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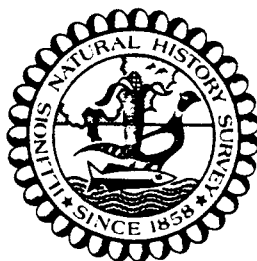
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ILLINOIS NATURAL HISTORY SURVEY

CHAPTER 9
AQUATIC MACROINVERTEBRATES
SECTION A
AQUATIC MACROINVERTEBRATES (EXCLUSIVE OF MOSQUITOES)



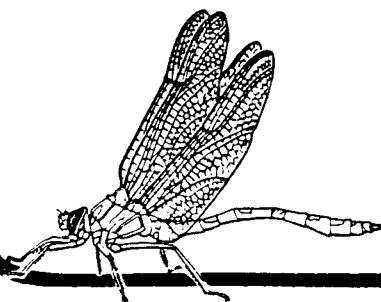
Final Report

October, 1985

Section of Faunistic Surveys and Insect Identification Technical Report

by

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CHAPTER 9
AQUATIC MACROINVERTEBRATES

SECTION A

AQUATIC MACROINVERTEBRATES (EXCLUSIVE OF MOSQUITOES)

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INTRODUCTION

Aquatic macroinvertebrates are primary and secondary level consumers that play an important role in transferring energy through the different trophic levels of the food chains of aquatic ecosystems. These animals feed upon submerged and emergent macrophytes, plankton, and organic material suspended in the water column. Burrowing and feeding activities aid in the decomposition of plant and animal matter and the eventual recycling of nutrients. In addition, these organisms prey upon each other and serve as food for fishes, certain birds, and other animals.

In general, aquatic macroinvertebrates have not been systematically surveyed in Illinois, and rarely have individual species been studied ecologically. This is due, in part, to the inconspicuous nature of most freshwater invertebrates and the many taxonomic problems which preclude distributional, ecological, and other studies.

Historical data on the distribution of aquatic macroinvertebrates in northeastern Illinois are limited. Included in this report are those groups for which the best data and current taxonomic expertise are available: worms and leeches (Annelida); isopods, amphipods, crayfishes, and shrimps (Malacostraca); nine orders of insects (Ephemeroptera, Udonata, Plecoptera, Heteroptera, Megaloptera, Neuroptera, Trichoptera, Coleoptera, and Diptera); and mussels (Unionidae).

Most of the distributional and ecological information for these species is contained in faunal studies conducted by personnel of the the Illinois Natural History Survey (Baker 1898, 1906; Garman 1917; Frison 1935, 1942; Ross 1944; Pechuman, Webb, and Teskey 1983; and Page 1985). Other papers containing information on the aquatic macroinvertebrate fauna of northeastern Illinois are cited in the bibliography.

METHODOLOGY

The expected occurrence of aquatic macroinvertebrates was determined by the examination of museum collections (primarily those of the Illinois Natural History Survey), published records, and likely occurrence based upon habitat evaluation. Aquatic macroinvertebrates were sampled at sites on the demonstration project site on 21-22 May and 9-10 July 1985 to document present occurrence and distribution. Qualitative samples were taken by several methods for different life stages including (1) aquatic net and (2) hand-picking for immatures and (3) ultraviolet light trap and (4) sweep-netting for adults. Identifications were made by specialists associated with the Illinois Natural History Survey.

Unlike the species-level biological and ecological information available for vertebrates, little information is available for aquatic macroinvertebrates. Because little precise information exists for individual species, the habits and trophic relationships of aquatic macroinvertebrates were summarized at the family level (Appendix A, Table 1). The terms used in categorizing the families by habits and trophic or food relationships are discussed below.

Aquatic macroinvertebrates employ a number of different modes of feeding. Some are shredders of both living and decomposing vascular plant tissue. Others obtain food by collecting (filtering) suspended decomposing fine particulate matter, scraping (grazing) attached algae and associated material, or piercing macrophyte tissue or cells to obtain fluids. Some live as predators (carnivores) or parasites (internal and external).

Within a given habitat, aquatic invertebrates employ a variety of methods to maintain their location or move about. The following are categories of invertebrate habits or modes of existence:

- skaters - adapted to skate upon the surface film of the water; occur in littoral (near shore) zone or limnetic (open water) zone
- planktonic - inhabit the limnetic zone, either by active swimming or passive floating [*e. g.*, Diptera: Chaoboridae (phantom midges)]
- divers - adapted to swim by "rowing" with the hind legs; may cling or crawl on submerged objects such as rooted plants in the littoral zone [*e. g.*, Coleoptera: Dytiscidae (predaceous diving beetles, Hemiptera: Corixidae (water boatmen)]
- swimmers - adapted to swim in littoral and limnetic zones; individuals usually cling to submerged objects between short bursts of swimming [*e. g.*, Ephemeroptera: Leptophlebiidae (mayflies)]
- clingers - adapted behaviorally or morphologically to attach to surfaces in current [*e. g.*, Ephemeroptera: Heptageniidae (mayflies)]

- sprawlers - inhabit surfaces of floating leaves of rooted plants in littoral zone or fine sediments in limnetic zone with adaptations for staying on top of substrate and maintaining respiratory surfaces free of silt [*e. g.*, Udonata: Libellulidae (dragonflies)]
- climbers - adapted for living on rooted or detrital debris in littoral zone with modifications for moving vertically on stem-type surfaces [*e. g.*, Udonata: Aeshnidae (dragonflies)]
- burrowers - inhabiting fine sediments in littoral or limnetic zones and construct burrows or tubes [*e. g.*, Ephemeroptera: Ephemeridae (mayflies), Annelida: Tubificidae (worms)]

RESULTS

A list of aquatic macroinvertebrate species known or likely to occur in northeastern Illinois (Lake County) in either restored wetland or modified riverine habitats was compiled. Field sampling on the Des Plaines River demonstration project site in late spring and summer documented the occurrence of a number of these species (Table 2, Appendix A).

At least 472 species, representing 70 families and 220 genera, were considered eligible for the preliminary checklist. In the 1985 survey, approximately 120 species, representing 39 families and 97 genera were found in the project area (Table 3, Appendix A). The number of species actually observed in the project area is much lower than the number expected. The lower number is partly attributable to the ecological disturbance that has occurred in the area, but is also related to the season of collection, flow conditions at the time of sampling, chance, and the availability of the appropriate habitat.

The short duration of the field study undoubtedly contributed to the low number of species collected in 1985. Ideally, sampling should be conducted over an annual cycle. Also, many species occur at low population levels and chance plays an important part in their observation or collection. Several years of frequent sampling are required to document the occurrences of species present only seasonally or in small populations.

The site shows considerable habitat degradation in the form of turbidity of the Des Plaines River, wetlands drainage, disturbance of woodlands, and introductions of exotic plants and animals. Although difficult to document because of the absence of historical data, it appears evident that major declines in the aquatic macroinvertebrate fauna, both in diversity and in population sizes have occurred in the project area in recent years.

Most of the species found on the study site occur throughout Illinois (Table 2, Appendix A, see "statewide"), frequently in disturbed habitats. For example, all the aquatic worms and leeches (Annelida), all the higher Crustacea (except the introduced *Orconectes rusticus*), and all the mussels found are

statewide or virtually statewide in distribution (Parmalee 1967, Page 1985). These widely distributed species constitute 69% of the species known or likely to occur on the project site (Table 3, Appendix A).

