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**FISHES COLLECTED FROM THE CANADIAN PORTION  
OF THE ASSINIBOINE RIVER DRAINAGE**

by

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## ABSTRACT

McCulloch, B.R. and W.G. Franzin. 1996. Fishes of the Canadian portion of the Assiniboine River drainage. Can. Tech. Rep. Fish. Aquat. Sci. 2087: v + 62 p.

The following report summarizes fish collections made in the Canadian portion of the Assiniboine River drainage and plots geographic distributions for each species. This is the first detailed summary of fish species distributions in the drainage and updates previous literature dealing with dispersal of recent invaders, range extensions of native species and potential limitations on future dispersal. Subsequent collections in the drainage are imperative, given the apparent dispersal rates of recent invaders and the large number of species known from the United States portion of the Red River watershed that potentially have access to, but have not been found in, Canadian waters of the basin.

**Keywords:** Fish distribution; fish management; fish resources; Manitoba; Saskatchewan; Souris River; Cypress River; Little Saskatchewan River; Qu'Appelle River; Shell River.

## RÉSUMÉ

McCulloch, B.R. and W.G. Franzin. 1996. Fishes of the Canadian portion of the Assiniboine River drainage. Can. Tech. Rep. Fish. Aquat. Sci. 2087: v + 62 p.

Le rapport suivant résume les prélèvements de poissons qui ont été faits dans la partie canadienne du bassin hydrographique de la rivière Assiniboine et indique les distributions géographiques de chaque espèce. Il s'agit du premier résumé détaillé sur les distributions d'espèces de poissons dans le bassin hydrographique; ce résumé met à jour les études précédentes traitant de la dissémination des récentes espèces envahissantes, du champ de la propagation des espèces indigènes et des obstacles éventuels pouvant limiter la dissémination à l'avenir. Il est impératif d'effectuer de nouveaux prélèvements dans le bassin hydrographique, étant donné les taux apparents de dissémination des récentes espèces envahissantes et le nombre élevé d'espèces existant dans la partie américaine du bassin hydrographique de la rivière Rouge. Ces espèces, bien qu'on ne les ait pas encore repérées dans les eaux canadiennes du bassin, peuvent éventuellement y pénétrer.

**Mots-clés:** Distribution du poisson; gestion du poisson; ressources de la pêche; Manitoba; Saskatchewan; rivière Souris; rivière Cypress; rivière Little Saskatchewan; rivière Qu'Appelle; rivière Shell.



## INTRODUCTION

Knowledge of the distributions of fishes in Manitoba is limited to large scale coverages such as Canada-wide (Scott and Crossman 1973) or North America-wide (Lee et al. 1980) compendiums which are well out of date. Even Manitoba coverage in single reports is general and very dated (Hinks 1943, 1957; Fedoruk 1971) and useful only as a guide to probable occurrence of common species in a particular water body. Current, detailed knowledge of the fish distributions in major drainage basins of Manitoba is lacking completely. These data are necessary to address effects of ongoing and potential development in drainage basins in the province. This report summarizes the current knowledge of validated fish distributions for the Assiniboine River drainage.

In the past 25 years, our understanding of the ichthyofauna of the Assiniboine River drainage has undergone many changes; both additions of new species and range extensions have been documented.

In 1969, the stonecat, *Noturus flavus*, was first collected in Manitoba in the Red River near Winnipeg (Stewart and Lindsey 1970). The species subsequently was reported from the Assiniboine River at Brandon (Stewart et al. 1985) and at the town of Shellmouth in 1990 (McCulloch 1994). It also is known from the Souris, Cypress, and Little Saskatchewan Rivers (McCulloch 1994).

The golden redhorse (*Moxostoma erythrurum*) was first collected in Manitoba from the Red River near Lockport in 1984 (Franzin et al. 1986). The species was collected for the first time in the Assiniboine River in 1993, just east of Portage la Prairie, Manitoba (G. Hanke, pers. comm.).

The first spotfin shiners (*Cyprinella spiloptera*) found in Manitoba were collected in 1988, from the Roseau River near its confluence with the Red River and from the Red River at the Flood Control Structure upstream of Winnipeg (W.G. Franzin and

K.W. Stewart, unpubl. data). The following year, the species was collected in the Assiniboine River at Hwy 248, and by 1990 it was found as far upstream as just below the spillway of the Portage la Prairie Dam (McCulloch 1994).

The bigmouth shiner (*Notropis dorsalis*) and tadpole madtom (*Noturus gyrinus*), neither of which previously had been reported from the Assiniboine River, were first collected from the river at Brandon, Manitoba in 1983 (Stewart et al. 1985).

Although known from the Qu'Appelle River in Saskatchewan, the shorthead redhorse (*Moxostoma macrolepidotum*), was first collected from the Assiniboine River near Spruce Woods Provincial Park in 1981 (Stewart et al. 1985).

This report is a summary of fish collections from the Assiniboine River drainage in Canada including collections from lakes along the Qu'Appelle River and Lake of the Prairies. Most oxbow lakes and headwater lakes (e.g. the many lakes in the Riding, Turtle and Duck Mountains) are not included. Fish species of most of these lakes may be found in reports of the Manitoba Department of Natural Resources and Parks Canada.

## MATERIALS AND METHODS

Fish collection records were obtained from various sources, including the University of Manitoba (Department of Zoology), University of Winnipeg (Department of Biology), the Manitoba Department of Natural Resources, the Manitoba Museum of Man and Nature, the Royal Ontario Museum, and the Canadian Museum of Nature. Most of the records from the Saskatchewan portion of the drainage were obtained from Atton and Merkowsky (1983).

Where possible, the following parameters were reported for each collection record: 1) Site: usually identified by the road crossing or other suitable reference

(town name); 2) Latitude and Longitude: to the nearest minute; 3) Date of collection; 4) Institution which made the collection: UMZ = University of Manitoba, UW = University of Winnipeg, MDNR = Manitoba Department of Natural Resources, MMMN = Manitoba Museum of Man and Nature, ROM = Royal Ontario Museum, CMN = Canadian Museum of Nature, SMNH = Saskatchewan Museum of Natural History; 5) Collector(s); 6) Water velocity, given as a maximum for the collection area; 7) Water temperature (°C); 8) Water depth, given as a maximum for the collection area; 9) Substrate types; 10) Total number of each species collected at a site (Common and scientific names are given with the species code name in Table 1). Data for the Qu'Appelle and Souris river basins in Saskatchewan are given as species presence only.

Collection locations for each species were plotted on distribution maps using CorelDRAW software. The Assiniboine River basin was divided into two maps to retain adequate definition of individual collection sites. One map documents a species' distribution in the portion of the drainage west from Winnipeg to approximately the Manitoba - Saskatchewan border, while the second map covers the remainder of the drainage to the western headwaters. Two introductory maps show river and creek names and latitude and longitude co-ordinates. Only collections made in the water courses labeled on the introductory maps are included in this report, except for Oak Creek (a small species-rich tributary of the Souris River near its confluence with the Assiniboine River) and Epinette Creek and Kiche Manitou Lake, locally important water bodies in Spruce Woods Provincial Park. Kiche Manitou Lake often is connected to the Assiniboine River via an outlet creek.

## RESULTS AND DISCUSSION

The numbers and species of fish known from the Assiniboine River and its major tributaries are presented in Table 2. Detailed fish species collection records by

site and date are summarized in Appendices 1-8. The distribution of each species within the Assiniboine River drainage is illustrated on the distribution maps: Figures 3-50 illustrate distributions of species inhabiting riverine and lake habitats while Figs. 51-54 show distributions of species restricted to lake habitats such as the Qu'Appelle River lakes. Overall, this summary explains by example the effect of increased sampling effort on the knowledge of species distributions. Prior to 1980, fish collections in the Assiniboine River drainage were few and far between with surveys conducted by the Royal Ontario Museum in the 1950s constituting much of what was known of species distributions. In the early 1980s, a fish collection field trip was implemented into the Biology of Fishes Class at the Zoology Department of the University of Manitoba. This greatly increased collection effort and available distributional data on fish species in southern Manitoba. Recent survey data collected in the Assiniboine River and several tributaries (McCulloch 1994) also has resulted in range extensions.

The distribution maps illustrate presence/absence data and general habitat preferences for most fish species. For example, species which favour larger rivers, such as the emerald shiner, flathead chub, freshwater drum and goldeye are collected mostly in the mainstem of the Assiniboine River. Conversely, those species preferring smaller streams, such as blacknose dace, creek chub, and bigmouth shiner, are found mainly in tributaries such as the Cypress River. A limitation to the maps is the lack of relative abundance data. For example, some Assiniboine River collections include one or two creek chubs and bigmouth shiners. The maps represent these collection data points equally with typical habitats (Cypress River, Shell River) favoured by the two species, where both can be abundant. However, the collection records in the Appendices do provide relative abundances as obtained with the various collecting gears and therefore reflect to a degree the species communities of the collection sites.

Many new collection localities are within the known general range of a species. For example, since the first collection of the shorthead redhorse in the Assiniboine River in 1981 (Stewart et al. 1985), it has been collected in several other localities between Winnipeg and the mouth of the Qu'Appelle River.

The role of dams as effective barriers to fish dispersal is illustrated by the present distribution of the stonecat, and this example may be useful in predicting future distributions of newly invading species. Since it was first collected in Manitoba in 1969 (Stewart and Lindsey 1970), the stonecat has been collected in the Assiniboine, Souris, Little Saskatchewan, and Cypress Rivers. In all but the latter, its occurrence to the foot of a dam indicates that its distribution may be limited by these barriers, as suitable habitat (riffles, rocky substrate) is available upstream in each case (McCulloch 1994).

The collection records also indicate that some species are more widely distributed in the province than previously thought. For example, the bigmouth shiner, first discovered in Manitoba in 1968 (Fedoruk 1970) and presently considered rare in Canada (Tompkins 1987) because of its limited distribution in the Pembina River and one of its tributaries, has been collected in the Assiniboine River (Stewart et al. 1985), the Shell River, the Little Saskatchewan River (McCulloch 1994) and the Cypress River (K.W. Stewart, unpub. data). These specimens do not represent recent expansion of the bigmouth shiner's range, as some of these locations are upstream of impassable dams constructed in the 1960s.

The importance of continued collections in the Assiniboine River drainage is emphasized by 1994 records. New locations were recorded for three species and range extensions for the golden redhorse and ninespine stickleback also were noted. A young-of-the-year golden redhorse was collected in the Assiniboine River at Hwy 34, indicating that the species has a breeding population upstream of the

dam at Portage la Prairie. This species was only discovered in the province ten years ago (Franzin et al. 1986). The collection of ninespine sticklebacks in the Assiniboine River at Spruce Woods Provincial Park is only the second record of the species from the river. The first collection was made 40 years ago at Winnipeg. However, abundant populations of ninespine sticklebacks are known from lakes in the Qu'Appelle River in Saskatchewan (Johnson 1963).

Subsequent collections in the Assiniboine River also will be important to monitor dispersal of potential new invaders. Owen et al. (1981) listed the following species which do not occur in Manitoba as present in the Sheyenne River, a Red River tributary in the United States: pugnose shiner, *Notropis anogenus*; lake chubsucker, *Erimyzon sucetta*; greater redhorse, *Moxostoma valenciennei*; green sunfish, *Lepomis cyanellus*; and orangespotted sunfish, *Lepomis humilis*. Additionally, Koel and Peterka (1994) listed the following species as present in the Red River south of the U.S. - Manitoba border: longnose gar, *Lepistosteus osseus*; bowfin, *Amia calva*; river carpsucker, *Carpoides carpio*; northern hog sucker, *Hypentelium nigricans*; central stoneroller, *Campostoma anomalum*; large-scale stoneroller, *Campostoma oligolepis*; golden orf, *Leuciscus idus* (European introduction); yellow bullhead, *Ameiurus natalis*; muskellunge, *Esox masquinongy* (introduced); rainbow darter, *Etheostoma caeruleum*; and least darter, *Etheostoma microperca*. Given the collections of the spottin shiner, stonecat, and golden redhorse in the Assiniboine River after their discovery in the Red River, the likelihood of at least some of these Sheyenne/Red River species being found in Manitoba is reasonable.

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**Table 1: Scientific and common names for the abbreviations used in the appendices.**

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Family Petromyzontidae

<i>I. cast</i>	<i>Ichthyomyzon castaneus</i>	Chestnut lamprey
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Family Hiodontidae

<i>H. alos</i>	<i>Hiodon alosoides</i>	Goldeye
<i>H. terg</i>	<i>Hiodon tergisus</i>	Mooneye

Family Esocidae

<i>E. luci</i>	<i>Esox lucius</i>	Northern pike
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Family Salmonidae

<i>C.clup</i>	<i>Coregonus clupeaformis</i>	Lake whitefish
<i>C.arte</i>	<i>Coregonus artedi</i>	Cisco

Family Umbridae

<i>U. limi</i>	<i>Umbra limi</i>	Central mudminnow
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Family Cyprinidae

<i>C. spil</i>	<i>Cyprinella spiloptera</i>	Spotfin shiner
<i>C. carp</i>	<i>Cyprinus carpio</i>	Common carp
<i>L. corn</i>	<i>Luxilus cornutus</i>	Common shiner
<i>M. stor</i>	<i>Macrhybopsis storeriana</i>	Silver chub
<i>M. marg</i>	<i>Margariscus margarita</i>	Pearl dace
<i>N. crys</i>	<i>Notemigonus crysoleucas</i>	Golden shiner
<i>N. athe</i>	<i>Notropis atherinoides</i>	Emerald shiner
<i>N. blen</i>	<i>Notropis blennius</i>	River shiner
<i>N. dors</i>	<i>Notropis dorsalis</i>	Bigmouth shiner
<i>N. hdon</i>	<i>Notropis heterodon</i>	Blackchin shiner
<i>N. hlep</i>	<i>Notropis heterolepis</i>	Blacknose shiner
<i>N. huds</i>	<i>Notropis hudsonius</i>	Spottail shiner
<i>N. stra</i>	<i>Notropis stramineus</i>	Sand shiner
<i>P. eos</i>	<i>Phoxinus eos</i>	Northern redbelly dace
<i>P. neog</i>	<i>Phoxinus neogaeus</i>	Finescale dace
<i>P. prom</i>	<i>Pimephales promelas</i>	Fathead minnow
<i>P. grac</i>	<i>Platygobio gracilis</i>	Flathead chub
<i>R. atra</i>	<i>Rhinichthys atratulus</i>	Blacknose dace
<i>R. cata</i>	<i>Rhinichthys cataractae</i>	Longnose dace
<i>S. atro</i>	<i>Semotilus atromaculatus</i>	Creek chub

**Table 1. continued.**

## Family Catostomidae

<i>C. cypr</i>	<i>Carpioles cyprinus</i>	Quillback
<i>C. comm</i>	<i>Catostomus commersoni</i>	White sucker
<i>I. cyp</i>	<i>Ictiobus cyprinellus</i>	Bigmouth buffalo
<i>M. anis</i>	<i>Moxostoma anisurum</i>	Silver redhorse
<i>M. eryt</i>	<i>Moxostoma erythrurum</i>	Golden redhorse
<i>M. macr</i>	<i>Moxostoma macrolepidotum</i>	Shorthead redhorse

## Family Ictaluridae

<i>A. mel</i>	<i>Ameiurus melas</i>	Black bullhead
<i>A. nebu</i>	<i>Ameiurus nebulosus</i>	Channel catfish
<i>N. flav</i>	<i>Noturus flavus</i>	Stonecat
<i>N. gyr</i>	<i>Noturus gyrinus</i>	Tadpole madtom

## Family Percopsidae

<i>P. omis</i>	<i>Percopsis omiscomaycus</i>	Trout-perch
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## Family Gadidae

<i>L. lota</i>	<i>Lota lota</i>	Burbot
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## Family Gasterosteidae

<i>C. inco</i>	<i>Culaea inconstans</i>	Brook stickleback
<i>P. pung</i>	<i>Pungitius pungitius</i>	Ninespine stickleback

## Family Cottidae

<i>C. rice</i>	<i>Cottus ricei</i>	Spoonhead sculpin
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## Family Centrarchidae

<i>A. rupe</i>	<i>Ambloplites rupestris</i>	Rock bass
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## Family Percidae

<i>E. exil</i>	<i>Etheostoma exile</i>	Iowa darter
<i>E. nigr</i>	<i>Etheostoma nigrum</i>	Johnny darter
<i>P. flav</i>	<i>Perca fluviatilis flavescens</i>	Yellow perch
<i>P. macu</i>	<i>Percina maculata</i>	Blackside darter
<i>P. shum</i>	<i>Percina shumardi</i>	River darter
<i>S. cana</i>	<i>Stizostedion canadense</i>	Sauger
<i>S. vitr</i>	<i>Stizostedion vitreum</i>	Walleye

## Family Sciaenidae

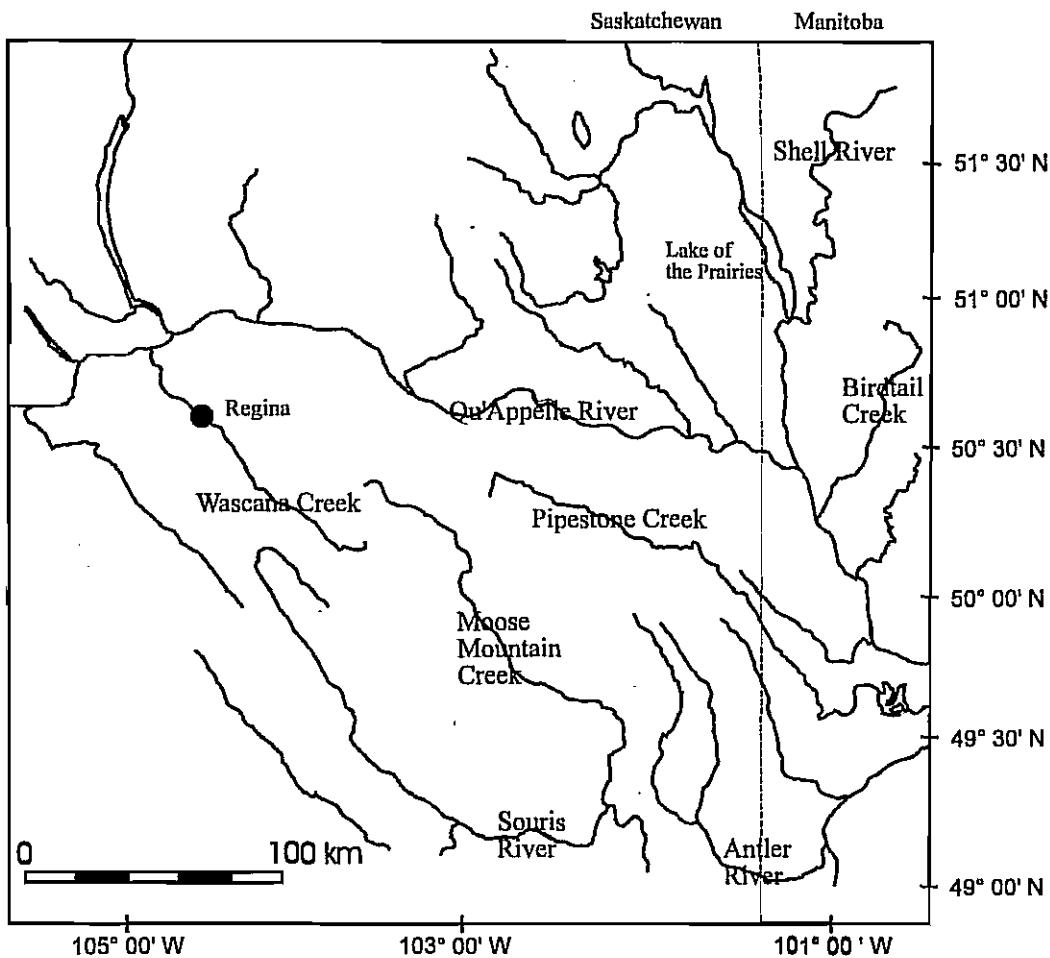
<i>A. grun</i>	<i>Aplodinotus grunniens</i>	Freshwater drum
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**Table 2. Fish species collected from the Assiniboine River and its major tributaries.**

