

## For the Boys and Girls

### WINTER OUT-OF-DOORS.

Now that the holidays are over, and the winter stretches before us, many young people are apt to think that jolly hikes are over till spring; that there is nothing worth seeing in the fields and parks. Not so, by any means. The out-of-doors is quite as beautiful in winter as in summer; in, of course, quite a different way. Look at the tree branches, for instance. It is only after the leaves have fallen that we can see what a beautifully made thing a tree is, with its etching of fine, dark branches against the snow. And it is most interesting to see all the deserted birds' nests, nesting in corners and crotches, showing so plainly against the grey sky. They are hard to find in summer, but in winter one can see the little bunches, and note the intelligence displayed by the wise little architects in placing their homes just right.

Then there are the tracks of small animals in the snow, and it is fascinating to see how far one can follow them, and to speculate as to just why they turned this way and that way; why they turned out of their track to run along that log. Here the tracks become confused, and the little wayfarer evidently played about a bit. Here they become long and hurried—evidently a fright. Then, for some unknown reason, he turns around and goes back, as if he had forgotten his hanky; or perhaps he smelled an enemy bigger than himself, for an animal can smell an enemy long be-

fore he can see him. And then, the final ending of the pretty little prints, under a stump or log. He has gone home to tea.

On a morning after a snowstorm the woods are like Fairyland, and a tramp, in short skirts and long boots, is a joy. The winter birds call and call their delight at being released from the nooks where they have been huddled out of the storm. The wind showers the soft, white, feathery stuff down upon you, and, at the brook, far down under the snow and ice, comes a musical tinkle and gurgle, muffled by the snow blanket, but unmistakable. The water is flowing.

Cultivate the winter out-of-doors; learn its poetry; listen to its voices; look upon its pictures. The boy or girl who cannot talk to King Winter—that grand old poet—who cannot speak his language, understand his signs and symbols, has missed something that leaves him or her incomplete. Get acquainted with Winter. He is the essence of beauty and poetry. Even his rages, when he shrieks and raves and shakes the windows, and wails like a grief-stricken banshee down the chimney—they are music. When he paints his wonderful pictures, on field and tree and window-pane, it is art. And when he whispers in the little winds and chatters through the squirrels, and birds, and gurgles in the brook, it is poetry. And he isn't altogether a highbrow, either; he is a good old sport. Cultivate his acquaintance.



## With The BOY SCOUTS and Help Others.

It is a tradition of the Royal North West Mounted Police that they always accomplish the task set them, no matter the difficulties faced, or the number against them, or the time required. In living up to this tradition members of the force have followed evildoers by horseback, canoe, by dog train, and on snowshoes clear to the Arctic Circle.

It is a tradition of a city fire department that when on the way to a fire and there is danger of a street collision, or of running over a child, the firemen sacrifice themselves. The fire engine, or truck, is run into a wall, or telephone pole, or over an embankment—anywhere so long as it is only the firemen who are hurt.

Certain hockey, football, lacrosse and other teams are traditionally first class sportsmen. They always play a hard, clean, thoroughly sportsmanlike game that it is a pleasure to watch; and they always play their best up to the last minute, no matter if there is a score against them that looks hopeless.

The tradition of certain old regiments of the British Army are well known—that they will go wherever they are directed or led, no matter if it means certain death.

Similarly Scouting is acquiring a tradition—particularly the tradition of Public Service; of usefulness to others.

Here are some stories of Canadian Scouts who were prepared, and performed valuable public service when the opportunity came:

During the disastrous fire in Northern Ontario last fall notable public service was rendered by the Scouts and Scout leaders of that district.

At North Cobalt, District Commissioner Rev. H. Ellis Gridley and Rover Scout Rathwell, at the risk of their lives, with fire to the south, north and west of them, not only fought the flames, but when the inhabitants were fleeing to places of safety, remained behind to direct and assist the people in their flight. They probably were instrumental in saving many lives. But for a change of the wind the Commissioner and Rover very probably would have been lost. Both afterwards required medical aid.

