

# WITH THE LONE SCOUTS

We are pleased that as a result of the publicity given to Lone Scouting through these columns many new members have joined the movement during the past few weeks. This week applications for membership have been received from Cobden, Hydro, Burkes Falls and Harrison, and at Durham there is every prospect of a full Patrol being formed.

A recent check up of the records of the Ontario Lone Scout Department showed that since its inception two years ago about 460 boys have been admitted to membership in the movement. Of course quite a few of these have been since transferred to regular troops which have been formed as a result of Lone Scout activity.

The Lones at Fenelon Falls under Senior Patrol Leader Doug Warren have had a very busy time just recently. On July 4th they had the pleasure of again meeting their friends of the 51st Toronto Troop, who camped near the town. The Lones held near the Toronto Scouts to make camp, and entered into their activities with zest.

Later the Lone Scouts were invited to visit the camp of the 90th Toronto Troop at Sandy Point, on Sturgeon Lake. They hiked over to the camp on July 8th, and to their surprise met an old friend who turned out to be none other than "Cookie" ("Colonel" Walton), who was so popular at the Lone Scout Camp at Elbow Park last summer. The Lones stayed overnight with the 90th, and entered into their programme enthusiastically, having a great time at the evening camp fire.

We like to see this fraternization between the Lones and their city brothers, and we are pleased to state that quite a few members of the Lone Scouts have gone to camp this year with regular troops, at the latter's invitation.

The Fenelon Falls Lone Scouts also report a most successful "Good Turn" which was held by the boys. They recently assisted by local town authorities to clean up the beach, which

we think was exceedingly good work, as we have seen quite a few beaches recently that could very well be described by a similar "Good Turn."

Lone Scout visitors to Provincial Headquarters in Toronto recently have included Bill Gilbert, of Essex, and Jack Bassett, of Listowel, and Harold Nickle, of Harrison, who was in Toronto a short time ago, but he did not pay a visit. Lones who come to Toronto for any reason are always welcome visitors to Scout Headquarters, so we hope you won't forget to pay us a call.

This week's Summer Time Proficiency Badge is the Angler's Badge. The requirements are as follows:

1. By the usual angling methods catch and name seven different species of fish. At least one specimen must be taken by fly-casting or trolling and one by bait-casting. In single handed fly-casting the rod must not exceed seven ounces in weight; in double handed fly-casting the rod may be one ounce weight for each foot in length; in bait fishing the rod must not exceed ten feet in length nor twelve ounces in weight.

2. Show proficiency in accurate single-handed casting with the fly for distances of 20, 40 and 50 feet, or in bait casting for distance of 40, 60 and 70 feet.
3. Make three artificial flies (either after three standard patterns or in imitation of different natural flies). Make a neat single gut leader at least four feet long, or a twisted or braided leader at least three feet long. Splice the broken joint of a rod neatly.

4. Give the open season for the game fishes in his vicinity, and explain how and why they are protected by the law.

Applications for membership in the Lone Scouts will be received from boys between the ages of 12 and 18 inclusive, who cannot become members of a regular Troop, for reason of locality or other handicap. Applications should be sent to the Lone Scout Department, The Boys Scouts Association, 339 Bay Street, Toronto, 2—"Lone E."

## Birds Necessary To Human Welfare

JULIAN S. HUXLEY

Eminent English biologist and writer. To watch birds is delightful enough in itself; but most people take a background against which they can set their observations.

These feathered creatures, what are they in the economy of Nature? What is their history? How do they compare with other kinds of living things? There are no other animals built in at all the same way as birds. How did they come to evolve into their present condition?

The first thing that evolutionary study teaches is that birds were not always so different from other creatures as they are today. The few fossil birds known from the upper Cretaceous age, 70 or 80 million years back, all had teeth, like any lizard. When we reach the Jurassic period, near twice as long ago, the only two species of birds so far found were so unlike any ordinary bird in their construction that, if it were not for the lucky accident of their having been embedded in such fine mud that the imprint of their feathers is still preserved to us, we should have been in doubt as to whether they were birds at all. They might have been agile reptiles, for they were toothed, had long jointed tail bones, and big claws on their fore limbs.

Birds, in fact, are an offshoot from one kind of very active reptile, probably related to some of the smaller dinosaurs. They became birds through the evolution of feathers out of scales, which first, by acting as a heat-retaining blanket, allowed their temperature to be kept at a high level, and, secondly, made flight possible.

