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Progress Report of a Survey of Iowa Insects

H. E. Jaques
Iowa Wesleyan College

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PROGRESS REPORT OF A SURVEY OF IOWA INSECTS

H. E. JAQUES

At its meeting a year ago the Academy authorized a small research grant to help with what we have chosen to call an Iowa Insect Survey. Because of the copartnership the Academy has had in the work and with the hope that the paper may possess considerable scientific interest and value, it has been chosen to report on the progress of the survey.

Ord. & Fam	Catalog Number	Scientific Name
XI 85	11193	<i>Adalia bipunctata</i> (L.)
Order		
Coleoptera		
Family		
Coccinellidae		
Habitat		Years
Food		
Jan	Feb ✓	Mar ✓
Apr ✓	May ✓	June ✓
Jul ✓	Aug ✓	Sep ✓
Oct ✓	Nov ✓	Dec ✓

Biological Survey—Department of Biology—Iowa Wesleyan College

In its beginning the project was of modest dimensions and centered around a collection to determine and illustrate the more common insects to be found in Henry County. For several years work was confined to the insects of this one county, then outlying districts were added. Three years ago the decision was made to include the whole state and to make the survey a study of the geographic and seasonal distribution of as many as possible of the insects occurring within our borders. Since that time the project has received continuous attention. No one realizes more than the writer the prodigious size of the undertaking and the futility of any thought that it will ever be wholly finished. Wickham's list of the Coleoptera of Iowa published in 1909 named 2,065 beetles alone, that were then known to occur in our state. The New York list shows 15,449 species and varieties of insects that have been found

within the confines of that state. We are convinced, however, that there is much value in the work of making the survey, and hope that it may form the nucleus for some permanent record of the insect fauna of Iowa, the heart of this important midwest region of America.

The records are kept on 3 x 5 index cards as here shown. Reports of species in reliable literature as well as specimens in all available collections are marked on the cards. Reports are marked by counties whenever that information is available. An "x" marked in a county indicates the presence of a specimen of that species in our survey collection. Other characters are used to indicate the presence of a specimen in some other collection or a report of its occurrence in some apparently reliable insect list. A colored "key card" explaining the significance of the different characters employed in this marking is kept in the files at the head of the cards for each order of insects.

The month shown on the locality labels of specimens is recorded by a check mark in the proper square on the index card. A space for "years" has been provided on the cards feeling that this would be helpful in determining life cycle data with some species.

The twenty-five orders of insects have been given Roman numbers and the families Arabic numbers beginning with number 1 for each order. Where an authentic catalog with catalog numbers is available these numbers are used. Thus Leng's "Catalog of the Coleoptera of North America North of Mexico" is used for the beetles.

The species names in the best available list or catalog for some orders are not numbered. This difficulty is overcome by numbering the species as cited beginning with number one for each page and, prefixing by hyphen, the page number. Thus the honey bee taken from "A List of the Insects of New York" is numbered 1033-9.

The index cards are arranged in the files in their numerical order which makes them readily accessible. Each species of insect then not only has its name but may be designated by a number. For example, on the cards and in the collection, XI-15648 is the Colorado Potato Beetle, XXI-1950 is the Army worm, while the House fly bears the number XXIII, 828-13.

The survey collection which is one of the chief sources of information, is kept in glass-topped insect cases. Specimens of each species are mounted by themselves in a white cardboard tray. The tray has a label bearing not only the name of the insect but its catalog number. Thus each tray may be readily placed in its logical

numerical order and any species readily found. Of course this arranges the specimens in the collection in the same order as the index cards in the files.

Counties have been made the unit for collecting. The aim is to get specimens from as many counties as possible and representing all the months in which the insect has been taken. To simplify the locality labels and county records, the counties of the state have been numbered from one to ninety-nine and are so recorded on the locality labels. Insect specimens are coming from many sources for the survey collection. Students are encouraged to collect in new territory whenever possible.

Every effort is being made to maintain the highest standard of accuracy in all phases of the work. Uncertain species are sent to specialists for determinations. Large numbers of specimens are out all the while in this way. All records and determinations made locally are checked.

We have had valuable help from many sources. Several of our fellow college biologists have made their contribution and a good number of high school teachers of biology throughout the state are sending in collections from their classes. A named collection of some of the more common Iowa insects — the ones their students need most to know — are given to these schools for reference work. Many specimens are sent in for identification.

Contacts have been made with high school biology teachers in practically every county of the state. Helps for collecting in the way of literature and supplies have been sent on request to many of these high schools. Named collections and identifications have been frequently furnished. A good percentage of these high schools have sent in collections as contributions to the survey. In some cases the number of specimens has been notably large. For example, Mr. Siverson of the Lincoln High School of Des Moines required each of his students to make an insect collection as a special project last summer and fall. All of these collections were turned over to us for the survey. Many valuable records and some rare species were gotten in this way.

It would require entirely too much time and space to even name all of those who have helped. One particularly valuable contribution must be mentioned however. Dr. Hauber of St. Ambrose College gave, last spring, several hundred species from his collection. Most of these were from Scott county and many index cards have been marked for that county as a result of his gift.

While some of the features of the collection and card index are

original, the helpful suggestions given by many entomologists and others have been of large value in devising the plan. To all who have aided in any way we would extend our thanks.

The relationship of insects to our state probably constitutes its largest biological problem. Many of our industries pay heavy toll to insect pests. Some insects bring valuable returns to the state. All of them are of sufficient interest to make a cultural or avocational problem worthy of anyone's attention. With no other group of living things can many biological phenomena be so conveniently illustrated or forcefully taught. Since more than one-half of all living things are insects it would seem that to neglect these interesting creatures would leave one's biological culture at least fifty percent defective.

In helping through the aid of the Academy to bring about a larger study of insects in the high schools of the state, we feel that a definite contribution is being made to better farming and a more intelligent citizenship.

IOWA WESLEYAN COLLEGE,
MOUNT PLEASANT, IOWA.