how he made the fire to cook my curry. It was hot stuff, too!

He had with him an iron cooking vessel and a bundle which he said contained rice and other things. I had no matches, neither had he, but he squatted down and made a fire from two pieces of bamboo, and after a time produced the curry for me to eat.

The first mouthful nearly lifted off the roof of my mouth. The old fellow had a hardened palate and made his curry mostly of chillies, which was rather trying for one of my tender years, but I persevered and survived the ordeal. It would never have done to leave any of it or the old chap would have been dreadfully hurt. I thought the elephant the lesser of the two evils and went off again as quickly as I could!

This was how the old Chaukidar produced his fire. He hunted round for a piece of dead bamboo and split it in two lengthwise with the funny kind of battle-axe with which he was armed. On the outside of one half he cut a sort of groove which went through the outer skin to the fibrous part below. He gathered more fibre, separated it and placed it on a flat piece of ground under the curve of the bamboo he had notched.

Then he shaved an edge of the other piece of bamboo, and, grasping it in both hands, sawed it rapidly across the groove in the first piece which he held in position with his toes. After a minute or two he produced a spark which he blew into a flame.

Dan Beard, the famous American Woodsman, calls this the Co-li-li method, and says it is used in the Philippines. That is the only occasion on which I have ever seen it used.

A great advance on the friction method of making fire was the use of flint and steel. The back of the blade of your knife makes quite a good steel and will produce sparks if struck sharply against a flint or a hard stone such as quartz. The most important part of the operation is to catch the sparks on tinder that will flare up at once.

Rags or cotton charred by being baked in an oven make good tinder, so does shredded birch bark. Whatever the material used it must be kept absolutely dry.

The modern match is, of course, a great saving of time, but there is something very satisfactory in making a fire without it.

There is a lot to remember even when using matches. First of all they must be kept dry. It is better to carry them in an old shaving-stick tin or one of those medicine phials that have a screw top. Sometimes you can dry a damp match by rubbing it through your hair (if you don't put nasty stuff on your head!) or you can rub the match between the palms of your hands.

To light your match in a wind, face towards the wind, cup your bands with their backs to the wind and hold the match so that its head points in the direction of the wind. Do this before you strike the match so as to get the position. Then remove the right hand, strike the match and immediately bring the hand back to its former position.

The head of the match is pointed away from you so that the wind coming through your cupped hands blows the flame up the stick and not away from it as would otherwise be the case.

Remember always that flame wants something to run up; that is a very important principle of the building of fires which we shall go on to talk about next.

CHAPTER V

FIRE-BUILDING

There are many different types of fires and it is just as well to decide at the very beginning what kind of fire you want before you start to build it. Out in the open there are two reasons for fires — you may want light, or you may want heat.

For instance, right out in the wilds with animals prowling about it is customary to make up a bright fire to scare them away. In tiger jungle in India we always used to tether all the horses, bullocks and elephants near a bright fire which showed them up. If they were in the shadows there was always the danger of them being attacked. We built up our fires so that we could have as big a range of vision as possible and in order that we also could be seen.

In some of the tea gardens in Assam, the planters were quite safe if they sat out on their verandas after dark, so long as they had a bright light burning, but I know a fellow who was carried off by a tiger from a dark veranda. He escaped with the loss of his arm, and was famous enough for that, but became more famous afterwards for other things.

Then you need the heat of a fire to warm yourself or to cook your food. Each of these reasons demands a different type of fire, and since different kinds of foods are cooked in different ways, here again you want to build your fire to suit your need. Then there is your evening camp-fire, which you want to give light and cheery warmth as well as to last for a long time.

A fire is not just a fire, but something much more important, on which your health and happiness in the open air may at times depend.

To build a fire you must go about it the right way. You are supposed to be able to start one with two matches in any kind of weather, but if you start wrong you can easily waste a whole box of matches without any results.

First of all there is the question of the site to decide. It is a bad thing to light fires in a hole, or against a wall. It is criminal to do so against a living tree, yet I have seen Scouts start to do that. Make sure also that your site is far enough from your tent, or anyone else's tent for that matter, to prevent any risk of the tent catching fire even if the wind veers right round, and instead of blowing away from the tent blows towards it.

Tents easily catch fire. If one does, pull at the poles and let it down with a run and stamp on it, but you will have to be jolly nippy. I should like to add a warning against going to sleep and leaving a candle burning inside your tent. I have seen a fire caused this way.

Well, about the site of your fire. Take up the turf where you are going to build your fire and lay it carefully aside so that you can replace it before you go away. After that be careful to clear the ground of all material that might burn. You will have to be particularly careful on a peat soil, and sometimes it is necessary to cut deep down as the peat can easily smoulder underground.

Having prepared your site, you and your helpers should collect a sufficient supply of *dry* wood. Dry sticks are more easily obtained than you would imagine. Good twigs can often be found right in the middle of holly or hawthorn bushes. You can also get dry twigs on one side of the larch. Birch bark and elder bark are good for kindling, and so are twigs from the ash, maple and pine.

Other things worth remembering are dead ivy, pine cones, dry bracken, gorse, heather, frayed out rope, and even dry orange peel. Paper has its uses, too, but I have tried to show that it is not really necessary.

Now you will want a few dead branches. "Dead from off the tree" is best, because they will have absorbed moisture if they are lying on the ground. For this purpose the more suitable are Alder, Beech, Birch, Elder, Holly, Pine, Hornbeam, Ash and Thorn. You don't want great logs, but branches varying from half an inch to two inches in thickness. In wet weather you can often get dry wood by peeling the bark off a branch — beech for instance, or by chopping splinters from the inside of a log. Rotten wood is not much good.

You will now have your site prepared and material all ready to hand. If it is wet you will be wise to keep the material under cover. Always keep it under cover at night so that your fuel is dry for the morning.

There is an Irish proverb which runs, "No two people ever yet made a fire without quarrelling." You would be wise to observe that proverb.

There are various ways of starting to build your fire, but remember to start very small at first; to allow for plenty of draught or air; to have something for the flame to climb; and to feed the fire gradually.

One good way of starting a fire is to use "fuzz-sticks" or fire-sticks. These are made by whittling a stick so that the shavings curl on it but do not fall off. Three or four of these should be made and built up together like a pyramid, either round a central one or round a loose heap of kindling. When using fuzz-sticks always plant them so that the thicker end is up in the air, then the flame will climb up the shavings until it reaches the stick itself.

What Fuzz-sticks" look like. They are easy to cut.

A "log-cabin" fire. The centre is filled with fire kindling, and more is heaped over the top.

Another way is to build a sort of "log-cabin" of small sticks. The centre of the cabin should be filled with fine kindling, and more kindling should be heaped lightly over the top.

Still another way is to take two stout sticks and push them into the ground so that they form an arch. Some small twigs can be sloped over the arch until a little cave is formed. Above this cave another can be formed of thicker sticks, and above that another of still thicker material. Your best kindling can then be set alight inside the inner cave.

Whichever of these methods you employ, it should not be necessary, even on the calmest day, to give your fire more than a few puffs, so you will not need to burst yourself or break the brim of your hat. In heavy wind a little shelter may be needed, but don't overdo that either. In *Two Little Savages*, Ernest Thompson Seton gives the following verse about starting a fire: —

"First a curl of burch bark as dry as it can be,
Then some twigs of soft wood, dead, but on the tree,
Last of all some pine-knots to make the kittle foam,
And there's a fire to make you think you're settin' right at home."

There are several old rhymes, too, that help you to remember which woods are best for burning. I reproduce one of the best of them below: —

"Oak logs will warm you well
If they're old and dry;
Larch logs of pine woods smell,
But the sparks will fly.
Beech logs for Christmas-time,
Yew logs heat well;
'Scotch' logs it is a crime
For anyone to sell.
Birch logs will burn too fast,
Chestnut scarce at all;
Hawthorn logs are good to last
If cut at the fall.
Holly logs will burn like wax,
You should burn them green;
Elm logs like smouldering flax,
No flame to be seen.
Pear logs and apple logs,
They will scent your room;
Cherry logs across the dogs
Smell like flowers in bloom.
But Ash logs all smooth and grey,
Burn them green or old;
Buy up all that come your way,
They're worth their weight in gold."

In very wet weather it may sometimes be necessary to start your fire in the tent in a frying-pan or in a billy. Never, however, keep it going inside the tent. It takes a good deal of rain to put out any fire that has got really well going and is being carefully fed.

Whatever fire you have built, and for whatever purpose you have used it, be sure when you have finished with it to put it out properly. See that there is not a single spark left. In Great Britain I have known heather fires, which have done considerable damage, caused by a tripper's fire left alight.

A Quick-fire Race — or whose fire will burn through the string first?

Here is a quick-fire race which you Scouts can practise so as to make you more proficient in building fires. I have taken it from an excellent little book, *Camp Fires and Camp Cookery*, by an American Scouter, E. Laurence Palmer.

"A string may be stretched between two trees in such a manner that for its entire length it is about twenty inches above the ground. At regular intervals under this string each of the competing boys selects a fire site. Here he assembles the material for a fire. It should be a rule that the stacked material may not reach higher than three-fourths of the distance from the ground to the string. At the signal, each boy lights his fire, using not more than two matches. The first boy to burn off the string above his fire by getting a sufficiently high and hot flame wins. Try this, and see if you do not think it is fun."

CHAPTER VI

COOKING FIRES

You can tell a Scout by his fire, and so we cannot be too careful how we make them. The most important part of the cooking fire is its building, and that is why we have gone fairly fully into the founding of fires. Unless your beginnings or foundations are sound, the work you do after or the building you put up will not be much good. This applies to other things besides fires, so try to remember to lay good foundations throughout your life.

Most people build their cooking fires far too large. All that is needed is one that is just large and hot enough to cook the food you want cooked without cooking you at the same time.

According to their properties there are two main types of cooking fires: a quick, hot, small fire that will boil water with speed and soon burn down to glowing embers that give out just the right amount of heat for frying; and a somewhat larger fire of slow burning embers that will keep up a steady, smokeless heat suitable for roasting, baking or simmering.

The soft woods — alder, lime, pines and so on — will give you quick, hot fires. The hard woods — ash, beech, hawthorn, etc. — will give you good slow fires. Occasionally it is best to combine the two types of wood; for instance, ash gives the best results when mixed with soft woods.

Suppose you want a fire to cook a quick lunch, to fry something, or just to boil a billy for tea. Well, this is the way you ought to set about it.

First of all put up a "crane" from which to hang your billy.

Drive a forked stick into the ground, or, if a forked stick is difficult to find, split the end of a stout stick down for two or three inches. Now lay a stout green stick across the fork, or wedge it into the split, so that it slants up from the ground, and weight the lower end with a stone, or peg it down with two other sticks. The slanting stick should be notched, or have the stub of a twig left at its upper end so as to hold the billy handle in place.

The Crane. This is used for cooking a quick lunch or for making coffee or tea.

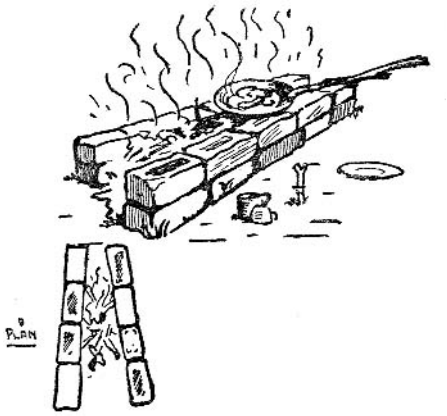
When in position the billy should hang about a foot from the ground. It is a good tip to suspend your cooking-pot so that there is plenty of air space left for the flames of your fire. If you push it right down on the fire you will, more often than not, smother the flames and lose heat.

The next thing is to build a "pyramid" fire under the point of suspension of the billy, which should be filled and hung before the fire is lit. A fire about the size of the crown of your hat will be quite sufficient, and it will only need a little feeding with small sticks before the water in the billy boils.

While the water is boiling get hold of a couple of quite thick sticks and place them on either side of the fire, parallel with one another and close enough together to carry your frying-pan or whatever it is you are going to use for frying. As soon as the water boils, take out the smoking butts of the sticks and leave only the glowing embers. With very little luck you should have your water boiled and your bacon or steak fried in twenty minutes.

A surer method of obtaining a bed of glowing embers in a short time is to use a "criss-cross" fire. You start in exactly the same way as above. Build a small pyramid fire about six inches high, and on each side of it place a foundation stick, two or three inches thick and a foot long. On these two sticks build up a criss-cross structure, rather like the "log-cabin" but with more sticks on each row. These sticks should be dry and hard, and not much thicker than your thumb. You will find that split sticks burn quicker than whole branches.

Remember all the time that you must set about your preparations with care. Without some kind of method and forethought you can make an awful mess of even such a simple thing as boiling your billy. I have known Scouts get their fire going and then discover that they had no water, and, naturally, while they were fetching the water their fire died out! It served them jolly well right, too. They weren't prepared for anything.



A modified Hunter or Trapper Fire built of bricks. The wider end should be towards the wind, but not facing directly into it.

The favourite cooking fire of the Western pioneers was undoubtedly the Trapper or Hunter fire (p. 39). To make this kind of fire lay two small logs on the ground — six inches in diameter is a good size — at an angle to each other so that they make a kind of V. At one end they should be only some four inches apart, and at the other end about a foot apart, but the distance between them will have to suit the cooking utensils which you want to place on them. The wider end should be towards the wind, but not facing directly into it.

Build your fire between the two logs and allow it to spread the length of the logs — say, a couple of feet. If there is time, it is better to square the top and inner sides of the two logs, as then your cooking-pots will not be so liable to topple over, and there will also be more room between the logs for your fire. Besides supporting the pots, the logs serve several other useful purposes.

They retain and confine the heat; they reflect and radiate the heat where you want it; they direct and control the draught; and they keep the heat of the fire off you! If the open ends of the logs are raised on sticks you will find it useful when starting the fire, when adding fuel, and when you want to increase the draught. With this fire you can boil more than one pot at the same time, as well as fry. Often, in order to get a larger cooking area, green sticks, or iron bars, are placed across the two logs on which to rest the cooking utensils.

Properly speaking, logs are necessary for the Hunter or Trapper fire, but a useful modification can be made by substituting for them bricks or stones or earth. The illustration shows one built of bricks.

The real Trapper fire can only be a general favourite in countries where there is a great amount of wood, and even in the West people are beginning to realise that wood is not inexhaustible.

CHAPTER VII

MORE COOKING FIRES

In European countries the favourite is the Open Trench fire. The success of the Open Trench fire depends greatly on the soil and the weather, but it is a very useful type when fuel is scarce, if there are a lot of leaves and dry grass about, and when the wind is blowing hard. The sides of the trench keep in the heat.

Two Open Trench Fires side by side just as they appeared in the camp of one of the competing Troops at the Denmark Jamboree. Note the awning put up to protect the fire (and cooks!) from sun and rain.

To make this fire dig a trench about twice as long as the space your cooking-pots will occupy. Just as in the Trapper fire, the trench should be narrow at one end and about twice as broad at the windward end. It should also slope down gradually from the windward end to a depth of about a foot at the rear.

If the soil is sandy, you would do well to line the trench with small stones, not flints. In the illustration you have two Open Trench fires side by side just as they appeared in the camp of one of the competing Troops at the Denmark Jamboree. Note the awning put up to protect the fires (and cooks!) from sun and rain.

Sometimes you will see a combination of a Trapper and Trench fire, that is the trench as described (p. 41) with a slow-burning log on either side of it. This combination is called a Chinook fire, and is very useful for a long camp as, by its aid, you can cook or bake almost anything.

Before going on to talk of fires that serve other purposes, I should like to mention one other fire that is good for both boiling and frying. That is the Backlog fire.

Lay a good stout, slow-burning log at an angle of about sixty degrees to the direction of the wind, and on the windward side of it build your fire right against the log. Lay two stout, green sticks at right-angles to the backlog as firedogs to confine the fire. Your pot should not be placed on them but hung on a crane clear of the fire, but against the backlog. Across the firedogs in front of the fire you can lay another couple of green sticks to support your frying-pan.

Stewing usually takes such a long time, and a stewing fire takes such a lot of attention that very little of it is done in camp. Here, however, is the description of an automatic stew fire that is well recommended.

Dig a hole about a foot deep and twice the diameter of your pot in width. Make the sides of the hole as steep and straight as you can. Again, if the soil is sandy, line it with small stones.

