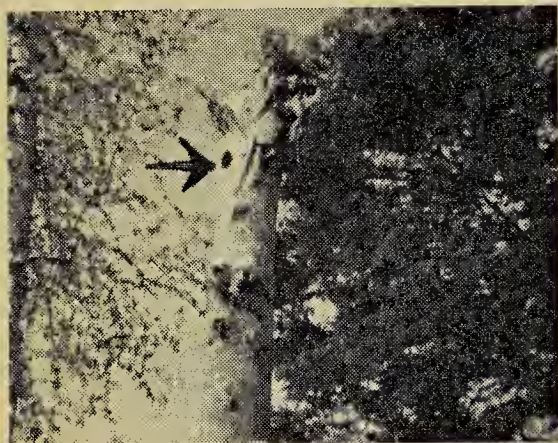


REPORT FROM URANIUM CITY

by Pat Kerr, age 15, Gunnar Mines,
Uranium City.



Yellow-shafted Flicker's nest (see arrow).

The following letter was received by Dr. Nero after his visit to Uranium City this summer. It was dated Oct. 19.

"I am enclosing a picture of a flicker's nest on Dome Lake. We have had our first snow and I saw a flock of six ptarmigan fly past our school this afternoon. After you left this summer myself and several others saw some small (about 6 inches long) type of bat. I may send some more

photos later on. If there are any samples of birds or mammals from this area, I will try to get them for you if you will let me know."

TAXIDERMY EXPERIMENT

by Jack Zess, Moose Jaw

Yesterday before school Jimmy Baily, a neighbour of ours, came to the door and asked for me. I went to the door. He had a dead sparrow in his hand and wanted to know what kind it was. I got my book and found it to be a Lincoln's Sparrow. Immediately I decided to try my hand at taxidermy. I got the chemicals and went to work. It didn't turn out too badly. Seeing that they are not supposed to live here I thought I'd let you know.



TAME DUCK

by Ernest Skaar, age 10, Hagen.

Insect Classification and National Collection of Insects

by G. P. Holland, Director, Entomology Research Institute, Ottawa

Editor's Note: The following item is part of a mimeographed article distributed on June 16, 1960, by Dr. Holland. We are pleased to print it because it stresses the importance of obtaining proper identification of specimens. If you would like to write about insects for the *Blue Jay* you should first get identification from your local Entomological Research Institute, e.g., Saskatoon (University sub post office) which houses part of the C.N.C. of insects. What is said here in support of proper identification of insects is true also for plants and other animals.

The scientific name of an insect is the key to all the information recorded for that species. Thus, a starting point in any problem in entomology is correct identification of the insect or insects involved. This is important because insects differ, physically and physiologically; each species has certain characteristics and limitations that determine its distribution, numbers, and habits. No two species are precisely alike in these respects. To use existing literature effectively, then, an investigator must know which species he is working with and, similarly, his own publications will carry little weight if he

does not specify the insect (or other organisms) that were involved in the experiments or observations reported.

The classifying of insects is a science in itself and is known as insect taxonomy or systematics; individuals trained in this field are called taxonomists or systematists.

The main concentration of insect taxonomists in Canada is in the Taxonomy Section of the Entomology Research Institute in Ottawa. There are more than twenty such officers in the Institute. Assisted by a number of technicians, they make identifications and conduct original researches on insect classification.

Their main working tools are the Entomology Library and the Canadian National Collection of Insects. The Collection includes preserved specimens of insects, mites, and spiders; each specimen is specially prepared and labelled with locality, habitat and other data. The Collection is maintained in special cabinets in a manner planned to ensure its safe

preservation for centuries. The specimens are identified by taxonomists and arranged in a fashion to illustrate the natural relationships (evolution) of the species and other groups.

Unlike other major national collections in this country, most of which are maintained and developed by the National Museum of Canada, the C.N.C. of Insects is, by agreement, the responsibility of the Department of Agriculture. The main collection is kept in the south (old) wing of the K. W. Neatby Building where it occupies much of the third floor. The taxonomists with their microscopes, books, and other equipment occupy small rooms adjacent to the Collection.

Many of the field laboratories of the Research Branch maintain small reference collections of insects; these are considered as part of the C.N.C.

The total Collection contains over three million identified specimens representing about 56,000 species plus many thousands not yet identified. It contains the "types" (original specimens from which species were described). It contains 7000 species. Most of the specimens are North American but there is important material from many other parts of the world. It contains the largest collection known of Arctic insects.

The Collection is stored in several types of cabinets and occupies some 10,000 square feet of floor space.

Large as it is, the C.N.C. contains representatives of only about 5% of the world fauna of insects, mites and spiders, though a much larger percentage of the North American fauna is represented. On the basis of comparison with countries that have been very well studied entomologically (e.g., the United Kingdom), it is estimated that as many as 80,000 different kinds of insects may occur in Canada alone! Obviously, then, the C.N.C. cannot be considered as complete, and we must continue to develop it!

The Collection is used as a tool for identifying harmful and beneficial insects. In addition, it forms the basis for research on insect classification, distribution, and habits.

It has already been pointed out that an investigator should know what he is working with, whether it be a

chemical, a mineral, a plant, or an insect. Each year the taxonomists of the Entomology Research Institute identify more than 30,000 specimens submitted by inquiring persons. In so doing, they constantly refer to properly identified material in the C.N.C.

The ultimate objective of the insect taxonomist is to make it possible to identify or name all species of insects. Canadian scientists in this field concentrate on the 70-80,000 species that occur in Canada and seek to determine their distributions, habits, food preferences, environmental relationships, and economic importance. Each taxonomist, in addition to providing identifications to entomologists in other fields such as insect control, also studies a segment of the fauna and publishes papers that will assist others to identify insects. Material in the C.N.C. forms the principal basis for his research.

The taxonomists of the Entomology Research Institute use the Collection regularly but other officers of the Research Branch visit Ottawa to study the Collection, or use the regional collections. Taxonomists from many countries visit Ottawa especially to study material in the C.N.C. At times, portions of the Collection are sent out on loan to accredited specialists or to graduate students at universities.

The Collection grows by gifts, purchases, exchanges, retentions from material submitted for identification, but mostly from fresh material collected on insect surveys organized by the Institute. The long-range needs of the Collection (especially as relating to current projects) are considered by a committee, and each year, field parties of one to five individuals are sent to areas from which specimens are required.

A number of the taxonomists go into the field each year to collect insects and to carry out other field studies. It is important for the taxonomists themselves to participate in the collecting because (a) as specialists, they do it better than anyone else, and (b) they have then an opportunity to study the species they are concerned with in a living state.

The Collection grows at an average rate of about 150,000 specimens annually.