There have been three other groups of animals to achieve true flight: one, the flying insects, arose from a wholly different stock; two, from the same back-boned stock to which the birds belong—the flying mammals or bats, and the flying reptiles or pterodactyls, the latter all long extinct.

The great advantage which the birds had over their vertebrate competitors in the art of flying was that they, possessing feathers, could make a wing of these; while the skinny flight-membranes of bats and pterodactyls had to be stretched taut and so demanded attachment to hind as well as fore limbs. Bats cannot run or hop, nor could pterodactyls; their legs are subordinated to their wings. But birds kept their legs clear of this entanglement, as the ancestors of man kept their fore limbs clear by running; and so birds were free both of the air and of the earth, having one pair of limbs for each element.

Insects are the equals of birds in this respect; but they are inferior in another. They can never grow big. It would take too long to go into the reason why, but the act remains; an insect as big as a swan or even as a thrush is, luckily for us, unthinkable. Small size is in itself a disadvantage;

it brings the further disadvantage in its train that it prevents an animal from having a constant temperature higher than its surroundings, for its bulk is so small in proportion to its surface that the heat generated by the chemical combustion in its muscles all leaks away in no time.

So insects are not only small, but the whole tempo of their lives goes up and down with the temperature of the outer world. They cannot achieve the constancy of living possible to a bird or mammal, and are at a great disadvantage in winter, being put out of action more or less completely by the cold.

However, though birds can grow big in comparison with insects, they are limited in size in comparison with other vertebrates. This comes from the fact of flight; the laws of aerodynamics make it very inconvenient for a flying bird to weigh over 50 pounds, and quite impossible for it to weigh as much as a horse or even a leopard. It is only birds which have given up flying, like the ostrich or cassowary, which have even begun to grow big according to mammalian standards. The stock size for birds, in fact, is from something under an ounce to about 10 or 15 pounds.

Birds and mammals developed from two quite distinct reptilian stocks. Birds have kept reptilian-looking scales on their feet, and have stuck to the reptile's method of reproduction by large-yoked eggs. In some ways, however, the bird branch has evolved beyond their rivals, the mammals, and in these respects must be regarded as at the very tip-top of the tree of life. Birds have the highest temperature, and therefore the greatest speed of vital chemistry, of any creatures. They have the greatest activity, the greatest emotional variety; they show the highest extremes of beauty in color and pattern; they have the most striking and highly developed courtship of any group of animals, and their songs are by far the most beautiful and elaborate music that the world knew before the coming of man. They are the most mobile of creatures, and so are at a great advantage over every other kind of animal in high altitudes; for they can breed there and take advantage of the riches of the Arctic lands and still more of the Arctic seas during the summer, and then migrate to temperate climates.

What part do birds play in the elaborate system of exchanges which constitutes the balance of Nature? The great majority of them are eaters of other animals. For this they have stuck to the ancestral predilections of vertebrates, which were all in origin flesh eaters.

The birds as a whole stuck to a meat diet; but their average size determined the average size of their prey. The great majority of them are so moderate in bulk that they can only eat small creatures, though they will include worms and snails and spiders, will for the most part be insects. Some of the larger birds eat

## Latest in Gas Masks



Three charming young ladies are exhibiting the latest types of gas masks at the Society of Chemical Industries exhibition held in Westminster, England. The exhibition displayed many of the latest marvels of science.

## Grasshoppers Still Invade Nebraska

Country Left Barren in Wake of Hordes Despite Desperate Offensive

Buffalo, Neb.—Wooden fence posts, wagon tongues, even clothing hung out to dry, were quickly devoured by the gray-yellow hordes. Anything containing vegetable fibre attracts the hungry grasshoppers.

Although farmers said several millions of the grasshoppers had been killed, additional swarms are expected when eggs now festering the ground have incubated. Fires in which bodies of the slain insects were being burned dotted the plains tonight. Introduction of poison as a weapon resulted in the death of thousands of the insects.

At some points the bodies of the grasshoppers were piled high on the rails, impeding trains. At others they made the ground slippery beneath the tires of automobiles.

Some of the farmers, their crops destroyed, raised money by packing the dead grasshoppers in preserves for bait at 20 cents a pound.

The insect invasion has devastated gardens, crops and fruit trees, and behind their advance stretches a sere swath. Damage already is in the millions of dollars.

Entomologists said the grasshoppers soon would sprout wings and increase the area of their damage. Unless checked soon, they will be in control of the entire tier of Northern Nebraska counties.