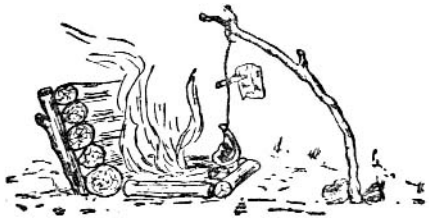
Build a fire in the pit, and hang your pot over the fire so that the bottom of the pot is only two or three inches above the surface of the ground. Put a good supply of sticks, twice as long as the pit is deep, into the pit so that one end is in the fire and the other ends are above the ground round the pot. As the lower ends of the sticks burn, the upper part will settle down, thus automatically feeding the fire and allowing you to go off and play! Such a fire, once well started, will only need attention about every half-hour.

I should not, however, advise you to wander away the first time you experiment with this fire. You may find you haven't built it in quite the right way and the machinery may fail to function. It would be a pity to lose a good stew. After some experiments you ought to find it quite safe.

Then there are baking fires to consider. For baking or roasting a high fire is best with a backing to throw the heat forward into the reflector or pan that is placed in front. The commonest type is the Reflector fire, where the fireback is made by driving stout sticks into the ground at a slight angle and by building up stouter logs against them one on top of each other. The fireback should be at right-angles to the direction of the wind and facing it. In front of this you can bake biscuits or flapjacks, or roast a chop, or some other delicacy, suspended by a string.

There is not space to describe other types of fires, which are very numerous — one book I know gives fifteen distinct varieties, all useful, and even then does not profess to have dealt with them all.

All I have been able to do is to give you a few types of the different kinds of fire that are used for various purposes, and I have endeavoured to give you the types which are most useful.



A Reflector Fire. The fireback should be made at right-angles to the direction of the wind and facing it.

Remember that it is of the greatest importance that your fire, whatever you are cooking, should be small and free from smoke, which means that you have to be very careful both as regards its construction and as regards its composition. Building and fuel are the two points you must watch. You cannot hope to be anything of a hand at out-of-doors cooking unless you can build and maintain a good fire — and the right one.

CHAPTER VIII

COOKING IN CAMP

Whatever your food may be, and however you intend to cook it, there are a few elementary rules that you should always remember.

You must be absolutely clean, in yourself, in your preparations, in your arrangements, and in your clearing up. It should not be necessary to tell Scouts that, but my experience shows me that it is. Possibly it is due to the mistaken idea that appears to have arisen that pioneers and such-like people did not worry about appearances or manners, so that when we get out into the open air we can discard these things too. I shall have more to say about this mistake later, so now I will say only that it is just as necessary for you to be clean out-of-doors as it is indoors.

Never start out to cook unless your hands are quite clean; wiping them on your shorts is not much good; you want to use soap and water. If you are alone have your wash after you have collected your firewood; if you have a helper, let him do the collecting of sticks and the stoking and keep the preparation of the food and the cooking of it to yourself. If you are on a cooking job, stick to it and don't look round for anything else — you will have quite enough to do as it is.

The utensils you use, pots and pans, knives and forks, and so on must be quite clean. Earth, and better still sand, are good cleansers provided that at the end of the cleaning process the earth or sand is itself removed. It is not sufficient to jab a knife into the ground and then straightway proceed to cut up the vegetables you and others propose to eat.

The arrangements you make in connection with your fire and kitchen must be cleanly. Remember this when choosing your site. You want to arrange your utensils and materials neatly so that you have them to hand.

Usually it is best to mark off your kitchen so that no one else comes into it except your helper.

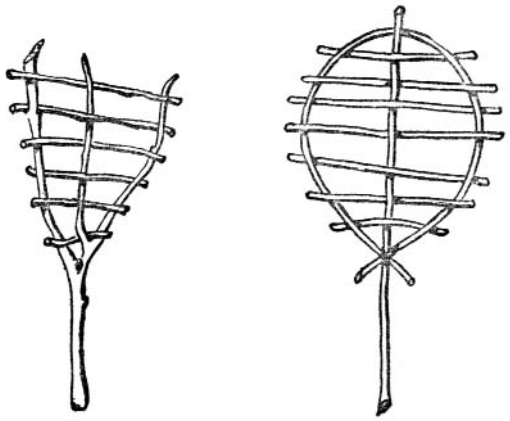
Don't throw the slightest scrap of food about, whether it has been removed previous to cooking, or whether it is waste after. Keep a special tin or something for scraps which should be burnt after you have finished cooking and feeding.

When you have had your feed, wash up all utensils, plates, and so on immediately. Don't just throw the water away anywhere near your kitchen, or in the bushes. This makes the ground damp and greasy and merely attracts flies and other things.

Dig a grease pit before you start cooking and throw the waste water into that. A grease pit is merely a hole in the ground made by removing the turf carefully and digging down a couple of feet, say, about a foot across. The sides should be steep and the soil carefully piled a little distance away near the turf.

Over the top of the hole you should place a few sticks and twigs, covered with grass or heather or bracken. This top "partition" will catch all the particles of food that are left in the water and should be burnt from time to time. When you break camp fill in the hole again and replace the turf.

Let us take just one or two cooking items. There is something to be learnt even in making tea. In this country we don't like our tea stewed. For tea you must have *boiling* water. As soon as the water has come to a boil, that is when the whole surface is broken with big bubbles, throw in the tea, a teaspoonful for every two of you is sufficient, but don't have too much water.



Camp Broilers.

Leave it on the fire for not more than thirty seconds, take it off, and when the tea leaves sink, after three or four minutes, bale it out. If the tea leaves are exceptionally slow in settling down a drop or two of cold water will help or a sharp tap on the billy. Sugar and milk can be put in the billy or given out separately as you like.

Personally, I prefer to place the tea leaves in a small, but very loose, muslin bag. In this case you will have to leave the tea a little longer after taking the billy off the fire and the bag will need shaking about in the water.

Porridge is fairly easy to make if you know how. Put sufficient water and some salt in the pot and when it is boiling hard sift in the oatmeal, or the substitute you have, meanwhile stirring hard. Keep it boiling for twenty minutes, stirring hard all the time. Now place it on the side of the fire and leave it to cook slowly while you fry your sausages. A little water in the bottom of the pan will keep them from sticking if you haven't any fat to start with.

In the book, *Spare Time Activities*, you are told how to cook dampers, flap-jacks and twists, so you do not need any information about them.

Here is a way to make a common stew, known usually as Hunter's stew. Chop your meat into small chunks about an inch square. Mix some flour with a little pepper and salt, and rub each chunk in the mixture. Scrape and chop up any vegetables you may have, including potatoes. Put all the vegetables into your pot with just enough water to cover them. Add the chunks of meat and enough water to cover them too. Allow the whole lot to simmer, not boil, for an hour and a quarter, and then eat it! The better your meat is the less stewing it will require, but you must be careful what kind of a fire you use.

Perhaps you would prefer to broil your meat, that is, cook it over glowing embers by direct heat. Broiling is a very good thing to learn, since it does not require any utensils. You can stick little pieces of meat on the end of a stick and broil, or toast, them. You can broil a steak or chop on a camp broiler made like those in the illustration, of green sticks of ash, beech or elm — yew and laurel and such-like are poisonous; you can broil on a large hot stone; or you can broil on a grid of green twigs laid across a Trapper's fire.

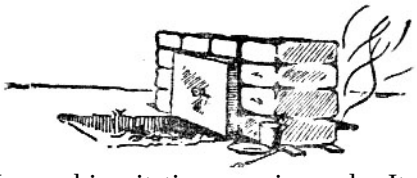
One or two hints with regard to broiling might be useful. Cut off all excess fat; have a suitable size bed of glowing embers, without flame or smoke, so that you do not need to add sticks to the fire. At first seal the outer surface of the meat by placing it almost on the embers for a minute, turning it every ten seconds. Salt the meat *after* broiling.

CHAPTER IX

MORE COOKING

A favourite dish in America and elsewhere is "kabob" For yourself alone you want anything up to a quarter of a pound of steak, half an onion and half a good sized potato.

Cut the meat into slices, an inch or so square. Cut the onion in half from top to bottom, and separate the leaves of one half. Cut the potato into thin slices. Cut a stick and sharpen it at one end. Pierce with it first a slice of meat, then a leaf of onion, then a slice of potato, then a slice of meat, and so on until you have all you want on the stick.



How a biscuit tin oven is made. It is placed on its side over a trench and bricks are packed round it. The handle can be made from an old cotton reel.

Cook it by laying the stick across the logs of a trapper's fire, or prop it over glowing embers. Be careful to turn the stick from side to side so that the "kabob" is properly cooked all the way round. When finished, salt it, and proceed to eat it off the stick. What can be simpler, no pots, no pans, no forks?

Lastly, just a word or two about roasting. Many people say that roasting is too difficult in camp, generally because they haven't tried. Roasting potatoes, for instance, in hot ashes is quite an easy thing to do, and we have all done it at one time or another.

Roasting meats, and so on, in front of a fire is more difficult, because it is hard to regulate and reflect the heat. A simple and workable method is to use a small oven.

There are many ways in which you can build one. One method is to dig a hole in a bank, a clayey one if you can find it. Another way is known as the "biscuit tin oven." The tin is placed on its side over a trench — in which the fire is afterwards lit — with a wooden handle, a cotton reel makes a good one, fixed to the lid.

Round the tin are packed bricks or clay or any old rubble so that an air space is left between the tin and the outer shell, except on the lid end. The outer shell should be made air-tight and a chimney provided. It is best to insulate the bottom of the tin with small pebbles. This will be found to make quite an efficient oven.

You can roast in a large billy if you take care not to have too hot a fire, and are prepared to clean the billy afterwards ready for the next meal.

Another way which has been proved successful time and time again is to use a strong iron bowl. Unfortunately, they are rather difficult to get hold of nowadays. The way to work it is as follows:—

Lift the turf from a flat piece of ground, the harder the ground the better. Light a good big fire on this patch and keep it going until the ground is quite hot. Then rake the embers away, leaving a clear patch in the middle large enough to take the plate, or bowl, that contains the meat you want to roast. The fat should be cut off the meat and placed on top of it.

The roast bowl. After a little "fire" preparation the bowl is inverted over a dish, as shown. Embers are raked all round the bowl, but not on top of it.

Over the meat and plate invert your iron bowl so that it rests evenly on the ground all the way round. Rake back the embers all round the bowl, but not on top of it. Keep a good hot fire going for five minutes, so as to seal the meat, and after that a slow fire. If you allow twenty minutes for each pound of the meat, you will know how long it should be cooked. At halftime, rake the embers away, carefully lift the bowl using sticks, not fingers — and scoop up all the melted fat and pour it over the meat.

You can bake your potatoes with the meat, and, if you are lucky enough to have another vegetable, it can be placed to boil in a billy on top of the bowl. Cabbages and such-like should be plunged into boiling water.

When everything is finished all you need to do to get washing-up water is to turn the bowl right side up and pour some water into it.

Well, there is not space enough to say anything more about cooking except this: Go out and practise it for yourselves, and you will quickly learn to take a pride in the dishes you can turn out.

CHAPTER X

COMFORT IN CAMP

You will remember I mentioned there seemed to be a mistaken idea amongst us that backwoodsmen, pioneers and explorers used not to worry about appearances or manners.

It is a mistaken idea, and in the matter of courtesy the fellow who has lived most of his life alone face to face with Nature is hard to beat. One of the most courteous men I ever met was one whom the ordinary sort of fellow in this country would classify as a heathen savage, but yet he had more of the milk of human kindness in him than any civilised Britisher I know.

I cannot go into details, but actually I was the first white man he had ever spoken to. Courtesy is not necessarily a product of civilisation, in fact many examples make one think that it is entirely the other way about.

Pioneers and so on may have worn beards, but it was usually for very good reasons, as a protection against cold or otherwise.

As a matter of fact all these people used to make themselves as comfortable as they could. They were not able to carry comforts and luxuries about with them, and so they used to make various odds and ends out of the material that Nature provided for them on the spot.

Take the Western Pioneers for instance. They clothed themselves in furs, using the skins of the animals they shot. They shod themselves in moccasins, tanning the leather for themselves or leaving it untanned as they fancied. They housed themselves, if they settled down for any period, in log cabins. They slept on mattresses of spruce and hemlock. They cultivated the ground near their huts and grew flowers and vegetables.

I'm afraid that we seem to take our illustrations of pioneering from stories of Deadman's Gulch which deal with some extraordinary finds of gold and the subsequent rush of all and sundry who want to make their fortunes.

According to such stories all the shanties and hovels are built on piles of empty tins and filth of the worst description, and the whole of the country is marred by those whose greed has reached to such a pitch that it has swept away any good qualities they may have had.

Of course such stories are grossly exaggerated, but in any case they do not deal with the pioneers that the Chief wants us to try to follow, but with those who came after them and brought the first wave of so-called civilisation into the country.

I have taken some trouble to rub this point in, because I want you to drive this false impression away from your minds. The real Scout is the fellow who reads and follows out what the Chief tells him in *Scouting for Boys*. I make no apology for quoting the following passage from one of his Camp-fire Yarns:

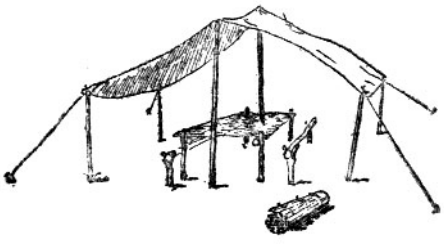
> "Some people talk of 'roughing' it in camp. These people are generally 'tenderfoots'; an old backwoodsman doesn't rough it, he knows how to look after himself, and to make himself comfortable by a hundred little dodges An old Scout is full of resource, that is, he can find a way out of any difficulty or discomfort."

If the Chief tells us that, we need not worry any more about it, but just look round to see how comfortable we can make ourselves when we go into camp.

Of course you can be jolly comfortable if you take a lot of things with you. I have done a lot of camping myself where I had a large tent, almost as big as a cottage, a nice bed, table, chairs, bath and everything else, but either I had an elephant to carry it all for me, or a steam launch. That's where I was lucky, for you will not find an elephant or a steam launch in your Patrol equipment!

On the other hand, I have camped just as often with nothing but the clothes I was in and an extra shirt and pair of shorts, and I believe I was happier when I did that than when I carried an hotel about with me. I did not have to worry so much and wasn't worried by other people, and so could just do what I liked in the matter of camping down for the night and so on.

Again the Chief tells you about making yourself comfortable for the night, so I will not give you any advice on that subject here, except to say that in Great Britain you would be more than wise to get hold of some kind of ground sheet on which to make your bed, and perhaps, too, that it is not the thing to go round chopping down fir trees so that you can make a bed!



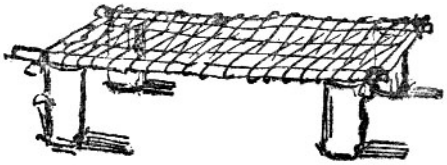
A high-class dining saloon.

Besides sleep, another important thing in camp is food. We have already heard something about that, but even after your food is cooked there are one or two things about which you should be careful. It is just as important that you should eat it in a clean way as that you should cook it in a clean way.

Perhaps it appeals to you to eat your breakfast off the ground. Animals do that, including pigs, so there is nothing very romantic about it. It is much better to have it raised off the ground. A large flat stone or a log of wood will make a good table.

The illustration shows a high-class dining saloon. As a matter of fact it is one of those built by the British Representative Troop at the Denmark Jamboree, 1924.

You will have heard that our Troop did not do so badly there. This will be a good example for you to follow.



A comfortable camp seat supported on logs.

The seat was a little difficult to balance upon, especially after a good meal. A more comfortable one can be built by making a sort of stretcher-like framework, and weaving between the framework a network of stout cord on which to sit. The seat in the sketch is shown with this framework supported on logs, but it can just as easily be lashed to thick sticks driven into the ground.

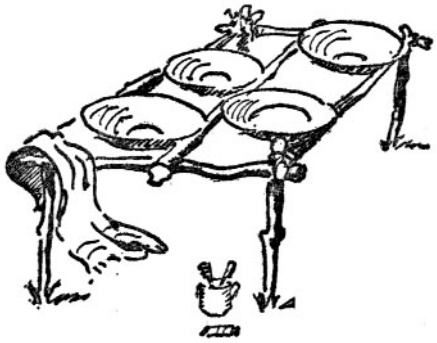
For your table you will find a small strip of white American cloth a good investment, if you happen to be taking your trek-cart along with you. It can easily be wiped with a damp cloth after every meal.

Another little gadget the British Troop used at Copenhagen was a washhand stand constructed in camp. Being clean fellows they brought the bowls along with them. Another example to follow!

