

## Where do the Butterflies Go? What Kills the Caterpillars? This Man Learned the Hard Way

The curiosity of a boy with a butterfly net 30 years ago, plus that boy's persistence, has led to an important scientific advance. It might be described as one of the longest and zaniest research jobs on record.

Dr. Frederick A. Urquhart, head of the Royal Ontario Museum's Division of Zoology and Paleontology, announced today that his research to find out where the butterflies go in the winter is complete. It is the first proof of an insect migration ever presented, and the techniques developed will enable scientists to study movements of some insects which are vitally important in agriculture.

As a boy, Fred Urquhart was curious about Canada's best known butterfly, the King Billy. In 1926, he and his friends went to Florida and the Gulf of Mexico for the winter, and they came back to Canada in the spring weary, tattered, but sun-tanned.

The problem that made the years of work necessary, was that the scientist had to know exactly where individual butterflies went to prove any theory. How do you follow a butterfly?

After several years of experimenting with different glues and papers, Dr. Urquhart found a way to stick a label on a butterfly's wings that wouldn't wash off, and that wouldn't interfere with flight.

From 1928 to 1949, he worked with other scientists across the country, trying different kinds of tags and labels. His work was interrupted by war service. In 1950, he was back at it again, and a satisfactory technique was developed in time for the 1954 tagging.

In all, 40,000 Monarch butterflies have been tagged, and Fred Urquhart captured and labelled 20,000 himself. He has had over 300 co-operators in Canada and the U.S.A. tagging and spotting. Until this year, results were discouraging. Butterflies bearing the label, "Return to Museum Toronto", were found in but a few scattered locations. None of those tagged on the Gulf or in Florida were captured here, and no Canadian tags were found in Florida.

## Mrs. B. Van Fleet Elected President Daughters of Knox

The regular monthly meeting of the Daughters of Knox was in the form of a Christmas party held at the home of Mrs. Helen Holmes. A short business meeting was held with the president, Mrs. E. A. Hansen, presiding.

The slate of officers for the coming year was given as follows: honorary president, Mrs. A. H. McKenzie; president, Mrs. Bern Van Fleet; first vice-president, Mrs. Lorne Masters; second vice-president, Mrs. Kerwin McPhail; recording secretary, Mrs. E. A. Hansen; corresponding secretary, Mrs. Wm. Toth; Glad Tidings secretary, Mrs. W. Robinson; press secretary, Mrs. Gilbert Jordan; treasurer, Mrs. Charles Kingsmill; assistant treasurer, Mrs. Allen Holmes; pianist, Mrs. Fye Somerville; assistant pianist, Mrs. Paul Lawson; literature and library secretary, Mrs. Jim McKnight.

Group leaders, Mrs. Doug Davidson, Miss Helen Holmes, Mrs. Lloyd Robinson, Miss Doris Allen, camp committee, Miss Inez McLellan, Mrs. Earl Masales; supply secretary, Mrs. Bob Foyer; card convener, Mrs. Cliff Ashley; assistant, Mrs. Gilbert Jordan; visiting committee, Mrs. Herb Price, Mrs. Mel Jordan.

The meeting was handed over to the three losing groups who entertained the winning group. The worship service for Christmas was taken from the Glad Tidings.

Games followed and a delicious turkey buffet was enjoyed.

The strange weather of 1956 seemed to help in some unexplained way, and the results already this fall have made the proof of migration complete.

A monarch tagged on September 3 at Meaford, Ontario, was found in Galveston, Texas, on October 18. And Dr. Urquhart has had his personal reward for the other two important specimens, found in Brownwood, Texas and Sibley, Texas, were both tagged by him near his Highland Creek home.

A scientific report on the project is being prepared now for release next year.

The study of the monarch butterfly was not limited to its migration. Dr. Urquhart also wanted to know what killed them. They have no natural enemies, and if all of the monarch caterpillars survived the hatching would soon be knee deep in them.

