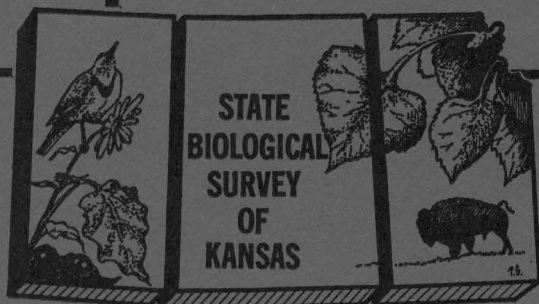


Michael Hubbard



PRELIMINARY LIST OF
KANSAS MAYFLY GENERA

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PRELIMINARY LIST OF KANSAS MAYFLY GENERA

PAUL M. LIECHTI

The order Ephemeroptera in Kansas is composed of 10 families containing 24 genera, whereas another 3 families and 10 genera may occur in the state. Kansas mayflies have never been surveyed on a statewide basis, but this task is under way as part of the aquatic macroinvertebrate inventory program of the State Biological Survey of Kansas. The inventory is incomplete, but enough material has been accumulated to warrant a preliminary list of mayfly genera and their distributions. Included in this report is a separate list of genera possibly occurring in Kansas and their distribution in North America as described by Edmonds, Jensen and Berner (1976) and Burks (1953).

In the near future more comprehensive accounts of mayfly genera in Kansas will be published. These accounts will include specific county records and detailed discussion of habitats where certain genera or families of mayflies have been found. Lists of species determinations and distributions are difficult to obtain, but are becoming more necessary for aquatic organisms because of increasing importance in the assessment of water quality (Resh and Unzicker, 1975). When one sets out to survey and identify Ephemeroptera, several problems become evident. There are few species keys for nymphs and females in certain taxonomic groups. Furthermore, since adult emergence patterns are often staggered, collecting must be done at various times of the year or immature forms must be reared to obtain a good sample of the species in the state.

The following lists are being offered to aid those who are either about to embark on a survey, or those who are interested in what mayfly genera inhabit certain areas of the state.

GENERIC ACCOUNTS

FAMILY SIPHLONURIDAE

Siphonurus Known from most areas of North America with its southern limits in California, Arizona, New Mexico and South Carolina.

Kansas: Most often found in the eastern half of the state with sporadic collections in the northwest.

Isonychia Widespread in North America but generally more abundant in the eastern United States and Canada.

Kansas: Riverine genus found throughout the state, but more abundant in eastern habitats.

FAMILY BAETIDAE

Baetis Cosmopolitan genus that is extremely widespread in North and Central America.

Kansas: Primarily eastern but isolated populations found throughout the western half of the state.

Callibaetis Very widespread in North America.

Kansas: Likely to be found in nearly all counties of the state.

Centropotilum In the Nearctic, widespread south to northern Mexico.

Kansas: Rarely encountered with only recent collections from the northcentral and southcentral regions of the state.

Dactylobaetis The genus is known from Oregon, Saskatchewan, and Oklahoma with other accounts extending into Neotropical regions.

Kansas: Only one population has been found in the east-central part of the state. The specimens found may be representatives of a new species. More material is needed for correct systematic placement.

Pseudocloeon Most common in the east occurring south to Florida, but also found in Utah and western Canada.

Kansas: Most abundant in the Flint Hills region, with one isolated record from the northwestern quarter of the state.

FAMILY HEPTAGENIIDAE

Heptagenia Common North American genus extending into Central America.

Kansas: Found throughout the state, where moderate to large streams and rivers occur.

Stenacron The genus is restricted to eastern and central North America.

Kansas: It may reach its western distribution in the state. It is abundant in the eastern half of the state, with only isolated collections from the western quarter of the state.

Stenonema Nearctic, where all but one or two species occur east of the Rocky Mountains.

Kansas: Primarily found in the eastern half of state, but more abundant in the eastern quarter.

Psuediron This relatively rare genus is restricted to North America and is known from scattered localities in central and southwestern North America west to Manitoba, Wyoming, and Utah.

Kansas: Only two localities are known for the state, both in the central region.

FAMILY LEPTOPHLEBIIDAE

Choroterpes Widespread in North and Central America but more abundant in the central and southcentral states into Mexico.

Kansas: The Flint Hills area has produced most of the state accounts, with a few collections from the western half of the state. Thus far, it has not been collected in the eastern three tiers of counties.

Leptophlebia Most species occur in central and eastern North America south to Illinois, Ohio, and Florida; in western North America the genus occurs south to Oregon, Utah and Colorado.

Kansas: An eastern genus with some western extensions along the southern border.

Paraleptophlebia Found in most regions of the United States and Canada, but not extending into Mexico even though it is known from Texas, Arizona, New Mexico, and California.

Kansas: The only collection is from the southeast corner of the state.