Amongst other little odds and ends that add to comfort and tidiness are boot racks, boot scrapers, towel racks, knife and fork racks and so on.

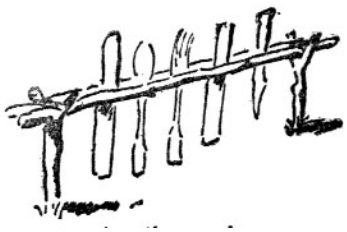
A boot rack is made by driving four short sticks into the ground in pairs three or four inches apart. The distance between each pair can be varied to suit the size of your boots. The front stick of each pair should be a couple of inches lower than the back one. Stretch a stick across the top of the lower ones and another across the top of the higher ones and you will have a very suitable rack that will keep your boots and shoes off the ground.

Boot scrapers can easily be made for the door of your tent by pegging down small bundles of brushwood or heather, or by fixing a stout stick, preferably one that has been split in half so as to give a fairly sharp edge, an inch or two above the ground between steady uprights.



A useful washhand stand which can be built in a few minutes.

Towel racks are very easily constructed by lashing a horizontal stick between two uprights some three or four feet high. You can fix on additional rails, like a towel horse, as you like.

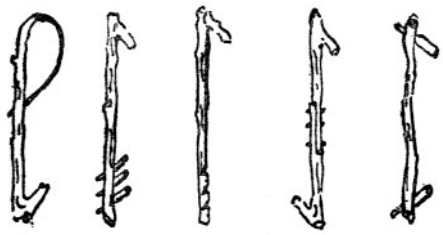


A cutlery rack.

A rack for knives and forks and spoons is made by splitting a stick lengthwise, and whipping the two together again, not too tightly at the ends and in the middle, and fixing it up like the one in the illustration. If you find it difficult to split the stick, two sticks lashed together in the same way will do.

You will probably find it difficult to manufacture an efficient knife in camp, but it is good fun to whittle forks and spoons out of sticks, but beware of yew, laurel and other poisonous woods.

Now that we have wandered back to food again — the open air does make us hungry! — I might mention that, when you are cooking, you will find pot hooks jolly useful things. I give you a few samples, all of them made out of bits of sticks such as you might pick up anywhere.



Pot hooks. The holes for the pegs are generally drilled with an augur.

Of course, that is nowhere near the end of the various gadgets you can make to fit yourself up comfortably in camp. I have only given you one or two samples to start you off in the way of making these things for yourselves.

CHAPTER XI

BE A HIKER

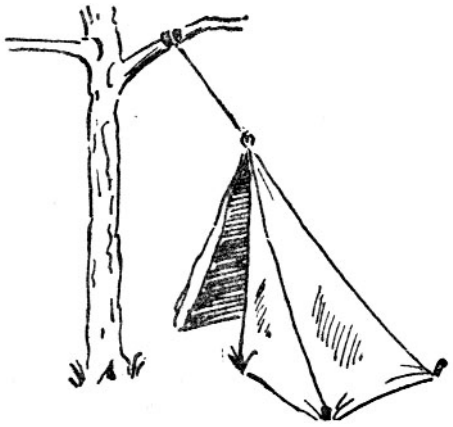
I am not going to write you an enthusiastic article on the subject of hiking, but will simply try to show you what kind of a kit you should take with you. You must decide for yourselves where you are going and what you are going to do on the way.

Perhaps I might say, however, that there is no particular object to be gained in trying to break records in the matter of miles per hour or miles per day. The more quietly you proceed on your way and the more time you take over it, the better will you enjoy your trip and the more will you see.

First of all let us consider the kit that you want to take with you. You must tackle this question from the point of view of what is unnecessary rather than from the point of view of what is necessary. You do not want to overload yourself, so cut things down as much as you can.

It is best to hike in pairs for companionship's sake, and if you are in pairs you will be able to divide up your kit so that each member of the pair has less weight to carry than he otherwise would have if hiking alone.

I will give you the requirements of one, and then you will be able to see for yourself what you can save if you pair off with anyone else.



A semi-pyramidal tent, which is ideal for hikers.

You will want shelter for the night, blankets, groundsheets, cooking utensils, mug, plate, knife, fork and spoon, change of underclothes, extra pair of socks, and light shoes, soap, towel, toothbrush and comb (perhaps a razor, too, if you are old enough), and various extras, such as matches, watch, compass and map.

If you are wise you will also add to this list a sweater, for evening wear when you have cooled down after your walk, a toque or knitted cap for night wear, and (shades of grandmothers!) a pair of bed socks. A pair of socks worn in bed is almost as good as an extra blanket, for if your feet are warm you will sleep all the better. You may also find a use for a first field dressing.

You will want some kind of a pack in which to carry all these things, a strong knife and a small axe and about twelve feet of stout cord.

Now let us go into details. First of all we will chat about the shelter you will require for the night. The main point you have to keep in mind is that your shelter is for night only, and that it must be light. The most simple form is just a kind of lean-to, made of a thatched hurdle or of some kind of cloth material, under which you can lie. This kind of shelter only protects you from above and from one side, but it has been proved quite sufficient in warm, dry weather. In some parts of the world, at certain seasons of the year, it is quite possible to sleep right out in the open without harming yourself, but in Great Britain that is impossible without risk.

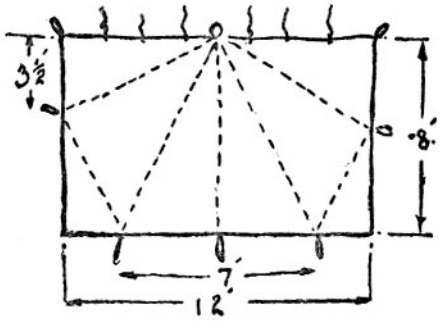
When we were talking about tents I mentioned the semi-pyramidal tent. It is a tent shaped like a pyramid cut vertically in half and is one of the lightest kind of enclosed tent in which it is possible to stand upright. Possibly the best sample of this is the "tarpaulin tent" (I give Kephart's name for it). On the opposite page you will see a pattern of the material required, showing the tape reinforcements along the seams, and on page 57 a sketch of it set up as a semi-pyramidal tent when the corners are tucked underneath.

One of the most suitable tents for hiking is a wedge-shaped one, like this. Doors can be provided at each end if desired.

The simplest and most satisfactory tent for hiking is just an ordinary wedge-shaped tent made of a suitable size and of suitable material. If lightness is the first consideration, both ends can be left open, provided you don't mind a stiff neck from the draught. Otherwise one end can be closed, or doors can be provided at each end. A tent of this nature can easily be erected, using Scout staves, or thumb-sticks as poles, or it can be erected by using one staff and running a cord from that staff under the ridge to a convenient tree, as shown in the illustration. If you use light material, like balloon fabric, you may be able to add walls at the side without greatly increasing the weight.

The main point about hike tents is that they should be light, easy to erect, and not necessarily require poles and pegs to be carried with them.

After tents come blankets. These are also important. You will probably find you require two. They should not be of any cotton mixture, but all wool, and they will provide more heat if they are loosely woven and fluffy. Try to get hold of decent sized ones of a darkish colour.



A pattern of the material required to make a semi-pyramidal tent. Notice the tape reinforcements along the seams. On page 29 is a sketch showing you the tent when set up, with the corners tucked underneath.

Here is the best way to get the full value out of a couple of blankets. Spread one out on the ground, double the other lengthwise and place it on top of the first so that the fold lies along one edge of the one on the ground. If long enough, turn over about a foot or so of the second blanket on top of itself. Fold the other half of the first blanket back on top of the second and fold the foot of it under the whole lot.

The object of doubling back the blankets at the foot is to provide more warmth for your feet.

If you use big safety pins, you can pin the two blankets together at the foot and at the sides, thus making a kind of sleeping bag.

Cooking utensils are rather a difficulty. Ordinarily speaking you will want a billy and some kind of a frying pan. Any ordinary sort of round tin will do for your billy, if it does not leak and is clean. A wire handle strung across the top will be a convenience.

Your frying pan needs more consideration. Iron frying pans without a handle are usually recommended. These frying pans have an oval socket into which you can insert a green stick. Aluminium frying pans are not very good, because they are apt to burn, but you can now get quite satisfactory ones made of "aluminol" or other mixture, which do not have this defect and are much lighter than iron. Many of these are provided with a folding handle, which is not to be despised since it saves a lot of time. Similarly, you can get canteens which give you a number of utensils all fitting into each other.

With regard to these contraptions the only warning I would give is to see that they are of good workmanship and that the folding parts are strong. Test them well *before* you set out on your hike and not during it; then you will know where you are.

We will pass on to the question of a pack.

Here, again, it is very much a matter of suiting yourself.

A good form of pack is a bag made of waterproof canvas, two feet square, with a flap that comes half-way down the outside and is fastened with three straps. It is best to bring the mouth of the bag in a little under the flap.

The bag is suspended by two straps which come from a common centre at the back, over the shoulders, to buckles sewn at the bottom corners of the bag. If not of good strong leather, the straps should be of stout broad webbing. Thin straps, or even broad straps of thin material, will just wrinkle up and cut into the shoulders. This bag will keep a good shape when a blanket is folded up carefully to fit it and placed at the back.

The Norwegian ruc-sac has the reputation of being the best kind of pack. It is placed on a framework of ash called a *meis*, which keeps the actual bag in position on the back, but at the same time allows the air to get between. Other frames are made in Switzerland of cane. A simple means of obtaining this current of air is to insert lengths of cane into small pockets on the back of the pack so that they are held vertically along it.

I'm afraid that is as far as we can go in the matter of hiking just now, but if you follow some of these tips you may be able to save yourselves trouble and expense. As you will have realised by this time, I do not want to lay down one definite way in which you should do a thing and then proceed to tell you exactly how to do it. I would much prefer, and I hope you do too, that you should try out things for yourselves and experiment a bit, and these few hints will, I hope, enable you to do this.

I would also like to suggest that when you are in the experimental stage with your pack, tent and kit, you take a few day hikes only as trial runs. This can easily be done before the real hiking season arrives and will give you practice and help to get you into trim. In a day hike, although you do not actually sleep out at night, you can practise everything else, including cooking.

CHAPTER XII

STALKING

Every Scout, whether in time of war or in time of peace, must be able to stalk if he is to be any good as a Scout. We people hope that wars will not come again in our time, or ever again for that matter, but we would be foolish if we did not study the lessons that more war-like Scouts have given us.

The Boy Scout needs to be able to stalk if he is going to obtain the greatest benefit he can out of the observation of Nature. It is also an exercise and game of the greatest interest to pit oneself against an animal or bird and see how near one can get to it without causing it to take alarm. The Chief Scout again and again suggests amusing games which we can put into practise and succeed in, if only we are able to stalk in a fairly decent fashion.

In *The Scout*, our weekly paper, you will always find articles on woodcraft, and all kinds of learned people have been giving us the results of their observations of Nature. That is all very well for those who are content to do their Scouting indoors or to let other people do the work for them, but it is ever so much better to find some of these things out for ourselves whenever we have the opportunity. That is one of the reasons why we should try and learn how to stalk more or less properly.

Stalking of course merely means that you have to creep up to your object without being seen, without being heard and without being smelt. If you do that there is some possibility of the object you are after remaining there until you are able to get quite close up to it. In that case you will be able to observe it very carefully, mark its form, colour, movements and other characteristic habits, and possibly to get a good photograph of it.

The first thing that you should set out to do, therefore, is to train yourself to move about through the grass, or through the woods, quite quietly. It is jolly difficult to do at first and takes a lot of patience and practice.

We have all heard how the Red Indians used to step noiselessly through the woods — well, I have seen other people do just the same in other parts of the world, and it was practice that enabled them to do it. Any native hunter, no matter what his race or country may be, learns to do this because he depends upon these quiet movements for his living. The "boy" who is employed by a big game hunter would have a very poor chance of earning money if he blundered along through the jungle the way some of us do in our woods.

There is a saying that one should crawl before one walks, but that does not apply to stalking, because then one has to learn to walk noiselessly first. It takes a long time to crawl, and it is very tiring, so that you should aim at keeping on your feet as long as you can when you are stalking an animal, until you get quite close.

Noiseless walking is very much a matter of balance. The cat, for instance, is one of the quietest of animals when it likes. The soft pads it has on its feet help it a great deal, and so does its power of balance. The cat is a stalking animal; just watch it when it is after a bird (but save the bird before it is caught, by shooing it away), and see how it moves its feet carefully one after another and can stand still and poised at any moment if it thinks its prey is alarmed.

You must learn to imitate the walking methods of the cat. Plant your feet so that on the slightest alarm you can remain poised, immovable as a statue.

Well, you ought to try and do the same and plant your feet in such a way that you can remain poised, too, on the slightest alarm, and turn yourself into a living statue. Then also you must be very careful, too, where you plant your feet, so that twigs do not crack under your weight and leaves rustle; in fact, as the hunter's saying is, you must have eyes in the toes of your boots.

Above everything else you must avoid the dangers of stumbling over roots and bushes and so on. One way to help you to guard against this is to practice and adopt the woodman's walk in which the knees are kept loose and slightly bent and the toes pointing straight forward. The more you point your toes out as you walk the more do they tend to act as hooks and catch in obstacles. You can try all these things for yourself in the woods even if you have no particular object in your stalk. Just try and see how quietly you can move, and if a blackbird, say, starts up right under your feet and not twenty yards away you will know that you are getting on.

Another tip that you will find useful is to adapt your movements to the more natural noises that are going on round about you, such as the noise of the wind in the trees and so on.

Then when you get fairly near to the object of your stalk it will probably be necessary to desert the walk for a crawl. Birds and animals have sharper eyes than you have, just as they have sharper ears, and if you are not very careful they will spot you a good way off, so you have to get down low and take advantage of all the cover there is.

Learn to crawl like a cat. As you move bring your knee up to where you placed your hand, and at the same time do not let your feet make the slightest noise.

There are many ways of crawling, all of which necessitate a good deal of practice. The one which you will find most useful and which you can have demonstrated to you anywhere is the cat crawl. Again have a look at a cat and watch how it moves and try to adapt these movements to suit your own hands and knees. You want to try and bring your knee up to where you placed your hand, and, at the same time, to prevent your feet from making a noise.

Some people find it easier to work along on their hands and feet in the same way. All cats, small or big, stalk along in the very same way. I have seen leopards and tigers doing exactly the same. Then when they get quite close to their prey they crouch close down to the ground and almost slither along it, moving very slowly one paw after the other, almost like an overhead swimming stroke. That, too, is what you must learn to do in the end, so that you can worm a few feet nearer at a time.

But remember that, when you get within shooting distance, all the shooting you do is with a camera!

And then you have got to move without being seen. I have already tried to show you how this can be done by keeping low and making use of cover. Besides that you should take the greatest care that the clothes you are wearing are somewhat similar in colour to the country through which you are moving.

I remember when I was at school Mr. Kearton coming down and showing us some of his wonderful bird photographs and telling us how he took them by using an old stuffed cow to hide in. What amused us most, however, was his description of the suit he sometimes wore, which was green on one side and brown on the other, so that he had just to turn over to suit the ground he was working over. Since those days we have heard a lot about camouflage and protective colouring, but nothing has emphasised the need of this precaution more than that parti-coloured suit. There have been many times when I wished I had one like it, only more so, with about six changes of colour to it!

I am not going to talk to you about how to make use of cover, and what not to do when you get to boulders and so on, because you can read all about that in Scouting for Boys for yourselves, and the Chief can tell you about that much better than I can.

I have left the bit about smell to the last. Just as animals have sharper ears and eyes than we have so they have sharper noses. We have been told that an elephant can scent a man at a range of a thousand yards.

We can't scent an elephant at a tenth of that range, though he is an enormous animal, and has at times an enormous smell.

I'm afraid I don't know anything about the smelling power of birds, nor do I remember having read anything about it, so I suppose their sense of smell is small in comparison with ours, but you have only to try and stalk a deer, say, to see how it throws up its nose and sniffs the breeze.

What you must do, therefore, if you hope for any success in stalking an animal, more especially a wild one, is to find out which way the wind is blowing and then, if you possibly can, work up to the animal against the wind, so that the wind blows from the animal to you and not from you to the animal. There will then be some possibility of the animal not scenting you and getting alarmed. Again, native hunters acquire a much stronger sense of smell than we ordinary people have, just as their sense of hearing and eyesight become stronger.

There is much more in stalking than the little I have been able to tell you, but the practice you make in these few points will soon show you what else you have to learn, and the more you learn the more you will realise how small animals and birds can beat you at a game which is peculiarly their own.

