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A PRELIMINARY LIST OF THE CRANE FLIES
(DIPTERA: TIPULIDAE) OF IOWA

ORVILLE HALVORSON AND H. E. JAQUES

The members of the family Tipulidae are commonly called "Crane flies." They have slender bodies, long slim wings, prominent halteres and long dangling legs. The legs break so readily between the trochanter and femur that it becomes a difficult problem to collect these insects and get them mounted in good condition.¹ This brittleness might almost be made a character for determination of the family. The antennae are long and slim and are composed of from six to thirty-nine jointed segments. The eyes are large and the ocelli are wanting. In size the various species show a range almost as great as that found in the entire order of Diptera; the wing expanse varying from about two millimeters to forty-five millimeters or more.

Crane flies are seen most often in damp localities especially where there is a rank growth of vegetation; but sometimes they occur in great numbers flying over meadows and pastures. Their power of flight as well as their ability to walk is poorly developed. A few of the smaller species, however, sustain themselves in the air for long periods of time.

The larvae of most species are scavengers, feeding on decayed vegetable matter, but some feed on living vegetable tissue and still others are carnivorous.

For the most part this family of insects is harmless but some of the species are very destructive while in their larval stage. They feed upon the tender rootlets of grass and grain causing a high percentage of loss.

The family Tipulidae is a rather large family of which nearly six thousand species are known. About five hundred of these species have been found in North America alone.

It can scarcely be said that any intensive collecting of this family has been done in Iowa. The preliminary list that follows is offered in the hope of stimulating interest in this group of insects. Most of the determinations have been made by J. S. Rogers.

¹ It is a good plan to collect but a few specimens in each cyanide bottle, touching them as little as possible when putting them in the bottle. As soon as they are killed they should then be carefully arranged in small envelopes and dried in a warm place. The data should be written on the envelope, or locality labels may be made and put within the envelope. Anytime after the specimens are thoroughly dried they may be mounted, by gluing on their side on one or two points. The insect should head away from the worker when the points stand to the left of the pin and the specimen arranged with its wings and dorsal side to the left. The envelopes should be left for a few hours in a moderately humid atmosphere just before mounting so that the flies will not be so brittle. Specimens put up this way do not lose their legs so readily.

- 2- 3 *Dicranomyia brevivena* O. S.
- 2- 9 *Dicranomyia liberta* O. S.
- 3- 2 *Geranomyia canadensis* Westw.
- 3-28 *Rhipidia domestica* (O. S.)
- 4-11 *Helius flavipes* Macq.
- 4-31 *Dicranoptycha germana* O. S.
- 6- 7 *Erioptera vespertina* O. S.
- 6-18 *Erioptera armata* O. S.
- 7-41 *Helobia hybrida* Meig.
- 7-61 *Gnophomyia tristissima* O. S.
- 8-24 *Gonomyia subcinerea* O. S.
- 9- 1 *Neolimnophila ultima* O. S.
- 9-26 *Cladura flavoferruginea* O. S.
- 10-21 *Epiphragma fascipennis* (Say.)
- 12-47 *Pilaria tenuipes* Say.
- 13-85 *Ericoera ligicornis* (Walker)
- 14-43 *Pedicia insonstans* (O. S.)
- 17-21 *Prionocera fuspennisi* Lw.
- 17-31 *Nephrotoma brevioricornis* Doane.
- 17-34 *Nephrotoma euceroidea* Alex.
- 17-35 *Nephrotoma ferruginea* Fabricius.
- 17-37 *Nephrotoma incurva* Loew.
- 17-38 *Nephrotoma lugens* Lw.
- 17-41 *Nephrotoma polymera* Lw.
- 18-33 *Tipula angustipennis* Loew.
- 18-37 *Tipula bicornis* Fbs.
- 18-42 *Tipula cunctans* Say.
- 18-43 *Tipula borealis* Wlker.
- 18-44 *Tipula angulata* Loew.
- 19- 2 *Tipula eluta* Lw.
- 19- 4 *Tipula fuliginosa* Say.
- 19- 7 *Tipula grata* Lw.
- 19-11 *Tipula dorsimacula* Walker.
- 19-12 *Tipula furca* Walker.
- 19-13 *Tipula distincta* Walker.
- 19-14 *Tipula flavoumbrosa* Alex.
- 19-15 *Tipula duplex* Walker.
- 19-52 *Tipula megaura* Doane.
- 19-53 *Tipula kennicotti* Alex.
- 20- 2 *Tipula parshleyi* Alex.
- 20- 8 *Tipula sarta* Lw.
- 20-16 *Tipula ultima* Alex.
- 20-18 *Tipula valida* Lw.
- 20-20 *Tipula triplex* Alex.
- 20-21 *Tipula youngi* Alex.
- 20-22 *Tipula unimaculata* (Loew.)