The remaining species (31%) in general only occur in the northeastern or northern to central portions of Illinois. These species may be limited in Illinois because their distribution in North America is more northern, not that their ecological tolerances are narrower or their habitat requirements more specialized. Included in this category are many of the dragonflies and damselflies (Odonata), caddisflies (Trichoptera), beetles (Coleoptera), and true flies (Diptera) (Tables 2 and 3, Appendix A).

Restoration of suitable habitats for a variety of aquatic macroinvertebrates occurring or potentially occurring at the site should result in an increase in diversity and population sizes.

SUMMARY AND CONCLUSIONS

1. A preliminary checklist of aquatic macroinvertebrates known or likely to occur in northeastern Illinois was compiled and updated following qualitative sampling at six sites on the Des Plaines River demonstration project site.
2. Because of the limited data available for individual species of aquatic macroinvertebrates, the habits and trophic relationships of species known or likely to occur on the demonstration project site were summarized by major group at the family level.
3. Approximately 120 species, representing 39 families and 97 genera were collected in the project area. Many of these occur under a broad range of ecological conditions, commonly occur in disturbed sites, and are statewide in distribution. The remaining species collected have more limited distributions in Illinois. This results more from their more northern distribution in North America rather than their having either narrower ecological tolerances or more specialized habitat requirements.
4. An increase in diversity and population sizes of aquatic macroinvertebrates is expected following the restoration of wetlands.

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APPENDIX A
TABLES AND FIGURES

Table 1
Ecological Information for Aquatic Macroinvertebrates

Major Taxon	Habit	Trophic or Food Relationships
<i>Annelida</i>		
Aeolosomatida	burrowers, sprawlers	collectors, scrapers
Glossoscolecidae	burrowers, sprawlers	collectors
Haplotaxidae	burrowers, sprawlers	collectors
Lumbriculidae	burrowers	collectors, shredders
Naididae	burrowers, sprawlers	scrapers, predators
Tubificidae	burrowers	collectors
Erpobdellidae	swimmers	predators (parasitic?)
Glossiphoniidae	swimmers	predators (parasitic?)
<i>Malacostraca</i>		
Asellidae	sprawlers, climbers	shredders, collectors (detritivores)
Hyalellidae	sprawlers, climbers	shredders, collectors (detritivores)
Gammaridae	sprawlers, climbers	shredders, collectors (detritivores)
Cambaridae	burrowers, swimmers	shredders (detritivores); predators
<i>Ephemeroptera</i>		
Baetidae	swimmers, climbers	collectors (gatherers)
Caenidae	sprawlers	collectors (gatherers); scrapers
Ephemeridae	burrowers	collectors (gatherers)
Heptageniidae	clingers	collectors (gatherers); scrapers
Leptophlebiidae	swimmers, clingers, sprawlers	collectors (gatherers)
Tricorythidae	clingers, sprawlers	collectors (gatherers)
<i>Odonata</i>		
Calopterygidae	climbers	predators
Coenagrionidae	climbers	predators
Lestidae	climbers, swimmers	predators
Cordulegasteridae	burrowers	predators
Gomphidae	burrowers	predators
Aeshnidae	climbers	predators
Corduliidae	sprawlers	predators
Macromiidae	sprawlers	predators
Libellulidae	sprawlers, climbers	predators
<i>Plecoptera</i>		
Perlidae	clingers	predators
<i>Heteroptera</i>		
Corixidae	swimmers	collectors
Belostomatidae	climbers, swimmers	predators
Nepidae	climbers	predators
Gelastocoridae	sprawlers (jumpers)	predators
Naucoridae	clingers, swimmers	predators
Notonectidae	swimmers	predators
Pleidae	climbers, swimmers	predators
Gerridae	skaters	predators
Hebridae	climbers, skaters	predators
Hydrometridae	skaters	predators
Mesoveliidae	skaters	predators
Veliidae	skaters	predators

Table 1
(concluded)

Major Taxon	Habit	Trophic or Food Relationships
<i>Megaloptera</i>		
Corydalidae	clingers, climbers	predators
Sialidae	burrowers, climbers, clingers	predators
<i>Neuroptera</i>		
Sisyridae	climbers, clingers	predators, piercers
<i>Trichoptera</i>		
Hydroptilidae	climbers, clingers	piercers, shredders, collectors (gatherers)
Leptoceridae	sprawlers, climbers, clingers	collectors (gatherers, filterers), scrapers, predators
Limnephilidae	sprawlers, climbers, clingers	shredders (detritivores, herbivores) collectors (gatherers)
Molannidae	sprawlers, clingers	scrapers, collectors (gatherers), predators
Phryganeidae	climbers	shredders (detritivores, herbivores)
Polycentropodidae	clingers	collectors (filterers), shredders (herbivores), predators
<i>Coleoptera</i>		
Dytiscidae	swimmers (divers)	predators (piercers)
Gyrinidae	swimmers	predators
Halplidae	climbers, clingers	shredders, piercers
Hydrophilidae	climbers, clingers	predators, collectors (gatherers), herbivores
Eubriidae	clingers	scrapers
Elmidae	clingers	collectors (gatherers), scrapers
Dryopidae	clingers, climbers	shredders, scrapers
<i>Diptera</i>		
Athericidae	sprawlers, burrowers	predators
Chaoboridae	sprawlers (day); planktonic (night)	predators
Chironomidae	sprawlers, burrowers (tube-builders), clingers	predators, collectors (gatherers), shredders (herbivores)
Simuliidae	clingers	collectors (filterers)
Tabanidae	sprawlers, burrowers	predators, collectors (gatherers)
<i>Mollusca</i>		
Unionidae	burrowers	collectors (filter feeders)

SOURCE: Merritt, R. W., and K. W. Cummins, ed.
1984. An introduction to the aquatic insects of North America, 2nd ed.
Kendall/Hunt Pub. Co., Dubuque. xiii + 722 pp.

Table 2

Checklist of Aquatic Macroinvertebrates Known or Likely
in the Des Plaines River Basin, Lake County, Illinois