In finding the answer to this question, the scientist convinced his neighbors that he was insane. Caterpillars live on milkweed plants, so Dr. Urquhart simply plopped up his three acre suburban garden and planted milkweed. He spent several summers sitting on the ground in his milkweed patch, watching caterpillars.

Why don't they survive? It turns out that the caterpillar is a natural Mr. McGoo. It just can't seem to find its way around. When a slight breeze shakes the plant, most of the caterpillars fall off the leaves and find their way back again, and starve to death.

Dr. Urquhart hasn't decided what to do with his three acres of prime milkweed, now that the project is over.

"People often think of the scientist as a man in a white coat, doing complicated and mysterious experiments which no layman could possibly understand," Dr. Urquhart said. "In reality, a lot of important research is just a matter of doing the obvious, simple thing, like labelling butterflies to keep track of their travels, or watching caterpillars to see what happens to them. It's common sense backed up by a thorough understanding of the subject."

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Collection for Gifts To Cedarvale School

The Woman's Association of the United Church met at the home of Mrs. W. J. Beatty on Tuesday of last week with a good attendance and the president, Mrs. H. Burns, presiding. The meeting opened with the Ode, the Lord's Prayer and a Carol. The devotional period was taken by Mrs. J. E. Johnson and the Christmas devotionals by Mrs. F. Cleave.

Roll call, 25c collection, amounting to \$10, which is to be sent to Mrs. Houghton to bring Christmas cheer and goodwill to the girls in Cedarvale school. Georgetown The sick and shut-ins are to be remembered during the holiday season.

A varied program included readings by Mrs. Wm. Ballentine, reading by Mrs. A. Shoemaker, reading by Mrs. J. Moore and a skit with Mrs. J. Wilderspin, Mrs. S. Holmes, Mrs. E. Lambert and Mrs. J. E. Johnson. Carols were sung.

Santa Claus was quite busy presenting his gift to each one.

The president thanked the ladies for their grand co-operation during the past year and welcomed visitors, especially Mrs. Doolie Friend were sorry to hear of Mrs. J. Symon's accident. Mrs. Beatty and her lunch committee, Mrs. J. Denby, Mrs. H. Burns, Mrs. J. P. Pike, Mrs. W. Evans, Mrs. J. Wilderspin, Mrs. B. Veldhuis and Miss M. Z. Bennett served refreshments and a social time was spent together. Mrs. Beatty was thanked for opening her lovely home for this occasion.

Woman's Association officers for 1957 are: president, Mrs. H. Burns; first vice-president, Mrs. I. Harris; second vice-president, Mrs. L. Masales; recording secretary and press secretary, Miss E. Hawthorne; treasurer, Mrs. D. Lemay.

Committee church housekeepers, Mrs. E. T. Theford, Mrs. W. Maddox; visiting book collectors, parsonage, Mrs. B. Veldhuis, Mrs. G. Ingles, Mrs. H. Burns; pianist, Mrs. C. Pickett; Mrs. J. Ralston; quilt, Mrs. E. Lambert, Mrs. N. Lambert, Mrs. J. Wilderspin, Mrs. E. T. Theford, Mrs. J. Ralston, Mrs. F. Cleave, Mrs. J. Bell, Mrs. W. Evans, Mrs. M. Walker; devotional, Mrs. S. Holmes, Mrs. C. L. Poole, Mrs. G. Adams; quarterly board, Mrs. H. Burns, Mrs. J. Moore, Mrs. J. Wilderspin.

## Civil Defence in the Future

(Last in a series of 24 articles.)

The need for civil defence in Canada is here to stay for as long as the possibility of war is around. In fact, the civil defence organizations may be with us even after the threat of nuclear conflict has disappeared—if it ever does—because of the usefulness of such a plan in combating natural disasters.

Civil defence planners are putting heavier emphasis on their plans' advantages to any community struck suddenly by disaster from nature out of control. That is, in floods, fires, tornadoes and so on.