CHAPTER XIII

TRACKING

NATURE is an open book to the Scout who can see and read the signs of the woods, of the valleys and of the plains. Where the Tenderfoot would only see a number of scrapes and scratches and a jumble of meaningless marks, a good Scout will find from these same marks an interesting story that tells him who or what has passed that way before and for what purpose.

A track is the impression made upon the ground, or sometimes in the snow, of a passing animal or man. From the shape and appearance of a single impression one well versed in tracking is able to tell the kind of animal that made it. All of us could tell whether the animal had been human or not, but that is about as far as most of us could go.

The *Shikari*. The man who could read tracks as easily as you can read a book.

I remember many years ago when out on a big tiger shoot we came across the "pug" or mark of a tiger. I think nearly all of us could tell that it was a tiger, because the pug was just like the footprint of a very large cat, four round blobs in front of a large blob and no nail marks showing.

Our *Shikari*, or tracker, bent down and examined it closely. Finally he started up and said: "A tigress passed this way about three hours ago, she was hungry and tired. We will probably find her within the next mile." There was only one impression on a little piece of soft sand. We went on, and everything turned out as the *Skikari* had said. What were the signs that led him to his conclusions we could not find out, as he was unable to explain how he read these things.

People not so experienced need a succession of tracks, a trail in fact, before they can hope to reach anywhere near a correct decision. It is the following of such a trail that we classify by the term Tracking.

Tracking, then, cannot be learnt in an hour, or in a day, or in a week; it is an art that requires a considerable amount of practice, and for this reason, if for none other, you should make a habit in all your trips into the open of seizing every opportunity you can of obtaining that practice.

Tracking is an activity that can be practised at all seasons of the year. In winter you can find no better medium for showing you tracks than the snow, yet we generally neglect the opportunities that the snow gives us. You should remember that birds as well as animals can leave tracks, and you will frequently find very interesting bird tracks in the snow, and rapidly learn to distinguish between the bird that hops about on the ground, the bird that perches in the trees, the bird that wades in the water and the bird that swims.

In reading *Scouting for Boys* for yourselves you will have noticed how the Chief Scout goes on from Observation to Tracking. Similarly you and your Patrol should never miss a chance of playing an observation game, there are heaps of them, ranging from Kim's Game; or of indulging in little competitions as you go along the road to see who will first spot a certain object, shop, or certain type of man.

You may remember what I said some time ago about getting your foundations well laid; well, a habit of observation is essential if you ever hope to be anything of a tracker. It is not only the tracks and trails that you have to consider, but also all the "signs," such as scratches on the rocks or on tree-trunks, hairs caught in bushes, leaves or worm casts on the track, and so on, all of which help you to determine what animal made the track you are following and the time that has elapsed since it passed. So you see that Tracking does call for very particular observation.

There is very little I can say which will be of much help to you since so much is a matter of your own individual practice. If, however, you are working along a road, no matter what the track you are following, it is best to work in pairs, each one taking a side of the road, so that you can the more easily spot the trail if it leaves the road. Apart from this it is usually best to work by yourself. A companion is apt to distract attention, and very frequently the track is obliterated by someone with you.

Supposing you are starting off on a track for the first time, the most important thing for you to do is to sit down and study the single track. If you can sketch it so much the better. An outline of the track, drawn the exact size, and one or two of its more pronounced features will do. Whether you can sketch it or not, try to get the picture of it printed off inside your head so that you can pick out that particular track from others.

When satisfied as to this, step out along the trail, either stepping close behind each track, if it is a man's or close alongside. If you can make your own steps the same length as those in the trail you will find it jolly useful when you come to a difficult bit of ground, for as often as not, by stepping out at the same pace, you will be able to pick up the track again.

If you do happen to lose the trail, you must make a cast to find it again. Place your staff, or something fairly conspicuous at the last track you saw and work round it in a wide circle, twenty, forty, or sixty yards away from the staff as a centre. Again, if you have your Patrol with you it is best to leave all except one at the mark and only yourself and one other work round the circle in opposite directions. If the whole lot start off to find the lost trail, their tracks will probably wipe out the one you are trying to follow.

In some parts of India each village has, or rather had, its trained tracker. So whenever a crime was committed in the village, the tracker started off to trail the fellow who had done it and, when the trail crossed into the country belonging to another village, the tracker in the new village took up the trail. Frequently if the trail was lost in any village, the inhabitants of that village had to pay for the crime.

A game on the same lines is quite easy to arrange. Each Scout, or Patrol, can be given a small tract of land adjoining the others. Then you, or a friend, can make a track through all the "villages" while the others are away. The first Scout, or Patrol, can then be called up and shown where the trail starts. If the trackers can follow it to the end of their territory they hand on the trail to the next Scout, or Patrol, and so on.

You need not expect to be so good at it as these Indian trackers. They have had years of practice, and some of them are extremely expert. The Headman of a village was brutally murdered in his house one night. The only clue found in the morning was the single print of a naked foot on a white sheet. After

some time the murderer was run to earth nearly a hundred miles away. The Chief Scout has told you other tales of a similar nature.

The clearness of a trail obviously depends greatly on the nature of the ground. On a sandy soil, especially when there is sun and a wind about, the tracks will be indistinct, the edges being blurred and the surface dry so that the track looks quite old. The same tracks will look much fresher on damp ground, and will remain very distinct in muddy patches, more especially if it is clay mud, under the shade of trees or hedges which protect the tracks from sun and wind. On the other hand, if the trail crosses hard, stony ground, it will be very difficult to spot it at all, the only signs left being shown by displaced stones or scratches.

When the trail is difficult to see, because it crosses hard ground or grass, look some thirty yards ahead in the direction indicated by the last track, and, in the case of hard ground, you will more easily notice the displaced stones. In the case of grass you will be able to spot where the grass has been bent and broken. The signs left by each track may be small, but seen one behind the other at a distance they will show up. It is possible to follow a trail on grass quite quickly on horseback by looking well ahead.

You will not have completed your education in Tracking when you can just follow a trail. There is a lot more in it than that. When you are out you will frequently come upon a lot of little signs near each other, and as a tracker you will be expected to be able to read them so that they tell you what has happened. This needs practice, too, and many Troops now have little tracking grounds built of sand in which little stories are acted of quite a simple nature, the Scouts being afterwards required to try to read what has happened.

CHAPTER XIV

AXES AND KNIVES

It may take you a little time and money to get a good axe, but that will be well repaid by the service it gives. You want to get hold of one shaped something like the one in the first sketch (p. 72). Its weight all told should not be more than a pound and a half. See that the head is of good steel and is sound. See also that the handle, or haft, is of good strong wood; ash and such-like are good, because you want a wood that has a little give in it.

You must be most particular to see that the head is well wedged on to the haft whenever you have your axe in use. It is very difficult indeed to get hold of an axe the head of which does not work loose, and the big axe-making firms have been trying all kinds of dodges to prevent this. Few of them have been successful, however.

You can imagine the nasty mess there would be if an axe-head flew off and struck anyone in the face. I have not seen it actually happen, but I have seen some very close shaves, and in one or two instances the standers-by were not old enough to start shaving !

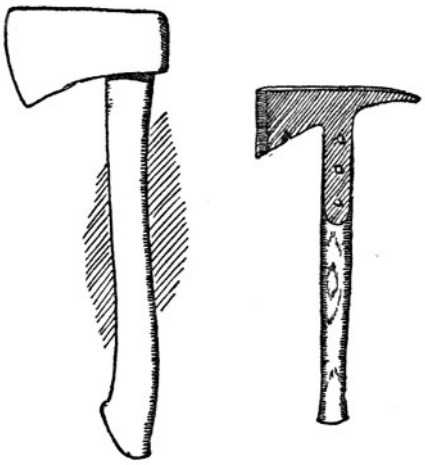
So be certain to look to the wedging of the head, and renew it from time to time, if necessary. You can tighten up the head by dipping it in a bucket of water, but that only lasts for a short time, because as soon as the haft dries up again the wood contracts, just in the same way that the water makes it swell.

Last summer a New Zealand Scouter told me that when he hafted an axe he dipped the top of the haft into linseed oil and also dipped the tip of the wedge into linseed oil before knocking it home. He said the oil acted as a kind of a cement and he had found this method most successful during the last fifteen years, so that is a tip worth remembering.

Then with regard to the treatment of your axe. Some fellows just throw it about anywhere and use it for any old thing, poking the fire, opening a tin, and so on.

A real Scout would not do that, for to him an axe is an axe and nothing else, and the kind of axe we use is one that chops wood only.

When buying an axe get one something like this. See that the head is of good steel and the handle is made of strong wood.



Do not buy this type of axe. It is useful for the purpose for which it was designed, that is, smashing windows and so on, but it is of little service to Scouts.

Of course you can find other kinds of axes which do other things, but they are not also meant to chop wood. There is, for instance, the kind of axe that many Scouts got stung with because some shop or other wanted to get rid of old stock and so labelled it as the Scout Axe. On the opposite page you will see a sketch of one of these "bargains." A very good axe for the purpose for which it is designed — namely, for smashing in windows and helping men to climb up walls or poles.

It is used by firemen and by men repairing telegraph lines, neither of whom want it to chop down a tree or to gather firewood. For some reason or other this axe has been christened a tomahawk in Great Britain and so it appeals to our romantic instincts. In Australia they call the ordinary hand axe a tomahawk, and they are nearer the mark.

Take great care of your axe. Use it only for the purpose for which it is intended — to cut wood — and keep it clean and sharp. A rub on the grindstone now and then is necessary. Use plenty of water so that the steel does not overheat during the process, and start well back from the edge on each side and gradually work forward. You will find it safer to turn the wheel away from the blade, and not towards it. You can finish off the job on a whetstone.

Apart from this it is only necessary to occasionally touch up the blade with a whetstone. You will find it worth your while to buy a piece of what they call "carborundum" stone. Put a little linseed oil on the haft occasionally and, when not in use, keep the head oiled or greased.

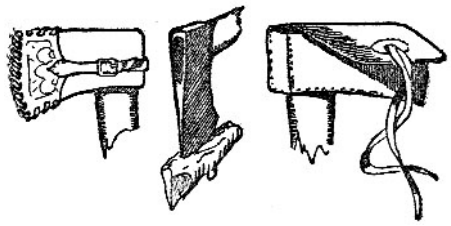
You can carry the axe in a pouch, but in any case you should have some kind of mask to cover the edge, or bit, of the blade. This is for safety's sake, for you can get a very nasty cut if you knock up against the business side of an axe. Never leave an axe lying about with the edge unprotected; if you have not a mask handy, knock the bit into a piece of wood or a stick.

Considering the number of accidents there are, we must regard an axe as a very dangerous thing indeed. One does not like to think that there are so many fools in the Scout world, and so it must be the axes' fault.

When you are using an axe to chop up sticks, it is best to keep your other hand and both your feet well out of the way. I have seen some fellows steady the stick they are chopping with a foot, and then wallop their axe down within an inch of their toes. These are the kind of fellows who don't deserve to have any toes, or an axe either for that matter.

I admit that when you are splitting sticks lengthwise you may have to bring your second hand into play to hold the stick up, but I should do this as little as possible, and rather split such sticks when they are lying

flat. One most important point is that the spot where you hit the stick should be resting on something solid, as otherwise the ends are apt to fly up and catch you a wallop in return.



Here you see two types of axe masks. If you have not a mask handy never leave the axe lying about with the edge unprotected. Knock the bit into a piece of wood as shown above by the centre sketch.

One other warning, don't ask the newest Tenderfoot to chop up the fuel and expect him to know all about it. You should only allow those Scouts to use an axe who really do know how to use it, how to take care of it, and how to avoid its dangers and also prevent them.

By so doing you will have less chance of an accident that might spoil the whole of your little camp.

Knives, too, need some care and attention. We are rather inclined to treat knives as such an everyday affair that we don't worry about them. Now, however, that it appears to be fashionable for Scouts to carry a sheath knife, in place of a clasp one, it is necessary to be more particular.

With regard to clasp knives, the ordinary Scout one with one good blade and a marlin-spike is hard to beat, but if you can get one with two blades it is better. The small blade should then be reserved, and kept absolutely clean, for emergency use in, say, surgical cases. I don't think the addition of a tin opener is very advisable. Whatever clasp knife you have, avoid those that have about a dozen separate instruments in them. They merely add to its weight and do not much increase its usefulness.

The sheath knife is really a skinning knife, but it has a kind of romantic appeal which attracts us. It can be a very useful tool, since it is always ready to hand and can be used for cutting small sticks, cutting bread and bacon, peeling potatoes and any odd job that comes along.

Whichever kind of knife you buy see that the steel is really good and not tempered too hard. When bought, take care of it, keep it sharp and touch it up occasionally with a stone and oil.

If by any chance you use your knife to split sticks do not hammer it on the back, but press it down evenly. If you are whittling a stick, always cut away from you and never towards your body, and if you are sitting down to the job, hold both stick and knife away from, and in front of, your knees.

If you are carrying a sheath knife make sure that your sheath is quite safe. You can buy better sheaths now than you used to be able to, but all the same it is much better to make your own.

Inspect the other knives in your Patrol, and your own too, perhaps, the next time the Patrol meets and you will probably receive a series of shocks.

I do, however, want to impress upon you two things in particular:—

Firstly, that both an axe and a knife are dangerous things in the hands of one who has not been shown how to use them; and secondly, that you should see that both are in good order before you go out into the open, even if it is only for a day trip.

CHAPTER XV

ACCIDENTS WILL HAPPEN

"Well, Jack," said the Troop Leader to the Patrol Leader of the Cuckoos, "I hear you are having your first Patrol camp with the Cuckoos next month."

"Yes," said the Patrol Leader, "we are really off on our own this time, and we are looking forward to a ripping time."

"I hope your camp is a success," said the Troop Leader, "but it all depends on you and the arrangements you work out now whether it really will be a good show or not. Have you made all your arrangements ?

"Rather — everything is fixed up, site, water, food, fuel, bedding and all the rest."

"What about accidents? They will happen, you know, even in the best regulated families."

"By Jove," said Jack ruefully, "I never gave a thought to the possibility of an accident. Do be a good chap and tell me the kind of thing a P.L. should be able to deal with a P.L. like myself I mean, not one of the 'super-ambulance certificate' kind of chaps."

"All right," replied the Troop Leader, as they drew into the fire. "I can give you a few tips. Some ass is sure to cut his finger."

"I know that," broke in Jack. "Wash well. Paint with iodine, and dress with boric lint and bandage."

"What about an axe cut on the foot?" queried the Troop Leader.

"Same treatment," said Jack.

"But if bleeding persists?

"Try pressure with pad and bandage."

"If you can't stop it, and the bandages become soaked?"

"Take him to a doctor. There is probably an artery cut that needs tying."

"Righto — now, what would you do if a chap fell off his bike and scraped his knees and wrists?"

"I don't know."

"Wash well and try to get all the dirt out, then paint well with iodine and repaint twice daily until it heals. If there is any fluid oozing out, put on a boric lint dressing and a bandage. By the way, which side of the lint goes next the skin? Smooth or fluffy?"

"Oh, give me a chance — smooth, of course."

"Well now," resumed the Troop Leader, "suppose you are making tea, and the cook upsets a billy full of boiling water over a chap's foot (see sketch, p. 78), what do you call that?"

"A scald."

"Right. And how do you treat it?"

"You've got me again there."

"Remove the stocking very carefully and, if it sticks, cut round with scissors and leave the adhering part to come away later. Don't break any blisters. Put on cotton wool to keep out the air, or, if you have any boric ointment, put it on strips of lint and apply. Strips are better than a big piece because later they can be removed bit by bit for a fresh dressing.

"The main thing is to keep out the air, so when your dressing is on, put on cotton wool and plenty of it, and bandage over the top of the whole lot. Shock is always present in these cases, so make the fellow lie

down in his tent and have someone to attend to him all the time. Keep him warm with extra blankets, and give him a hot drink, such as milk or tea."

"Well," said Jack, "I hope we don't have anyone causing all that bother, but I'm glad you told me all about it — it's best to Be Prepared."

If the camp cook overturns a billy full of boiling water on a Scout's foot you must treat him at once for a scald.

"Yes," said the Troop Leader, "but there are two other things you had better prepare for. The first is a speck in the eye. That nearly always happens on the journey to camp through fellows putting their heads out of the carriage window."

"I think I know about that," said Jack. "You can pull down the lower lid, and, if you see the speck, remove it, or you can pull the upper lid out a bit and push the lower one up below it and let the lower eyelashes brush the back of the upper lid. If that does not do the trick, take him to a doctor. How's that?"