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Aquatic Annelida			
Oligochaeta			
Aeolosomatida			
Aeolosomatidae			
<i>Aeolosoma</i>	+	-	statewide
Lumbriculida			
Lumbriculidae			
<i>Lumbriculus variegatus</i> (Muller)	+	-	statewide
Haplotaxida			
Enchytraeidae	+	+	statewide
Glossoscolecidae			
<i>Sparganophilus tamesis</i> Benham	+	-	statewide
Haplotaxidae			
<i>Haplotaxis gordioides</i> (Hartmann)	+	-	statewide
Naididae			
<i>Amphichaeta</i>	+	-	statewide
<i>Bratislavia unidentata</i> (Harman)	+	-	statewide
<i>Chaetogaster diaphanus</i> (Gruithuisen)	+	+++	statewide
<i>Chaetogaster diastrophus</i> (Gruithuisen)	+	-	statewide
<i>Chaetogaster limmaei limmaei</i> von Baer	+	-	statewide
<i>Dero digitata</i> (Muller)	+	+++	statewide
<i>Dero furcatus</i> (Muller)	+	-	statewide
<i>Nais barbata</i> Muller	+	-	statewide
<i>Nais behringi</i> (Michaelsen)	+	-	statewide
<i>Nais bretscheri</i> (Michaelsen)	+	-	statewide
<i>Nais communis</i> Piguet	+	+	statewide
<i>Nais elinguis</i> Muller	+	-	statewide
<i>Nais pardalis</i> Piguet	+	++	statewide
<i>Nais pseudoobtusa</i> Piguet	+	-	statewide
<i>Nais simplex</i> Piguet	+	+	statewide
<i>Nais variabilis</i> Piguet	+	++	statewide
<i>Ophidonais serpentina</i> (Muller)	+	+	statewide
<i>Paranais frici</i> Hrabe	+	++	statewide
<i>Piguetiella michiganensis</i> Hiltunen	+	-	statewide
<i>Pristina aequisetata</i> Bourne	+	+	statewide
<i>Pristina breviseta</i> Bourne	+	+	statewide
<i>Pristina idrensis</i> Sperber	+	-	statewide
<i>Pristina leidyi</i> Smith	+	++	statewide
<i>Pristina synclites</i> Stephenson	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Aquatic Annelida			
Naididae (concluded)			
<i>Vejdovskyella comata</i> (Vejdovsky)	+	-	statewide
<i>Vejdovskyella intermedia</i> (Bretscher)	+	-	statewide
<i>Slavina appendiculata</i> (d'Udekem)	+	-	statewide
<i>Stylaria fossularis</i> Leidy	+	-	statewide
<i>Stylaria lacustris</i> (Linnaeus)	+	++	statewide
Tubificidae			
<i>Aulodrilus americanus</i> Brinkhurst & Cook	+	-	statewide
<i>Aulodrilus limnobioides</i> Bretscher	+	-	statewide
<i>Aulodrilus pigueti</i> Kowalewski	+	++	statewide
<i>Aulodrilus plurisetus</i> (Piguet)	+	-	statewide
<i>Bothrioneurum vejdovskyanum</i> Stolc	+	-	statewide
<i>Branchiura sawerbyi</i> Beddard	+	++	statewide
<i>Ilyodrilus templetoni</i> (Southern)	+	++	statewide
<i>Isochaetides freyi</i> (Brinkhurst)	+	-	statewide
<i>Limnodrilus cervix</i> Brinkhurst	+	+++	statewide
<i>Limnodrilus claparedeianus</i> Ratzel	+	-	statewide
<i>Limnodrilus cervix-claparedeianus</i> variant	+	-	statewide
<i>Limnodrilus hoffmeisteri</i> Claparede	+	++	statewide
<i>Limnodrilus hoffmeisteri</i> variants†	+	-	statewide
<i>Limnodrilus maumeensis</i> Brinkhurst & Cook	+	-	statewide
<i>Limnodrilus udekemianus</i> Claparede	+	-	statewide
<i>Pelosclex ferox</i> (Eisen)	+	-	statewide
<i>Pelosclex freyi</i> Brinkhurst	+	-	statewide
<i>Potamothrix bavaricus</i> (Oschmann)	+	-	statewide
<i>Quistadrilus multisetosus</i> (Smith)	+	-	statewide
<i>Rhyacodrilus coccineus</i> (Vejdovsky)	+	-	statewide
<i>Spirosperma ferox</i> (Eisen)	+	-	statewide
<i>Tubifex tubifex</i> (Muller)	+	+	statewide
Hirudinea			
Erpobdellidae			
<i>Dina</i>	+	-	statewide
<i>Erpobdella punctata</i> (Leidy)	+	-	statewide
Glossiphoniidae			
<i>Helobdella triserialis</i> (E. Blanchard)	+	-	statewide
<i>Placobdella montifera</i> Moore	+	+	statewide
<i>Placobdella ornata</i> (Verrill)	+	-	statewide

†Includes *L. spiralis* form.

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Aquatic Higher Crustacea (Malacostraca)			
Isopoda			
Asellidae			
<i>Caecidotea forbesi</i> (Williams)	+	-	statewide
<i>Caecidotea intermedia</i> (Forbes)	+	+++	statewide
<i>Lirceus lineatus</i> (Say)	+	-	northern
Amphipoda			
Gammaridae			
<i>Crangonyx gracilis</i> Smith	+	++	statewide
<i>Crangonyx pseudogracilis</i> Bousfield	+	-	statewide
Hyalellidae			
<i>Hyaella azteca</i> (Saussure)	+	+++	statewide
Decapoda			
Cambaridae			
<i>Cambarus diogenes</i> Girard	+	-	statewide
<i>Orconectes immunis</i> (Hagen)	+	-	statewide
<i>Orconectes rusticus</i> (Girard)	+	+++	northern
<i>Orconectes virilis</i> (Hagen)	+	++	statewide
<i>Procambarus acutus</i> (Girard)	+	+++	statewide
<i>Procambarus gracilis</i> (Bundy)	+	+	statewide
Ephemeroptera			
Baetidae			
<i>Callibaetis skokianus</i> Needham	+	-	northern
<i>Callibaetis ferrugineus</i> (Walsh)	+	+	northern
<i>Callibaetis fluctuans</i> (Walsh)	+	-	statewide
<i>Centroptilum</i> (larva)	+	+	statewide
Caenidae			
<i>Caenis simulans</i> McDunnough	+	-	northern
<i>Caenis</i> (larva)	+	+	
Ephemerellidae			
<i>Ephemerella bicolor</i> Clemens	+	+	northern
<i>Ephemerella deficiens</i> Morgan	+	+	statewide
Ephemeridae			
<i>Hexagenia limbata</i> (Serville)	+	+++	statewide
Heptageniidae			
<i>Heptagenia diabasia</i> Burks	+	++	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Ephemeroptera			
Heptageniidae (concluded)			
<i>Leucrocuta maculipennis</i> Walsh	+	-	statewide
<i>Stenacron gildersleevi</i> Traver	+	+	statewide
<i>Stenacron interpunctatum</i> (Say)	+	+	statewide
<i>Stenonema femoratum</i> (Say)	+	+	statewide
<i>Stenonema terminatum</i> (Walsh)	+	-	statewide
Leptophlebiidae			
<i>Leptophlebia nebulosa</i> (Walker)	+	-	cent/north
<i>Leptophlebia praepedita</i> Eaton	+	-	statewide
Oligoneuriidae			
<i>Isonychia</i> (larva)	+	+	statewide
Tricorythidae			
<i>Tricorythodes stygiatus</i> McDunnough	+	-	cent/north
Odonata			
Zygoptera			
Calopterygidae			
<i>Calopteryx aequabilis</i> Say	+	-	northern
<i>Calopteryx maculata</i> (Beauvois)	+	-	statewide
<i>Hetaerina americana</i> (Fabricius)	+	-	statewide
Coenagrionidae			
<i>Anomalagrion hastatum</i> (Say)	+	-	statewide
<i>Argia apicalis</i> (Say)	+	+	statewide
<i>Argia moesta</i> (Hagen)	+	-	statewide
<i>Enallagma antennatum</i> (Say)	+	-	northern
<i>Enallagma basidens</i> Calvert	+	+	statewide
<i>Enallagma carunculatum</i> Morse	+	-	northern
<i>Enallagma civile</i> (Hagen)	+	-	statewide
<i>Enallagma ebrium</i> (Hagen)	+	-	northeast
<i>Enallagma exsulans</i> (Hagen)	+	-	statewide
<i>Enallagma geminatum</i> Kellicott	+	-	statewide
<i>Enallagma hageni</i> (Walsh)	+	-	northeast
<i>Enallagma signatum</i> (Hagen)	+	-	statewide
<i>Enallagma vesperum</i> Calvert	+	-	northern
<i>Ischnura verticalis</i> (Say)	+	-	statewide
<i>Nehalennia irene</i> Hagen	+	-	northeast