At Haliburton Scoutmaster Sever of the 1st Cobalt Troop stayed to assist persons in danger, and it was stated that but for a change in the wind he also would have been burned. In one case he had to forcibly remove an aged woman from her home, carrying her to a place of safety.

Meantime the boys of his troop in Cobalt were doing splendid service in looking after refugees from the burning district. They served refreshments, located missing children and restored them to their parents, and collected and distributed clothing. They watched for and put out incipient fires on the outskirts of the town.

In July of 1919 two Scouts were seated on the shore at Purcell's Cove, Halifax Harbor, when they noticed some distance out a man in a canoe endeavoring to reach land against the strong wind and heavy sea running. As the boys watched the canoe suddenly capsized. The Scouts quickly secured and launched a boat, and pulled out to the scene. The man was clinging to the overturned canoe. The weight of the man made the rescue very difficult and dangerous in the rough sea, but finally by cool-headed watermanship the two boys got the unfortunate safely into their boat. After a hard pull against both sea and wind they regained the shore. There, to complete the work of Scout service, they revived their rescued passenger with hot tea which they secured from a picnic party. The two Scouts were Murray Fraser, 13; and Arthur Goodwin, 15, 1st Halifax Troop.

For two weeks during their summer holidays two Ottawa Patrol Leaders—Kealey and McDougall, 9th Ottawa Troop—were on duty at the Ottawa Union Depot distributing fire protection pamphlets for the Canadian Forestry Association. In order to cover all trains the boys came on duty at daybreak. They accepted nothing for their service.

### What Antique Collectors Should Know.

How long ago was the circular saw invented? If you aspire to become a collector of genuine antique furniture you should know the answer to the question. The circular saw was invented as far back as the year 1777. Therefore, no piece of seventeenth century furniture should bear the tell-tale curved lines that a bent tooth in a circular saw makes.

The maker of false antique furniture may copy the form of the original piece with comparative ease, but he has difficulty in giving it the appearance of genuine age. Boring wormholes is now regarded as dangerous; other methods of aging are preferred. For example, an Englishman, who was visiting the shop of a prosperous country dealer in antique furniture noticed several rabbits inside an interesting carved coffer. "You know more about such things than I do," he remarked to his host, "but unless I am greatly mistaken that is an original sixteenth century coffer. How in the world can you put it to such a use?"

"It will be a fifteenth century coffer when the rabbits have finished with it," was the cool reply.

### African States.

The whole continent of Africa has only three independent states, Egypt, Abyssinia and Liberia; and Great Britain really dominates both Egypt and Abyssinia, and the United States virtually controls Liberia. If the Sahara Desert be included, France is the greatest landowner in Africa. Great Britain, Belgium, Portugal, Italy and Spain follow in the order named. Germany, which once ruled over more than a million square miles, is now entirely out of Africa. The Cape-to-Cairo railway now building is expected to open for development vast areas of rich country.

## AIRCRAFT PROVE BIG AID IN SURVEY WORK

### ECONOMY EFFECTED BY NEW METHOD.

### Successful Application of Aerial Photography to Mapping of North West Canada.

During the season just closed a number of experiments were carried out looking to the utilization of aircraft for supplementing the work of parties employed by the Topographical Survey in western and northwestern Canada. These experiments were conducted by the Royal Air Force of Canada under the direction of Mr. A. M. Narraway, Controller of Surveys, and consisted of the taking of series of vertical and oblique photographs from aircraft flying at pre-determined heights, and the use of these photographs as an aid in the plotting of topographical features on the map. Briefly stated, these experiments were entirely successful and indicate the lines upon which the method may be developed.