"Not bad, but you have forgotten a very important thing at the start. What is it?"

"Oh yes, of course," said Jack. "Prevent him rubbing his eye."

"And if the speck is sticking in the eyeball?" queried the Troop Leader, who knew rather a lot about First Aid.

"Drop in some olive or castor oil, apply a soft pad of cotton wool, bandage, and take him to the doctor."

"Good. Now the other thing I meant to ask about was a sprained ankle. How do you treat that, if you are away from camp?"

Apply a bandage over the boot at once, under the instep, crossing it in front of the ankle. Then wet the bandage to tighten it. On reaching camp remove bandage, boot and stocking, and place the leg in a comfortable position — probably tipping it up a bit. Apply cold water dressings as long as they relieve the pain, and when the cold doesn't help put on hot fomentations. Whew!"

"That's all right. Come and tell me how you got on when your camp is over."

"Righto, thanks very much. Good night."

AFTER THE CAMP

A month later the Troop Leader and Jack were again, seated by the fire.

"Well," said the Troop Leader, "I heard about your accident. What an ass I was not to mention dislocations that night we talked about your camp. However, I never expected such a thing to happen. It's a lesson to me to remember the old saying, 'It's the unexpected that happens.' Let's hear the story anyhow. The. S.M. told me you and your fellows had behaved jolly well over it, and had done quite the right thing. Congrats.!"

"Oh!" said Jack, blushing slightly. "I can't take much credit. It was young Ted who really told me what to do. Last month his brother did practically the same thing and dislocated his shoulder."

"How did it all happen, anyhow? " asked the Troop Leader.

"We were out about a mile from camp. I had just gone on to a farm to see about some milk. While I was away young Jones would insist on climbing a small elm tree. Of course the ass stepped on a small, weak branch, which promptly broke off, and he fell. He clutched another branch as he passed, and that broke his fall. When I returned I found him on the ground moaning and groaning."

"What did you do?" asked the Troop Leader.

It is the unexpected that happens. This Scout didn't know the branch was too weak to bear his weight and the result was a nasty dislocation.

"At first I thought his arm was broken, and I told the chaps to cut some sticks for splints — you see, his shoulder was in great pain. When I got his shirt off and felt his shoulder, there was a swelling at the joint and the bone seemed quite straight and normal. He said his hand was numb and he couldn't move his arm. I tried to move it ever so gently, but it seemed to be fixed and the shoulder looked a queer shape. That's what made young Ted say, "Why, that's what my brother's shoulder looked like when he had it dislocated." That put me on the track, and I felt sure that Ted was right."

"What did you do then?"

"I remembered the S.M. telling us that no one but a doctor should tackle a dislocation, so I sent Bill and Jeff off for a doctor with a note, saying it was a dislocation case, then we took a gate off its hinges, piled some straw on it, laid all our great coats on the straw — it was lucky we had them with us, you see it was a pretty nippy sort of day — and then laid Jones on this bed, supporting his arm in a comfortable position by a couple of the coats which we rolled up.

"We carried him back to camp and found the doctor waiting for us. He said we had done the right thing, and in a very short time he had Jones fixed up nicely.

"The farmer's wife brought him cream and scones every day for three days, so he did fairly well.

"I mean to get my ambulance certificate before I run another camp on my own. All's well that ends well, but this job opened my eyes to the danger of taking other chaps away, and not being prepared for any accidents that might crop up. I think a P.L. who does that is asking for trouble."

"I'm with you there all the way," said the Troop Leader.

CHAPTER XVI

PIONEERING

Pioneering is a splendid open-air exercise, and it provides real Scout training in many particulars. The pioneers were the men who went ahead of any party, whether war-like or peaceful, in order to make some kind of a trail or track for those who followed after. In many cases no one followed for several years, but that did not matter so much to the pioneer. He had a call to the wilds, and nothing could prevent him from keeping ahead of so-called civilisation.

Nowadays the usual trouble with us Scouts is that we associate pioneering with some marvellous weighty erection which we call a bridge, and forget that the real essence of the whole thing as far as we are concerned should lie not in engineering but in making use of whatever material may be lying about.

Our pioneering has been limited by the amount of stores or equipment that we possessed. This is entirely the wrong point of view to take. Rather we should take a pride in seeing what kind of a bridge, or similar

object, we can construct with no particular equipment other than the staves and cord we generally carry about.

I have spent a good part of my life in a country where material for pioneering work was always ready to hand. We used bamboos for making bridges, whether for Scout purposes or for more permanent use. We used bamboos for making rafts. We used bamboos for making scaffolding, for fences, for traps, for fishing machines, for Scout staves, for ladders, and even for eating at times when the tender shoots could be boiled up as vegetables. In fact, we would have felt absolutely lost without our friend the bamboo.

Unfortunately we have not these advantages in this country, but at times such things as hop poles, scaffolding poles, haystack props can be bought fairly cheaply or can be borrowed for a time.

Knotting is the basis of practically all pioneering work, whether you are building a bridge, a fence, or a shelter. Therefore, before you start be sure that you and the others in your Patrol still remember the knots. The more time you spend on this preparation work the better, as then you will know that your knots are all right and that they will stand the strain that you put on them. This is an important point, so I will rub it in. Never start on any pioneering work until you are certain that all those working on the job thoroughly know the knots that will be required. Apart from the Tenderfoot knots, you should at least know the timber hitch and the rolling hitch.

Then you must be certain of lashings — square, diagonal and racking. Most people start a square lashing with a clove hitch, the free end of which is wrapped round the standing part so that there is a strain on both ends. Generally a diagonal lashing is started with a timber hitch.

The one golden rule that you should bear in mind, whatever kind of lashing you are doing, is that the lashing should be tightened up all round at every stage. The tighter your lashing, the firmer will it hold, so when you are practising beforehand do not allow your Scouts to race one another to see who can get his lashing finished first. In real pioneering men's lives may depend on a lashing holding fast, and work done quickly and hurriedly may save a few minutes of time but waste a few lives of men!

You will get quite a fair amount of practice in lashing by making a trestle with Scout staves and thick cord. You can also get quite a fair amount of practice in pioneering with just your Scout staves. Some years ago in camp, I remember, I called up the Patrol Leaders and told them that after an interval of an hour I would come round to their Patrols and see what use they had made of their staves. That was all I said.

After an hour we all toured round to the various Patrol tents to see the exhibition. One Patrol had constructed quite a decent bridge, with footway and handrail across a narrow, but deep, gully-ditch you might call it — that ran in front of their tent. Another had constructed a stretcher and also a tent that was made of blankets thrown over a framework of staves. Another had constructed an eligible residence in a similar style, and when I proposed to lift the blankets and look at their knots, the residence was hurriedly torn down and the staves used to beat out a small fire one of the rascals had started alongside in case I should be my usual inquisitive self!

Then we went on towards the tent of the fourth Patrol, but could not see a sign of any of the Scouts. Eventually a cry was heard from up a tree where they had built themselves a platform and were nesting. As a matter of fact it was quite contrary to the habits of their Patrol bird to nest up a tree, but that fact was overlooked!

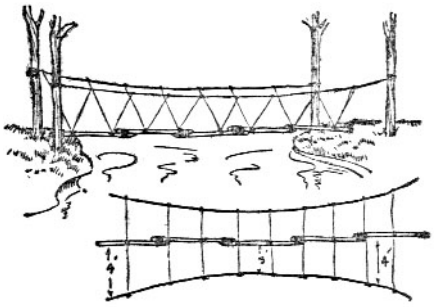
I give you this illustration merely to show you that expensive and heavy material is not essential in pioneering. As a matter of fact, you can probably get more fun and practice when the material you have is very sketchy and not very promising. At any rate, you have to think a good deal more, and that is always good for you.

There is another point connected with pioneering which you would do well to remember, and that is when running any kind of a bridge across a stream you must take great care to see that no one who cannot swim

has anything to do with the actual placing of the bridge in position. Such fellows should be told off to carry on with the preparations right back from the edge of the bank. The same thing applies to the construction of rafts. At least one fatal accident has occurred among Scouts through a raft upsetting.

I will give you just two practical examples of simple bridges. You will understand that the type of bridge you build is determined by the breadth and depth of the stream that you span and by the nature and height of its banks.

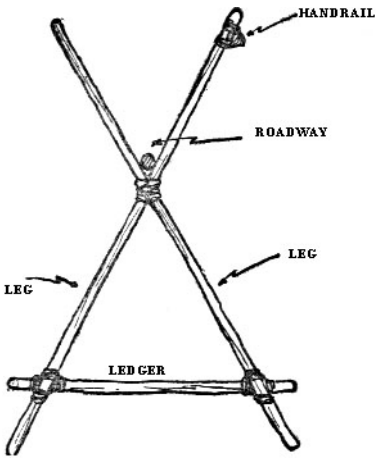
The sketch below shows a temporary light bridge which a Patrol can easily put up, but which will only bear one Scout at a time. Scout staves are used to form the roadway of the bridge, and lariats for the handrail.



An easily erected bridge, but it will only bear one fellow at a time.

Lay your staves in a long line on the ground with the ends overlapping to the extent of about eighteen inches, and lash them together, using two lashings at each join. Lay two lariats on either side of the staves. Tie thin cords eight or nine feet along to each join of the staves. This is best done by tying clove hitches round the staves in the middle of the cords — a double clove hitch on each will make it firmer. Then tie the ends of the cords to the lariats with a clove hitch, made more secure by giving the free end a couple of half hitches on the standing part.

The cords should be tied so that the lariats are about three feet away from the staves in the centre of the line and about four feet away at the ends. The ends of the lariats are then made fast to two convenient trees.



Trestles are easily made by lashing two poles together with a plain binding lashing.

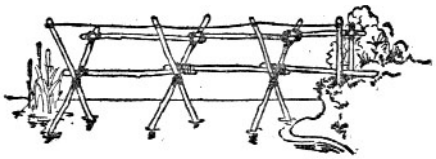
It is the lariats that bear all the weight of this bridge, so you will have to be particularly careful to see that they are fastened securely and do not sag too much. All you have to do now is to fasten the ends of the staves, or roadway, to the banks so as to prevent any sideway movement. Provided the lashings are sound you will have a kind of suspension bridge which will enable you to get across a stream without getting your feet wet.

Another bridge can be constructed out of light poles in this fashion. It is a type that I have frequently seen used in out-of-the-way parts, made of bamboo.

It is built in sections, a trestle at a time, so that your bridge can be pushed across a shallow stream from one side only. The trestles are made by lashing two poles together near the top with a plain binding lashing. The bottom ends of the poles are then pulled apart, and another pole, or ledger lashed across with square lashings.

The distance between the bottom ends of the poles — the butts is the correct term — should be half the distance between the butts and the first lashing that has turned the two poles into sheer legs.

Each trestle, before being pushed out into the stream, has another pole lashed to it as a roadway, the end of the pole being placed above the crutch of the trestle. While still another pole is lashed to one of the top ends of the trestle as a handrail.



Part of a trestle bridge. It is built a trestle at a time and is gradually pushed across the stream.

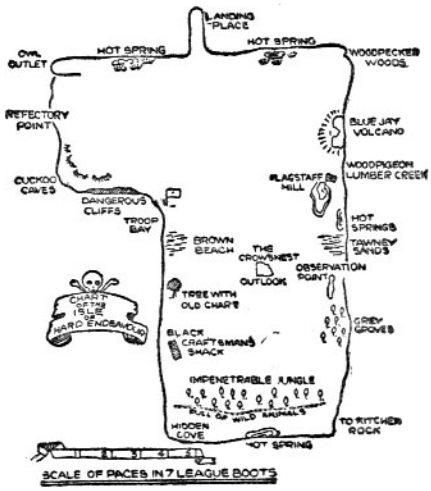
The first trestle is pushed out from the bank and the ends of the roadway and handrail made fast to posts driven into the bank. The second trestle is pushed out from the end of the first and lashed firmly in place and so on. If the bottom of the stream is very muddy you will find it better to plant the legs on a faggot of brushwood.

A second handrail can be added when the bridge is completed by hitching a lariat, rope or cord to the top ends of the trestles on the side farthest from the pole rail.

CHAPTER XVII

MAP-MAKING

We consider it rather an adventure to go on a journey even though the whole of our route is mapped out and known to within a hundred yards. Just think what an adventure it must have been when Vasco da Gama or Christopher Columbus set forth on their voyages of discovery with no maps to guide them, only vague, and generally false, tales picked up in the seafaring ports of Europe.

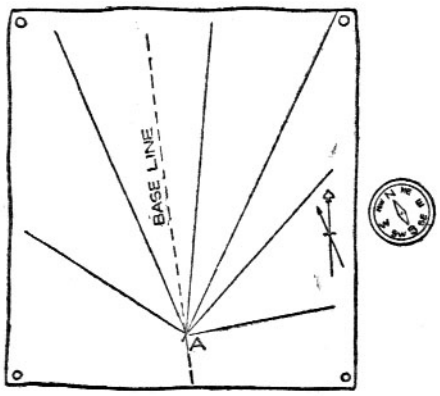


A good example of a map. As you can see it is not very difficult to draw and is quite explanatory in itself.

I don't know if you have ever heard of Sir John Mandeville. He was a great traveller of some hundreds of years ago, and became famous because of the tall yarns he told afterwards of the wonderful things he had seen. For instance, he told of great rocks that attracted iron, so that ships with iron nails in them could not pass by, of trees that grew in the morning and disappeared into the earth again in the evening, of a sea of sand that ebbed and flowed, of a river that only ran for three days in the week ! Yet these early explorers went out expecting to see such wonders and fully believing that they would encounter horrid dangers.

That just shows you that there is something exciting about maps, and it is not at all a bad plan to begin your map-making by imitating the old maps these voyagers made. You may have seen the kind of thing in a book like *Treasure Island*. These old maps are full of pictures showing trees, and mountains, and weird animals, and comments are written on them, such as, "Here lies the treasure"; "Here lives the Great Khan." On the waters you can see ships at anchor, and whales and great fishes.

A map on the lines shown by the sketch on p. 44 of even your own Troop Headquarters makes an interesting record.

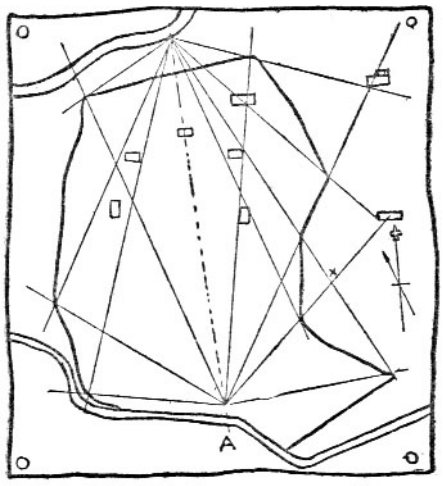


A sketch of your camp site is a good thing to start with. First choose a long line in the centre of the site, so that you can get an unobstructed view from both ends of it.

A map, of course, is just a picture of a piece of the earth's surface. It is just a picture taken from an aeroplane so to speak. I have lying by me a photograph taken from an aeroplane and an Ordnance Survey map of the same piece of country showing the same features. The higher the aeroplane goes the smaller do the details appear and the larger does the area seen grow.

On maps this is represented by scales. A large scale map gives you all the details and is more realistic than the small scale maps which give you a larger tract of country but less detail. So we see that the scale is just the ratio between the actual country the map represents and the sheet of paper on which the map is printed and so we get a mile of country represented by, say, an inch on the paper.

The map nearly complete. When you have arrived at this stage you can begin filling in the details either by using a compass direction from one of your prominent objects and pacing the distance, or by judging their distance and positions by eye.



A map of your camp site is a good thing to start with. Choose a long line in the centre of the site, so that you can get an unobstructed view from both ends of it. If you start with a small area this line will only be about fifty or one hundred yards in length. Fix your paper on a flat surface at one end of this line, and mark the other end with your staff. Put a pin in your paper to represent the spot where you are, find the true north point (the sun and watch method given in *Scouting for Boys* will do) and mark it.

Place your compass on the paper and draw in the magnetic north diverging from the true north. I'm afraid there is not the space to go into the difference between the two. Place a ruler, or straight edge, alongside the pin until it points in the direction of the staff and draw that line, which is going to be your base line, on the paper. Without moving the paper, select other objects, such as tents, flagstaff, prominent trees, and, using your ruler in the same way, draw other faint lines radiating from the pin.