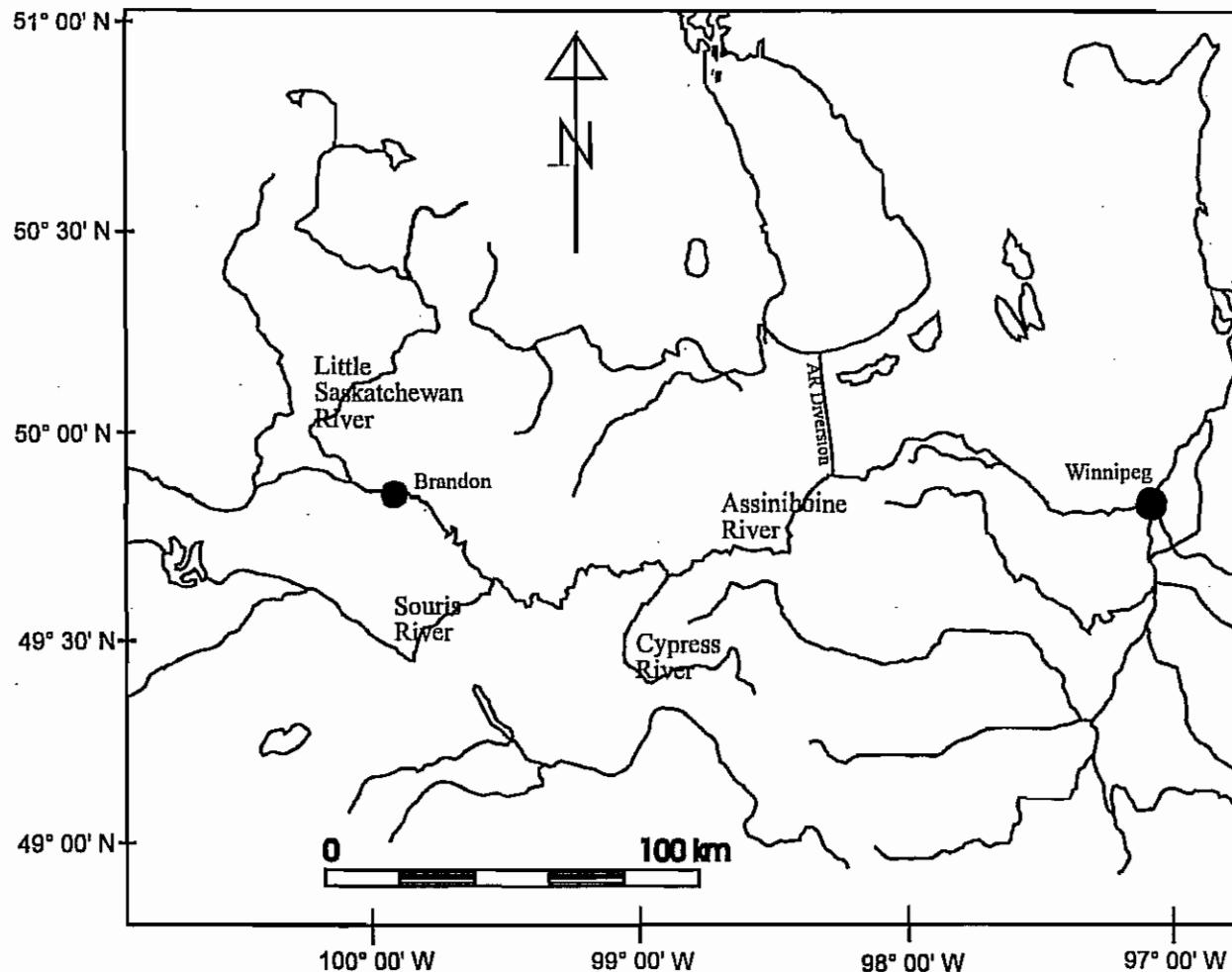
Species	Assiniboine River	Qu'Appelle River	Souris River	Little Saskatchewan River	Cypress River	Shell River
<i>Ichthyomyzon castaneus</i>	*	*				*
<i>Acipenser fulvescens</i>	historic					
<i>Hiodon alosoides</i>	*	*	*			
<i>Hiodon tergisus</i>	*	*				
<i>Esox lucius</i>	*	*	*	*	*	
<i>Umbra limi</i>	*		*			*
<i>Salvelinus fontinalis</i>			stocked			stocked
<i>Oncorhynchus mykiss</i>						stocked
<i>Coregonus artedii</i>			lakes			
<i>Coregonus clupeaformis</i>			lakes			
<i>Cyprinella spiloptera</i>	*					
<i>Cyprinus carpio</i>	*	*	*	*		
<i>Luxilus cornutus</i>	*	*	*	*	*	
<i>Macrhybopsis storeriana</i>	*					
<i>Margariscus margarita</i>			*	*		
<i>Notemigonus crysoleucus</i>	*		*			
<i>Notropis atherinoides</i>	*	*				*
<i>Notropis blennius</i>	*	*	*		*	
<i>Notropis dorsalis</i>	*		*	*	*	*
<i>Notropis heterodon</i>	*		*			
<i>Notropis heterolepis</i>	*	*	*			
<i>Notropis hudsonius</i>	*	*	*	*		
<i>Notropis stramineus</i>	*	*	*			*
<i>Phoxinus eos</i>			*			
<i>Phoxinus neogaeus</i>	*					
<i>Pimephales promelas</i>	*	*	*	*	*	*
<i>Platygobio gracilis</i>	*		*			
<i>Rhinichthys atratulus</i>	*	*	*	*	*	*
<i>Rhinichthys cataractae</i>	*	*	*	*	*	*
<i>Semotilus atromaculatus</i>	*	*	*	*	*	*
<i>Carpioles cyprinus</i>	*	*				
<i>Catostomus commersoni</i>	*	*	*	*	*	*
<i>Ictiobus cyprinellus</i>			lakes			
<i>Moxostoma anisurum</i>	*					*
<i>Moxostoma erythrurum</i>	*					*
<i>Moxostoma macrolepidotum</i>	*	*	*	*		*
<i>Ameiurus melas</i>	*	*	*			
<i>Ameiurus nebulosus</i>			*			
<i>Ictalurus punctatus</i>	*	*				
<i>Noturus flavus</i>	*		*	*	*	
<i>Noturus gyrinus</i>	*		*			
<i>Percopsis omiscomaycus</i>	*	*	*			*
<i>Lota lota</i>	*	*		*		*
<i>Culaea inconstans</i>	*	*	*	*	*	*

**Table 2. Continued.**

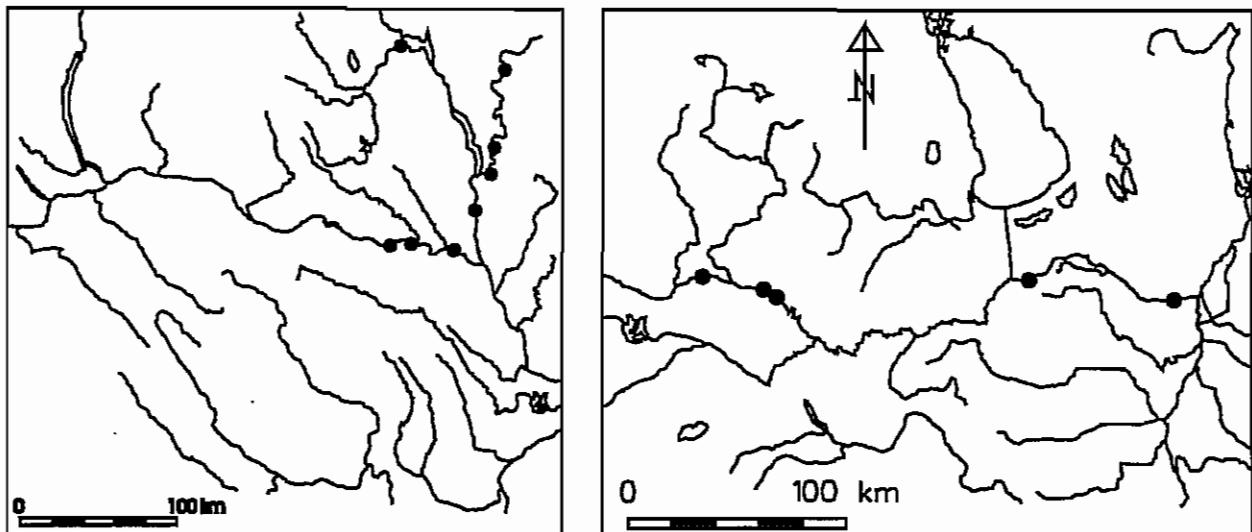
<i>Pungitius pungitius</i>	*	*				
<i>Cottus ricei</i>			lakes			
<i>Ambloplites rupestris</i>	*	*	*	*	*	*
<i>Etheostoma exile</i>	oxbow	*	*			*
<i>Etheostoma nigrum</i>	*	*	*	*	*	*
<i>Perca flavescens</i>	*	*	*	*		
<i>Percina maculata</i>	*	*	*	*	*	*
<i>Percina shumardi</i>	*				*	
<i>Stizostedion vitreum</i>	*	*	*	*		
<i>Stizostedion canadense</i>	*	*				
<i>Aplodinotus grunniens</i>	*					
Total (extant native species)	45	35	33	20	18	17



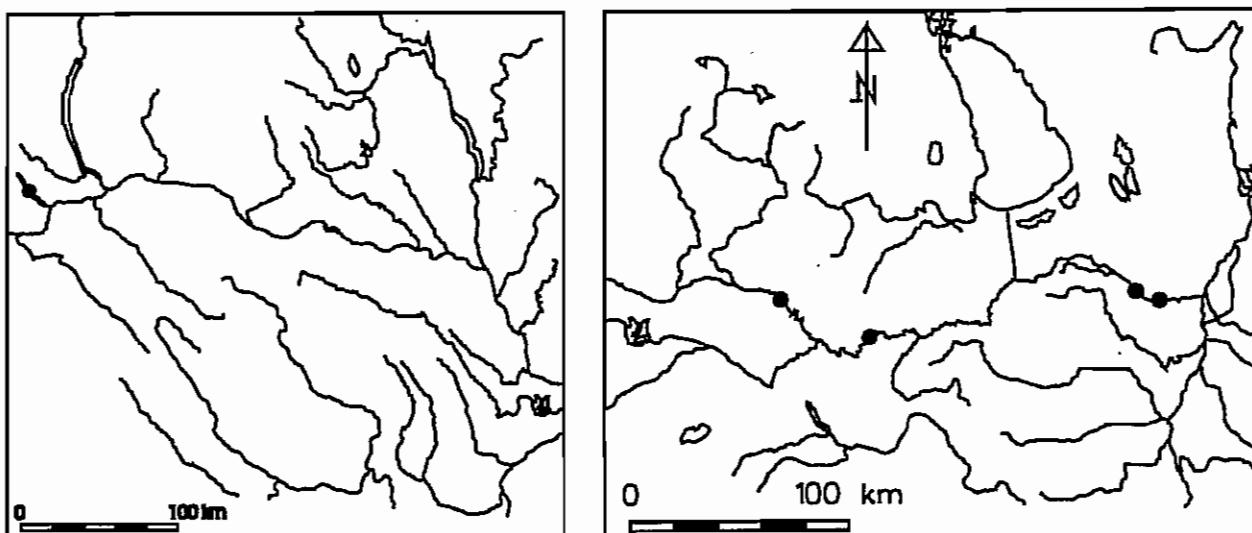
**Figure 1. Reference map for western portion of the drainage in Canada.  
Note that the scale is smaller than in Figure 2.**



**Figure 2. Reference map for eastern portion of the drainage. Note that the scale is larger than in Figure 1.**



**Figure 3. Collection localities for the chestnut lamprey (*Ichthyomyzon castaneus*).**



**Figure 4. Collection localities for the goldeye (*Hiodon alosoides*).**

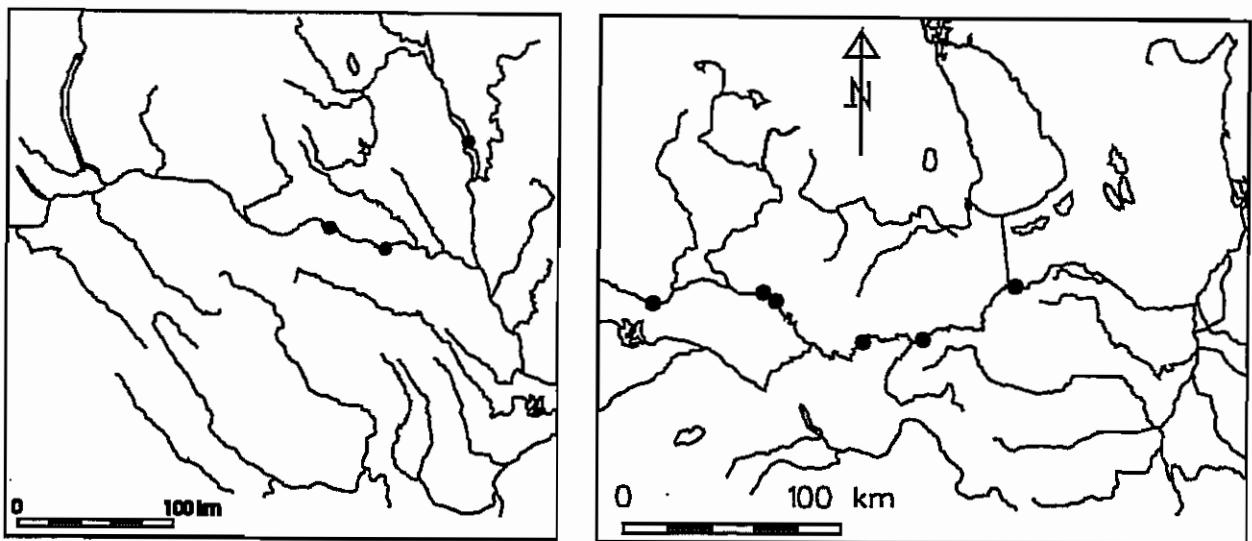


Figure 5. Collection localities for the mooneye (*Hiodon tergisus*).

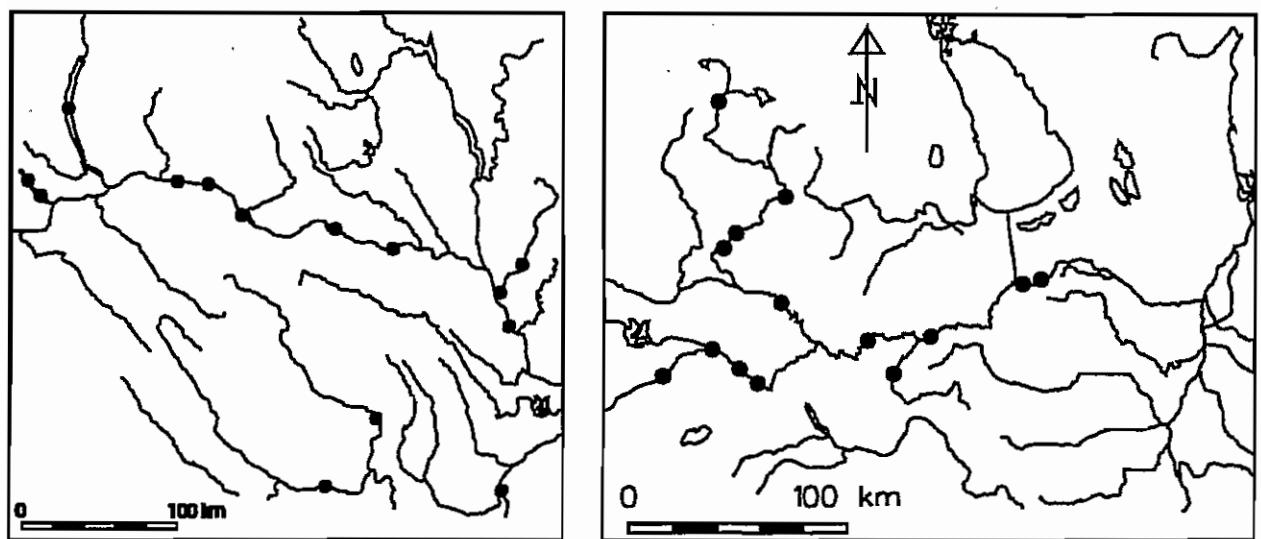


Figure 6. Collection localities for the northern pike (*Esox lucius*).

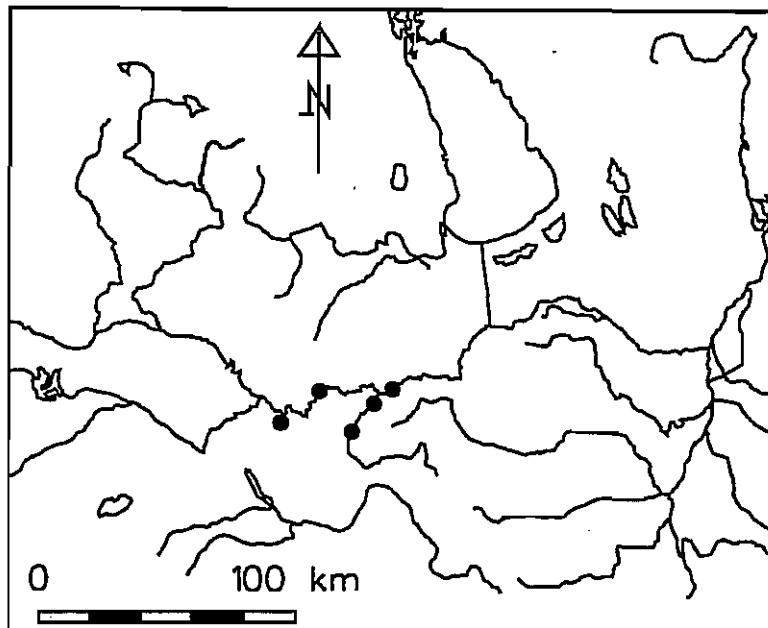


Figure 7. Collection localities for the central mudminnow (*Umbra limi*).