Since Canada's civil defence plan

often stressed that the value of civil defence to a community goes far beyond its immediate objectives.

"Besides their potential for protection in the time of war," he has said, "civil defence measures can have valuable peacetime application as well."

"In a serious peacetime disaster, a well-equipped, properly trained civil defence force can be of inestimable value in maintaining public morale and in restoring nor-

## Pollock and Campbell

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The Communist may have decided they can dominate the world by winning a bloodless cold war. Only the Russians could say.

While all of this is only speculation, one thing seems certain: there appears little hope of obtaining an international climate in which free nations can relax their vigilance.

And aside from considerations of the threat of war is the fact man has not yet learned to so control the forces of nature that he can predict and prevent entirely their sudden onslaughts against him.

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How long might that be? It is doubtful that there is a reputable crystal gazer in business anywhere today who would care to predict the answer.

"What is the grand aim of Soviet Russia?" F. F. Worthington, Federal Civil Defence Co-ordinator, once asked an audience. He gave his own answer.

"Learn one of the original Russian Communist leaders" tells in his own words, "to bring to triumph the world revolution, to create the Soviet Republic of the world or world domination under Soviet Russia."

Originally the Communist aim was to dominate the world through bloody revolution. If it has changed, it has done so only in the method, not the eventual outcome.

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What with St. Nick and the Holiday Season fast approaching why not relax from the hustle and bustle with a friendly Bowling Game Open Bowling Friday and Saturday Evenings.

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## Brampton Telephone Will be "Glendale"

BRAMPTON—A new telephone numbering system, which will include the use of exchange names, will be introduced in Brampton next spring when the exchange becomes dial-operated.

Under the new system all telephone numbers will consist of the first two letters of the exchange name "Glendale" plus the exchange number "1" and four other figures. A typical Brampton number would be "Glendale 1-1234."

The uniform numbering plan is an integral part of an important new advance in long distance service which enables operators to dial direct to telephones in distant centres without the assistance of any other operators. In a few years, telephone users will be dialing their own long distance calls. In 1958 telephone users in Brampton will begin dialing some of their long distance calls.

Speaking of Britain's organization, British Home Secretary Sir David Fife once said:

"Civil defence is not just a crisis organization to be built up when the international situation gets worse and forgotten when it improves.

"Civil defence is a permanent element in our defence, a permanent feature of local government and a permanent part of the responsibilities that fall on all of us as citizens of a free country."

The same applies in Canada. It likely will continue to apply as long as the slightest possibility of the most horrible disaster of all, nuclear war, remains.

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## At Christmas Oakville Boys Collect Toys

OAKVILLE—Scouts throughout the Oakville-Trafalgar-Bronte area have collected 225 toys for the children of stricken families of the Springhill, Nova Scotia, mine disaster last month.

Started originally as a Sixth Oakville Scout Group project three weeks ago, the drive eventually enlisted the co-operation of every scout group in the area.

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## To Our Acton and District Customers: PLEASE TAKE NOTICE

IN CONTRAST to other stores, the local DRY CLEANERS will be closed on Mondays, December 24 and December 31, and will be open Wednesday to Saturday inclusive of these weeks.

Please co-operate by phoning early for your Christmas and New Year's dry cleaning needs.

May we take this opportunity to wish one and all the compliments of the season and may another year bring you health, happiness and prosperity.

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## Knox Church Choir Has Christmas Party

Knox Presbyterian church choir held their Christmas party at the church following their practice Thursday, December 6 with over 30 attending. The Sunday School room was gaily decorated for the occasion and Miss Isabel Anderson was in charge of the entertainment. Rev. Andrew H. McKenzie showed films.

A most delicious lunch was enjoyed by all.

Knox Presbyterian church choir held their Christmas party at the church following their practice Thursday, December 6 with over 30 attending. The Sunday School room was gaily decorated for the occasion and Miss Isabel Anderson was in charge of the entertainment. Rev. Andrew H. McKenzie showed films.

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