The map in its final stage showing all the details and positions of various objects.

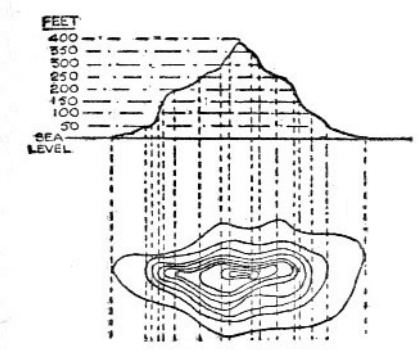
Now take your paper and board to the other end of your base line first fixing a staff or stick in the exact place you have been. On your base line measure off a suitable length to scale to represent on the map the actual distance between the two staves. Remove the pin on the paper to the other end of this base line. Set your paper so that the compass directions and base line agree, and using the same prominent objects draw other lines from where the pin now is. The points where the lines to any one object cross will give you the exact position of that object on your map.

After all these spots have been found the details, such as paths, streams, houses and so on can be filled in, either by using a compass direction from one of your prominent ob]ects and pacing the distance, or by judging their distance and positions by eye (see p. 45).

The diagrams will show you the various stages of your map much better than I can describe them.

In all maps sea-level is the zero from which all heights are taken and the most common method of showing the height of land above this level is by using contours. The sketch above shows an imaginary hill as seen from the side, and the same hill as it would be depicted by means of contours on a map. I will not worry you about other methods of representing heights. You will find the various conventional signs used on maps given in your Scout diaries. You should make a point of knowing and using these whenever you can.

One would need a whole book to be able to explain how to make maps really properly, but have a shot at it whenever you can. It is really only by practice that you can improve at it. It is an important thing for a Scout to be able to make maps if he wants to let other people know what a particular piece of country looks like. It also doubles the value of any report you are making on a camp if you can give a map showing where all the objects you mention in your report really are.



An imaginary hill as seen from the side, and the same hill as it would be depicted by means of contours on a map.

Before you start to make maps, however, you should make sure that you and all the members of your Patrol are able to read one. This is not always so simple as it seems, and it is best to learn by making use of a map on every possible occasion. If you can get hold of a map of the country round your

Headquarters, always carry it with you, looking at it from time to time whenever you are on any outdoor expedition.

You will also find it quite a good observation game to study an Ordnance Survey map and take imaginary journeys on it, trying to imagine for yourself all the things that lie on either side of your path. This game makes a good Patrol stunt, as it helps everyone to read a map properly.

CHAPTER XVIII

CAMP RECREATIONS

Although a Scout camp is not merely a pleasure trip, but a place where the various details of Scouting practices we have previously learnt are put into actual execution, still it is not necessary that our Scout camp should be all work. To the keen Scout all work of a Scouting nature is enjoyable, but even he is the better for a little relaxation at times.

So remember to leave time in your camp programme for various recreations which have no apparent bearing on the work you and your Patrol are doing.

For instance, at one part of the day, preferably in the early afternoon, there should be a period of at least an hour set aside for a quiet time. During this period all violent physical exertion should be forbidden, and the time devoted to writing letters, sketching, telling yarns, reading papers and books, and so on.

Apart from this rest period there should be a few odd half hours during which each fellow can amuse himself as he pleases. If you are a keen Patrol Leader, these odd half hours may tell you a lot about the likes and characters of your Scouts. You may see some just lazing about, others having a stroll; some may be taking snaps — there is generally a camera fiend in every camp, and he can be turned to very good account if encouraged to take photos of interesting events or interesting things, places, trees, birds or animals — others may be doing a little quiet nature-stalking on their own; some may be taking part in a favourite game, while a few more may be indulging in a little knotting practice.

If I were you, I should get hold of those who are just lazing about and set them something to do. You will remember how the Chief Scout is always telling us what a lot we can do if we don't waste time about it. Probably we should not have heard anything about Scouting as we now know it, if he hadn't employed all his spare time in making experiments and other odds and ends.

Camp recreations then are merely spare time activities which amuse, but at the same time are useful. As with the other subjects we have dealt with, it is only possible for me to give one or two examples.

First of all games might be mentioned. "Catch the Thief," the game described in *Scouting for Boys*, is just the thing, as are practically all the many kinds of duel contests in existence. A duel contest is one in which only two fellows can take part at a time, while the others watch. Sometimes the duel is a real test of skill or strength, at other times it is a means of giving the onlookers great amusement. As an example of the former I might mention "Tilting on Buckets," where the two duelists are armed with light sticks, well padded at the ends and have to prod each other off up-turned buckets or logs, or any of the various forms of "cock fighting."

Great amusement may be caused by a laughing duel where the fellows have to laugh continuously for a minute, the one who laughs the loudest in varying styles and fashions being judged the winner by the onlookers.

You should remember the Chief's advice that in those contests which require skill, or strength, or quickness, the loser needs more practice than the winner. Your competitions, therefore, should aim at

finding the champion of the Patrol both ways, up and down. Your expert champion can then take on the expert champion of another Patrol and your dud champion the dud champion of that Patrol.

An excellent camp recreation is lariat work, that is lassoing, or roping, and rope spinning.

Perhaps it will help you to become lariat experts if I tell you how to hold and throw your lariat. I will not attempt to tell you all about the tricks of the crinoline, butterfly spinning and vertical spinning, because they are still more or less hidden mysteries to me!

First of all see that your lariat is well stretched. Get the personal measurement of the loop you should use by pulling out a large loop between your foot and hand, with the hand stretched above your head. Grasp the loop, and the standing part of the lariat, in your right hand, letting the honda, or thimble, hang down about eighteen inches on the outer side. Starting from this position the honda will help to keep the loop open you swing it.

Gather the remainder of the lariat in coils in your other hand, the stopper at the end being grasped firmly between the thumb and first finger, and the coils lying loosely on the palm of the hand. See that there is a fair amount, but not too much, of the lariat lying between your two hands, or otherwise you are liable to get tied up.

The sketch below shows how your lariat should be held before you start to circle the loop round your head.

How your lariat should be held before you start to circle the loop round your head.

Now you want to swing the loop round your head slowly, right to left in front of the body, left to right behind it — counter-clockwise as it is generally called. As you swing the rope round and round, your hand should be kept almost in the same position above the head, but your wrist should be twisted sharply with each turn.

It is the twist of the wrist that keeps the loop open and until you can maintain an even swing with the loop open all the time it is useless trying to throw at all. The throw is effected by merely loosening the hand and letting the loop fly as it comes round from behind the right shoulder. Don't jerk it or you will miss your aim, although gradually, of course, you will get up greater speed in your circling and so be able to throw wider.

As you let your loop go from your right hand, shoot the left hand forward and let the coils slide away from it, taking care to keep a grip on the end.

You will find it best at first to aim a little above, and to the right of, the object you are trying to lasso.

Well, that is all that we can say about it at the moment. A great amount of practice is needed in roping, but it is a very useful accomplishment to have. I have seen lives saved, both on land and on water, by means of a well directed rope. In Canada, for instance, it is now the common practice for Scouts to take a lariat with them whenever they are out in the winter on or near ice, so that they are prepared if any accidents happen.

Another very interesting and skilled recreation suitable for camp is archery. Just as roping appeals to us because of its connection with frontiersmen and pioneers, so archery appeals because of its associations with our own history. The English archers were famous in their time, and all of us have heard of Robin Hood and his merrie men.

When preparing to shoot do not grasp the end of the arrow between the finger and thumb, but between, and at the ends of, the first and second fingers.

It takes a good deal more than a bow and an arrow, however, to make an archer. Some considerable practice is required as well as a knowledge of the right style. Good bows and arrows are difficult to obtain, and somewhat expensive, but you can get quite a lot of fun and interest out of a home-made set. There are several precautions necessary in archery. For instance, you should never string your arrow until you are actually preparing to fire, and then you should see that there is no one in front of you and also that there is no one close alongside or behind you. The one in front would perhaps be hit with a stray arrow — arrows have a habit of straying anywhere except near the target at first — and the other would be in danger should your bow break through too great a strain being placed on it.

The bow is grasped in your left hand, with fingers and thumb round the grip. The arrow is strung by running the bow-string into the slit, taking care that the cock feather is outside. Do not grasp the end of the arrow between the finger and thumb, but between and at the ends of the first and second fingers. The shaft of the arrow lies above your left hand and to the left of the bow. Turn almost sideways to your target and stand with your feet about a foot apart. Raise the left arm, keeping it slightly crooked, on a level with the shoulder, and draw back the right hand to the chin. You are now more or less in the correct attitude to take up before letting fly. The arrow should then be loosed quickly from the right hand.

In time you will learn the strength of your bow, and the angle you will have to aim at for a long shot. Archery is all the more interesting because of the effect that wind has on your shooting, an effect for which you have to make careful allowance.

CHAPTER XIX

NATURE LORE

It is impossible to be long out of doors away from the busy rattle and strife of towns without realising what a number of interesting things there are round about us; in fact, so many that it is difficult to know how to take them all in. There are numerous nature subjects, all full of interest and all giving scope for endless study and amusement.

In *Scouting for Boys* the Chief Scout in his chapter on "Woodcraft or Knowledge of Animals and Nature" mentions animals, birds, reptiles, fishes, insects, trees and plants. Elsewhere he mentions the stars. Even these eight branches of Nature study do not exhaust all the possibilities there are. It is best, if possible, to take up one branch at a time and try to get more proficient in that, while at the same time not neglecting the opportunities that may occur for studying any of the other branches.

With regard to animals, you can gain a lot of knowledge by studying the habits of the ordinary domestic animals with which you come in contact every day. There are quite a lot of interesting facts about the cat and the dog, for instance, which your Scouter may be able to tell you, and which will possibly quickly make you realise why we are kind to animals and do not tie tin cans to their tails.

Tracking, too, will make these everyday animals more interesting to you, for from the tracks they make you can tell their early habits.

To give one example, you will notice that the track of a cat and a dog, both four-footed animals of approximately the same size, are quite different. The cat leaves a track that does not show any marks of nails, and its trail is in a straight line and looks rather as if it has been made by a two-footed animal. The track of the dog does show the nail marks, and its trail shows the marks of all four feet.

The difference in the tracks tell you that the cat used to hunt its food quietly and pounce upon it when it wasn't looking, while the dog used to depend upon its speed to overhaul whatever it was hunting.

The cat draws its claws in, so as not to make a noise; the dog keeps them out, so as to protect its paws.

The difference in the trails leads you to exactly the same conclusion. The cat puts its hind paws in the place where its front paws have been, so as not to make a noise; the dog doesn't care where his feet go as long as he gets along quickly.

Exactly the same thing is true of the wilder form of the same species. In the jungle I have been within a few yards of a leopard and never heard a sound, although I found out afterwards that it was on the move the whole time, whereas I have heard a jackal making a terrible din in more or less the same circumstances.

A cat stalking.

A dog walking. Compare the difference in tracks.

The wilder kinds of animals are more difficult to study because they are so seldom seen, but their tracks will tell you a lot about their habits.

In Great Britain you will find hedgehogs, moles, shrews, foxes, badgers, otters, martens, stoats, weasels, polecats, wild cats, squirrels, dormice, mice, rats, voles, rabbits, hares, red deer, fallow deer, roe deer, lizards, slow worms, snakes, frogs, toads, newts, and those curious flying animals, bats.

From this list you can easily see that even in this country there are a lot of wild animals that we can study, while there are usually many varieties of each kind.

The difficulties in the way of the study of animals are perhaps the greatest of all, for you will have to exercise the very greatest caution before you can hope to see one and still more care before you can get a chance of studying its habits, but at the same time you will gain a great deal of practice in tracking and stalking which will be useful to you in addition to the knowledge you may gain about animals.

Next we might take birds. The study of them is not so difficult in the sense that you will have more opportunities of observing them, and can, by the use of feeding trays and nesting boxes, attract them to you, even if you do happen to be living in a town. Their identification is, however, more difficult because there are so many more of them.

In 1915, the British Ornithologists' Union (an ornithologist is a fellow who studies birds!) issued a list of four hundred and seventy-five British birds. Of these, one hundred and forty-one were resident, forty-seven were summer visitors, forty-six were winter visitors, thirty were birds of passage, sixty-one were occasional visitors, one hundred and forty-nine were rare visitors, and one species had become extinct.

Well, that is quite sufficient to show you the number of varieties there is. If you are taking up bird study you cannot hope to know much about more than a quarter of these, unless you are going to make the study a life hobby.

I have already mentioned the use of feeding trays and nesting boxes to attract birds to you. I would like to tell you more about these, but there isn't room. One thing you should realise is that the birds are living creatures with a right to exist as a part of the great scheme of creation, and that they are also of the greatest service to us in protecting plants, trees and crops. So they need our protection at all times.

In the study of birds it is important that you should keep notes. A Patrol bird calendar is a very good idea. In this, notes are made of every bird seen and studied, making special mention of, say, appearance, colouring, habits, eggs, times of appearance and so on.

One side of bird study which is rather neglected, but which again gives you opportunities for stalking, is their song. Try to get to know the different kinds of birds and their calls, and also the different calls of the same bird. Mr. Mortimer Batten's book on Patrol calls will help you in this respect. Finally, don't take eggs, take photographs instead.

We have already mentioned reptiles under the heading of animals. Reptiles include snakes and lizards, tortoises and crocodiles. The only poisonous snake in this country is the viper or adder, so we can regard ourselves as lucky. For this reason perhaps I had better say a word about it.

It is quite short, usually less than two feet and thick in the body with a short tail, while our other snakes have long, tapering bodies. The viper's head is flat and broad. Its colour varies very much, so that its shape of body and head is the most important point to remember.

If, by any mischance, a Scout does get bitten by an adder — it has happened — the best treatment is to suck the wound hard and apply oil to it.

Pressure above the wound will prevent the poison from spreading and the swallowing of a little ammonia will help to fight the poison inside.

You can attract birds by using feeding-trays and nesting-boxes.

The study of fishes in their natural state is somewhat difficult, and Scouts do not get many opportunities, but those of you who live in London should go and have a look at the new aquarium that has been put up at the Zoo. You will see all kinds of weird and wonderful fishes there, and you will be amazed at some of the marvellous colours they have, and their ugly faces.

You will find insects an interesting source of study. It is impossible to give you a list of all the different kinds of insects. An insect has six legs, not more, and a jointed body, and that is how you know them! Butterflies, beetles, bees and gnats are perhaps the ones we know best, and they are all interesting to watch, sketch and photograph.

We have not so many varieties of trees as of birds. Ordinarily speaking we have about fifty different kinds of trees in Great Britain, the majority of which has been imported from time to time. They are, however, almost as important to us as the birds, and should, therefore, be taken great care of. The beauty about the study of trees is that they are always with us and can be studied both in summer and in winter.

It makes it all the more fascinating that those of them that shed their leaves change their appearance so much in the winter, for that leads us to get to know them by other means than their leaves alone.

Don't be content, therefore, with knowing a tree by its leaf and flower. Learn to recognise it by its bark, the appearance of its trunk, the position and angle of its branches and twigs. In this way, you will easily be able to identify a tree that is a long way off. Several Scout Troops have taken to planting at least one tree a year in some open space, and that is a good practice to follow.

All we have left of the parts of nature study mentioned in *Scouting for Boys* are plants and stars. You will find both to be very numerous! The stars form too vast a subject for an ignorant person like myself to say anything about, but it is a branch of Nature Lore which we, in the past, have rather neglected, and one, too, that can be studied just as easily in the cities as in the country. Try it yourself on a clear night.

CHAPTER XX

NATURE GAMES

There is no doubt that nature lore does help to strengthen and establish a love for the open air, and it is because we are a Brotherhood of the open air that we should do as much nature study as we can. We do not necessarily need to have an intimate knowledge of any of the nature subjects, but we do want to have a kind of working acquaintance with them, so that, when we are in the open air, we feel at home and among friends. It is better for us that we should study from Nature itself than from books which record the observations of other people. Books have their place, but only after we have tried to find out things for ourselves.

You may, however, frequently find a boy in your Patrol who does not appear to have any natural love for Nature, who is not attracted as you are to the wonders that can be seen in the open air. It would be a mistake to try to give him lectures on the subject. It would be much wiser if you started to train him by giving your Patrol games and competitions dealing with nature subjects, so that he will practise nature study in an enjoyable way which will soon show him what an amount of interest there is to be got out of it.

The greater number of different kinds of games and competitions you have the better, since that will merely add to the interest.

My aim now is just to give you a few examples of Nature Games.