DEPARTMENT OF BIOLOGY,
IOWA WESLEYAN COLLEGE,
MT. PLEASANT, IOWA.

PRELIMINARY SURVEY AND ECOLOGICAL NOTES
OF IOWA CORIXIDAE

D. D. MILLSPAUGH

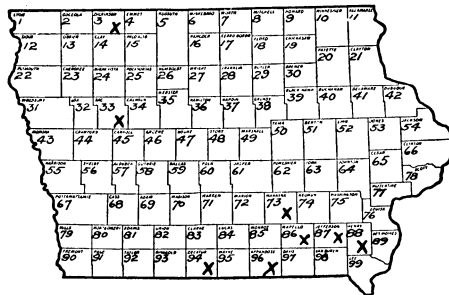
Our literature dealing with Iowa Corixidae (water-boatmen) is limited. Van Duzee in his "Catalogue of the Hemiptera of America North of Mexico," gives only general distribution which may include Iowa as does Blatchley in his "Heteroptera of Eastern North America."

Perhaps one of the main reasons for this neglect lies in the fact that these insects are, aside from fish culture, of little economic importance. The increasing attention given to the lakes and streams of Iowa by state and institutional organizations will, I believe, see increasing emphasis placed on the general biology of our corixids and other aquatic insects.

The corixids or water boatmen may be recognized by their free swimming habits with their backs uppermost. They are medium sized to small insects and are usually marked with bars of yellow and brown running in a definite pattern, thus probably giving protective coloration. The head overlaps the thorax dorsally and articulates with it. The most peculiar thing about them is the structure of the beak, which is very short, scarcely distinguishable from the head, the opening to the mouth being on the front of the so-called *beak*. The fore legs are used in securing food, and the fore tarsi are peculiar in that they are only one segmented, flattened and fringed with strong bristles so they can scoop food into the mouth.

Ord. & Fam.	Catalog Number	Scientific Name
XVII-33	1422	<i>Arctocorixa alternata</i> (Say)

Order						
Hemiptera						
Family						
Corixidae						
Habitat						
Food						
Jan.	Feb.	Mar.	Apr.	May	June	
		✓	✓	✓	✓	
July	Aug.	Sep.	Oct.	Nov.	Dec.	
✓	✓		✓	✓		



Iowa Insect Survey

The middle leg is used for anchorage. When the insect submerges with its bubble of oxygen and does not find sufficient anchorage he holds the anchor and floats to the surface but then usually will dive again until he can catch solid footing. The hind legs are the propelling organ of the corixid.

One needs to collect in a variety of habitats for various species. Usually rather slow moving streams are good collecting but during some seasons of the year ponds and lakes are better collecting.

1427-1 *A. dakotensis* Hungerford

This species has been collected only in northwestern Iowa in counties 1 and 3. Its range is likely further north as the name indicates. Taken in June and July.

1437 *A. interrupta* (Say)

This species is said to be a general northern form but ranges from New England west to the Pacific and south into Texas. It is found in intermittent streams, and rain ponds, but does not like stagnant water. Some have been taken in spring fed streams. It can likely be taken during most of the season since they have been taken in March, July, October, and November. Our records list counties 3 and 88.

1443½ *A. modesta* Abb.

Blatchley reports it from Maryland, Virginia and District of Columbia and says it is not recorded elsewhere. We have collected it in counties 2, 3, 88, and 91 for the months of March, April, and July.

1444-1 *A. obliqua* Hungerford

Recorded only in county 87 in May and June.

1456-1 *A. vulgaris* Hungerford

Taken in counties 3, 88, and 94 during the months of August, October and November.

1462 *Palmacorixa buenoi* Abb.

Taken in county 3 in June and July. It was collected in grassy streams where other insects are striving.

1469-5c *Coricella* sp.

Only one specimen which is determined only to genus. It was taken in county 87 during April.

1469-8T *Trichocorixa* sp.

We have a good series which has not been determined to species because of classification difficulties.

1469-8 *Trichocorixa burmeisteri* (Fiebr)

Found in county 14 in July. Abundant enough to cause alarm regarding the safety of fingerling fish. Their abundance in this locality would lead one to think they would be very abundant in this state. They are likely one of the most abundant of our corixids and are usually found in lakes which have sparse vegetation except for desmids and other minute algae.

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