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Odonata			
Lestidae			
<i>Lestes congener</i> Hagen	+	-	northeast
<i>Lestes disjunctus</i> Selys	+	-	statewide
<i>Lestes dryas</i> Kirby	+	-	statewide
<i>Lestes forcipata</i> Rambur	+	-	northeast
<i>Lestes rectangularis</i> Say	+	-	statewide
<i>Lestes unguiculatus</i> Hagen	+	-	northern
<i>Lestes vigilax</i> Hagen	+	-	statewide
Anisoptera			
Aeshnidae			
<i>Aeshna canadensis</i> Walker	+	-	northeast
<i>Aeshna clypsydra</i> Say	+	-	northeast
<i>Aeshna constricta</i> Say	+	-	northern
<i>Aeshna umbrosa</i> Walker	+	-	northern
<i>Anax junius</i> (Drury)	+	-	statewide
<i>Boyeria vinosa</i> (Say)	+	-	northern
Cordulegasteridae			
<i>Cordulegaster diastatops</i> (Selys)	+	-	northeast
Corduliidae			
<i>Epitheca spinigera</i> (Selys)	+	-	northeast
<i>Somatochlora linearis</i> (Hagen)	+	-	northeast
Gomphidae			
<i>Dromogomphus spinosus</i> Selys	+	-	northeast
<i>Gomphus externus</i> Hagen	+	-	northern
<i>Gomphus fraternus</i> (Say)	+	-	northern
<i>Gomphus furcifer</i> Hagen	+	-	northeast
<i>Gomphus graslinellus</i> Walsh	+	-	northern
<i>Gomphus lentulus</i> Needham	+	-	statewide
<i>Gomphus notatus</i> Rambur	+	-	statewide
<i>Gomphus spicatus</i> Hagen	+	-	northeast
<i>Gomphus spiniceps</i> (Walsh)	+	-	northern
<i>Gomphus vastus</i> Walsh	+	-	statewide
<i>Gomphus</i> (early instar)	-	++	
<i>Ophiogomphus rupinsulensis</i> (Walsh)	+	-	northeast
Libellulidae			
<i>Celithemis elisa</i> (Hagen)	+	-	statewide
<i>Celithemis eponina</i> (Drury)	+	-	northern
<i>Erythemis simplicicollis</i> (Say)	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Odonata			
Libellulidae (concluded)			
<i>Ladonna julia</i> (Uhler)	+	-	northeast
<i>Leucorrhinia intacta</i> (Hagen)	+	-	northern
<i>Libellula luctuosa</i> Burmeister	+	-	statewide
<i>Libellula pulchella</i> Drury	+	-	statewide
<i>Libellula semifasciata</i> Burmeister	+	-	northern
<i>Pachydiplax longipennis</i> (Burmeister)	+	-	statewide
<i>Perithemis tenera</i> (Say)	+	-	statewide
<i>Plathemis lydia</i> (Drury)	+	-	statewide
<i>Sympetrum costiferum</i> (Hagen)	+	-	northeast
<i>Sympetrum internum</i> Montgomery	+	-	northern
<i>Sympetrum rubicundulum</i> (Say)	+	-	northern
<i>Sympetrum vicinum</i> (Hagen)	+	-	northern
<i>Tramea lacerata</i> Hagen	+	-	northern
Macromiidae			
<i>Didymops transversa</i> (Say)	+	-	statewide
<i>Macromia illinoiensis</i> Walsh	+	-	statewide
<i>Macromia pacifica</i> Hagen	+	-	northern
Plecoptera			
Perlidae			
<i>Acroneuria mela</i> Frison	+	+	statewide
<i>Neoperla clymene</i> (Newman)	+	-	statewide
<i>Perlesta placida</i> (Hagen)	+	++	statewide
Heteroptera			
Belostomatidae			
<i>Belostoma flumineum</i> Say	+	-	statewide
<i>Lethocerus americanus</i> (Leidy)	+	-	cent/north
<i>Lethocerus griseus</i> (Say)	+	-	statewide
Corixidae			
<i>Corisella edulis</i> (Champion)	+	-	statewide
<i>Corisella tarsalis</i> (Fieber)	+	-	northern
<i>Hesperocorixa atopodonta</i> (Hungerford)	+	-	northern