FAR AND NEAR: A point is awarded to the Scout who spots a particular object.

FAR AND NEAR (from *Scouting for Boys*) — This game has various names and forms, and is very suitable for walks or hikes. It can be played with the individual or Patrol as the unit, and suited to any of the branches of nature study that are taken up. A point, or points according to the scarcity of the object, is awarded to the Scout who spots any of a list of particular objects determined on beforehand by the Leader.

The list may contain a dozen different varieties of trees, birds, animals, animal or bird tracks, or an assortment of the whole lot. In fact, the list may contain a great many varieties of objects.

The players go along separately, in which case marks for every object can be scored by each Scout or Patrol, or, if played as a Patrol game, the whole Patrol goes along and the Scout who first spots any of the objects takes the points for that object.

Variations can be introduced by confining observation to one side of the road, or to objects which are, say, one hundred yards from it. By using the latter variation you will be able to train your Scouts in the habit of distant recognition.

PLANT RACE: The first Scout to bring back a leaf of the tree named scores a point.

PLANT RACE (from *Scouting for Boys*) — A good variety of this game can be played when you are well out in the country, but you should have studied the natural objects nearby beforehand. Take up your position in a central spot, and collect your Scouts round you. Then shout out the name of a tree, plant, or weed, and count ten slowly.

On the ten all the Scouts disappear and the first to bring you back a leaf of the tree named, and so on, scores a point. If all fail then you have an opportunity of telling them what the leaf or plant you want is like.

THE HIDDEN SEARCH — Here is a game which Captain Hebbert, Commissioner for Harrow, mentioned in a number of *The Jamboree*. I reproduce it in his words:

"Each Patrol Leader was given a small piece of paper on which I had written down the names of six or more different kinds of leaves. Each Patrol had the same list and I knew beforehand that all the named trees and shrubs were actually in and around the field in which the game took place.

"After a short explanation of the game I gave the whole Troop one minute in which to disappear, and then five minutes in which to find the mentioned leaves *without being spotted by me*. Any Scout spotted came back to me in the centre of the field and forfeited any leaves he may already have collected for his Patrol.

"The Patrol which first collected all the leaves correctly or which had the biggest number of correct leaves when time was up was the winning Patrol.

"If no Patrol had finished at the end of the five minutes, I sometimes decided to give them a little longer, in which case they were of course informed and they had another minute in which to disappear again, and then three or four or five minutes — whichever was decided upon — in which to carry on and try to finish their collection.

"There were several more or less easy and obvious variations. I blew a whistle at the end of the very first minute, and up to that time I hid my face in the ground so that I should not see in which direction the various Patrols were moving and finding cover. The next whistle at the end of the pre-determined time terminated the game, and the Scouts all came in again.

"It seems very important that any game of this sort should have: (1) a well-wooded, well-hedged, and 'tufty' field or common of a good size; (2) a clearly defined and rigidly adhered to time limit (and always a short one so that the game cannot hang fire); (3) a good deal of discretion at first as to when one should not call out a boy one has 'spotted.' (Later on one can be quite strict, perhaps, but at first the game of

collecting without being seen is difficult enough for some boys always to fail to keep under cover, and invariably to call one young fellow out gives him no encouragement — nor opportunity for that matter — to practise the very thing he is bad at.)"

This is an example of a game that combines two separate activities — nature study and stalking — which makes it all the more valuable and interesting.

A TREE CENSUS — A good competition in camp, whether for Scout or Patrol, is to take a census of trees — other things will also suggest themselves — within a certain radius of camp. At first it is best to confine the Scouts' energies to making a list of, say, ten different varieties, together with their positions. This will probably be sufficient for a morning's work.

As knowledge is gained the number of varieties can be increased, and a census made of all the specimens of any particular tree within the area.

KIM'S GAME — As usual our old friend comes in very useful in nature study. Set out twenty or more natural objects such as leaves, nuts, flowers, pieces of bark, berries and so on. The game is conducted in the same way as the ordinary Kim's Game, but it is best to award two sets of points for each object.

For instance, one point might be given for "Oak leaf," but two points for " Leaf of Turkey Oak." That is a useful tip to remember in every variety of Kim's Game — it is very important that each object should be correctly described.

This nature game can be played indoors or out in the open. The latter is best, of course, and then it can be combined with some other form of activity. For instance, the Scouts or Patrols could be seated at some distance from the place where the objects have been laid out and a trail set between the two places.

INDOOR GAMES

There are many varieties of indoor games which can be converted so as to stimulate the study of nature subjects, and I give a couple of examples, because it is not always possible to be out of doors, and at the same time it is not necessary to confine your Nature Games to the open air.

QUESTIONS — The Patrol Leader or a Scout chooses the name of a bird he wishes to represent, while the others have to find out what kind of a bird he is by indirect questions. The "bird" answers "yes" or "no" only, but is entitled to refuse to answer any direct question, such as, "Are you a Robin?"

Questions should be asked in turn, and a limit may be placed on the total number, after which the "bird" goes aside while the others discuss what he is.

The "bird" should usually be one who knows a fair amount of his subject. This kind of game can obviously be applied to any kind of nature subject.

IDENTIFICATION — In this game you will want to provide yourself with some objects and photographs.

You hold up an object and the first Scout has to name it, the second adds some information concerning it, and so on. If any one fails to answer or answers incorrectly he loses a mark. Naturally if all the Scouts fail to answer no one loses a mark, but you pass on to the next object, after adding any remarks you have to make about the first one.

Apart from all the various games and competitions you can have, you can go in for Patrol collections. Plants and flowers can be pressed, leaves can be collected, or prints of them taken on sensitive paper, or by using carbon paper.

If you do make any kind of a collection, remember that it should be for use rather than for show and that you should lend it out to other Patrols that want to study the subject. Don't be selfish about it.

CHAPTER XXI

OPEN-AIR GAMES

I am afraid the title is rather misleading, because, as far as possible, all our games as Scouts should be played in the open in preference to indoors. The more fresh air we get the better, no matter what time of year or of day it may be. Football, Rugby and Soccer, and Cricket are, of course, excellent games and cannot be beaten in their way. I do not propose to talk about them, but they have one serious drawback in that they all limit the number of players.

A Troop footer team is an excellent thing within reason, so long as it does not deprive the other members of the Troop, who are not in the team, of opportunities of exercise, and so long as the Scouting activities of the Troop are not sacrificed for footer. That is a question that has to be decided by each Troop or Patrol.

What I want to do is to try to give a few examples of various types of games and competitions in which the whole Troop can take part, and in which everyone has a chance of showing what he can do. These games are just types, and some can just as easily be played indoors, but I will try to avoid those given by the Chief Scout in Scouting Games. That book, by the way, in case you do not know it, contains one hundred and twenty different games, the majority of which has never been attempted by the average Troop.

First let us take one or two games that will give you a certain amount of physical exercise, great or small according to the energy you put into them.

We have all practised relay races with the Patrol as a team in some shape or form. A very good series of relay races is given by copying the gait, or movements, of animals, as for example: —

The elephant relay in which you walk on your hands and feet, keeping your knees stiff and placing the feet and hands close alongside each other. You will find at first that ten yards is just about as much as you can do!

The frog relay in which you have to hop on all fours.

The horse relay, in which you imitate on all fours the action of a horse, trotting or galloping.

The tortoise relay in which you proceed somewhat slowly on all fours with your back to the ground and your face looking skywards.

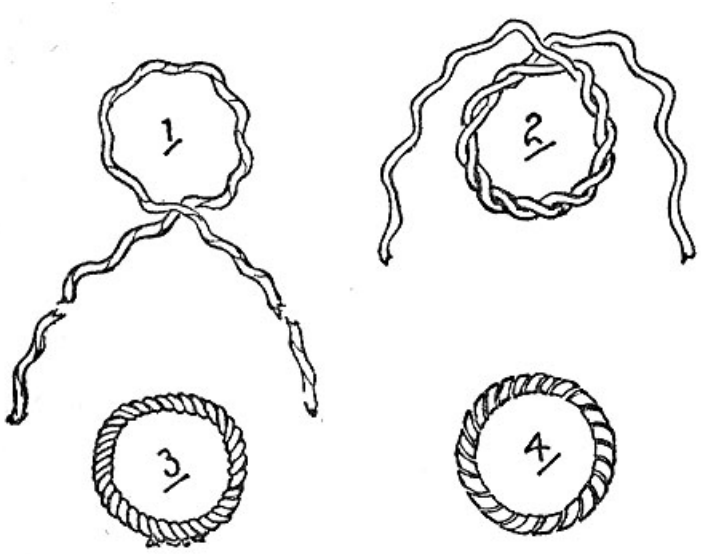
“Rounders” is a good team game (provided it is not played for too long at a time) in which the sides can be as large as required. There are various varieties of rounders that help to make the game more interesting and amusing. You will remember that baseball is just an advanced form of rounders.

You can have a game of football as played in the Stone Age! Mark out a circle at each end of your field of play. The circles can be any size you like, and so can the field. Place an empty tent-peg sack in the middle of the field. There are no rules of any kind except that both sides must particularly observe the fifth and sixth Scout Laws.

In order to score, the “ball” (sack) must be grounded in one or other of the circles. In order to keep the game moving, the referee, if still alive, may order a throw up at any time. In this game it is advisable to wear a minimum amount of clothing and to insist on sandshoes, stockinged or bare feet.

While repairing damage from such a game you could have a competition in deck tennis. This is a game that has been played for years on the boats going to the Far East.

All you want is a net, a string or rope will do quite as well, stretched five feet above the ground, and a rope grommet. The sides can consist of one, two, or even more Scouts.



The four stages in making a Grommet: (1) The rope with one strand unravelled, and loop formed. (2) The two-stranded ring, obtained by following the groove around the loop with both ends. (3) The ring with ends twisted together, tucked under the nearest strands and trimmed. (4) The finished article.

The grommet is thrown from side to side across the net. It must be fairly caught in one hand, and returned at once. If not, a point is lost. In returning the grommet the hand must not be raised higher than the shoulder. Scoring is the same as in tennis, the best of three games constituting a match.

Perhaps I should say that a grommet is merely a rope ring. You can easily make grommets for yourselves. Take a length of rope five times the circumference of the grommet you desire to make. Unravel one strand, keeping the original kinks in it. In the middle of the strand form a loop the size of the grommet.

With both ends follow the groove around the loop, thus making a two-stranded ring. Follow the groove again till you have a three-stranded ring. Twist the ends together as for the start of a reef knot, and tuck them under the nearest strands cutting the surplus ends away. To make the join more secure you can wrap it round with some kind of adhesive tape.

Any amount of games can be played into which observation is introduced. A Scout can be half concealed in the bushes, and the others asked to squat as soon as they have spotted him from a line a fair distance away. The Patrol can be asked to look at the edge of a wood for a minute or two and then be turned round and told to write down all the different kinds of trees they noticed, and so on.

You can take the Patrol for a short stroll from camp, carefully noting yourself various objects, natural or otherwise, on the way. When you return to camp you can question them on the points you have noticed. For instance: “Where did we pass the dog that had its right ear torn?” “What was leaning against the north side of the haystack in the farmer’s yard?”

Even by laying a simple nature trail you can give your Patrol a lot of practice and amusement. Make your trail by using sticks, twigs, stones and so on. Let it lead beside things you want your Scouts to have a look at. After laying the trail you can go along with them on the journey to see how they do it, but leave the direction entirely to them unless they run off the trail all together, which they are pretty certain to do the first few times.

A really splendid game, which needs previous preparation, is an obstacle race, bringing in obstacles of a Scouting nature which have to be overcome on the way.

A three-mile Patrol Obstacle Race formed one of the competitions in the World Scout Championship at the Denmark Jamboree in August, 1924, and I cannot do better than write down for you, in a shortened form, an account of that obstacle race.

At the starting point each Patrol received instructions — the Patrols ran the race at different times, of course — to join its Troop which was following the enemy and had marked the way it was taking by white strips of cloth. While following the trail the Scouts came across a boy sitting by the roadside, a dead poisonous snake lay at his feet, and there were the marks of a snake-bite on his leg. Naturally the Scouts had to set to at once and treat him.

Further along the trail they came upon a boy with his arm in a sling standing helplessly by his bicycle, the chain of which had come off and the saddle twisted. The Scouts had to repair the bike, test it, and return it to its owner so that he could go safely on his way.

Then they came to a river which one of them had to swim and secure a boat which was tied to the opposite bank. There was only one oar in the boat, the river was swift, and had a muddy bottom. The Patrol had then to cross to the other bank in the boat.

Next (it was a day of adventures!) the Patrol reached a swamp which previously had been crossed by a bridge of which the enemy had only left two piers and a single plank between them. By some means or other the Patrol had to get over these remains. I may mention that each competing Patrol had previously been told to take a thirty-foot line with it, which naturally came in useful, here and at the previous obstacle.

The Patrol journeyed on and was halted at a point from which the Scouts could see one of their own fellows signalling to them that the enemy was at a certain place near at hand and directing them to creep to a second spot without being seen.

On arrival at this second spot they were told to proceed nine hundred and fifty feet N.N.E. — compasses were not allowed and the direction had to be discovered from the sun-settle down there and wait till someone arrived. This was the end of the race.

There is no need for you to have so difficult a competition to start with, and I only give this race as an example of what can be done, when you are out in the open, intent on getting to know how to do things for yourselves.

CHAPTER XXII

CAMP-FIRES

Those of us who have been privileged to take part in Scout camps, no matter in what part of the world they have been held, seldom forget the camp-fires which brought each succeeding day to an end. In some cases we remember the hushed pause after a splendid yarn, or the glow of the fire reflected in our hearts caused by a few simple words from one we realised to be a leader of men.

In other cases we remember a swinging tune, a well sung chorus or a melodious round. Sometimes, but seldom, we remember a camp-fire ruined by an unScoutlike song, a silly tale, or the selfish behaviour of a few of those present who tried to be funny at the expense of those who contributed to the programme, or who prevented anyone else from having a look in.

Sometimes, too, we remember a camp-fire at which we have been bored stiff because it contained nothing but hackneyed tunes and dull yarns.

Yet, despite it all, when we meet again it is to recall memories of these camp-fires, to sing again the same tunes we sang then, to tell again the tales then told, to recall the whole atmosphere of happy brotherhood that banded us together round the dying embers as darkness drew on and "Good nights" rang out.

Frequently we overlook the fact that the camp-fire is the foundation of Scouting, for is not *Scouting for Boys* just a collection of Camp-fire Yarns told by an old hand to those who are striving to follow after him?

So, from every point of view, your camp-fire is an important and necessary part of your open-air Scouting.

Some kind of ceremony in connection with the assembly at the camp-fire, and also at its opening, is useful because it helps to create a kind of atmosphere that marks the hour as an important one. If your programme is continually being interrupted by late arrivals, who search for seats, shout for their pals, and so on, you cannot hope for success.

The camp-fire — when every Scout is expected to do something. He need not sing — in fact, it might be wiser if he didn't.

The amount of ceremony you use depends upon your own tastes, but, personally, I prefer something quite simple, such as a mere declaration by the leader that the Council Fire is open. What is important is that everyone should be assembled at the given time either round the fire or at a given spot from which they are intended to walk to it.

In many parts of America where the ceremonial usage of the camp-fire has been developed to a high degree — the Council Ring is sacred, and trespassing on it forbidden at all times — a certain procedure of clothing, speech and action is rigidly observed, and the fire itself is lighted with great ceremony, generally by means of fire-sticks, while some kind of invocation or incantation is pronounced.

It is not, however, the question of ceremonies that I wish to discuss now, but the more important campfire programme itself. Here, as in everything else connected with Scouting, you should work for variety. A camp-fire does not necessarily imply that you must sing songs or tell tales all the time. There are many more sides to the question than that.

On occasion your camp-fire can be made the medium for a course of instruction in some subject in which your Patrol is weak. Do not be afraid of introducing into your programme a five, or ten, minutes' talk on, say, camping, cooking, courtesy or consideration of the point of view of other people.

Again, it is quite in order, and fitting, to conduct a certain amount of business at the camp-fire. The Patrol can sit in council and decide what it is going to do the next day, or what arrangements are going to be made for another camp. When a period is set aside for business in this way, some of your Patrol may come forward with a suggestion that will help to improve the routine of the camp, whereas they would not be so inclined to mention it in broad daylight.

Again, I have often asked Scouts to tell us at campfire what they have noticed in the course of a stroll during the day, and have often set them something definite to do during the day telling them that I would call for a report at the camp-fire. In this way they have been encouraged to speak up for themselves and to describe things in an interesting, and sometimes very amusing, way. I remember one night a Patrol Leader gave a very detailed description of a bird. The next night another Patrol Leader took him off with a vivid and lengthy description of a blade of grass!