Fields, green today, may be spotted tomorrow with barren stretches. Another day, and the fertile Platte Valley may be barren.

City and town dwellers also are witnessing the march of the grasshoppers. Gardens and trees are left leafless. Hungry grasshoppers swarm solidly on the houses, gather in clusters and fall to the ground from trees and telephone poles.

Burning of the insects was decided upon when farmers feared their cattle would die after eating the bodies of grasshoppers which had been killed by poison.

## Harvesting in West Early This Year

Winnipeg.—Wheat cutting commenced in the St. Adolphe district of Manitoba on July 25th, the earliest, it is believed, such operations have occurred in Manitoba.

One farmer, resident in Manitoba, for 36 years, declared it was "the earliest date for wheat cutting in my experience." St. Adolphe is two miles south of Winnipeg.

## British Star



"Bunny" Austin, England's ranking Davis Cup tennis player, returns a fast one during a set which he won from Sydney Wood of New York.

## New Letters Patent For Governor-General

Ottawa.—New letters patent constituting the office of Governor-General of Canada have been issued by King George V., together with new instructions for the guidance of the conduct of the Governor-General. The last time letters patent were issued was in 1905 by King Edward VII. In general the recent documents bring the office of the Governor-General into accord with the recommendations of the Imperial Conference of 1925, which were adopted by the Parliaments of the Empire at various dates since that year.

Specifically, they remove from the Government of the United Kingdom the last vestiges of control exercised by that Government over the appointment of a Governor-General to Canada, making it a direct and personal one by His Majesty, acting on the advice of H.M. Government in Canada.

Formerly in defining the powers and authority of the Governor-General, the letters patent directed His Excellency to carry out such instructions "as may from time to time be given him under our sign manual and signet, or by order-in-Council, or by us through one of our principal secretaries of state." In the new issue, the last two references are eliminated.

The same deletion occurs in the document containing the King's instructions.

An archaism is removed from these instructions having reference to the grant of pardons, etc., by the Governor-General. Previously His Excellency had the authority to prescribe banishment for political offenders. That obsolete form of punishment is done away with by merely deleting the sentence which conveyed that power.

## Prayer

He who prays as he ought will endeavor to live as he prays.—Owen.

## Seven Women Fliers to Compete in British Air Classic

London.—Forty-two competitors, including seven women, are ready to start in the 1,000 mile race for the King's cup, British air race classic. The field includes the first Canadian in the event, John C. Webster, of Montreal, flying a Canadian machine.

A daughter's challenge to her father is one of the features of the race. Capt. The Hon. Frederick G. Guest and his daughter, Miss Diana Guest will fly moth planes, leaving together 28 minutes and nine seconds after the first starters.

No one would be surprised if the trophy remained in feminine hands for another year. Miss Winifred Brown, who last year was the first woman to capture the trophy, is heavily handicapped, however, leaving an

## Water Replaces Steam in New British Engine

Tradition of 300 Years Upset by Invention Using Liquid Working Substance

London.—A new kind of engine that uses liquid water instead of steam, discards boilers and condensers, develops more power in less space than ordinary steam and gas engines, with freedom from explosion hazards and heat wastes, will shortly be offered for experimental commercial use here.

It is the invention of J. F. J. Malone, engineer, of Newcastle-on-Tyne, who has experimented with the novel water engine for several years. The details of its operation have just been revealed.

Since steam and other engines have been worked always by the expansion of gases of one kind or another for some 300 years, this new kind of prime mover that is operated by expansion of liquid instead of expansion of gases has created much interest in engineering circles.

Both the new water engine and conventional steam engines use water, but in the case of the steam engine the water must be changed to steam before any work can be done. In the Malone engine the water stays liquid even under pressures of tons per square inch created within the engine.

Rapid heating and cooling of the liquid water are necessary in order that the water engine will operate. This was accomplished by Mr. Malone through the development of a novel form of heat transfer within one of the cylinders of the water engine.

Other advantages claimed for the engine are: Only a small amount of water is needed and this reduces the size of the engine and allows it to be used where water is scarce.

It runs and changes speed more noiselessly than conventional engines. It loses less heat than other engines and its outside shell is cool to the touch.

Its mechanism is simpler and the working parts need not be opened for inspection only once in four years.

There is no incessant boiler cleaning, no water gauges, no risk of shortness or foulness of water. The control system is simpler than in the steam engine.

It has no exhaust, as the water is used over and over. All bearings within the engine are cold and lubricated by the water itself.