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Heteroptera			
Corixidae (concluded)			
<i>Hesperocorixa interrupta</i> (Say)	+	-	statewide
<i>Hesperocorixa obliqua</i> (Hungerford)	+	-	statewide
<i>Hesperocorixa vulgaris</i> (Hungerford)	+	-	cent/north
<i>Palmarcorixa buenoi</i> Abbott	+	+	statewide
<i>Ranphocorixa acuminata</i> (Uhler)	+	-	statewide
<i>Sigara alternata</i> (Say)	+	-	statewide
<i>Sigara bicoloripennis</i> (Walley)	+	-	northern
<i>Sigara compressoidea</i> (Hungerford)	+	-	northern
<i>Sigara conocephala</i> (Hungerford)	+	-	northern
<i>Sigara decorata</i> (Abbott)	+	-	northern
<i>Sigara decoratella</i> (Hungerford)	+	-	northern
<i>Sigara defecta</i> Hungerford	+	-	northern
<i>Sigara grossolineata</i> Hungerford	+	-	statewide
<i>Sigara hubbelli</i> (Hungerford)	+	-	statewide
<i>Sigara mathesoni</i> Hungerford	+	-	northern
<i>Sigara modesta</i> (Abbott)	+	++	statewide
<i>Trichocorixa borealis</i> Sailer	+	-	northern
<i>Trichocorixa calva</i> (Say)	+	++	statewide
<i>Trichocorixa kanza</i> Sailer	+	-	statewide
<i>Trichocorixa macroceph</i> (Kirkaldy)	+	-	northern
<i>Trichocorixa sexcinta</i> (Champion)	+	++	cent/north
Gelastocoridae			
<i>Gelastocoris oculatus</i> (Fabricius)	+	-	statewide
Gerridae			
<i>Gerris alacris</i> Hussey	+	-	statewide
<i>Gerris argenticollis</i> Parshley	+	-	statewide
<i>Gerris buenoi</i> Kirkaldy	+	-	statewide
<i>Gerris comatus</i> Drake & Hottes	+	-	statewide
<i>Gerris conformis</i> (Uhler)	+	-	statewide
<i>Gerris insperatus</i> Drake & Hottes	+	-	statewide
<i>Gerris marginatus</i> Say	+	-	statewide
<i>Gerris notabilis</i> Drake & Hottes	+	-	statewide
<i>Gerris remigis</i> Say	+	++	statewide
<i>Limmoporus dissortis</i> (Drake & Harris)	+	-	statewide
<i>Neogerris hesione</i> (Kirkaldy)	+	-	statewide
<i>Metrobates hesperius</i> Uhler	+	+	statewide
<i>Rheumatobates rileyi</i> Bergroth	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Heteroptera			
Gerridae (concluded)			
<i>Rheumatobates</i>	-	+	
<i>Trepobates inermis</i> Esaki	+	-	statewide
<i>Trepobates knighti</i> Drake & Harris	+	-	statewide
<i>Trepobates pictus</i> (Herrich-Schaeffer)	+	-	statewide
<i>Trepobates subnitidus</i> Esaki	+	-	statewide
Hebridae			
<i>Hebrus buenoi</i> Drake & Harris	+	-	statewide
<i>Hebrus burmeisteri</i> Lethierry & Severin	+	-	statewide
<i>Merragata brunnea</i> Drake	+	-	statewide
<i>Merragata hebroides</i> White	+	-	statewide
Hydrometridae			
<i>Hydrometra martini</i> Kirkaldy	+	-	statewide
Mesoveliidae			
<i>Mesovelia amoena</i> Uhler	+	-	statewide
<i>Mesovelia mulsanti</i> White	+	-	statewide
Naucoridae			
<i>Pelocoris femoratus</i> (Palisot-Beauvois)	+	-	statewide
Nepidae			
<i>Nepa apiculata</i> Uhler	+	-	cent/north
<i>Ranatra fusca</i> Palisot-Beauvois	+	-	statewide
<i>Ranatra kirkaldyi</i> Torre-Bueno	+	-	northern
<i>Ranatra nigra</i> Herrich-Schaeffer	+	-	statewide
<i>Ranatra</i>	-	+	
Notonectidae			
<i>Buenoa margaritacea</i> Torre-Bueno	+	-	statewide
<i>Notonecta irrorata</i> Uhler	+	-	statewide
<i>Notonecta raleighi</i> Torre-Bueno	+	-	statewide
<i>Notonecta undulata</i> Say	+	-	statewide
Pleidae			
<i>Neoplea striola</i> (Fieber)	+	-	statewide
Saldidae			
<i>Saldula oblusa</i> Drake and Hottes	+	+	statewide
Veliidae			
<i>Microvelia albonotata</i> Champion	+	-	statewide
<i>Microvelia americana</i> (Uhler)	+	-	statewide
<i>Microvelia buenoi</i> Drake	+	-	statewide
<i>Microvelia fontinalis</i> Torre-Bueno	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Heteroptera			
Veliidae (concluded)			
<i>Microvelia hinei</i> Drake	+	-	statewide
<i>Microvelia pulchella</i> (Westwood)	+	-	statewide
<i>Rhagovelia obesa</i> Uhler	+	-	statewide
<i>Rhagovelia oriander</i> Parshley	+	-	statewide
Megaloptera			
Corydalidae			
<i>Corydalus cornutus</i> (Linnaeus)	+	+	statewide
<i>Neohermes</i> (larva)	+	+	statewide
Neuroptera			
Sisyridae			
<i>Climacia areolaris</i> (Hagen)	+	-	statewide
<i>Sisyra apicalis</i> Banks	+	-	northern
<i>Sisyra vicaria</i> (Walker)	+	-	statewide
Trichoptera			
Hydropsychidae			
<i>Cheumatopsyche campyla</i> Ross	+	++++	statewide
<i>Cheumatopsyche pettiti</i> (Banks)	+	+++	statewide
<i>Cheumatopsyche</i> (larva)	-	+	
<i>Hydropsyche betteri</i> Ross	+	+++	statewide
<i>Hydropsyche bidens</i> Ross	+	++	statewide
<i>Potamyia flava</i> (Hagen)	+	+++	statewide
Hydroptilidae			
<i>Agraylea multipunctata</i> Curtis	+	+	northern
<i>Dibusa angata</i> Ross	+	+	northern
<i>Hydroptila armata</i> Ross	+	-	statewide
<i>Hydroptila scolops</i> Ross	+	++	statewide
<i>Hydroptila hamata</i> Morton	+	-	statewide
<i>Hydroptila spatulata</i> Morton	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Trichoptera			
Hydroptilidae (concluded)			
<i>Hydroptila</i> (larva)	-	+	
<i>Hydroptila waubesianae</i> Betten	+	-	statewide
<i>Ochrotrichia eliaga</i> (Ross)	+	-	statewide
<i>Ochrotrichia tarsalis</i> (Hagen)	+	-	statewide
<i>Orthotrichia americana</i> Banks	+	-	cent/north
<i>Orthotrichia cristata</i> Morton	+	-	statewide
<i>Oxyethira pallida</i> (Banks)	+	-	statewide
<i>Oxyethira serrata</i> Ross	+	-	northern
Leptoceridae			
<i>Ceraclea alagmus</i> (Ross)	+	-	cent/north
<i>Ceraclea ancylus</i> (Vorhies)	+	-	cent/north
<i>Ceraclea maculata</i> (Banks)	+	+	cent/north
<i>Ceraclea tarsi-punctata</i> (Vorhies)	+	++	cent/north
<i>Leptocella albida</i> (Walker)	+	-	statewide
<i>Leptocerus americanus</i> (Banks)	+	+	statewide
<i>Nectopsyche albida</i> (Walker)	+	-	statewide
<i>Nectopsyche candida</i> (Hagen)	+	+++	statewide
<i>Oecetis cinerascens</i> (Hagen)	+	-	cent/north
<i>Oecetis inconspicua</i> (Walker)	+	+	cent/north
<i>Oecetis</i> (larva)	-	++	
<i>Triaenodes aba</i> Milne	+	-	northern
<i>Triaenodes baris</i> Ross	+	-	northern
<i>Triaenodes injusta</i> (Hagen)	+	-	cent/north
<i>Triaenodes marginata</i> Sibley	+	-	statewide
<i>Triaenodes tarda</i> Milne	+	-	statewide
Limnephilidae			
<i>Limnephilus hyalinus</i> Hagen	+	-	northern
<i>Limnephilus ornatus</i> Banks	+	-	northern
<i>Limnephilus sericeus</i> (Say)	+	-	northern
Molannidae			
<i>Molanna uniophila</i> Vorhies	+	-	northern
Philopotamidae			
<i>Chimarra obscura</i> (Walker)	+	++	statewide
<i>Neureclipsis bimaculata</i> (Linnaeus)	+	-	statewide
Phryganeidae			
<i>Agryphia vestita</i> (Walker)	+	-	northern
<i>Banksiola crotchi</i> Banks	+	-	northern

