#### AQUATIC SURVEYS (FOR 328-4)

#### BIOLOGICAL COLLECTION REQUIREMENTS

#### GENERAL

A collection of 25 different species of macroscopic aquatic freshwater invertebrates is required for presentation. Collection will be worth  $\underline{\text{no}}$   $\underline{\text{less than } 10\%}$  of the final grade. Deadline for submission is  $\underline{\text{September}}$   $\underline{30}$ .

#### COLLECTION

Students are urged to start collecting specimens this summer. Some equipment may be loaned to students by the Department for collection in the fall. Students are required to purchase specimen bottles and preservative.

#### PRESERVATION

An alcohol preservative is recommended. Preferably a 70-80% ethyl alcohol and water solution. Ethyl alcohol is available at most drug stores.

#### PRESENTATION

Specimens are individually preserved in vials\* or screw capped jars of suitable size. Specimen jars are numbered to correspond with a separate species list with classification and pertinent information.

- 1. date of capture
- 2. location
- 3. depth and temperature of water
- 4. habitat description (substrate type, veg.)

#### CLASSIFICATION

For each specimen, give a reduced hierarchical classification as follows:

Phylum Class Order

Family (a passing grade for collections ID'd correctly to Family)

Genus (full marks awarded to collections ID'd correctly to Genus)

Use a bifurcating identification key. DO NOT CLASSIFY ON THE BASIS OF SUPERFICIAL RESEMBLANCE TO LINE DRAWINGS IN SIMPLIFIED FIELD GUIDES.

\*Vials available at College Bookstore or any drugstore.



#### REFERENCE LIST FOR COLLECTION IDENTIFICATION

- Edmunds, G.R. Mayflies of North and Central America. Minneapolis, University of Minneapolis Press, 330 p.
- Needham, P.R. and Needham, J.G. 1969 Guide of the Study of Fresh Water Biology. San Francisco, Holden-Day, Inc., 108 p.
- \*Needham, J. S., J. R. Traver and Y. -C. HSU. 1972 The Biology of Mayflies. Hampton, E.W. Classey. 759 p.
- \*Pennak, R. W. 1953. Freshwater Invertebrates of the United States, New York. The Ronald Press Company. 769 p.
- \*Merritt, R. W. and K. W. Cummins, 1978. An Introduction to the Aquatic Insects of North America. Dubuque, Kendal/Hunt. 441 p.
- \*Wiggins, G. B. 1977. Larvae of the North American caddisfly genera (Trichoptera). Toronto, University of Toronto Press. 401 p.
- \*Usinger, R. L. (ed.). 1973. Aquatic Insects of California. University of California Press. Berkeley, California. 508 p.

\*THESE REFERENCES WILL BE PARTICULARLY USEFUL

## Sault College

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