Operations were first conducted in the area north of Pas, Manitoba, where reliable maps are needed to facilitate the development of the mineral and forest resources in which the district is known to abound. Here countless islands are separated by rocky ridges covered with almost impenetrable bush. Owing to the mass of detail required and the great difficulties to be overcome in collecting it, the production of an adequate map of such a country by ordinary survey methods is very expensive, and as a result the collection of topographical information has heretofore been restricted to the limits of the main connected waterways.

### Carried Aerial Camera.

A survey party had been sent into this area in the spring to establish a through traverse line along the main waterways extending from Athapascow lake to the Churchill river, as well as throughout the mineralized area to the east. In anticipation of the aerial photographic work to be undertaken, the party was instructed to note carefully the stations occupied so as to be able to identify these points on the photographs. The party was followed later in the season by a seaplane carrying a pilot, an engineer, and a photographer with suitable emergency rations to provide against forced landings. The plane carried an aerial camera mounted over the nose and made flights at a height of about 4000 feet over the course followed by the survey party.

Oblique photographs were taken at intervals of about three miles so that each picture would show in the foreground the terrain shown in background of the preceding one. In addition to these, other photographs were taken in a systematic manner at right angles to the line of flight. In this way photographs were obtained of a strip of country stretching for over five miles on each side of the line of traverse.

### 700 Views Obtained.

Subsequently, when the photographs had been developed and collated, a grid system was laid down on them based upon the points of the survey, and corresponding to a system of squares on a plan, thus enabling the various topographical features to be plotted. Upwards of seven hundred views were obtained. These are now being plotted and the resulting maps

## Unusual Bird Tragedies

BY ALVIN M. PETERSON

Tragedies in the bird world are so common that one sees traces of them on practically every field trip. Cowbirds lay their eggs in every nest they find, which generally results in a tragic end to the rightful occupants, some boys and nearly all cats kill every bird they possibly can, storms destroy still others, and farm and other machinery grind to pieces many nests together with the eggs or young in them. Some birds prey on other birds, robbing nests of eggs and young birds, while many wild animals prowl about woods and fields devouring eggs and nestlings. A. A. Allen writes that ninety, if not ninety-five per cent. of the nests he finds each year are ill-fated. The percentage of tragedies depends mainly upon the location of the region studied. Naturally, regions near large cities are far less suited to nesting than are regions farther from cities in out-of-the-way places. I kept a record of all the nests I found for two years, together with the fate of each. I found that approximately one-third of the nests met tragic ends.

Even though tragedies in the bird world are to be expected daily, some of them are in a sense exceptional and out of the ordinary. For example, a bluebird built its nest in a hole in a post that stood near the south boundary of a small truck farm. One day, during a severe electrical storm, this bird was electrocuted. But a few rods off in an alfalfa field, a neighbor of mine cut a sitting quail in two with his mower. The alfalfa about the nest was very thick and this kept the bird from seeing and getting out of the way of the sickle. The quail at the time was sitting on twenty-two eggs.

Two years ago, I found a tree swallow's nest in a hole in a fence post. That would seem a pretty safe place for a nest, still all but one of the young birds lost their lives in an accident. As the young birds grew, they had less and less room in their post-hole home. Soon the hole was filled to overflowing with growing young birds. They squirmed about a good deal trying to find room in the hole and often changing their positions for more comfortable ones. They thus loosened a piece of the post which fell to the ground, thus removing the entire front wall of their nursery. All but one of the young birds then fell to the ground, where they died from ex-

posure. I tied the piece of wood back in place and thus saved the remaining youngster.

A meadowlark built a nest in a large open place in a Fair park. Fair parks are used mainly during the fall of the year and the choice seemed a fortunate one. Furthermore, a fair growth of grass seemed to insure that the nest would not be found very easily by marauders. All went well until the eggs were about to hatch. Then the grass was cut preparatory to erecting a building, what is known as "The Old Mill," on that particular spot. The moving machine passed over the nest, but did not destroy the eggs and nest. This proved too much for the owners and they deserted their nest. Carpenters and masons were soon on the ground and one of them stepped on and crushed the eggs. The park to-day has an "Old Mill," but less meadowlarks because of the tragedy.