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Trichoptera			
Phryganeidae (concluded)			
<i>Fabria inornata</i> (Banks)	+	-	northern
<i>Phryganea cinerea</i> Walker	+	-	northern
<i>Phryganea sayi</i> Milne	+	-	northern
<i>Ptilostomis ocellifera</i> (Walker)	+	++	cent/north
<i>Ptilostomis semifasciata</i> (Say)	+	-	cent/north
Polycentropodidae			
<i>Ceratomyia ohio</i> Ross	+	+	statewide
<i>Cymellus marginalis</i> (Banks)	+	+++	cent/north
<i>Polycentropus cineris</i> Hagen	+	++	cent/north
<i>Polycentropus crassicornis</i> Walker	+	-	cent/north
<i>Polycentropus flavus</i> (Banks)	+	-	cent/north
<i>Polycentropus interruptus</i> (Banks)	+	-	cent/north
<i>Polycentropus remotus</i> Banks	+	-	cent/north
<i>Polycentropus</i> (larva)	-	+	
Coleoptera			
Dryopidae			
<i>Helichus lithophilus</i> (Germar)	+	-	statewide
Dytiscidae			
<i>Acilius fraternus fraternus</i> (Harris)	+	-	northern
<i>Acilius semisulcatus</i> Aube	+	-	statewide
<i>Acilius sylvanus</i> Hilsenhoff	+	-	northern
<i>Agabus bifarius</i> (Kirby)	+	-	northern
<i>Agabus disintegratus</i> (Crotch)	+	-	statewide
<i>Agabus erythropterus</i> (Say)	+	-	statewide
<i>Agabus gagates</i> Aube	+	-	statewide
<i>Agabus seriatus</i> (Say)	+	-	statewide
<i>Copelatus chevrolati</i> Aube	+	-	statewide
<i>Copelatus glyphicus</i> (Say)	+	-	statewide
<i>Coptotomus loticus</i> Hilsenhoff	+	-	statewide
<i>Coptotomus lenticus</i> Hilsenhoff	+	-	statewide
<i>Cybister fimbriolatus</i> (Say)	+	-	statewide
<i>Dytiscus fasciventris</i> Say	+	-	statewide
<i>Dytiscus hybridus</i> Aube	+	-	northern
<i>Graphoderus fasciatcollis</i> (Harris)	+	-	northern

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Coleoptera			
Dytiscidae (concluded)			
<i>Graphoderus liberus</i> (Say)	+	-	northern
<i>Hydaticus bimarginatus</i> Say	+	-	northern
<i>Hydaticus modestus</i> Sharp	+	-	northern
<i>Hydaticus piceus</i> LeConte	+	-	northern
<i>Hygrotus acaroides</i> (LeConte)	+	-	statewide
<i>Hygrotus impressopunctatus</i> (Schaller)	+	-	statewide
<i>Hygrotus sayi</i> Balfour-Browne	+	-	northern
<i>Hydroporus hybridus</i> Aube	+	-	statewide
<i>Hydroporus niger</i> Say	+	+	statewide
<i>Hydroporus pulcher</i> LeConte	+	-	statewide
<i>Hydroporus striatopunctatus</i> Melsheimer	+	-	statewide
<i>Hydroporus undulatus</i> Say	+	+	statewide
<i>Hydroporus vittatipennis</i> Gemminger & Harold	+	-	statewide
<i>Laccophilus fasciatus rufus</i> Melsheimer	+	-	statewide
<i>Laccophilus maculosus maculosus</i> Say	+	-	statewide
<i>Liodessus affinis</i> (Say)	+	-	statewide
<i>Liodessus flavicollis</i> (LeConte)	+	-	statewide
<i>Liodessus fuscatus</i> (Crotch)	+	-	statewide
<i>Matus bicarinatus</i> (Say)	+	+	statewide
<i>Rhantus binotatus</i> (Harris)	+	-	northern
<i>Thermonectes basillaris basillaris</i> (Harris)	+	-	northern
<i>Thermonectes ornatocollis ornatocollis</i> Aube	+	-	northern
<i>Uvarus lacustris</i> (Say)	+	-	statewide
Elmidae			
<i>Dubiraphia bivittata</i> (LeConte)	+	-	statewide
<i>Dubiraphia quadrimotata</i> (Say)	+	+	statewide
<i>Dubiraphia vittata</i> (Melsheimer)	+	+	statewide
<i>Macronychus glabratus</i> Say	+	+	statewide
<i>Optioservus fastiditus</i> (LeConte)	+	-	northern
<i>Stenelmis crenata</i> (Say)	+	+	statewide
<i>Stenelmis vittipennis</i> Zimmermann	+	-	statewide
Eubriidae			
<i>Ectopria leechi</i> Brigham	+	-	statewide
<i>Ectopria nervosa</i> Melsheimer	+	-	statewide
<i>Ectopria thoracica</i> Ziegler	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Coleoptera			
Gyrinidae			
<i>Dineutus assimilis</i> (Kirby)	+	+	statewide
<i>Dineutus discolor</i> Aube	+	-	statewide
<i>Dineutus horni</i> Roberts	+	-	statewide
<i>Dineutus nigrrior</i> Roberts	+	-	statewide
<i>Dineutus serrulatus analis</i> Regimbart	+	-	statewide
<i>Gyrinus analis</i> Say	+	+	statewide
<i>Gyrinus borealis</i> Aube	+	-	northern
<i>Gyrinus dichrous</i> LeConte	+	-	northern
<i>Gyrinus fraternus</i> Couper	+	-	northern
<i>Gyrinus maculiventris</i> Leconte	+	-	northern
<i>Gyrinus marginellus</i> Fall	+	-	statewide
<i>Gyrinus minutus</i> Fabricius	+	-	northern
<i>Gyrinus piceolus</i> Blatchley	+	-	northern
Haliplidae			
<i>Haliplus blanchardi</i> Roberts	+	-	northeast
<i>Haliplus borealis</i> LeConte	+	-	northern
<i>Haliplus connexus</i> Matheson	+	-	northeast
<i>Haliplus cribrarius</i> LeConte	+	-	northeast
<i>Haliplus immaculicollis</i> Harris	+	-	northeast
<i>Haliplus longulus</i> LeConte	+	-	northeast
<i>Haliplus subguttatus</i> LeConte	+	-	northeast
<i>Haliplus tortilipenis</i> Brigham & Sanderson	+	-	northeast
<i>Haliplus triopsis</i> Say	+	-	statewide
<i>Peltodytes duodecimpunctatus</i> (Say)	+	-	statewide
<i>Peltodytes edentulus</i> (LeConte)	+	+	statewide
Helodidae			
<i>Cyphon</i> (larva)	+	+	statewide
Hydrophilidae			
<i>Anacaena limbata</i> (Fabricius)	+	+	statewide
<i>Berosus fraternus</i> LeConte	+	-	statewide
<i>Berosus infuscatus</i> LeConte	+	-	statewide
<i>Berosus pantherinus</i> LeConte	+	-	statewide
<i>Berosus peregrinus</i> (Herbst)	+	-	statewide
<i>Chaetarthria pallida</i> (LeConte)	+	-	northern
<i>Cymbiodyta minima</i> Notman	+	-	northeast
<i>Cymbiodyta</i> (larva)	-	+	
<i>Dibolocelus ovatus</i> (Gemminger & Harold)	+	-	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Coleoptera			
Hydrophilidae (concluded)			
<i>Enochrus consortus</i> Green	+	-	statewide
<i>Enochrus diffusus</i> (LeConte)	+	-	statewide
<i>Enochrus hamiltoni</i> (Horn)	+	-	northern
<i>Enochrus ochraceus</i> (Melsheimer)	+	-	statewide
<i>Enochrus perplexus</i> (LeConte)	+	-	statewide
<i>Helocombus bifidus</i> (LeConte)	+	+	statewide
<i>Helophorus linearis</i> LeConte	+	+	statewide
<i>Hydrobius fuscipes</i> (Linnaeus)	+	-	northern
<i>Hydrochara</i> (larva)	+	+	statewide
<i>Hydrophilus triangularis</i> Say	+	-	statewide
<i>Laccobius agilis</i> (Randall)	+	-	statewide
<i>Paracymus subcupreus</i> (Say)	+	+	statewide
<i>Tropisternus glaber</i> (Herbst)	+	-	northern
<i>Tropisternus lateralis nimbatus</i> (Say)	+	-	statewide
<i>Tropisternus mixtus</i> (LeConte)	+	-	statewide
<i>Tropisternus natator</i> d'Orchymont	+	+	statewide
Diptera			
Athericidae			
<i>Atherix variegata</i> Walker	+	-	cent/north
Ceratopogonidae			
<i>Palpomyia</i> complex	+	+	statewide
Chaoboridae			
<i>Chaoborus punctipennis</i> (Say)	+	-	statewide
Chironomidae			
<i>Ablabesmyia illinoense</i> (Malloch)	+	-	statewide
<i>Ablabesmyia mallochi</i> (Walley)	+	-	statewide
<i>Ablabesmyia peleensis</i> (Walley)	+	+	statewide
<i>Ablabesmyia</i> (larva)	-	+	
<i>Chironomus crassicaudatus</i> Malloch	+	+	statewide
<i>Chironomus decorus</i> Johannsen	+	-	statewide
<i>Chironomus staegeri</i> Lundbeck	+	+	statewide
<i>Coelotanypus concinnus</i> (Coquillett)	+	+	statewide
<i>Cricotopus bicinctus</i> (Meigen)	+	-	statewide
<i>Cricotopus tricinctus</i> (Meigen)	+	+	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Diptera			
Chironomidae (concluded)			
<i>Cricotopus</i> (larva)	-	+	
<i>Cryptochironomus fulvus</i> (Johannsen)	+	+	statewide
<i>Dicrotendipes modestus</i> (Say)	+	+	statewide
<i>Dicrotendipes neomodestus</i> (Malloch)	+	-	statewide
<i>Dicrotendipes nervosus</i> (Staeger)	+	-	statewide
<i>Eukiefferiella</i> (larva)	+	+	statewide
<i>Glyptotendipes lobiferus</i> (Say)	+	++	statewide
<i>Harnischia collator</i> Townes	+	+	statewide
<i>Harnischia curtilamellatus</i> Malloch	+	+	statewide
<i>Larsia decolorata</i> (Malloch)	+	+	statewide
<i>Parachironomus monochromus</i> Wulp	+	-	statewide
<i>Phaenopsectra flavipes</i> (Meigen)	+	++	statewide
<i>Polypedilum halterale</i> (Coquillett)	+	-	statewide
<i>Polypedilum illinoense</i> (Malloch)	+	-	statewide
<i>Polypedilum scalaenum</i> (Schrank)	+	++	statewide
<i>Procladius sublettei</i> Roback	+	-	statewide
<i>Procladius</i> (<i>Procladius</i>) (larva)	-	+	
<i>Pseudochironomus pseudoviridis</i> (Malloch)	+	+	statewide
<i>Pseudochironomus richardsoni</i> Malloch	+	+	statewide
<i>Stictochironomus devinctus</i> (Say)	+	+	statewide
<i>Stenochironomus hilaris</i> (Walker)	+	++	statewide
<i>Tanypus neopunctipennis</i> Sublette	+	+	statewide
<i>Tanypus stellatus</i> Coquillett	+	+	statewide
<i>Xenochironomus festivus</i> (Say)	+	+	statewide
<i>Thienemannimyia</i> complex	+	-	statewide
Simuliidae			
<i>Simulium vittatum</i> Zetterstedt	+	+++	statewide
Tabanidae			
<i>Atylotus bicolor</i> (Wiedemann)	+	-	cent/north
<i>Atylotus woodi</i> Pechuman	+	-	northeast
<i>Chrysops aberrans</i> Philip	+	-	statewide
<i>Chrysops aestuans</i> Wulp	+	-	statewide
<i>Chrysops brunneus</i> Hine	+	-	statewide
<i>Chrysops callidus</i> Osten Sacken	+	-	statewide
<i>Chrysops cincticornis</i> Walker	+	-	statewide
<i>Chrysops frigidus</i> Osten Sacken	+	-	northeast
<i>Chrysops indus</i> Osten Sacken	+	-	northeast