Camp-fire games usually prove popular, too. "Tenderfoot Tim" has familiarised us with "Jack's alive," a game in which you have to be jolly quick in passing the burning cork round, and where you get heaps of

fun when the fellow who lets the spark out has his face well blackened for him. A wise Patrol Leader will lead him to the water after the camp-fire.

Then there are several varieties of games in which you imitate the words and actions of the leader. Other games, in which you try to pull the legs of those taking part, depend for their success on the victims being ignorant of them.

Many games exercise your brain, such as the telling of a round story, or the repetition of the adventures of some weird and imaginary fellow to whose credit everyone adds some impossible happening. Many games exercise your hands and brains, for instance, when suddenly a series of small articles is passed rapidly round the circle and some unfortunate Scout is then called upon to name each article in the correct order.

There are also various contests involving the strength of leg, arm, hand, voice, whistle, and so on, which can quite suitably be played in the open space round the fire.

Various kinds of entertainments can also be given. I have seen conjuring tricks displayed, and listened to an excellent ventriloquist. But quite simple individual entertainments can provide a lot of amusement. Each member can get up and act, in dumb show, some historical incident, such as "Christopher Columbus discovering America," "Sir Walter Raleigh laying his cloak before Queen Elizabeth."

Each performer can make up his own subject, but it is better fun when the Leader hands him a piece of paper on which the incident he has to act is written. The same thing can be done with the everyday incidents of the camp: "Tommy lighting a fire," "The P.L. washing his neck"! Of course, the others can try to guess what on earth the fellow is pretending to do each time.

At a camp-fire last summer I saw a most magnificent piece of acting in which a Scouter showed us how a Borneo head-hunter stalked and killed his victim, and carried his head back in triumph to his village. It was so well done that we all felt our own heads getting a little light, just as if they were ready to fly off, too.

If it is a Troop camp, a Patrol can get together and contribute a combined item by acting a little scene, either one that they have invented for themselves or some story that they have read. For instance, you can get quite a lot of fun out of acting an old nursery rhyme, one Scout repeating the words slowly and solemnly while the others act them.

Yells are good things, too, for camp-fires, if done in moderation, and if you are certain that all your Scouts know that it is just fun and that the yells are meant to be used as a kind of safety-valve, so that they can let out a lot of noise at once and then settle down quietly to listen to the next item. Sometimes, too, yells are useful in livening things up a bit when everyone seems dull.

You will, of course, look for songs for the greater part of your programme, although I have tried to show you that they only form a part, and not necessarily a very great part, of the camp-fire. You should have one or two good sound choruses ready in which everyone can join, but the trouble seems to be that we are usually content with just these one or two, and don't seem to learn any more.

This is, of course, a mistake, because, however good a chorus may be, you will grow very tired of it if it is repeated too often. Then, again, do try at the campfire to avoid the average music-hall sort of song. After all, you can hear that on every barrel-organ, and neither the tune nor the words are very suitable to the outdoors.

There is a real need in Scouting for good, wholesome, cheery songs, and there are signs that we may be able to collect a few more together from time to time. In the matter of camp-fire songs we are not up to the standard of the Scouts of other nations so far as the musical part of it is concerned. Too many of us think that when we are making an awful din we are singing, but too often we are just merely yelling.

If you can get a chance, try to find someone who will teach you some of the old country songs and sea chanties, and those more modern ditties which are not sentimental, but deal with seemingly childish and almost absurd subjects, at the same time being amusing and musical. The old-fashioned rounds, like "London's Burning," are just the things for the camp-fire.

I am not going to say anything to you about yarns; although I believe that a good yarn at the camp-fire is the most valuable way of showing us all what the spirit of Scouting really is. So we will just mention the closing ceremony.

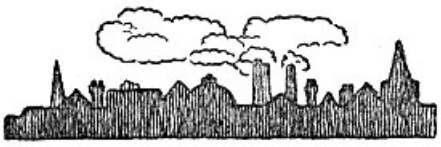
Whenever you can, finish off with a simple prayer to the One who has given you the day that is just closing, and all the enjoyments you have had in it. A short prayer, possibly the National Anthem, and the "Good Night" Chorus, will send you off to your tents to rest with the feeling in your hearts that your day in the open has been well spent and fitly ended.

CHAPTER XXIII

TOWN SCOUTING

I do not suppose there is a single town where there are not heaps of places in which to indulge in outdoor Scouting. Most towns — and London itself is no exception — are now plentifully supplied with parks and other open spaces where Nature can be studied quietly and a certain amount of tracking carried out. Most towns have also beautiful country lying at their very gates, and a twopenny tram ride will get you there!

Town Patrol Leaders should buckle to, have a look round and see where they can go for games and practices. For instance, if you are a Patrol Leader, you might have a special look round the vacant building sites, or the vacant ground round various factories and works. You will find some of them about, and it will not be so difficult to get permission to use these pieces of ground for Scouting purposes. On a small piece of waste ground you can easily practise fire-lighting, cooking, tent-pitching, and pioneering as well as indulge in a few outdoor games.



Towns are sometimes unattractive places, but there is generally one nice spot in their smoky hearts. It's up to you to find that spot and make good use of it.

Possibly on the outskirts of your town you will find old sand-pits or quarries, or disused railway cuttings and roads, that can be used for the same purposes. In such places as these you may, if you ask permission, be able to rig up a kind of outdoor Headquarters with shelters and fire-places, and, by using your imaginations, to discover an uncharted island which you promptly annex and proceed to tame. These are the sort of places where you can get any amount of fun.

Some town Troops, through the good services of a farmer or other landed proprietor, have been able to rent a small plot of land outside their town and they have erected some kind of a hut. Members of the Troop hike out there when they can and spend a night without any further trouble. I have seen such a place as this outside Copenhagen, and the Danish Scouts had built themselves an excellent cabin by the shores of a lake that gave them all the open air and Scouting that they could possibly desire.

These are some of the possibilities in the direction of open-air work in towns; but, actually in the town itself and in its streets there are many open-air games you can play and many open-air Scout practices you can follow.

"Morgan's Game" and the "Shop Window Game" (see *Scouting for Boys*) are types of obvious observation practices which are not now so commonly played as formerly.

Both entail being out of doors, and both should be combined with some other kind of Scouting exercise, such as the practice of Scout's Pace, in order to make the outing more interesting and more profitable, in the Scouting sense, not the money sense!

You will find, too, that it is quite possible to play several of the Nature Games already mentioned right in the heart of a town. An interesting book has recently been published called *The Nature World of London*, in which the author, Walter Johnson, mentions, among many other examples of trees and plants, a fig tree growing in St. Paul's Churchyard, a Black Poplar by St. Andrew's Church on the Holborn Viaduct, and Birches in Lincoln's Inn Fields.

It will be quite obvious to any of you if you care to look round that you will find quite a fair variety of trees within reasonable distance of your own Headquarters. Why not start taking a census of them and drawing a map showing the nearest tree of each different variety?

The Pathfinder Badge gives you every opportunity to get out and explore your own neighbourhood. I wonder if you realise what this badge should mean to the ordinary Scout ? In *Scouting for Boys*, the Chief Scout tells us that, among Red Indian scouts, the man who was good at finding his way in a strange country was termed a "Pathfinder." That name was considered a great honour by the Indians, because a scout who could not find his way was of very little use.

There you have it in a nutshell! A Scout who cannot find his way is of very little use, and what is the good of an ordinary Scout, let alone a King's Scout, for which the Pathfinder is one of the qualifying badges, if he cannot find his way even in his own country?

If I were you I should specialise in Pathfinding with my Patrol whether my Troop was a town or country one.

What is required of the Scout who wears the Pathfinder badge, and of every boy who aspires to be a Scout in the real sense of the word, is that he should be able to direct people by showing them the way, by giving them verbal directions, but directions which they cannot mistake or misinterpret, by pointing out the way on a map.

He should also be able, when asked by a stranger, to tell him what places are worth visiting and the best way to get to them. In fact, besides having a detailed knowledge of his own particular locality, he must be in a position to act as a kind of miniature guide in connection with his five-mile district.

All this requires knowledge which you cannot just learn from a book, and so you have got to walk about in the open and keep your eyes wide open. At the same time you should get to know all the spots nearby which are of historical or other interest. While you and your Patrol are engaged on all this you will come across heaps of interesting things which will lead you to explore other paths.

There are one or two games which will help you on your way.

"Far and Near," fully described in Chapter XX, can be altered so that you score for every Post Office letter-box, every water hydrant, every butcher's shop noticed as you walk through a given route. You can lay your Patrol a trail by making them follow a route indicated only by a list of shop signs jotted down beforehand by you in their correct order.

You can combine your trail with Nature Study by letting your clues be trees only, the particular species of tree being written down and against it a rough compass bearing, or its distance from the immediately preceding clue should be indicated.

Another method of practising open-air Scouting in a town is to challenge your Patrol, or another for that matter, that you will get within a certain distance of, or inside, Troop Headquarters without being nabbed. It depends upon the alertness of your opponents whether or not this will entail the adoption of a disguise.

I know of one Scouter who secured victory by assuming the disguise of a coster, complete with barrow, but I am not so sure that he did not get thrown out by the caretaker of the hall in which his Troop met!

A good idea is to challenge a Patrol that you will get to within a certain distance of, or inside, Troop Headquarters without being "nabbed." It depends upon the alertness of your opponents whether or not this will need the adoption of a disguise.

It is best, in playing a game of this type, to define an area for operations and to have some rule with regard to questioning, since quite innocent passers-by are apt to be accosted by some over-keen Scout and put through a rigorous cross-examination as to their movements.

Night-work in the open is particularly suitable for towns. At any moment the Troop or Patrol can be sent out to rally at a given spot some distance away, the direction being indicated by a general compass bearing or by naming certain of the streets on the route.

To get your Scouts to acquire a habit of looking where they are going, it is a good plan, after a stroll, to ask them to write down in their correct order the names of all the streets that they passed on their right-hand side. This test can be given with or without warning; it all depends how far advanced the fellows are in their local knowledge.

Well, have I said enough to show you that you fellows in towns are not so hard up as you think for opportunities of open-air Scouting? I hope so !

CHAPTER XXIV

WINTER PREPARATIONS

Our Oversea Brother Scouts have a great advantage over us in the fact that it is more feasible for them to practise open-air Scouting. In Australia, for instance, where there is no winter as we know it, the Scouts can be out of doors all the year round without thinking anything about it. In Canada, where the winter is much more severe than ours, they are able to be out and about most of the time, because the climate is so much drier.

A few months ago I had a letter from a Scouter in that dominion who had just returned from a week's hike with the temperature at fourteen degrees below freezing point. From his remarks it was easy to see that the whole party had enjoyed every hour of the journey.

In Great Britain we are not so fortunate, but we are not so badly off as most of us seem to think. Personally I am not very keen on camping in this country in the winter because most of the time it is so beastly damp. Some hardy fellows take a pride, however, in camping all the year round, and they profess to enjoy it, too.

Even if you don't actually camp out you can still put in a good deal of outdoor work in winter, especially in the form of day hikes.

For instance, there are the Saturday afternoons when most of us are free from work. Do we, in winter, make as much use of them for Scouting as we could? Are we doing ourselves much good watching football matches when we could be out taking exercise even if it is only in the shape of walking? These

are some of the questions that you fellows ought to be asking yourselves and the other members of your Patrols.

The winter nights, too, afford you the best opportunities for studying the stars. You can see more of them and they are much clearer then than in summer.

In discussing tracking I mentioned the opportunities that snow afforded you of spotting tracks, but taking it all round the winter gives you better opportunities for tracking, because the ground is softer and so deeper impressions are left than in the summer.

Now as to the various preparations you can make during the winter so that you can take every advantage of the finer weather when, and if, it does come along.

Your camping gear should be overhauled and put in thorough order. It so often happens that after the summer camp the Patrol's tent is pitched into a corner and left there for the whole winter. A few days before the Patrol intends going into camp in the spring, the Patrol Leader summonses up the energy to have a look at his tent. As often as not he finds it damp and full of holes.

He then sits down and proceeds to blame the maker, or, if he made it himself, he blames the shop for selling him rotten cloth. In reality of course he has only himself to blame.

The sun goes down on a good summer's work, but rises with winter preparations well in hand.

No tent of any description, no matter how good the material, no matter how well made, will survive the off season, unless it has been put away thoroughly dry, and unless it is opened out and looked at and aired two or three times in the course of the winter. So your winter preparations for camping should start with the proper care of your tent.

When opened out to air the opportunity should be taken to make any necessary repairs to the fabric, guys and so on. In patching a tent always remember to place over the hole a piece of cloth considerably larger than the actual hole and of the same material. This should be sewn on all round with a blanket stitch or with alternate long and short stitches, and the whole patch criss-crossed with stitching and well flattened out. Particular care should be paid to the guys, and all worn-out or frayed ropes replaced.

The same thing should happen to all the cooking gear. Before being put away it should be looked at, cleaned, and greased, inside and out. All your other camping gear should be treated in the same way, blankets repaired, ground-sheets patched and so on.

By such preparations as these you will save yourself endless trouble when the spring comes, because you will know that all your gear is in order and when the first opportunity comes all you will have to do is to pick up the gear and go off into the open with it, knowing that everything is all right. Remember one thing — as well as wiping your cooking-pots dry, thoroughly clean out with boiling water before attempting to cook food in them, or accidents will happen!

Talking about cooking gear reminds me that it is a jolly good plan to do a certain amount of cooking practice in the winter. Whether the practice is done out of doors or in you will find it useful, and I would strongly recommend you to get a little practice yourself and see that the others of your Patrol get some too. Cooking is an art, as I think I have already told you, and an art that only can be acquired by practice.

I learnt most of mine at Christmas and Easter, because we had a little cottage in the country to which my brothers and I used to go.

Once one of them went down with scarlet fever and no one would come near, so my mother and I stayed on, packed the rest of the family off, and proceeded to do the needful. She was the nurse and I was the cook, and all three of us survived although I must confess that I used to indulge, unknown to the others, in many experiments in the culinary art!

Anyhow, there is no necessity to go to the extreme lengths of scarlet fever in order to get in your cooking practice.

Your preparations should also include the making of various camp gadgets that will add to your comfort when you are in camp. This is a good plan, not only because it gives you something to do connected with the open-air, but also because it reminds you of past camps and enables you to let the Tenderfoots in your Patrol know what will be expected of them in camp and realise that they are going to be quite safe.

Many Scouts seem to find amusement in giving a Tenderfoot the creeps by telling him all the hardships he will have when he goes to camp. Give the fellow a run for his money. As an older Scout it is your job to put him right and up to all the tips, and not to frighten him off.

Winter is the time of the year in which you can give, or get your Scouters to give, the Patrol chats on what to do with their axes and knives, and how to look after themselves, inside and out. Winter is the time to rehearse songs and choruses so that your Patrol can be on top in the camp-fire competitions. Winter is the time to smarten up your Nature lore, and to determine what you are going to learn during the coming months. In fact the cold season is the time in which to make out your summer programme.

Possibly you will not get through all that you and your Patrol set down, but you will have some kind of a plan on which to work, and you will be able to go out into the open with some definite object in view.

I am inclined to think that it is because we are so indefinite that we find it so difficult to imitate the work of backwoodsmen, explorers and frontiersmen. They always knew what they were up against, they always knew in what direction they were moving, they always knew that unless they looked ahead, tried to imagine the difficulties that might befall them and thought out the remedy to overcome these difficulties, they would go under in the struggle for existence. Their lives depended on their being prepared to meet the many emergencies and disasters that might occur.

In a similar manner our Scout lives depend on how we live up to our motto. Unless we are always prepared, we cannot hope to make much progress in Scouting.

Remember our motto especially in connection with your open-air Scouting. The time we can spend in the open is so short that we should always see to it that all our preparations are made beforehand so that not one hour of that time is wasted and so that we get the utmost value out of God's open air.

"I know not where the white road runs nor what the blue hills are,
But a man can have the sun for a friend, and for his guide a star;
And there's no end of voyaging when once the voice is heard,
For the river calls, the road calls, and oh! the call of a bird.
Yonder the blue horizon lies, and there by night and day,
The old ships draw to home again, the young ships sail away,
And come I may, but go I must, and if men ask you why,
You may put the blame on the stars and sun, and the white road and the sky."

(GERALD GOULD.)

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