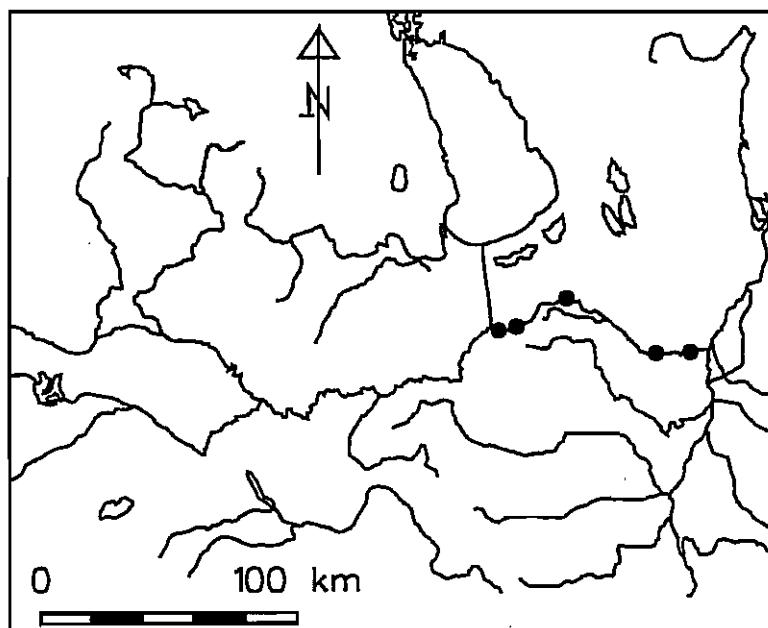


Figure 8. Collection localities for the spotfin shiner (*Cyprinella spiloptera*).

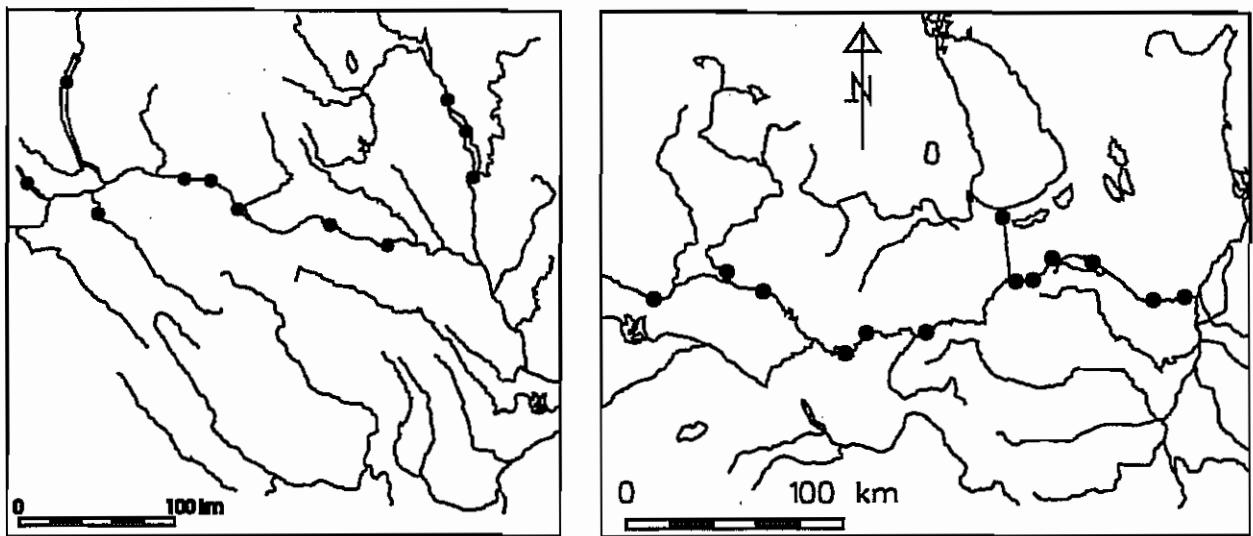


Figure 9. Collection localities for the common carp (*Cyprinus carpio*).

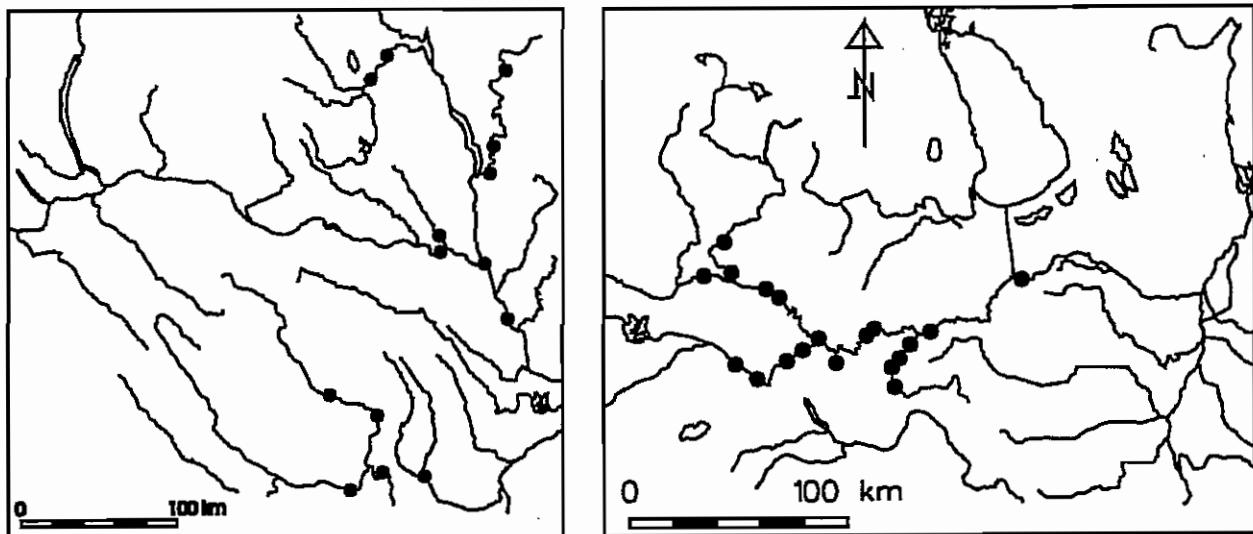


Figure 10. Collection localities for the common shiner (*Luxilus cornutus*).

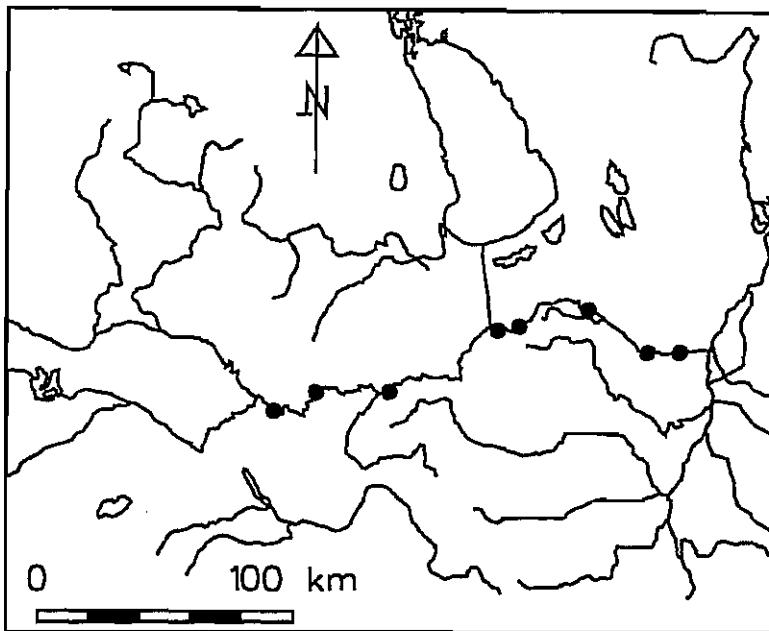


Figure 11. Collection localities for the silver chub (*Macrhybopsis storeriana*).

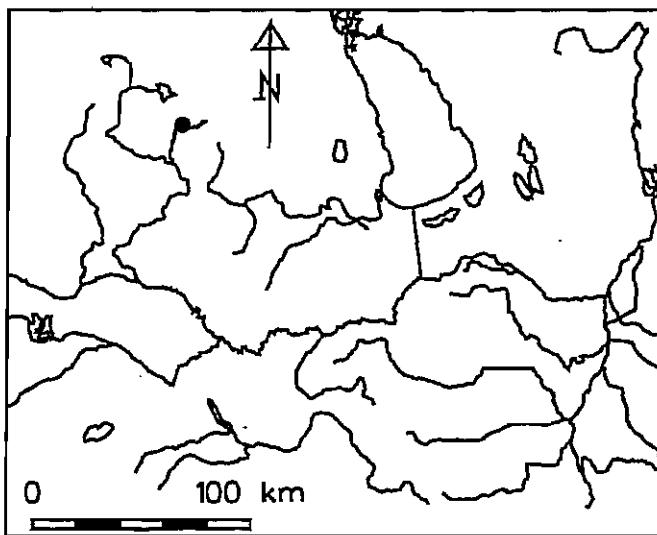
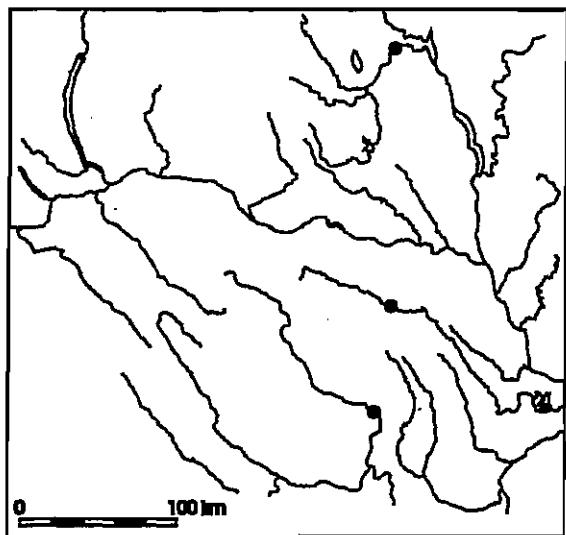
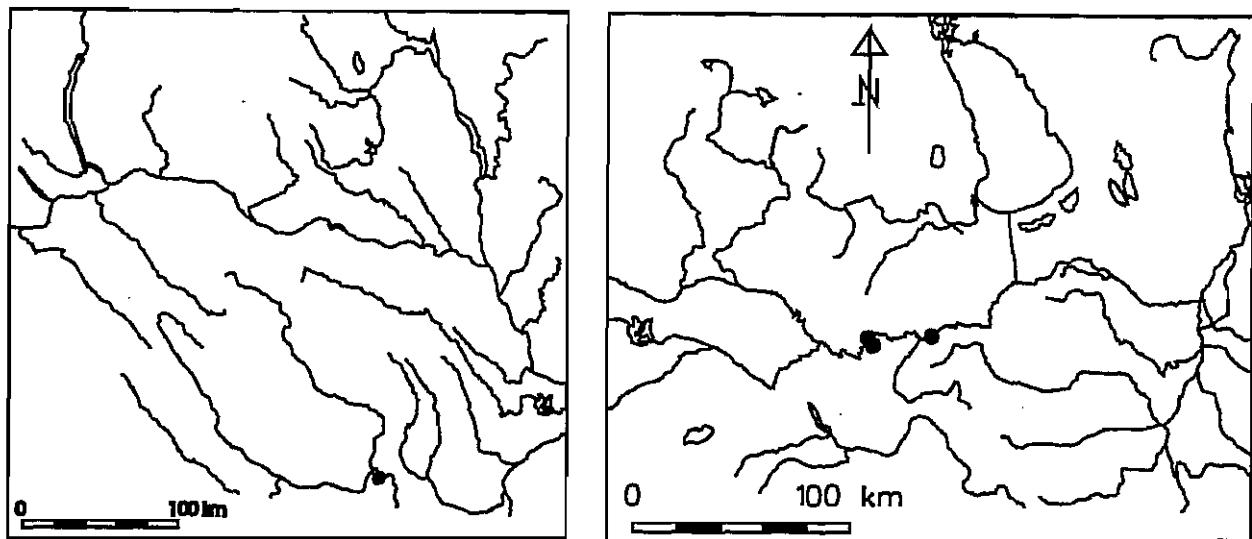
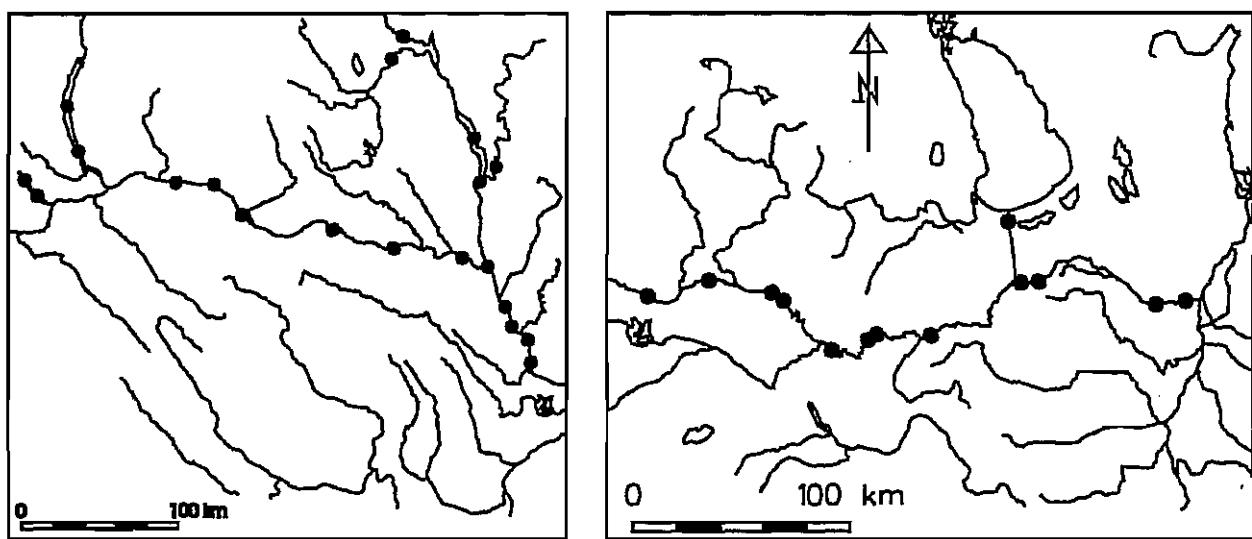


Figure 12. Collection localities for the pearl dace (*Margariscus margarita*).



**Figure 13. Collection localities for the golden shiner (*Notemigonus crysoleucas*).**



**Figure 14. Collection localities for the emerald shiner (*Notropis atherinoides*).**

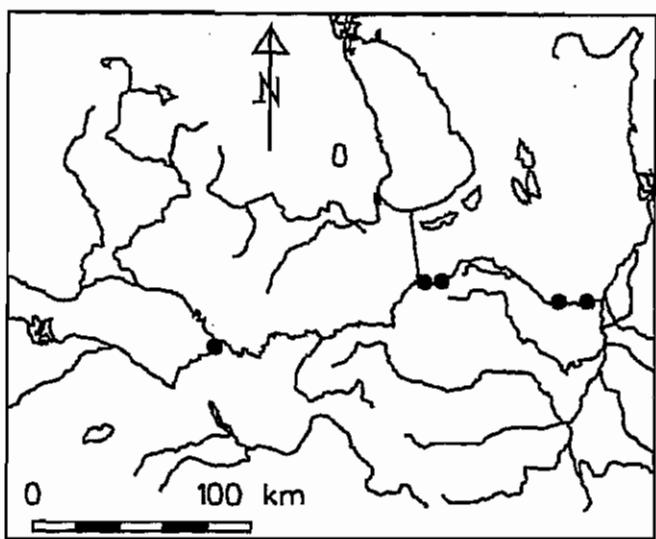
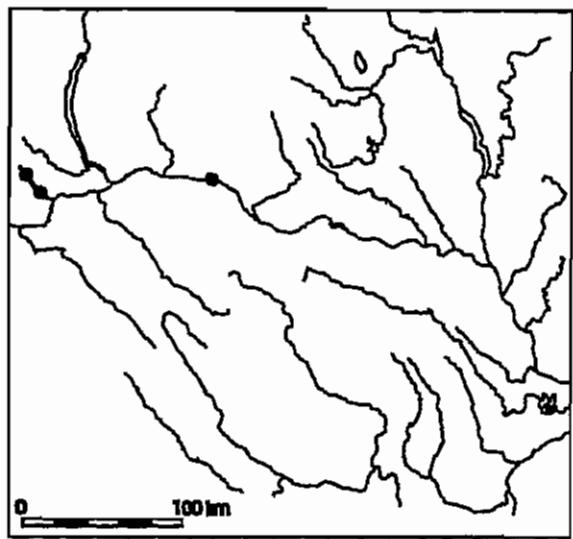


Figure 15. Collection localities for the river shiner (*Notropis blennius*).

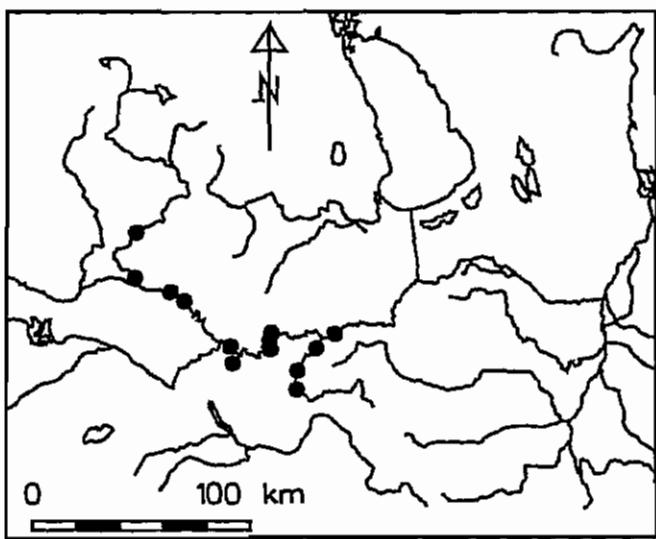
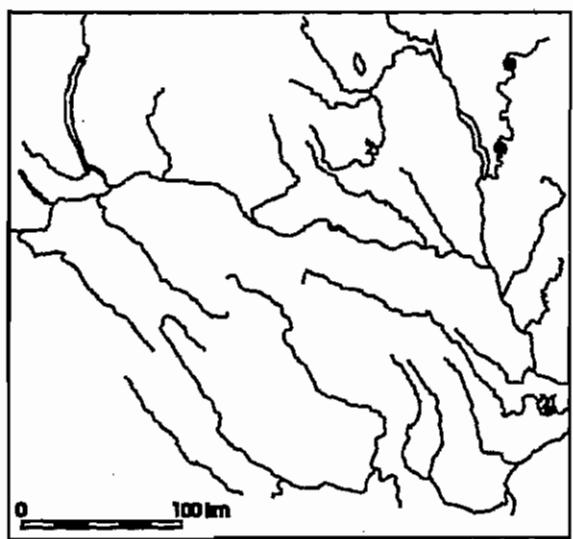


Figure 16. Collection localities for the bigmouth shiner (*Notropis dorsalis*).