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Diptera			
Tabanidae (concluded)			
<i>Chrysops mitis</i> Osten Sacken	+	-	northeast
<i>Chrysops moechus</i> Osten Sacken	+	-	statewide
<i>Chrysops niger</i> Macquart	+	-	statewide
<i>Chrysops pikei</i> Whitney	+	-	statewide
<i>Chrysops sackeni</i> Hine	+	-	northeast
<i>Chrysops sequax</i> Williston	+	-	statewide
<i>Chrysops striatus</i> Osten Sacken	+	-	northeast
<i>Chrysops univittatus</i> Macquart	+	-	statewide
<i>Chrysops vittatus</i> Wiedemann	+	-	statewide
<i>Hybomitra epistates</i> (Osten Sacken)	+	-	north 1/2
<i>Hybomitra frontalis</i> (Walker)	+	-	northeast
<i>Hybomitra illota</i> (Osten Sacken)	+	-	northeast
<i>Hybomitra lasiophthalma</i> (Macquart)	+	-	statewide
<i>Hybomitra lurida</i> (Fallen)	+	-	northeast
<i>Hybomitra minuscula</i> (Hine)	+	-	northeast
<i>Hybomitra sodalis</i> (Williston)	+	-	north 1/2
<i>Stonemyia rasa</i> (Loew)	+	-	north 1/4
<i>Tabanus atratus</i> Fabricius	+	-	statewide
<i>Tabanus lineola</i> Fabricius	+	-	statewide
<i>Tabanus marginalis</i> Fabricius	+	-	northeast
<i>Tabanus nigripes</i> Wiedemann	+	-	northeast
<i>Tabanus novaescotiae</i> Macquart	+	-	northeast
<i>Tabanus pumilus</i> Macquart	+	-	statewide
<i>Tabanus quinquivittatus</i> Wiedemann	+	-	statewide
<i>Tabanus reinwardtii</i> Wiedemann	+	-	statewide
<i>Tabanus sackeni</i> Fairchild	+	-	statewide
<i>Tabanus sagax</i> Osten Sacken	+	-	statewide
<i>Tabanus similis</i> Macquart	+	-	statewide
<i>Tabanus stygius</i> Say	+	-	statewide
<i>Tabanus subniger</i> Coquillett	+	-	northeast
<i>Tabanus subsimilis</i> Bellardi	+	-	statewide
<i>Tabanus trimaculatus</i> Palisot de Beauvois	+	-	statewide
Tipulidae			
<i>Elephantomyia</i> (larva)	+	++	northeast
<i>Tipula</i> (larva)	+	+	statewide

Table 2
(continued)