FAMILY EPHEMERELLIDAE

Ephemerella (Ephemerella)* Widespread from Alaska to Florida.

Kansas: Only one collection has been made from the northwest corner of the state.

Ephemerella (Eurylophella)* Mostly an eastern and central subgenus of North America, with only one species known in western regions.

Kansas: To date, the only Kansas collection is from the southeast corner of the state.

FAMILY TRICORYTHIDAE

Tricorythodes Widespread Nearctic genus, extending from Central America to British Columbia, Saskatchewan, and Quebec.

Kansas: It is found throughout most of the state in lotic environments.

FAMILY CAENIDAE

Brachycerus Widespread in eastern and central North America, west to Utah and Idaho.

Kansas: Thus far, it appears to be limited to the larger rivers in the central part of the state, extending from the northern to southern borders.

*Subgeneric designation was made because the genus Ephemerella is one of the largest and most complex in North America with eight recognizable subgeneric classifications.

Caenis Cosmopolitan; widespread throughout North America south to Panama.

Kansas: Found in nearly all counties within the state, especially common in lentic waters and backwater areas in rivers and streams.

FAMILY POTAMANTHIDAE

Potamanthus Known primarily east of the Rocky Mountains.

Kansas: Most common in southeast quarter of the state with a few collections from the central region of the state.

EPHEMERIDAE

Ephemera Relatively common, but only one species is known in northwestern United States and western Canada.

Kansas: It is only known from the southeastern corner of the state.

Hexagenia Known throughout North America, from Mexico to most areas of Canada.

Kansas: It is common throughout the state but less abundant in the southwestern quarter of the state.

Pentagenia Primarily found in central North America but extends into Florida.

Kansas: Primarily found in the northeast quarter of the state, but one population is known from central Kansas.

FAMILY POLYMITARCYIDAE

Ephoron Widespread in southern Canada and the United States, south to Georgia and New Mexico.

Kansas: It is primarily eastern and southeastern in distribution, but populations have been found in the central regions of the state.

Tortopus Found in central Canada and in central to southeastern areas of the United States.

Kansas: Thus far, populations have only been found in medium to large rivers in the eastcentral and central regions of the state.

POSSIBLY OCCURRING GENERA

FAMILY SIPHLONURIDAE

Amelatus Most abundant and diverse in the northern areas of North America but extends southward along the mountains into California and New Mexico, and into Illinois and Georgia.

FAMILY METREPODIDAE

Siphloplecton Most common in the eastern United States, but extends west to Central Alberta and south to Florida. Other midwestern states with records are Minnesota, Michigan, Indiana, and Illinois.

FAMILY BAETIDAE

Cloeon Most abundant in northeastern United States and eastern Canada. Its distribution extends into Idaho, Colorado, Illinois, and Florida.

FAMILY OLIGONEURIIDAE

Homoeoneuria A Neotropical and Nearctic genus found in South Carolina, Indiana, Nebraska, and Utah.

FAMILY HEPTAGENIIDAE

Epeorus It is represented in the western and northeastern states, but it is rare in the Midwest. It is known from Indiana and Michigan, and in Canada from Ontario and Manitoba.

Rithrogena The genus is frequently encountered in the western states and in the Northeast, and is abundant in the central states. It is known from Illinois, Michigan, and Minnesota.

Anepeorus Its distribution is made up of scattered records from Illinois, Iowa, Georgia, Saskatchewan, and Utah.

FAMILY LEPTOPHLEBIIDAE

Habrophlebiodes The genus is found in central and eastern North America with records from Florida, Illinois, and Arkansas.

Traverella This warm river genus is known from Alberta, Saskatchewan, Washington, Ohio, and Texas.

FAMILY TRICORYTHIDAE

Leptohyphes Mostly found south of the United States, but with species extending north to Utah, Texas, and Maryland.

FAMILY BAETISCIDAE

Baetisca The genus is most abundant and diverse in the southeastern United States, but several species occur in the central states of Michigan, Illinois, Wisconsin, Indiana, and Iowa.

There are several primarily eastern genera that apparently reach the end of their range in the Great Plains region. These genera should be taken into account when one tries to identify Kansas material. There is no single key to the species of North American mayflies; published accounts are scattered in journals and various institutional publications. Treatises that provide keys to the identification of eastern Ephemeroptera may not necessarily include the entire Kansas fauna, nor would keys to Southwest or montane species. At present, the most useful and recent published work on both nymphs and adults is the one offered by Edmonds et al. (1976). It encompasses North America, but the keys extend only to the generic level. One rather complete publication by Burks (1953) includes the identification of the mayflies found in Illinois and is useful for most midwestern states; however, the book is now in need of revision. With the above two publications one should be able to identify most Kansan mayflies to the generic level, and to species for several groups, until a regional key can be constructed.

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