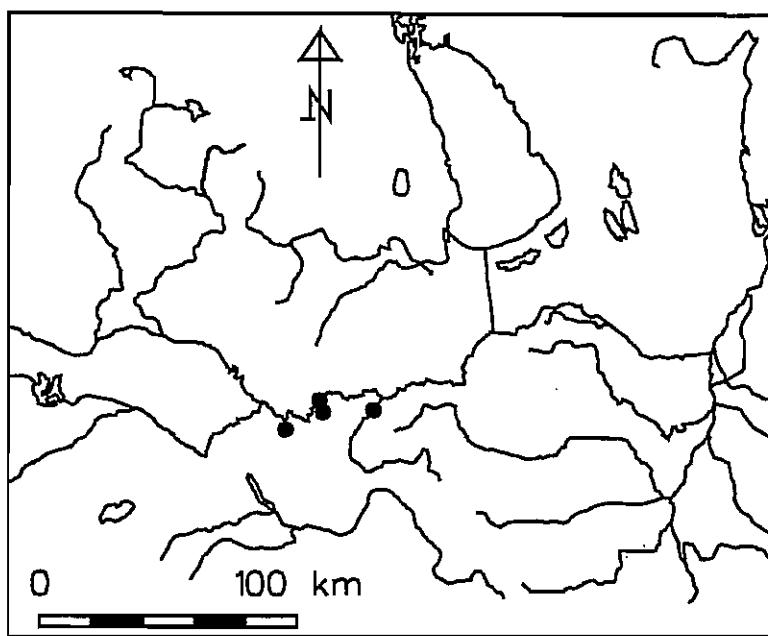


Figure 17. Collection localities for the blackchin shiner (*Notropis heterodon*).

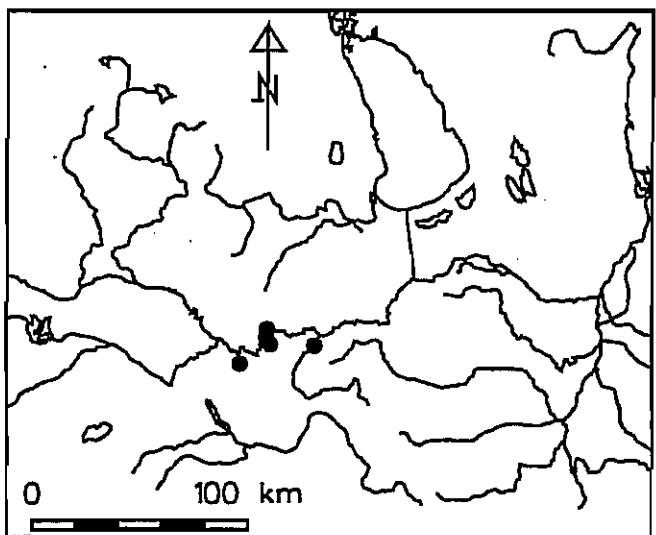
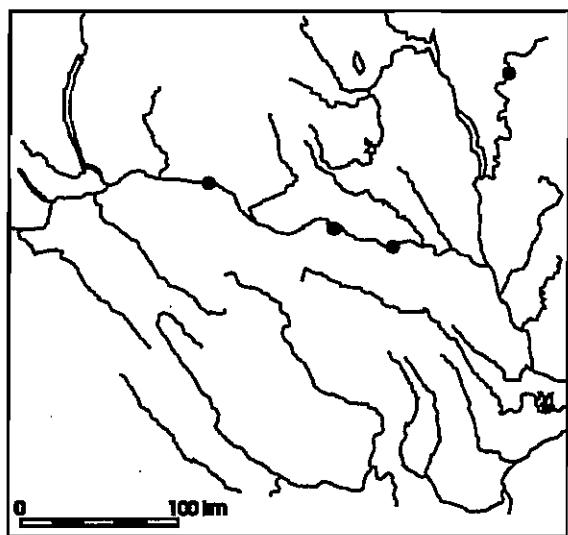


Figure 18. Collection localities for the blacknose shiner (*Notropis heterolepis*).

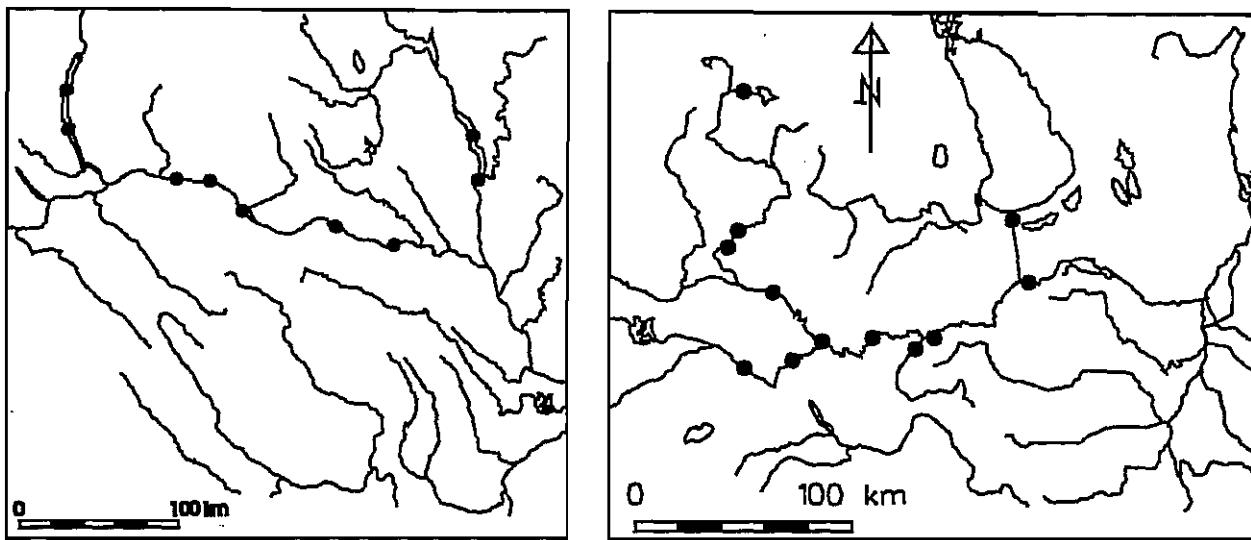


Figure 19. Collection localities for the spottail shiner (*Notropis hudsonius*).

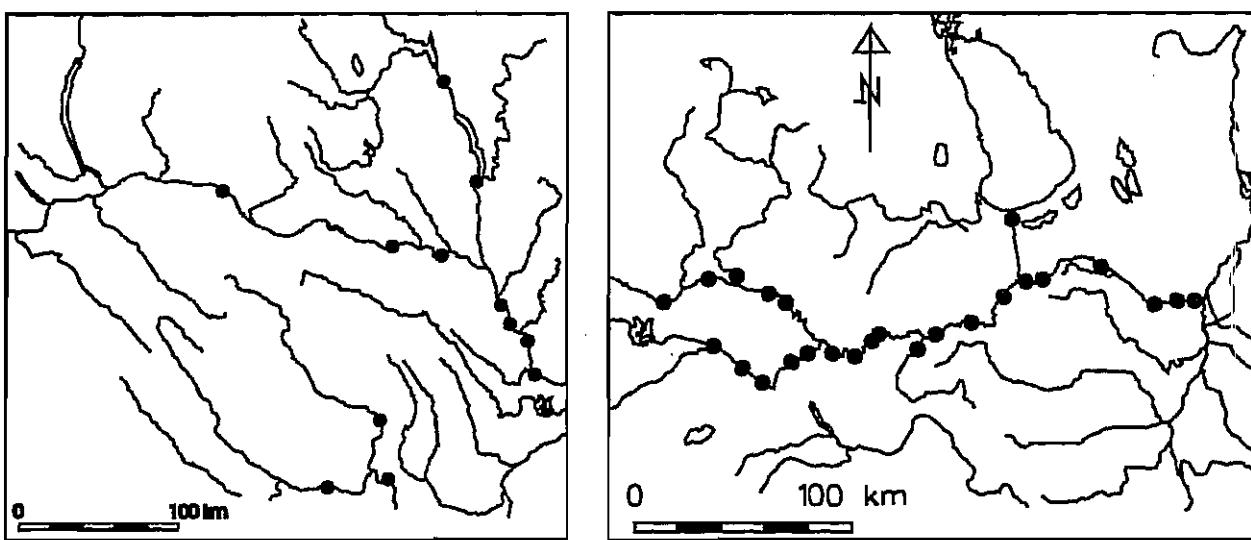


Figure 20. Collection localities for the sand shiner (*Notropis stramineus*).

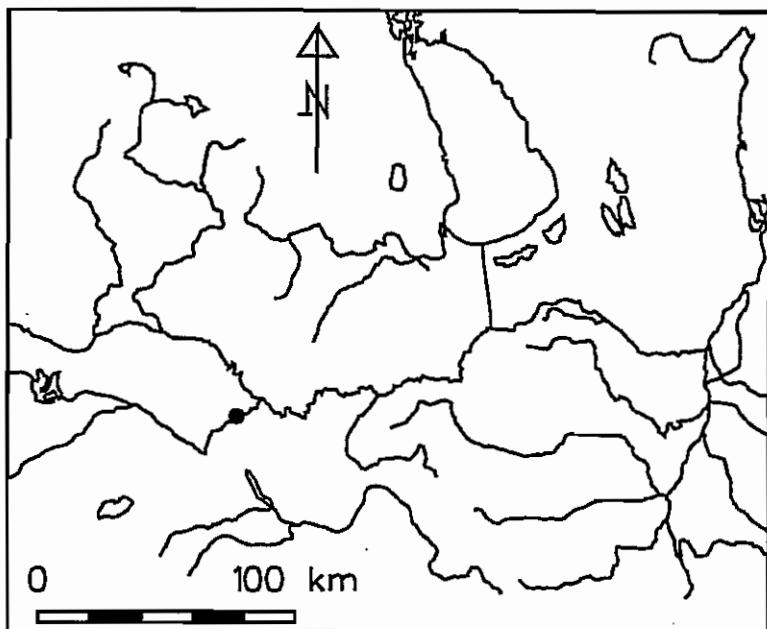


Figure 21. Collection locality for the northern redbelly dace (*Phoxinus eos*).

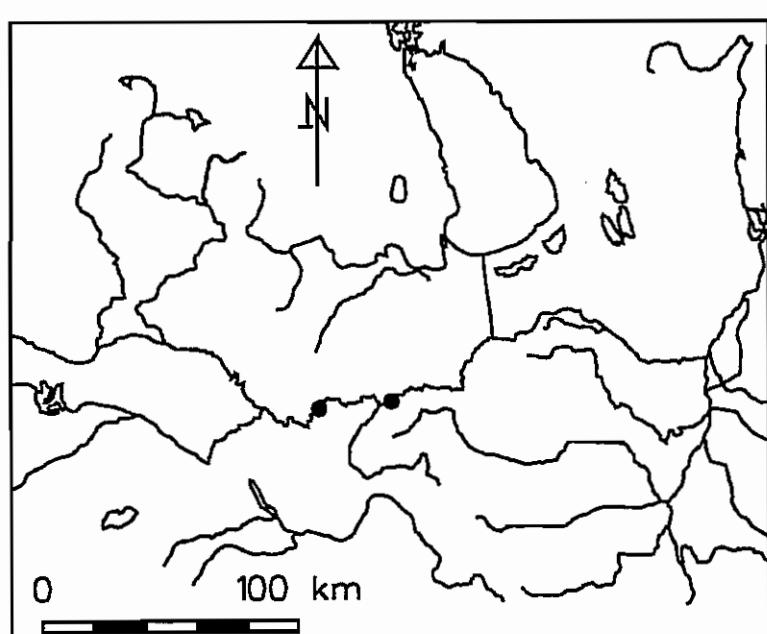


Figure 22. Collection localities for the finescale dace (*Phoxinus neogaeus*).

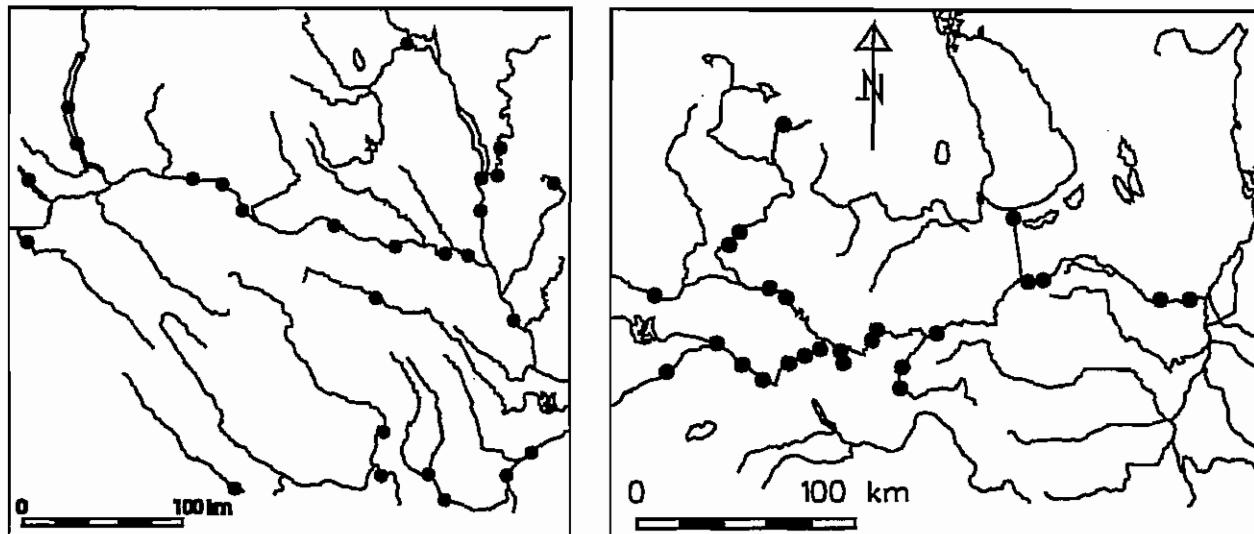


Figure 23. Collection localities for the fathead minnow (*Pimephales promelas*).

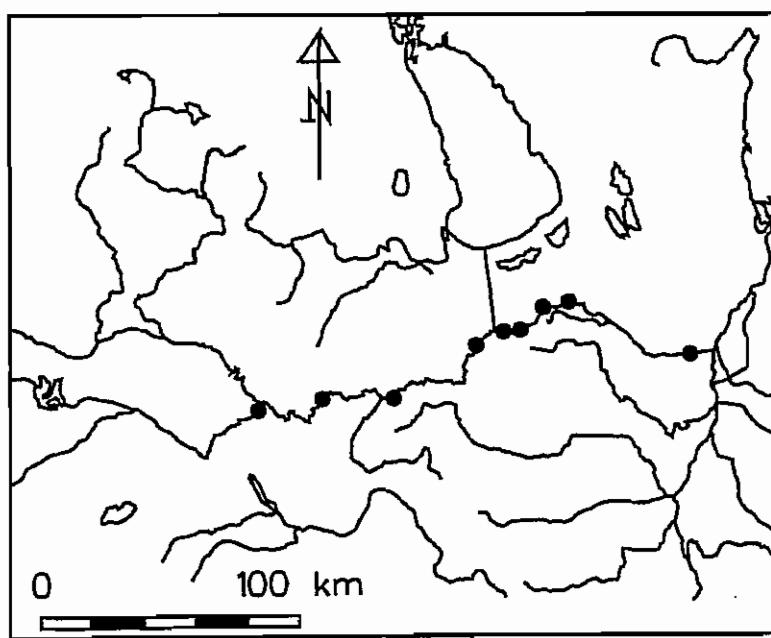
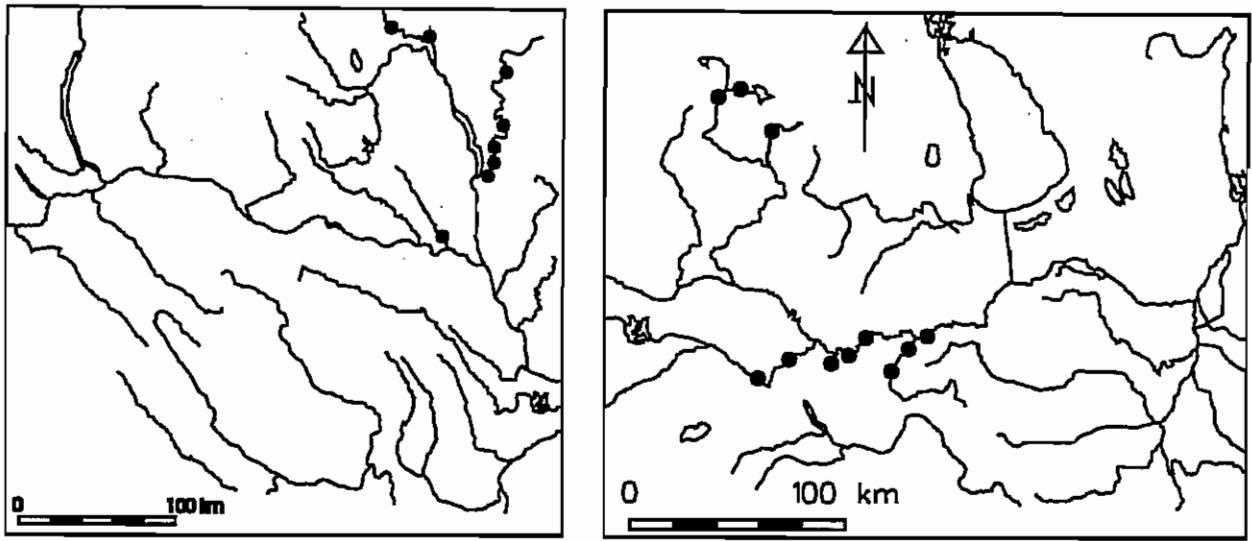
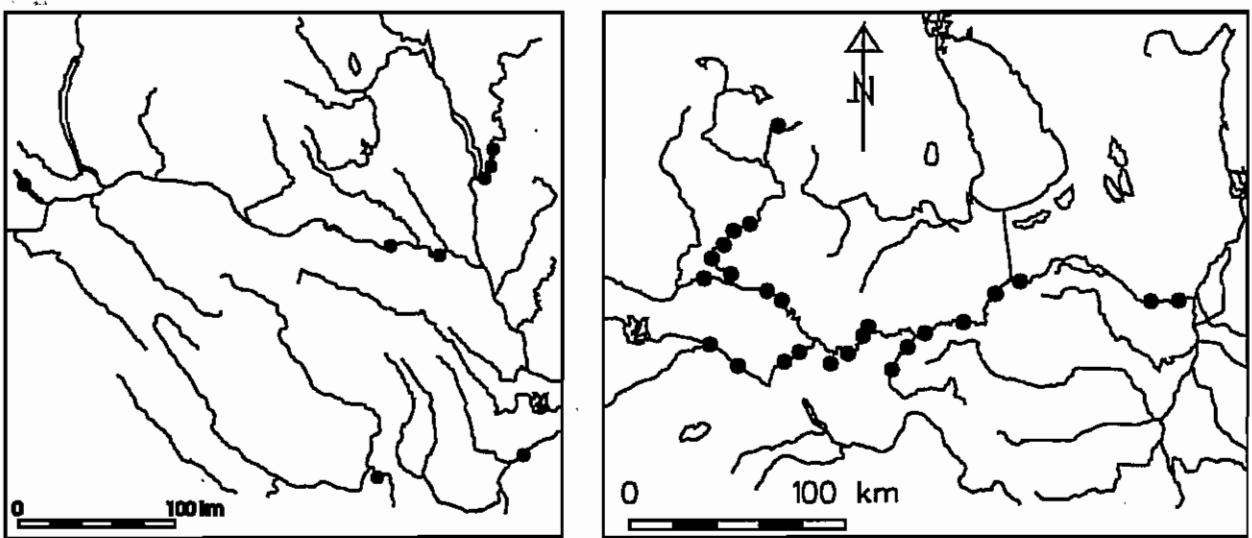


Figure 24. Collection localities for the flathead chub (*Platygobio gracilis*).