Taxon	Preliminary Checklist	Abundance (1985)*	Illinois Distribution
Mussels			
Pelecypoda			
Unionidae			
<i>Amblema plicata</i> (Say)	+	+	statewide
<i>Anodonta grandis</i> Say	+	+	statewide
<i>Anodonta imbecillis</i> Say	+	-	statewide
<i>Anodontoides ferrusacianus</i> (Lea)	+	-	statewide
<i>Lampsilis radiata luteola</i> (Lamarck)	+	+	statewide
<i>Lasmigona complanata</i> (Barnes)	+	++	statewide
<i>Toxolasma parva</i> (Barnes)	+	-	statewide

- * + = <5 individuals collected
 ++ = 6 to 25 individuals collected
 +++ = 26 to 100 individuals collected
 ++++ = >100 individuals collected

Table 3

Summary of Aquatic Macroinvertebrates
and Their General Distribution in Illinois

Taxa	Preliminary Checklist (#)		1985 Collections (#)		General Distribution in Illinois [#(%)]						
	Families	Genera	Species	Families	Genera	Species	Statewide	Northern	Northeast	Central	Northern
Aquatic Annelida	9	32	61	4	13	20	61 (100)	-	-	-	-
Aquatic Malacostraca	4	7	12	4	5	7	10 (83)	2 (17)	-	-	-
Insecta											
Ephemeroptera	8	12	18	6	9	11	12 (67)	4 (22)	-	-	2 (11)
Odonata	9	29	64	2	3	3	28 (44)	20 (31)	16 (25)	-	-
Plecoptera	1	3	3	1	2	2	3 (100)	-	-	-	-
Heteroptera	13	28	71	4	8	9	55 (77)	12 (17)	-	-	4 (6)
Megaloptera	1	2	2	1	2	2	2 (100)	-	-	-	-
Neuroptera	1	2	3	-	-	-	2 (67)	1 (33)	-	-	-
Trichoptera	8	27	53	6	13	18	23 (43)	14 (27)	-	-	16 (30)
Coleoptera	8	41	99	6	16	18	66 (67)	25 (25)	8 (8)	-	-
Diptera	7	31	79	4	22	26	59 (75)	-	16 (20)	4 (5)	-
Mussels	1	6	7	1	4	4	7 (100)	-	-	-	-
Total	70	220	472	39	97	120	328 (69)	78 (17)	40 (8)	26 (6)	-



Figure 1

Station 1: Des Plaines River (looking downstream)
0.1 mi E US 41, NW Waukegan, 1 mi S Mill Creek (straight line)
T45N, R11E, SE/4, SW/4, SE/4, Sec. 3 (Wadsworth 7.5' quad)



Figure 2

Station 2: Mill Creek (looking upstream)
downstream US 41 bridge, NW Waukegan
T45N, R11E, SW/4, NE/4, SW/4, Sec. 34 (Wadsworth 7.5' quad)



Figure 3

Station 3: Gravel pit
immediately E US 41, N Mill Creek, NW Waukegan
T45N, R11E, SW/4, NE/4, SW/4, Sec. 34 (Wadsworth 7.5' quad)



Figure 4

Station 4: Des Plaines River (looking upstream)
0.1 mi S Wadsworth @ Wadsworth Road bridge, 0.45 mi E US 41,
2.6 mi W IL 131
T45N, R11E, NE/4, NW/4, NE/4, Sec. 34 (Wadsworth 7.5' quad)

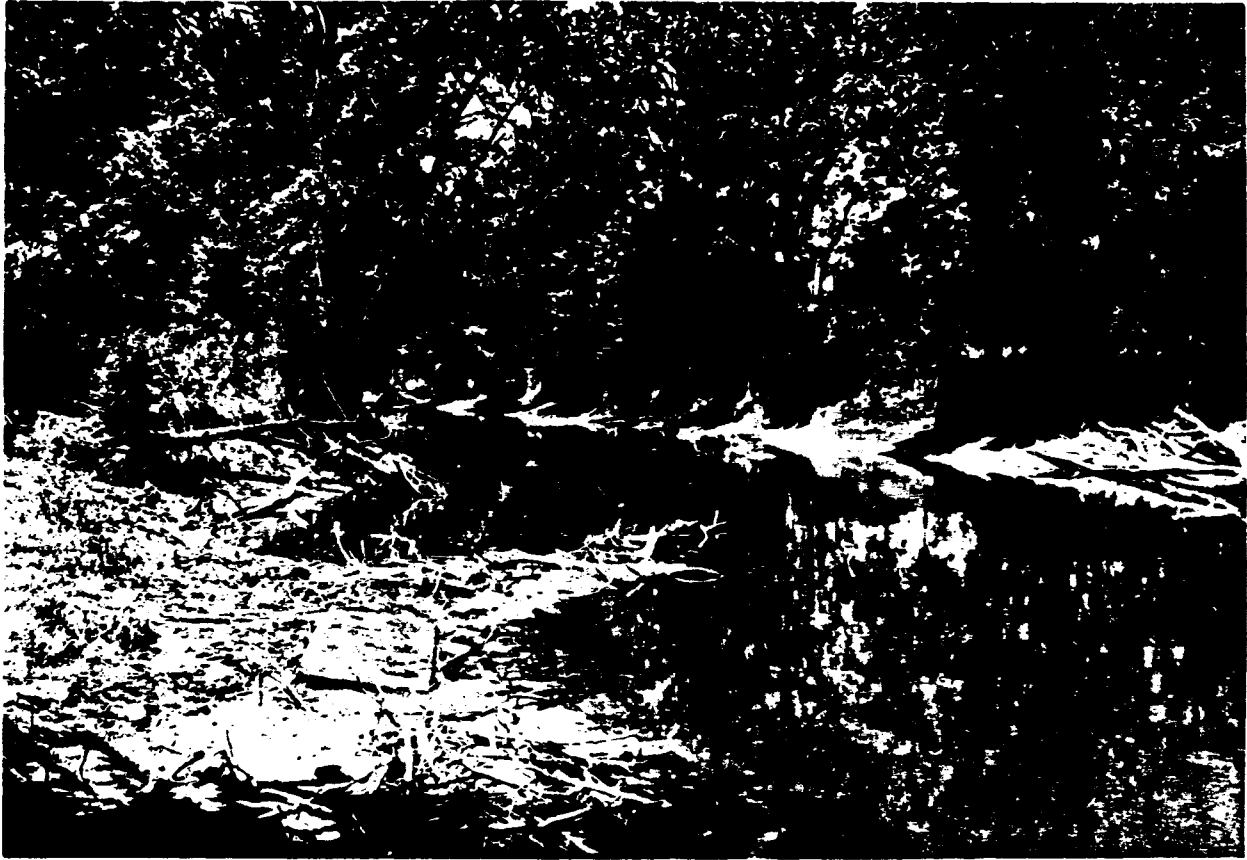


Figure 5

Station 5: Des Plaines River (looking upstream)
0.75 mi S Wadsworth Road bridge, 0.3 mi E US 41, NW Waukegan
T46N, R11E, NW/4, SW/4, SE/4, Sec. 34 (Wadsworth 7.5' quad)



Figure 6

Station 6: Lower gravel pit
0.4 mi E US 41, NW Waukegan
T45N, R11E, SW/4, NE/4, NW/4, SE/4, Sec. 3 (Wadsworth 7.5' quad)