For the past two years I have studied and kept a record of the nests to be found about hundreds of old and dilapidated box-cars standing on a siding near a city of half a million inhabitants. All the boxcars on the siding were old worn-out cars that were seldom moved. Some had had their ends smashed in, others their couplers pulled out by the very roots, others sagged in the middle, some bulged at the sides, while some had but one set of wheels. The cars stood on the siding by the hundreds year after year and were regularly used by English sparrows, robins, phoebes, and barn swallows for nesting-sites. Bluebirds and house-wrens, too, sometimes found nesting-places about them where they raised their broods. The siding was, in fact, a box-car cemetery which the birds used for nesting purposes.

A pair of phoebes built a nest on a bar near the ceiling of one of these cars. Scores of box-cars stretched out for a quarter of a mile on either side of the one the phoebes had chosen for their nest. I visited the place again and again, but never saw very much of the owners. They were doing all they possibly could to keep the location of their nest a secret. The female had been sitting on her eggs for some time when the unexpected happened. The railroad company decided to make use of that particular box-car. It was moved and I saw no more of either the phoebes or their nest.

will be the most complete ever issued of any district in the North.

The next series of experiments was carried out in the settled areas in the vicinity of Red Deer and Edmonton, Alberta, where topographical maps were being made by the ordinary field methods. Oblique photographs were taken at various altitudes from five thousand to ten thousand feet.

A further series of experiments was conducted in the Edmonton district, in conjunction with the surveys for the classification of lands for settlement. This work requires the use of accurate maps showing the roads and trails, areas covered by bush, swamps, hay meadows, and other natural features. Mapping by ordinary methods is necessarily slow, whereas, since the country suitable for settlement has already been laid out in sections and quarter sections, and as the surveyed lines and roads are nearly all visible from the air, all features may be mapped without further ground control.

### Results and Conclusions.

The experiments above described indicate great possibilities. In Western Canada the Dominion Lands survey forms an excellent natural system for scaling photographs and outline maps can be filled in at a reasonable cost.

In the unsettled North, the country is similar to the area near Pas and it is only reasonable to expect that the same success which attended the experiments there will be attained when the method is applied on a larger scale. Results indicate that it is possible to go into an area previously unmapped and by means of aerial photography and a comparatively small amount of ground work to map even the most intricate waterways. A greater distance can be covered in the season with considerable saving in cost.

There can be no doubt that aerial and aerial photography by rendering possible the economical production of topographical maps will play a large part in opening up our immense hinterland to the geologist, the prospector, and to all interested in the development of our resources.

### The Little Flowers of Love and wonder.

The little flowers of love and wonder  
That grow in the dark places,  
And between the giant rocks of chance  
And the coarse winds of space.

The little flowers of love and wonder  
That raise their heads  
Beneath the dread rains  
And against the chill frosts;  
That peep and dream  
In flaws of light  
And amid the still gray places  
And stony ways.

The little flowers of love and wonder  
That peep and dream,  
And quickly die.

The little flowers of love and wonder.  
—Theodore Dreiser.

### The Color of Water.

To speak of color in water seems absurd. A tumbler of water from the tap shows no color at all. How many instances there are, though, where water seems to be colored, either by reflection of light or by material or organisms contained in it.

As a rule, tropical seas appear quite blue, and as one travels farther from the Equator the blue gradually changes to green.

The color varies according to the amount of salt in solution in the water; and as the concentration of salt is greatest when evaporation is greatest, and therefore where the sun is strongest, the blue is intensified towards the Equator.

In the case of the Mediterranean the salt is further concentrated owing to the fact that less fresh water is deposited into it by rivers. The blue sky also increases the color of the sea by its reflection.