**Figure 25.** Collection localities for the blacknose dace (*Rhinichthys atratulus*).



**Figure 26.** Collection localities for the longnose dace (*Rhinichthys cataractae*).

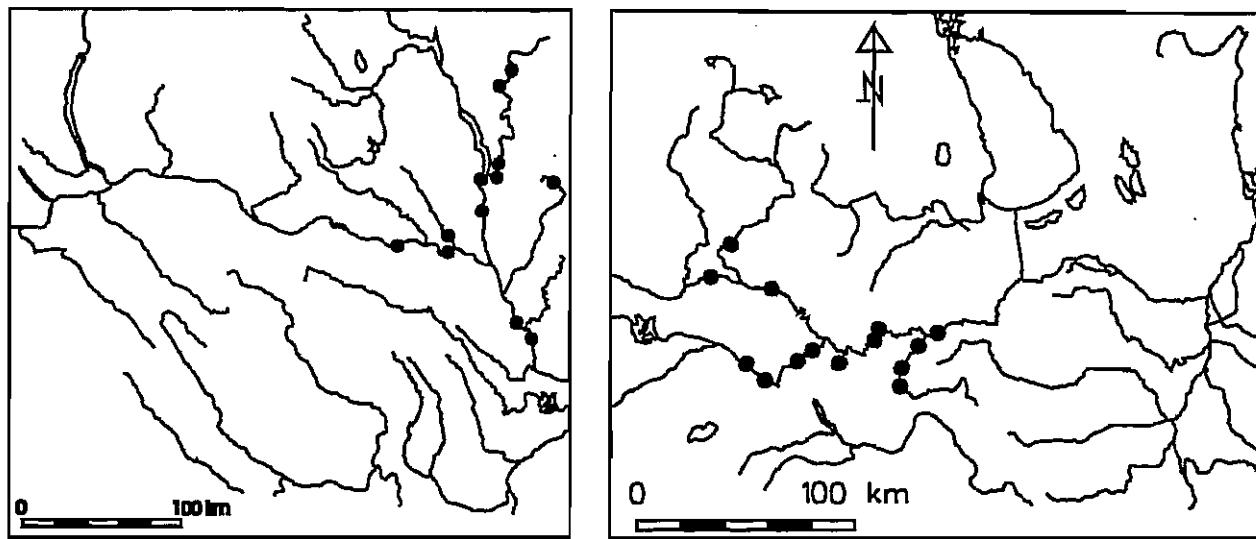


Figure 27. Collection localities for the creek chub (*Semotilus atromaculatus*).

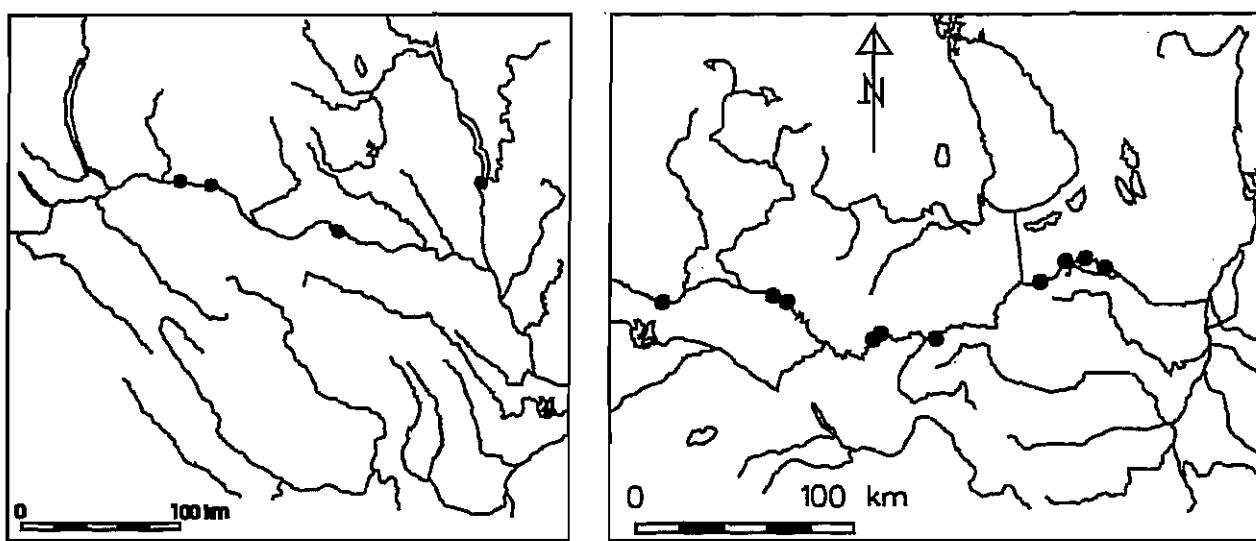


Figure 28. Collection localities for the quillback (*Carpioles cyprinus*).

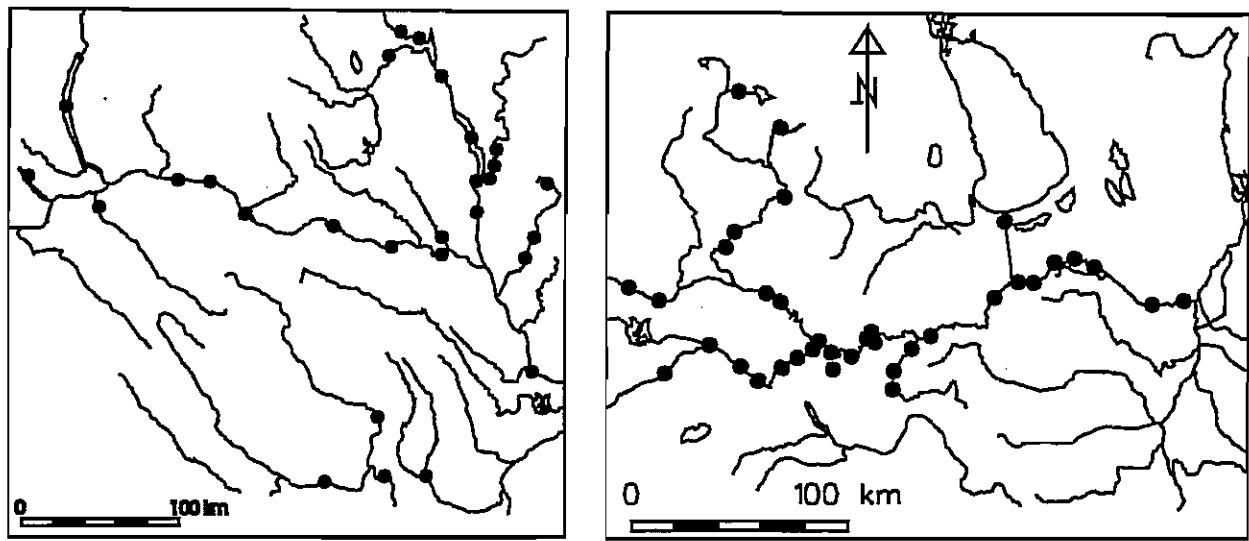


Figure 29. Collection localities for the white sucker (*Catostomus commersoni*).

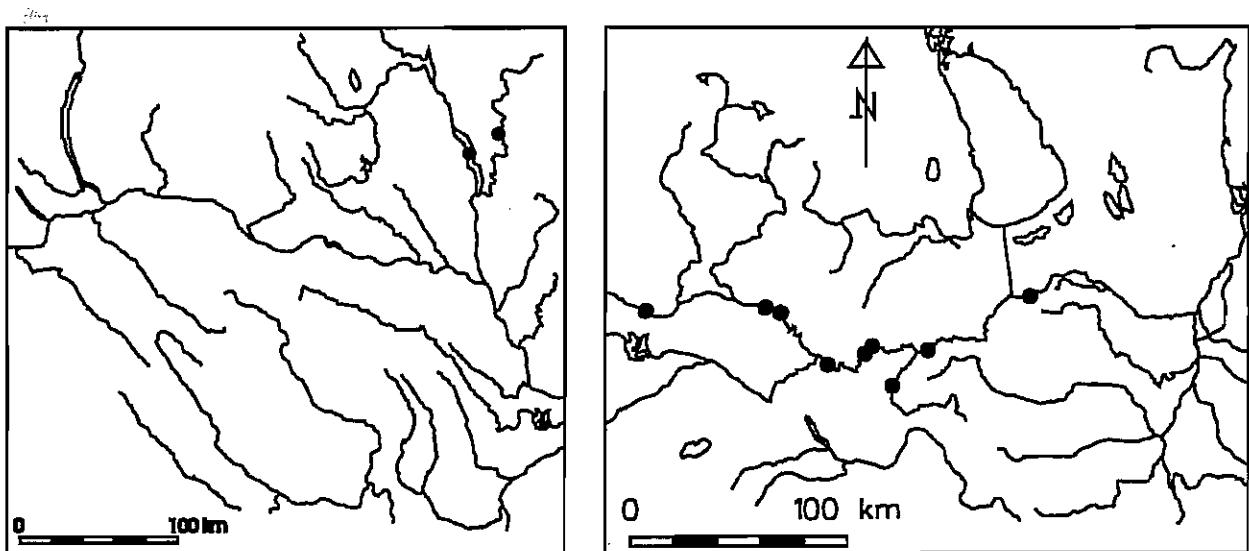


Figure 30. Collection localities for the silver redhorse (*Moxostoma anisurum*).

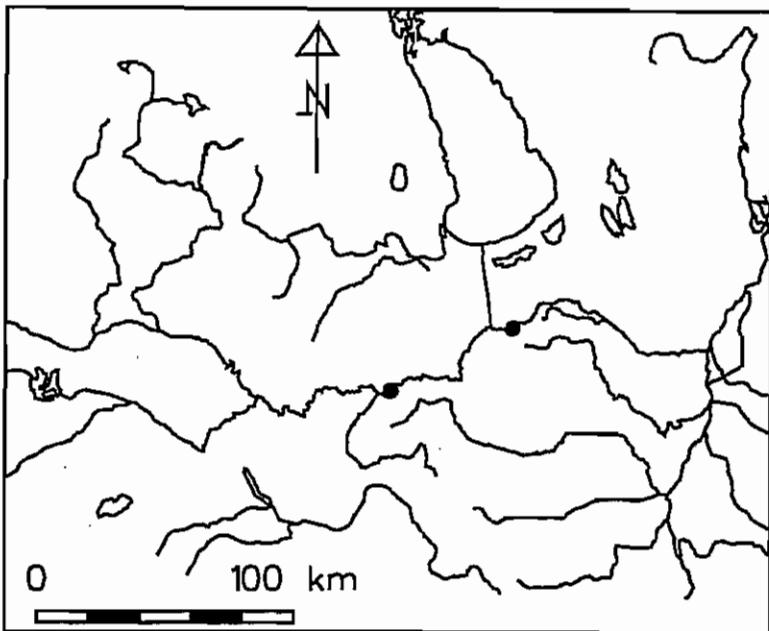


Figure 31. Collection localities for the golden redhorse (*Moxostoma erythrurum*).

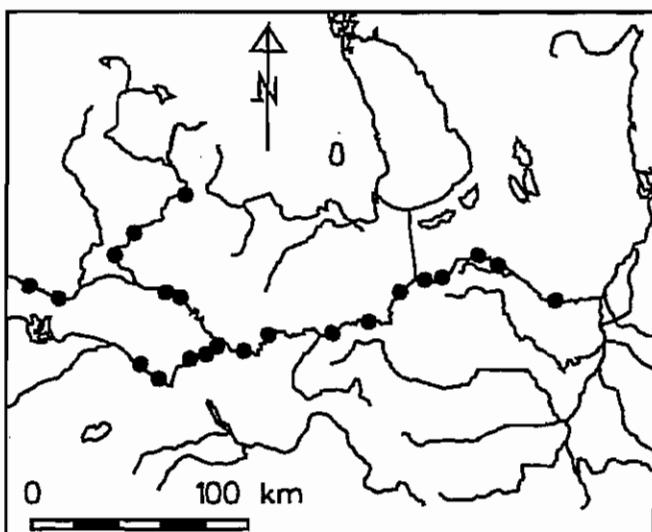
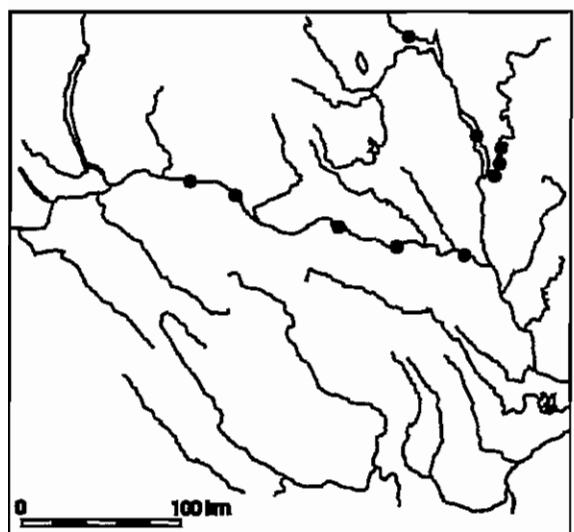


Figure 32. Collection localities for the shorthead redhorse (*Moxostoma macrolepidotum*).

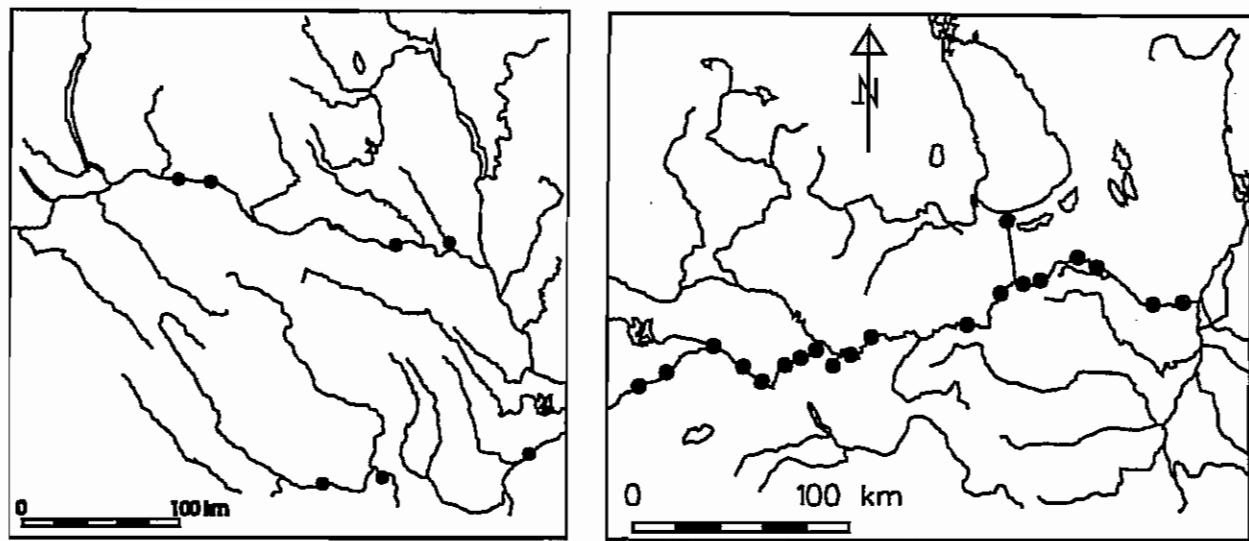


Figure 33. Collection localities for the black bullhead (*Ameiurus melas*).

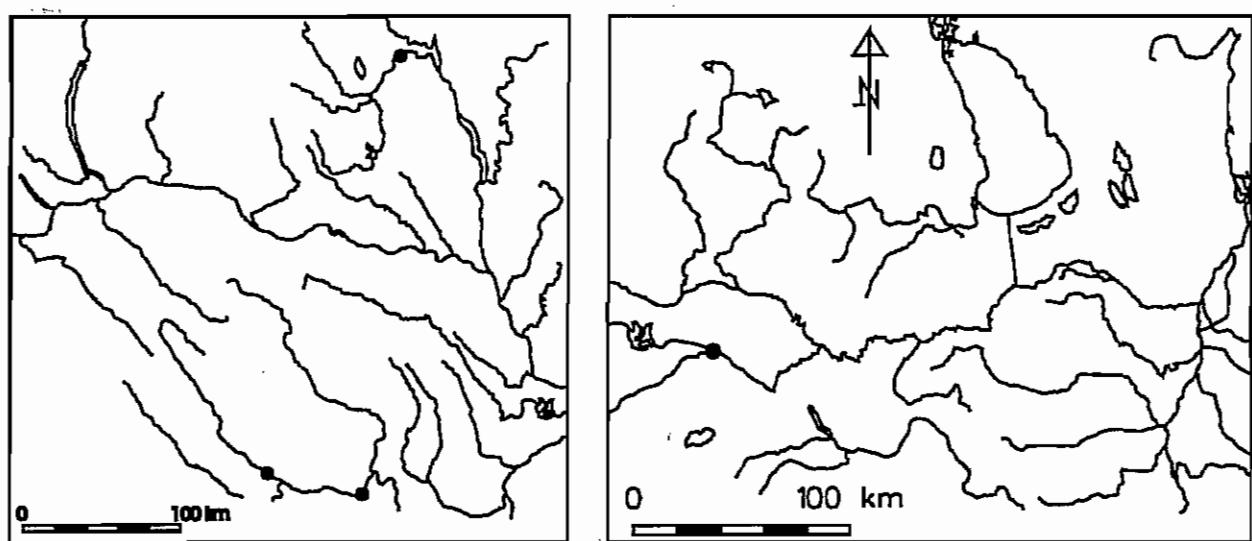


Figure 34. Collection localities for the brown bullhead (*Ameiurus nebulosus*).

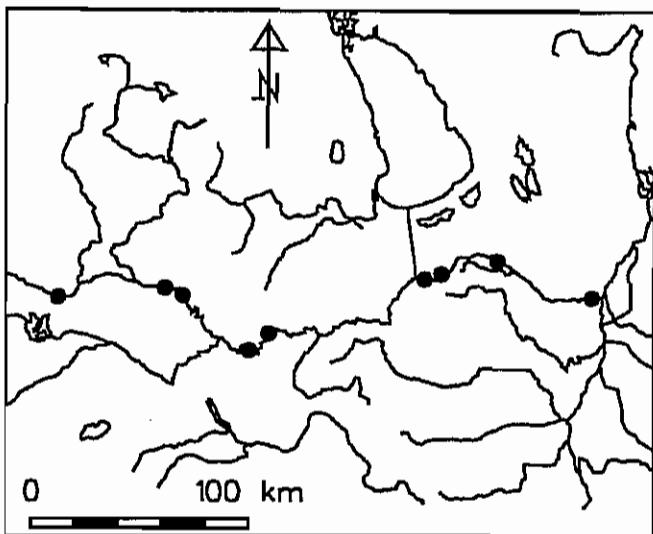
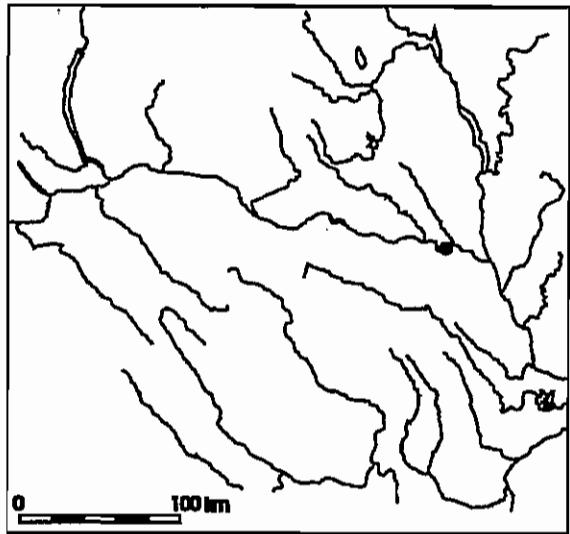


Figure 35. Collection localities for the channel catfish (*Ictalurus punctatus*).