## New Cards Invented To Aid Bridge Players

Zurich.—A new kind of playing cards, according to The N.Y. Times, will soon be adopted by bridge players all over Europe and America, according to Dr. Paul Herrmann of Zurich, an authority on the game.

The cards, made in Austria, lessen the chances of a revoke at contract bridge, a game rapidly becoming more complicated. Hearts are red, diamonds pink, spades black and clubs dark green; the cards themselves are longer and narrower than those at present used and are made to fit the present-day duplicate contract boards.

## 70-Year-Old Man Enters University

Toronto.—A freshman has been admitted to Queen's University, Kingston, for the summer classes, who is 70 years old, is an ex-royal and also an ex-member of the Canadian Parliament. Mr. I. E. Pedlow of Renfrew, Ont., is Canada's oldest "freshman."

Mr. Pedlow's college days will be followed with great interest, for he has carved out an honorable and useful career for himself, and is now taking his studies, which usually come first, last.

## So They Say:

"When you make art democratic, you defy mediocrity and the indifferent."—Geraldine Farrar.

"I am perfectly certain that there are more and better things to do than any one is doing now."—Henry Ford.

"Some of the most successful men I've known gave money hardly a second thought."—Charles M. Schwab.

Economic boundaries are no longer identical with political boundaries anywhere in the world."—Nicholas Murray Butler.

"In twenty-five years there won't be a respectable opponent of birth control."—Will Durant.

"I am certain that Americans are beginning to realize that material possessions are not essential to a happy and blessed life."—Albert Einstein.

"As a gardener, Nature has two sides, a good and a bad. She plants and she also prunes."—Sir Arthur Keith.

"The prevailing pessimism is a good sign because the crowd-always lags behind the event."—Sir Harry Brittain.

"The sophisticated reader does not like being led by the nose any more than the sophisticated writer likes leading him."—John Galsworthy.

"Physical discomforts in prisons are being removed, but spiritual, mental, emotional discomforts remain."—Louis E. Lawes.

"We are now asking the landowner to render unto Caesar the things that are Caesar's."—Philip Snowden.

"The dream is in large part of warning of something to come."—Dr. Carl Jung.

"After all, it is not entirely certain that every question admits of a reasonable answer."—Albert Einstein.

"Joy is a fruit that Americans eat green."—Amando Zegri.

"Young people ought to be paid to go to school."—Henry Ford.

"Poverty is opulence where there is happy marriage."—Rupert Hughes.

"It is very difficult to make women believe anything that is so."—Thomas A. Edison.

"There is nothing that so kills the ambition of a man as criticism from his superiors."—Charles M. Schwab.

"A creative dressmaker, to be successful, must understand the psychology of women better than a surgeon understands their anatomy."—Paul Poirer.

## High Heels Replace Lancashire Clogs

London.—Lancashire lasses have taken so largely to high-heeled shoes and silk stockings that a moving picture company which has been visiting that famous British county to make films of mill workers, has had to send to the south of England for a supply of stout wooden-soled clogs for camera models to appear in.

The clog is the traditional footwear of the Lancashire industrial workers, but even the much-talked-of trade depression has not brought them back to popularity. Depression or no depression the mill lasses of Lancashire wear high heels and silk.

## Births, Deaths, Marriages

According to a bulletin issued by the Dominion Bureau of Statistics, births registered in June in 52 cities of Canada numbered 7,457, deaths 3,369 and marriages 3,705, as compared with 7,258 births, 3,644 deaths and 4,390 marriages registered in June last year, giving an increase of 2 1/2 per cent. in births, and decreases of 7 1/2 per cent. and 14 per cent. in deaths and marriages respectively.

For the six months January-June births showed a decrease of 2 per cent., deaths an increase of 3 1/2 per cent. and marriages a decrease of 10 1/2 per cent. from the corresponding six months of 1930.

## "Reckless Walking"

A charge of "reckless walking" was recently brought in a Paris court, for the first time, it was said, in French legal history. Damages of \$2,000 were demanded by the plaintiff, a woman worker in a dressmaking establishment, who was hurrying across the Rue de Rivoli when she collided with the defendant, a banker. The plaintiff maintained that her wrist was sprained when she was thrown down by the collision.

## Russia's Population Gains 35 Per Cent.

Moscow.—The census of urban population taken this year shows that Moscow has increased 35.5 per cent. since 1926, reaching a total of 2,745,000.

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