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A Progress Report of a Survey of the Insects of Iowa

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A PROGRESS REPORT OF A SURVEY OF THE
INSECTS OF IOWA

H. E. JAQUES

Considerably more than one half of all the known species of living things are insects. These make vital contact with man at every angle of his living. Crops are raised, possessions of many kinds are kept, health of man and beast is maintained and many other activities made successful only after a combat with insect enemies. A knowledge of the insect life of a region is highly desirable not only for its economic relationships, but because of still greater value as a pure science problem. Since Iowa stands at the focus of a great mid-west faunal region, a knowledge of its insect population, would be of value to the surrounding states in addition to its large worth at home. These reasons as well as the value of such an undertaking for a department project led us, some years ago to begin work on a geographic and seasonal distribution survey of the insects of Iowa. The project presents problems of collecting, identifications, and housing and arrangement of specimens and records.

Many college, high school, and amateur biologists throughout the state have helped with collecting but the greatest percentage of the material has come through organized collecting with our own students. In this way at least some work has been done in each of the 99 counties of Iowa. In building the survey collection the aim is to retain one specimen of each species from every possible county to show geographic distribution. Seasonal distribution is shown by putting into the collection at least one adult specimen of each species for each possible month. Twenty specimens are taken as the desired minimum of a series whose restricted habitat would not otherwise give that great a number. Each specimen bears a locality label showing the number of the county in which it was taken, the date, and the name of the collector. These locality labels are put on the pin, of course, at the time of collecting. After determinations are made, each specimen bears an additional name label showing the full name, catalog number and who determined it. Where many specimens of a species are kept, part of them are marked with the catalog number and name of determiner only.

All the specimens retained, of each species, are mounted in a unit tray which bears a removable long tray label with the order, family, and catalog number of the species, together with its full scientific name. Special notations are sometimes made on these tray labels and habitat groupings will be indicated by colored adhesive dots. Trays are of six sizes. The trays are kept in glass topped cases, 14" x 18", and are easily arranged in their logical order by use of the order, family and species number on each tray. Cases have metal label holders with card labels bearing order and family numbers with letters to indicate the logical order of cases in large families. The cases are kept in cabinets and are arranged in logical order.

Many specialists are helping with the determinations. Entire families are being worked in this way and wherever there is any uncertainty, verifications of names are sought from an authority. Every effort is made to maintain the highest type of accuracy in every phase of the project. All of the work done by students is checked for mistakes, before being passed.

The records are kept on 3 x 5 index cards, with a card for each species. The cards bear an outline map of the state with its counties. The counties are numbered to correspond to the county numbers on the locality labels. Each county represented by one or more specimens of a species in the survey collection is marked with an x. Records from the literature on Iowa insects and the specimens in other collections are being recorded on the cards as time and opportunity permits. Special characters are used for these markings. Each month represented by adult specimens in the survey collection is checked. Each index card shows the order, family, and

Ord. & Fam.	Catalog Number	Scientific Name												
Order														
Family														
Habitat	Years													
Food														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">Jan</td> <td style="width: 12.5%;">Feb</td> <td style="width: 12.5%;">Mar</td> <td style="width: 12.5%;">Apr</td> <td style="width: 12.5%;">May</td> <td style="width: 12.5%;">June</td> </tr> <tr> <td>Jul</td> <td>Aug</td> <td>Sep</td> <td>Oct</td> <td>Nov</td> <td>Dec</td> </tr> </table>	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec		
Jan	Feb	Mar	Apr	May	June									
Jul	Aug	Sep	Oct	Nov	Dec									

Biological Survey—Department of Biology—Iowa Wesleyan College
The Record Card

catalog numbers of the species it represents as well as the scientific name. The cards are kept in their logical order by these numbers, making any card readily accessible. The cards are referred to and marked when additional specimens are put into the collection so that the cards always show the exact status of the named collection.

Newly acquired specimens are first sorted to families into "pink label" insect boxes which house the undetermined collection. When named to species, the specimens needed for the survey collection are put into it and the others are marked with green "dots" and put in "green label" boxes. This is the duplicate collection.

These duplicate specimens are given to other collections, used for laboratory work, or thrown away. Both the undetermined collection and the duplicate collection boxes are marked with the order and family numbers and arranged in logical sequence.

It will be noted that the same system of labeling is used for all parts of the three collections and for the index records, so that any one working on the project can readily locate any desired part or easily return it to its proper place.

It has been indicated that each of the 99 Iowa counties are already represented by a good number of specimens in the collection. The survey Collection is richest in Coleoptera. Hymenoptera and Diptera are well represented. This part of the collection is perhaps growing most rapidly though some of the smaller orders are quite completely represented in their limited way. The survey and undetermined collections now number over 50,000 specimens, representing more than 6,000 species.

It is planned to continue the present scheme with greater emphasis on group collecting and study. Some of our specimens and cards are already marked with ecological records. It is hoped to make this a more regular feature of the work.

A list of the many who have contributed valuable assistance is too large to include here. We are grateful for all this help and will appreciate any suggestions or criticisms as the project progresses.

IOWA WESLEYAN COLLEGE,
MT. PLEASANT, IOWA.