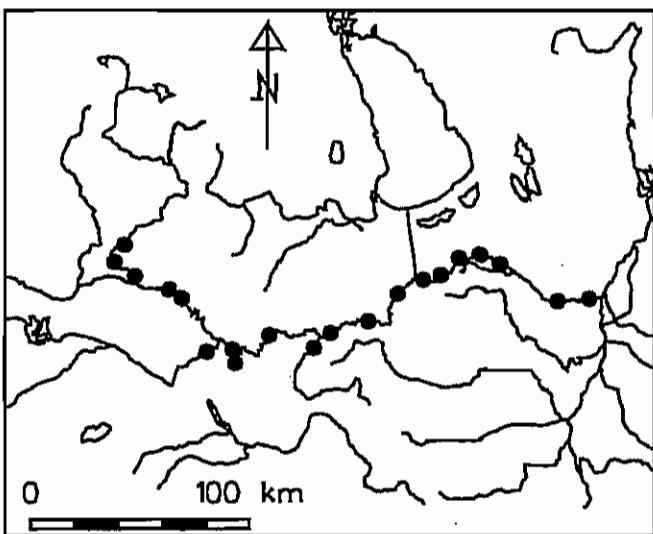
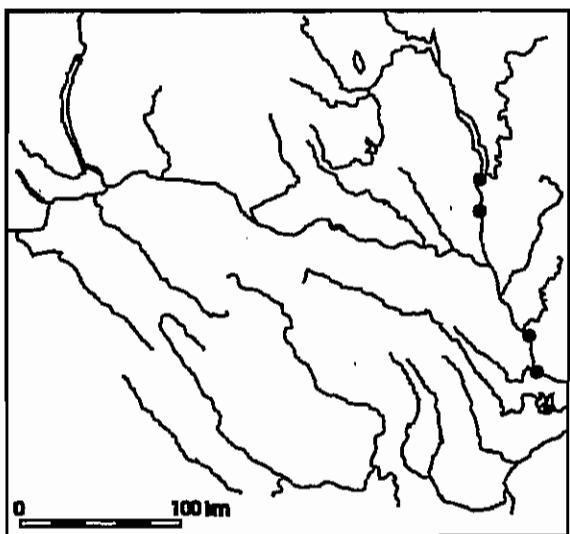


Figure 36. Collection localities for the stonecat (*Noturus flavus*).

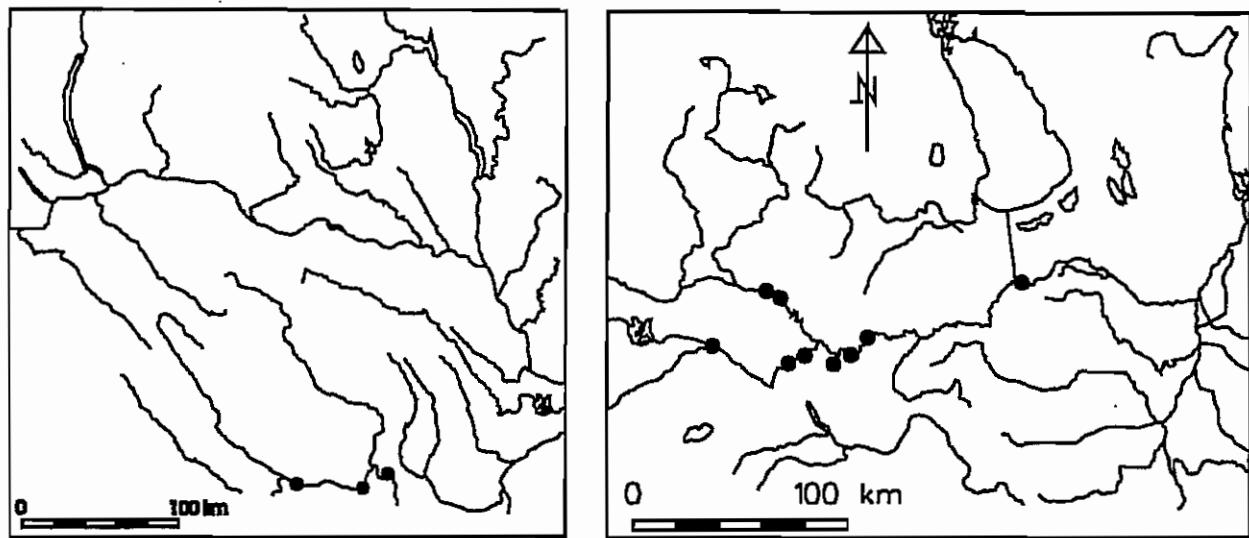


Figure 37. Collection localities for the tadpole madtom (*Noturus gyrinus*).

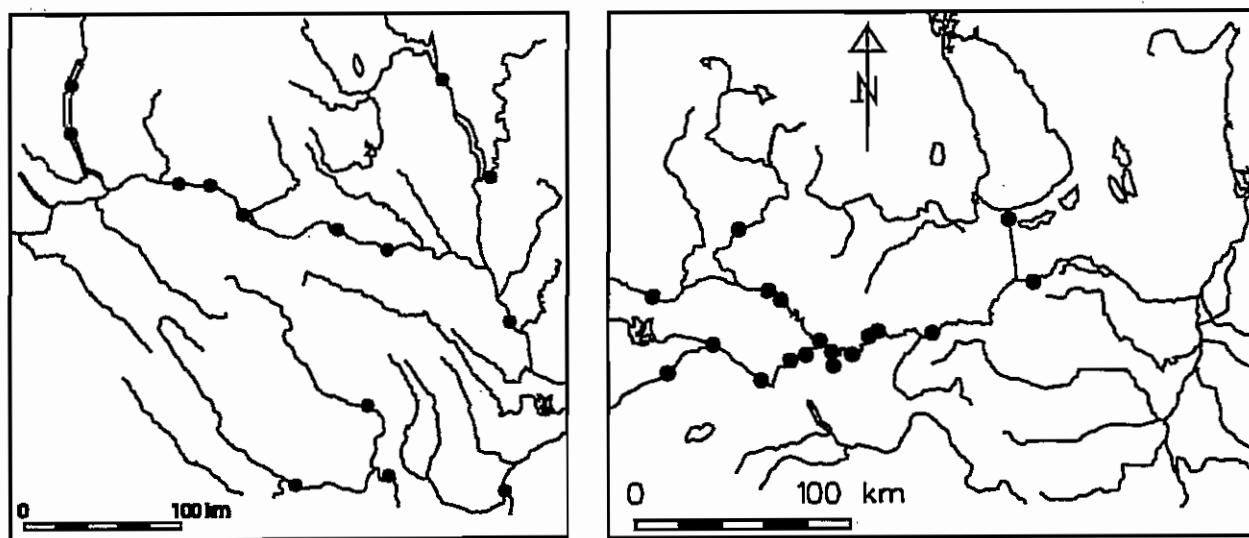


Figure 38. Collection localities for the trout-perch (*Percopsis omiscomaycus*).

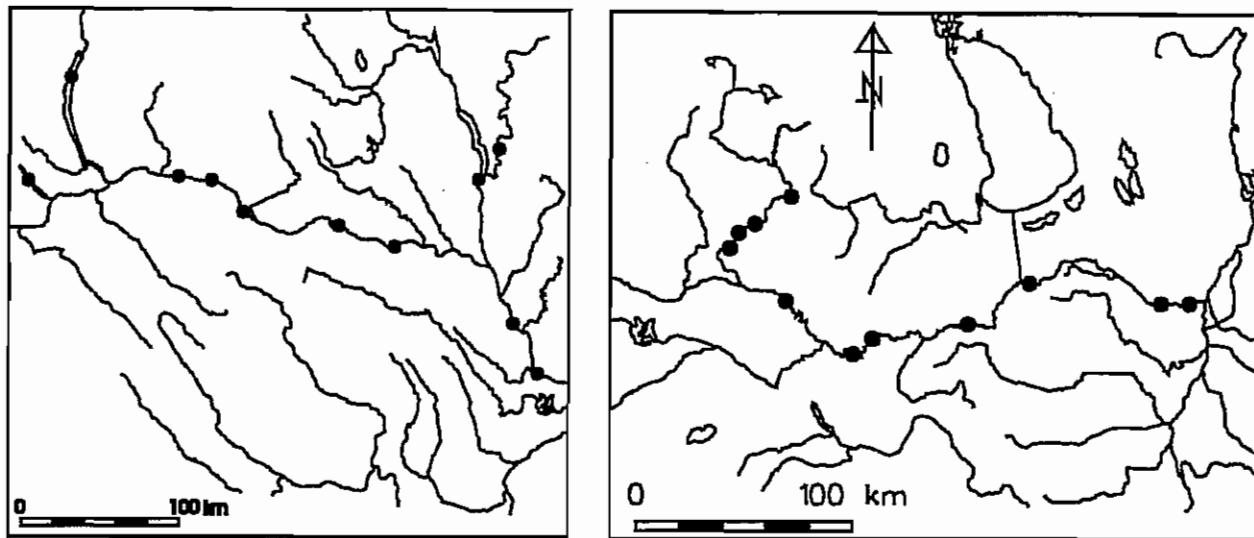


Figure 39. Collection localities for the burbot (*Lota lota*).

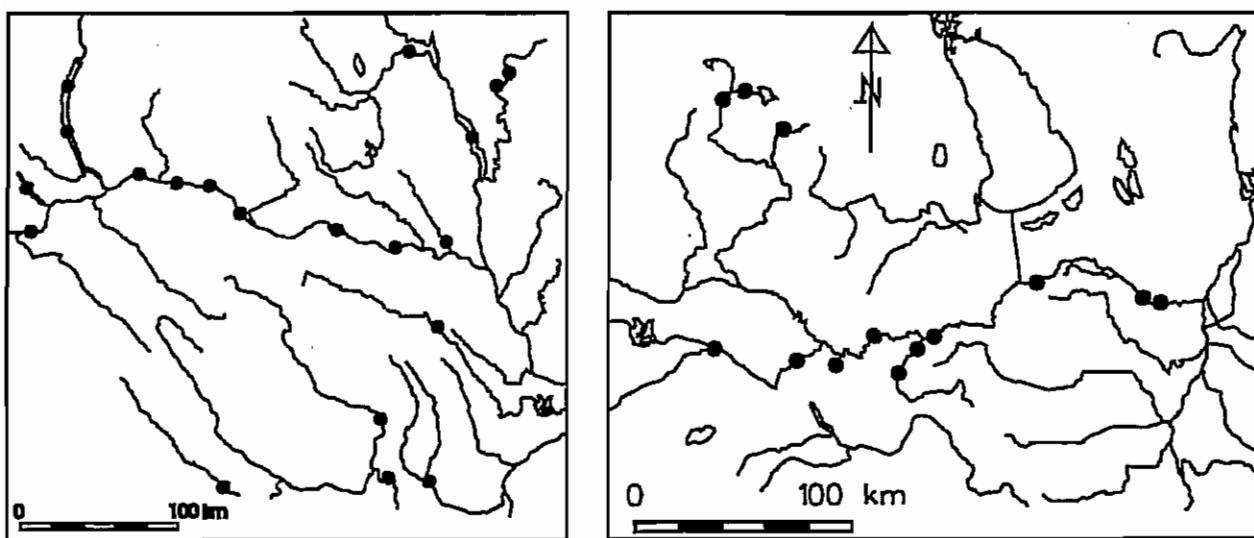


Figure 40. Collection localities for the brook stickleback (*Culaea inconstans*).

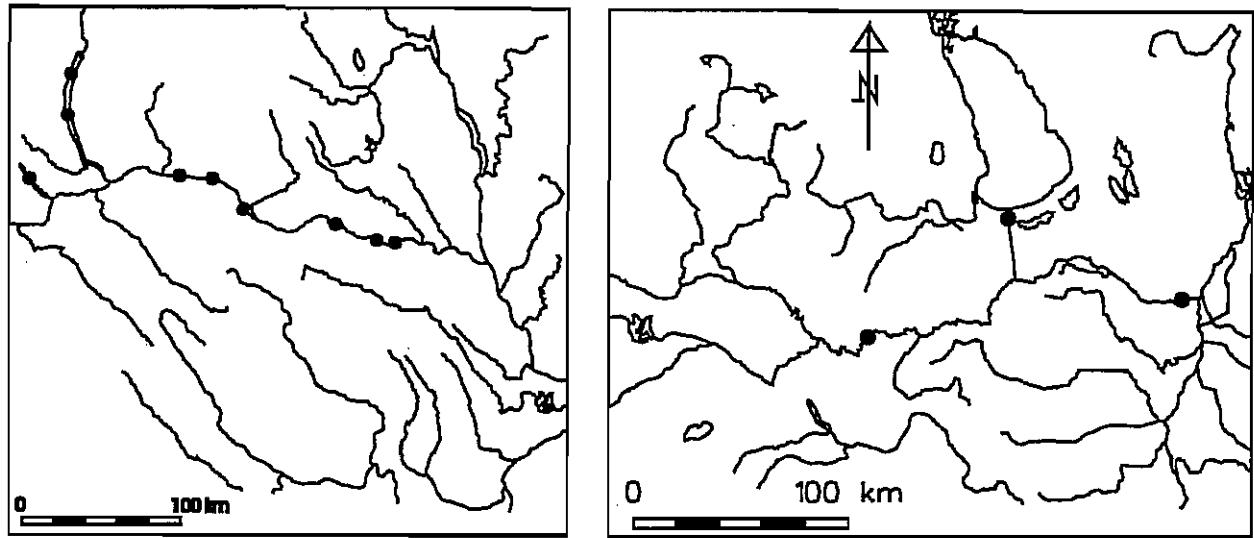


Figure 41. Collection localities for the ninespine stickleback (*Pungitius pungitius*).

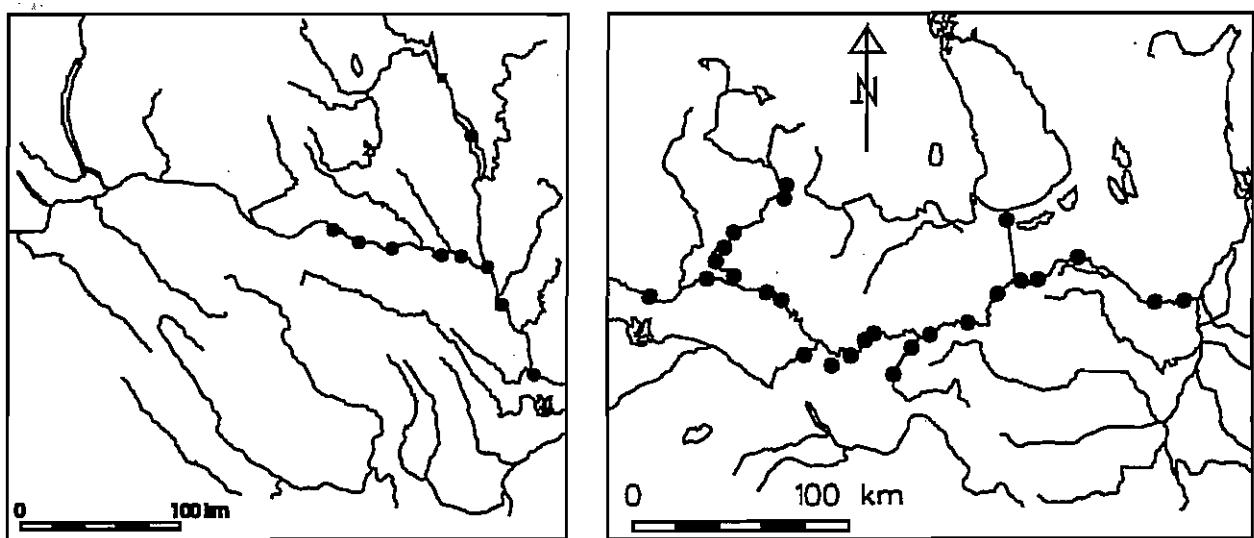


Figure 42. Collection localities for the rock bass (*Ambloplites rupestris*).

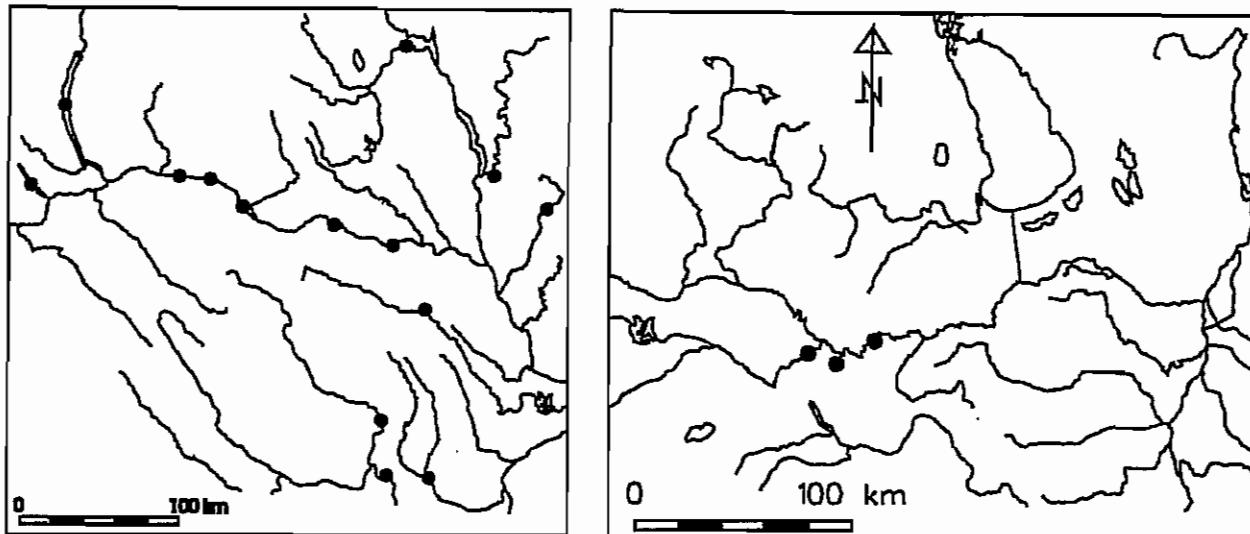


Figure 43. Collection localities for the Iowa darter (*Etheostoma exile*).

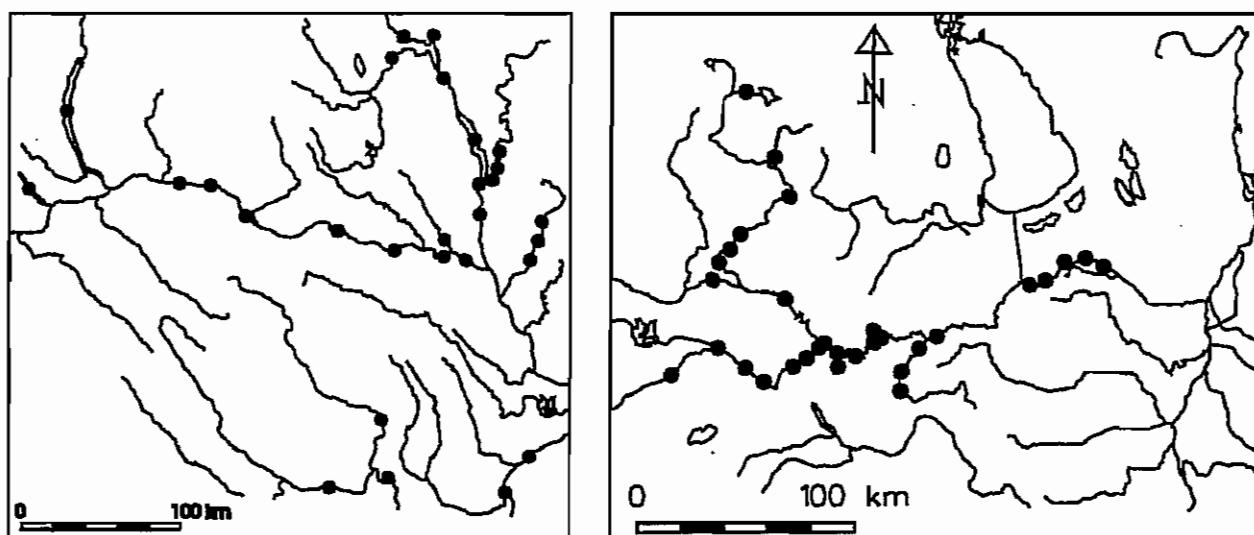


Figure 44. Collection localities for the johnny darter (*Etheostoma nigrum*).

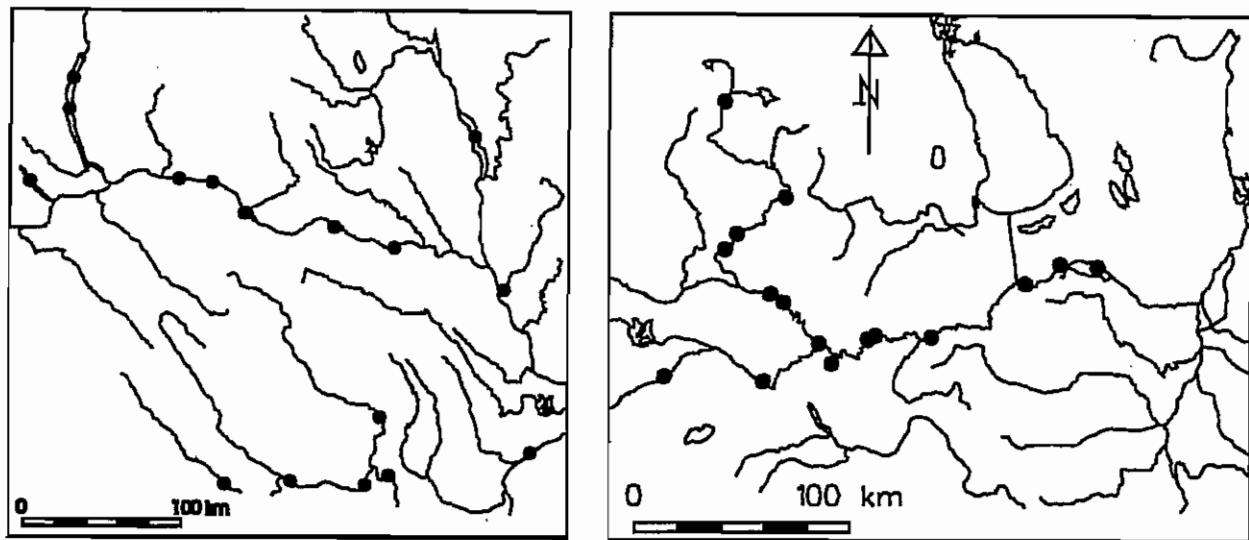


Figure 45. Collection localities for the yellow perch (*Perca flavescens*).

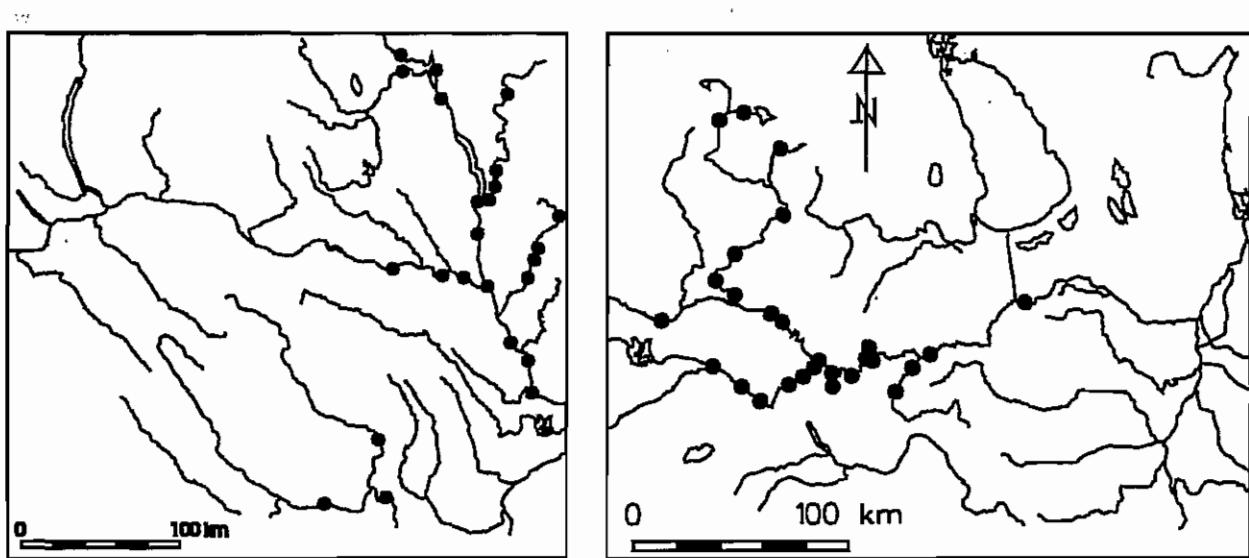


Figure 46. Collection localities for the blackside darter (*Percina maculata*).

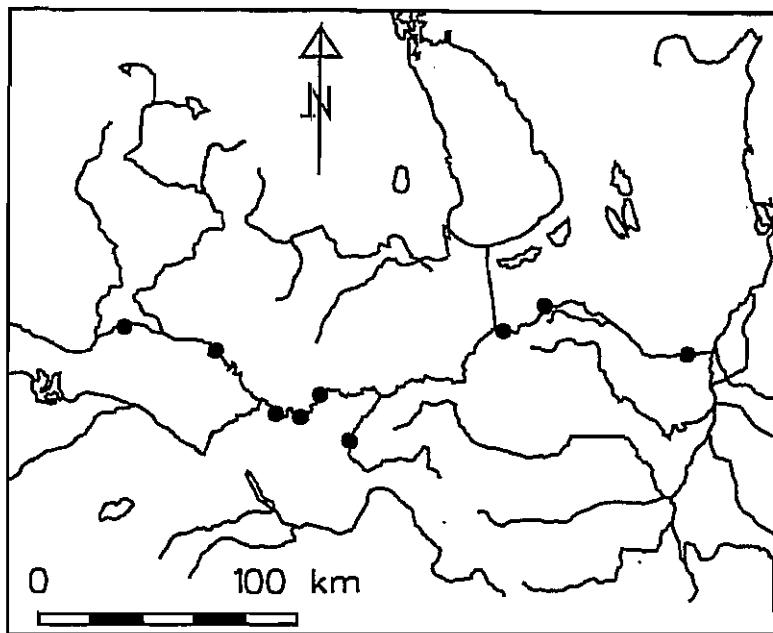


Figure 47. Collection localities for the river darter ( *Percina shumardi* ).

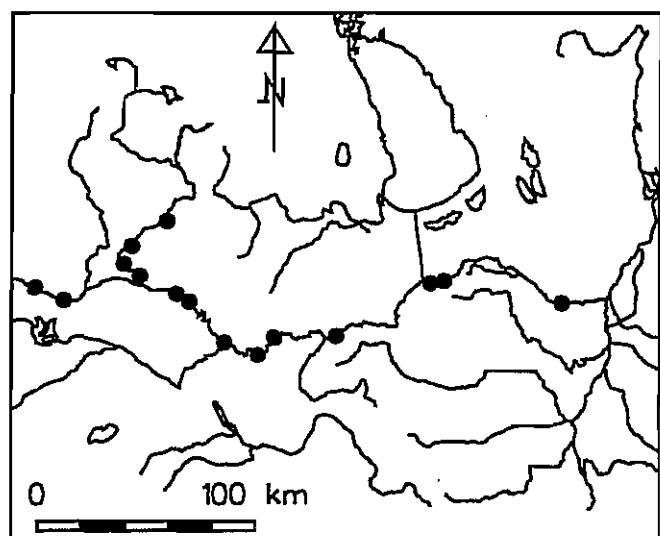
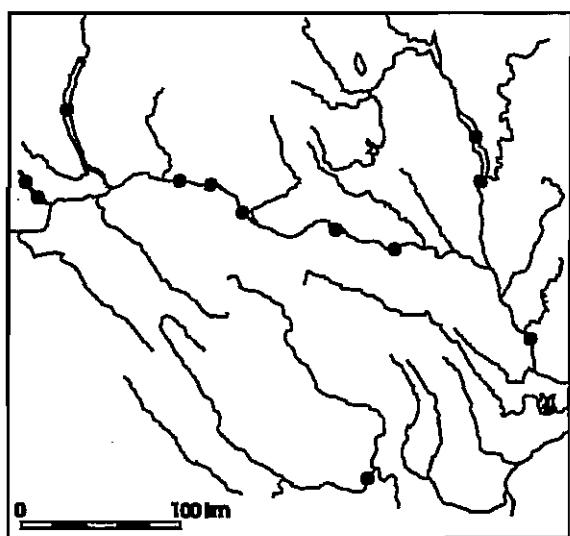


Figure 48. Collection localities for the walleye ( *Stizostedion vitreum* ).

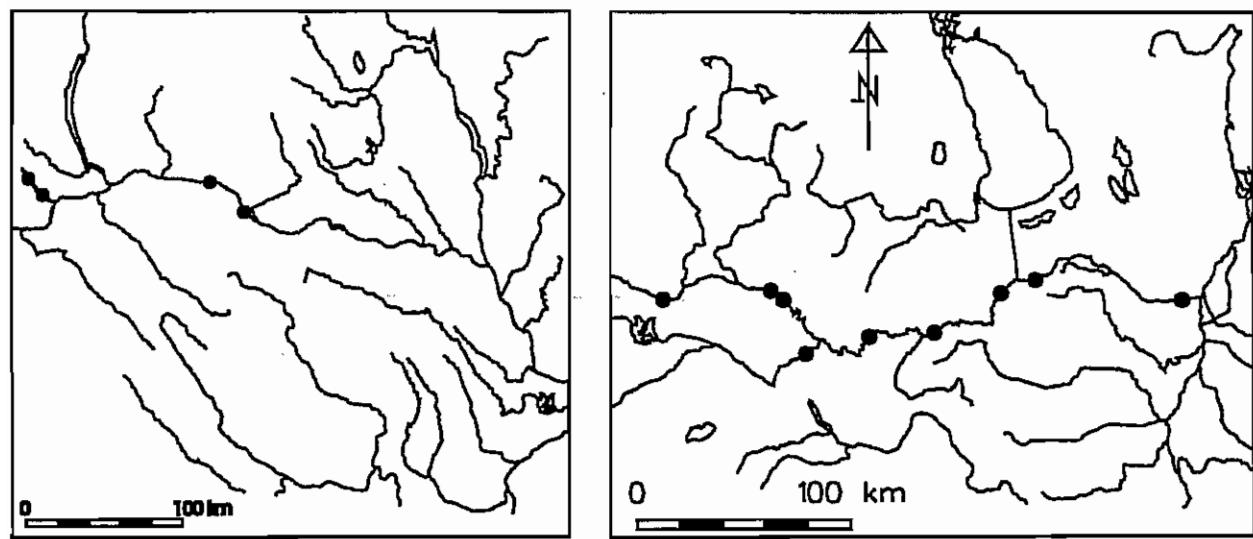


Figure 49. Collection localities for the sauger (*Stizostedion canadense*).

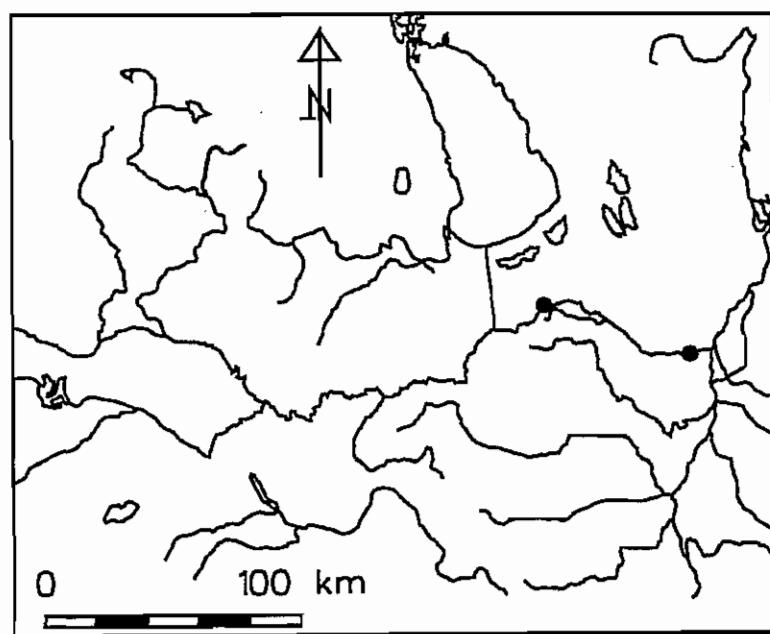


Figure 50. Collection localities for the freshwater drum (*Aplodinotus grunniens*).

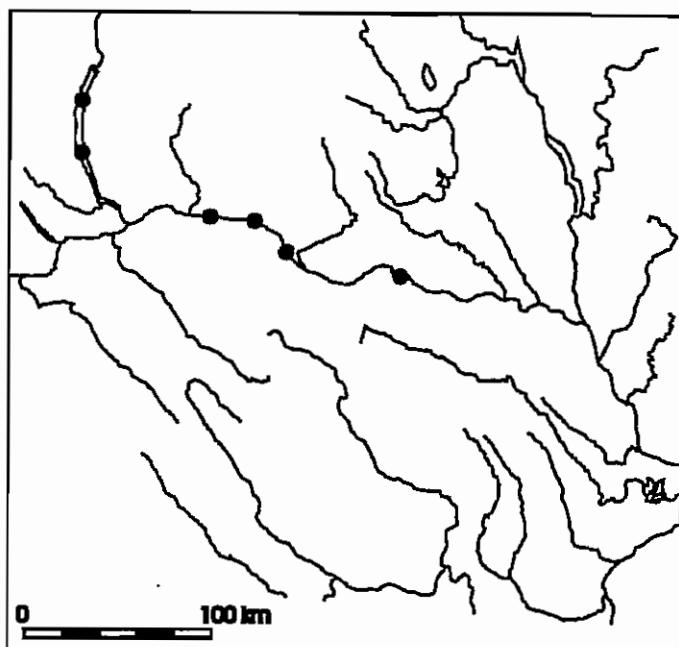


Figure 51. Collection localities for the lake whitefish (*Coregonus clupeaformis*).

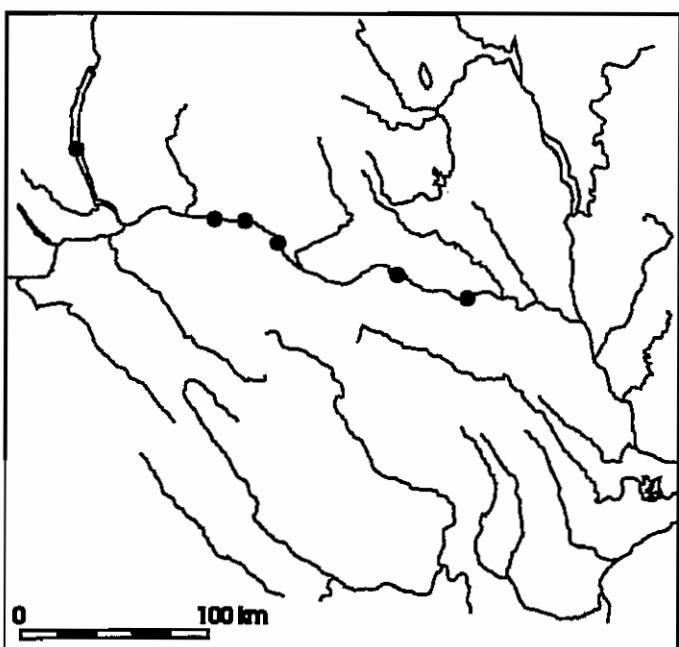


Figure 52. Collection localities for the cisco (*Coregonus artedi*).

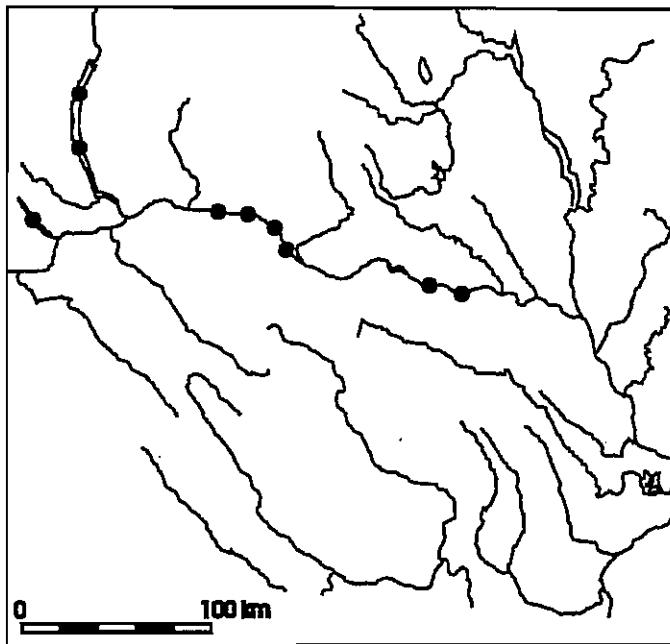


Figure 53. Collection localities for the bigmouth buffalo (*Ictiobus cyprinellus*).

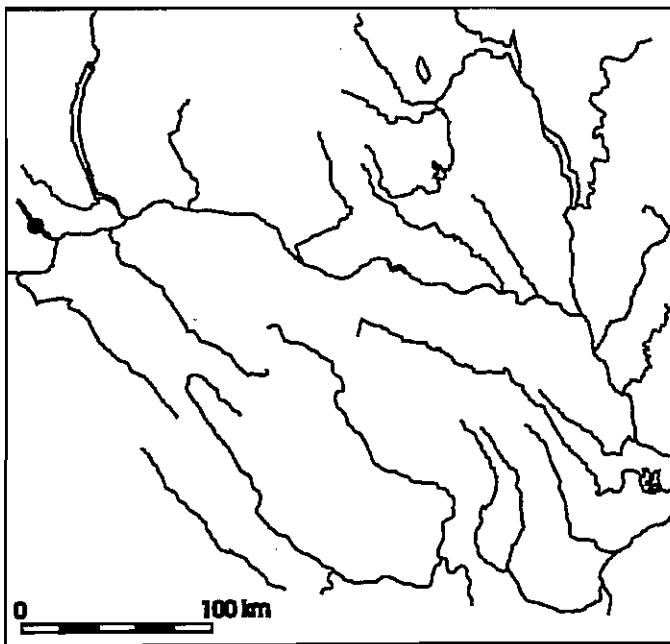


Figure 54. Collection localities for the spoonhead sculpin (*Cottus ricei*).

**APPENDIX 1: ASSINIBOINE RIVER COLLECTIONS**

SITE: at Winnipeg <i>I. cast:</i> X	LOC: 49° 53'; 97° 09'	DATE: 06.06.33	INST: ROM	COLL: G.E. Butler
SITE: at Brandon <i>C. carp:</i> 4	LOC: 49° 51'; 100° 00'	DATE: 24.06.49	INST: ROM	COLL: J.J. Keleher
SITE: near Dickens P.O. <i>L. lata:</i> 1	LOC: 49° 53'; 97° 09'	DATE: 30.08.50	INST: MMMN	COLL: R.W. Sutton
SITE: at mouth <i>N. stra:</i> 1	LOC: 49° 53'; 97° 07'	DATE: 22.09.54	INST: ROM	COLL: J.J. Keleher
SITE: T10 R02E <i>M. stor:</i> 2 <i>N. stra:</i> 3 <i>P. pung:</i> 3	LOC: 49° 50'; 97° 12'	DATE: 22.09.54	INST: ROM	COLL: J.J. Keleher
SITE: T10 R02E <i>N. stra:</i> X	LOC: 49° 52'; 97° 18'	DATE: 22.09.54	INST: ROM	COLL: J.J. Keleher
SITE: S6 T26 R29W <i>N. stra:</i> 1	LOC: 51° 15'; 101° 32'	DATE: 10.08.55	INST: ROM	COLL: J.J. Keleher
SITE: at Brandon <i>C. carp:</i> 4	LOC: 49° 51'; 100° 00'	DATE: 22.08.55	INST: ROM	COLL: J.J. Keleher
SITE: 5.8km W of Headingly <i>C. inco:</i> X	LOC: 49° 53'; 97° 24'	DATE: 01.07.60	INST: CMN	COLL: F.R. Cook
SITE: west of Winnipeg <i>I. punc:</i> 1	LOC: 49° 53'; 97° 31'	DATE: 09.05.67	INST: MMMN	COLL: A. Beck
SITE: E. of Poplar Point <i>P. grac:</i> 1	LOC: 50° 04'; 97° 59'	DATE: 16.08.67	INST: UMZ	COLL: T. Vincent, B. Case
SITE: Jct Hwy 430 & 426 <i>P. grac:</i> 2 <i>P. shum:</i> 1	LOC: 50° 04'; 97° 58'	DATE: 16.08.67	INST: UMZ	COLL: T. Vincent, B. Case
SITE: E. of Stockton Ferry METHOD: Seine <i>P. shum:</i> 4	LOC: 49° 36'; 99° 26' WT(°C): 19	DATE: 02.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: E. of Stockton Ferry METHOD: Seine <i>A. rupe:</i> 2	LOC: 49° 36'; 99° 26' WT(°C): 19	DATE: 05.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: E. of Stockton Ferry METHOD: Seine <i>S. vitr:</i> 1	LOC: 49° 36'; 99° 26' WT(°C): 19	DATE: 07.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: W. of Stockton Ferry METHOD: Seine <i>C. carp:</i> 3 <i>N. gyr:</i> 1 <i>S. vitr:</i> 1	LOC: 49° 36'; 99° 26' WT(°C): 20	DATE: 09.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: E. of Stockton Ferry METHOD: Seine <i>L. lata:</i> 1	LOC: 49° 36'; 99° 26' WT(°C): 19	DATE: 10.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: W. of Stockton Ferry METHOD: Seine <i>R. atra:</i> 1 <i>R. cata:</i> 3 <i>A. mel:</i> 2 <i>P. omis:</i> 4 <i>E. nigr:</i> 3 <i>P. macu:</i> 4 <i>S. vitr:</i> 2	LOC: 49° 36'; 99° 26' WT(°C): 19	DATE: 10.09.73	INST: MMMN	COLL: R.K. Kaffen
SITE: at Brandon <i>I. cast:</i> X <i>H. terg:</i> X <i>C. carp:</i> X <i>C. cypr:</i> X <i>S. vitr:</i> X	LOC: 49° 51'; 100° 00'	DATE: 04.09.77	INST: MDNR	COLL: A. Beck

SITE: at Brandon	LOC: 49° 51'; 100° 00'	DATE: 1978 I	NST: MDNR	COLL: A. Beck
METHOD: Substrate sampler <i>N. gyr.</i> : X				
SITE: at Hwy 101 <i>A. grun.</i> : X	LOC: 49° 52'; 97° 21'	DATE: 01.06.79	INST: UMZ	COLL: K.W. & J.A. Stewart
SITE: at Hwy 34 <i>L. corn.</i> : 2 <i>N. athe.</i> : 1 <i>N. dors.</i> : 1 <i>N. stra.</i> : 23	LOC: 49° 42'; 98° 55'	DATE: 17.08.79	INST: UW	COLL: G.G. Moodie
SITE: at Norquay Beach <i>N. blen.</i> : 9 <i>N. stra.</i> : 2 <i>P. grac.</i> : 9	LOC: 49° 58'; 98° 06'	DATE: 17.08.79	INST: UW	COLL: G.G. Moodie
SITE: at Brandon	LOC: 49° 51'; 100° 00'	DATE: 04.09.79	INST: MDNR	COLL: A. Beck
METHOD: Gillnet <i>I. cast.</i> : X <i>H. terg.</i> : X <i>C. carp.</i> : X <i>C. cypr.</i> : X <i>C. comm.</i> : X <i>S. vitr.</i> : X <i>M. macr.</i> : X				
SITE: at Winnipeg <i>I. punc.</i> : X	LOC: 49° 53'; 97° 07'	DATE: 31.05.80	INST: MMMN	COLL: W. Clearwater
SITE: at Portage la Prairie <i>P. grac.</i> : 1	LOC: 49° 59'; 98° 18'	DATE: 01.06.80	INST: UMZ	
SITE: at Hwy 101 <i>N. stra.</i> : X <i>M. macr.</i> : X <i>A. rupe.</i> : X <i>C. comm.</i> : X <i>L. lota.</i> : X	LOC: 49° 52'; 97° 21'	DATE: 28.09.80	INST: UMZ	COLL: R. Ratynski
SITE: Steele's Ferry SWPP COLL: K.W. & J.A. Stewart, K. Leavesley <i>P. grac.</i> : 7	LOC: 49° 39'; 99° 14'	DATE: 18.07.81	INST: UMZ	
SITE: at Brandon	LOC: 49° 51'; 100° 00'	DATE: 02.09.81	INST: MDNR	COLL: A. Beck
METHOD: Seine <i>C. carp.</i> : X <i>L. corn.</i> : X <i>N. stra.</i> : X <i>R. cata.</i> : X <i>M. macr.</i> : X <i>C. cypr.</i> : X <i>P. omis.</i> : X <i>S. cana.</i> : X <i>S. vitr.</i> : X				
SITE: boat launch SWPP COLL: K.W. & J.A. Stewart, K. Leavesley <i>P. grac.</i> : 4 <i>M. macr.</i> : 3	LOC: 49° 39'; 99° 16'	DATE: 11.07.82	INST: UMZ	METHOD: Gillnet
		DEPTH(m): 1.0	VEL(m/sec): 1.0	SUBS: sand, gravel
SITE: boat launch SWPP COLL: K.W. & J.A. Stewart, K. Leavesley <i>H. terg.</i> : 1 <i>E. luci.</i> : 1 <i>N. crys.</i> : 1 <i>N. stra.</i> : 102 <i>R. cata.</i> : X <i>E. nigr.</i> : 7 <i>P. shum.</i> : 1 <i>S. vitr.</i> : 11	LOC: 49° 39'; 99° 16'	DATE: 11.07.82	INST: UMZ	METHOD: Seine
		DEPTH(m): 0.25	VEL(m/sec): 2.0	SUBS: gravel
		<i>C. comm.</i> : 15 <i>M. anis.</i> : 1 <i>M. macr.</i> : 5 <i>N. flav.</i> : 1 <i>P. omis.</i> : X		
SITE: Steele's Ferry SWPP COLL: K.W. & J.A. Stewart, K. Leavesley <i>M. macr.</i> : 1	LOC: 49° 39'; 99° 14'	DATE: 16.07.82	INST: UMZ	
SITE: Kiche Manitou Lake COLL: K.W. & J.A. Stewart, K. Leavesley <i>N. hdon.</i> : X	LOC: 49° 39'; 99° 16'	DATE: 26.07.82	INST: UMZ	METHOD: Seine
		VEL(m/sec): 0	SUBS: mud	
SITE: Kiche Manitou Outlet COLL: K.W. & J.A. Stewart, K. Leavesley <i>N. crys.</i> : 5 <i>S. atro.</i> : 5 <i>P. prom.</i> : 10 <i>C. comm.</i> : 4 <i>P. omis.</i> : X <i>P. macu.</i> : 20	LOC: 49° 39'; 99° 16'	DATE: 29.08.82	INST: UMZ	METHOD: Seine
SITE: Kiche Manitou Lake COLL: K.W. & J.A. Stewart, K. Leavesley <i>U. limi.</i> : 1 <i>N. hdon.</i> : X <i>N. hlep.</i> : X <i>A. mel.</i> : 20 <i>N. gyr.</i> : 3	LOC: 49° 39'; 99° 16'	DATE: 29.08.82	INST: UMZ	METHOD: Seine
		DEPTH(m): 0.75	VEL(m/sec): 0	
		<i>E. exil.</i> : 14 <i>P. flav.</i> : 6		
SITE: at Brandon	LOC: 49° 51'; 100° 00'	DATE: 09.09.82	INST: MDNR	COLL: A. Beck
METHOD: Gillnet <i>I. cast.</i> : X <i>H. terg.</i> : X <i>E. luci.</i> : X <i>C. comm.</i> : X <i>M. macr.</i> : X <i>C. cypr.</i> : X <i>N. flav.</i> : X <i>A. rupe.</i> : X <i>S. vitr.</i> : X				
SITE: at Brandon	LOC: 49° 51'; 100° 00'	DATE: 09.09.82	INST: MDNR	COLL: A. Beck
METHOD: Seine <i>H. terg.</i> : X <i>M. macr.</i> : X <i>N. flav.</i> : X <i>P. macu.</i> : X				

SITE: Brandon Hydro weir LOC: 49° 51'; 99° 53' DATE: 09.09.82 INST: MDNR COLL: A. Beck  
*L. cast:* X *H. terg:* X *E. luci:* X *C. comm:* X *M. macr:* X *I. punc:* X *A. rupe:* X *S. vitr:* X

SITE: at Brandon LOC: 49° 51'; 100° 00' DATE: 16.09.82 INST: MDNR COLL: A. Beck  
*A. rupe:* X

SITE: Kiche Manitou Outlet LOC: 49° 39'; 99° 16' DATE: 18.09.82 INST: UMZ COLL: Biology of Fishes Class  
*N. athe:* 5 *N. hlep:* X *N. stra:* X *P. prom:* 21 *S. atro:* 13 *R. cata:* 9 *C. comm:* 10 *M. macr:* 1 *E. nigr:* 12 *P. macu:* 7

SITE: Kiche Manitou Lake LOC: 49° 39'; 99° 16' DATE: 18.09.82 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Seine  
*N. crys:* X *N. hdon:* X *N. hlep:* X *N. stra:* 1 *P. prom:* X *P. omis:* X *C. inco:* 8 *P. flav:* X

SITE: boat launch SWPP LOC: 49° 36'; 99° 16' DATE: 18.09.82 INST: UMZ COLL: Biology of Fishes Class  
*H. terg:* 1 *N. athe:* 1 *N. hdon:* 6 *N. stra:* X *P. grac:* 10 *R. cata:* 18 *C. comm:* 1 *M. macr:* 3 *P. omis:* 20 *A. rupe:* 1  
*E. nigr:* 4 *S. cana:* 1 *S. vitr:* 2

SITE: Brandon Hydro weir LOC: 49° 51'; 99° 53' DATE: 16.04.83 INST: MDNR COLL: A. Beck  
 METHOD: Gillnet  
*H. terg:* X *C. cypr:* X *C. comm:* X *M. anis:* X *M. macr:* X *S. vitr:* X

SITE: at Hwy 34 LOC: 49° 42'; 98° 55' DATE: 13.07.83 INST: MDNR COLL: B. Yake  
 METHOD: Seine & trapnet  
*H. terg:* 19 *E. luci:* 1 *N. crys:* 2 *N. athe:* 42 *N. huds:* 1 *C. cypr:* 1 *M. anis:* 2 *P. omis:* 4 *P. macu:* 1 *S. cana:* 1  
*S. vitr:* 4

SITE: at Hwy 5 LOC: 49° 39'; 99° 16' DATE: 14.07.83 INST: MDNR COLL: B. Yake  
 METHOD: Seine  
*L. corn:* 1 *N. athe:* 19 *N. stra:* 2 *R. cata:* 1 *C. comm:* 4 *P. omis:* 3 *E. nigr:* 1 *P. macu:* 15 *P. shum:* 1 *P. flav:* 2  
*S. cana:* 1 *S. vitr:* 3

SITE: at Hwy 5 LOC: 49° 39'; 99° 16' DATE: 14.07.83 INST: MDNR COLL: B. Yake  
 METHOD: Trapnet  
*H. terg:* 5 *N. flav:* 1 *A. rupe:* 1 *P. macu:* 4

SITE: Brandon Sewage Outlet LOC: 49° 51'; 100° 00' DATE: 05.08.83 INST: MDNR COLL: B. Yake  
 METHOD: Seine & trapnet  
*H. terg:* 15 *L. corn:* 7 *N. athe:* 2 *N. huds:* X *N. stra:* 16 *C. comm:* 7 *M. anis:* 2 *M. macr:* 4 *N. flav:* 1 *N. gyr:* 1  
*P. omis:* 156 *A. rupe:* 16 *S. cana:* 1

SITE: Curran Park LOC: 49° 51'; 100° 00' DATE: 05.08.83 INST: MDNR COLL: B. Yake  
 METHOD: Seine & trapnet  
*H. terg:* 3 *E. luci:* 1 *L. corn:* 5 *N. athe:* 2 *N. dors:* 2 *N. stra:* 5 *P. prom:* 6 *S. atro:* 1 *C. comm:* 14 *M. anis:* 1  
*I. punc:* 9 *N. flav:* 2 *P. omis:* 131 *A. rupe:* 18 *P. macu:* 24 *S. vitr:* 16

SITE: at Brandon LOC: 49° 51' 100° 00' DATE: 09.08.83 INST: MDNR COLL: A. Beck  
 METHOD: Seine  
*H. terg:* X *N. athe:* X *N. huds:* X *C. comm:* X *P. omis:* X *A. rupe:* X *P. flav:* X

SITE: N. of Oak Lake LOC: 49° 47'; 100° 38' DATE: 11.08.83 INST: MDNR COLL: B. Yake  
 METHOD: Seine  
*H. terg:* 4 *C. carp:* 1 *N. athe:* 63 *N. stra:* 9 *P. prom:* 2 *M. anis:* 1 *P. omis:* 109 *A. rupe:* 1 *P. macu:* 3

SITE: at Brandon LOC: 49° 51'; 100° 00' DATE: 02.09.83 INST: MDNR COLL: A. Beck  
*P. macu:* X

SITE: at Brandon LOC: 49° 51'; 100° 00' DATE: 16.09.83 INST: MDNR COLL: A. Beck  
 METHOD: Gillnet  
*I. cast:* X *H. terg:* X *E. luci:* X *N. huds:* X *C. cypr:* X *C. comm:* X *M. macr:* X *A. rupe:* X *S. vitr:* X

SITE: NE of Virden LOC: 49° 53'; 100° 51' DATE: 20.07.84 INST: MDNR COLL: B. Yake  
*N. athe:* 6 *N. stra:* 2 *P. prom:* 1

SITE: N. of Arrow River LOC: 50° 06'; 101° 04' DATE: 24.07.84 INST: MDNR COLL: B. Yake  
*N. athe:* 1 *N. stra:* 2 *P. macu:* 1

SITE: S. of Hwy 41 <i>N. atche</i> : 2 <i>N. stra</i> : 3 <i>P. macu</i> : 2	LOC: 50° 27'; 101° 19'	DATE: 25.07.84	INST: MDNR	COLL: B. Yake	
SITE: NW of Miniota <i>N. atche</i> : 5 <i>N. stra</i> : 2	LOC: 50° 09'; 101° 06'	DATE: 26.07.84	INST: MDNR	COLL: B. Yake	
SITE: Kiche Manitou Lake METHOD: Seine <i>N. crys</i> : X <i>N. hdon</i> : 60 <i>N. hlep</i> : 39 <i>N. stra</i> : 32 <i>P. prom</i> : 47 <i>C. comm</i> : X <i>A. mel</i> : 2 <i>E. exil</i> : 10 <i>P. flav</i> : X	LOC: 49° 39'; 99° 16'	INST: UMZ	COLL: K.W. Stewart, K. Leavesley		
SITE: W. of Hwy 340 COLL: K.W. & J.A. Stewart, D. Pannu <i>L. corn</i> : 36 <i>M. stor</i> : 2 <i>N. atche</i> : 15 <i>N. dors</i> : 2 <i>N. stra</i> : X <i>P. prom</i> : 4 <i>C. comm</i> : 66 <i>I. punc</i> : 4 <i>N. flav</i> : 2 <i>P. omis</i> : 56 <i>E. nigr</i> : 21 <i>P. macu</i> : 31 <i>P. shum</i> : 93	LOC: 49° 41'; 99° 37'	DATE: 28.08.84	INST: UMZ	METHOD: Seine	
SITE: boat launch SWPP METHOD: Seine <i>H. alas</i> : X <i>H. terg</i> : 1 <i>L. corn</i> : 23 <i>N. crys</i> : 2 <i>N. dors</i> : 6 <i>N. hlep</i> : 3 <i>N. huds</i> : 1 <i>N. stra</i> : X <i>P. grac</i> : 1 <i>R. cata</i> : 16 <i>C. cypr</i> : 2 <i>C. comm</i> : 34 <i>M. anis</i> : 1 <i>M. macr</i> : 1 <i>P. omis</i> : 28 <i>L. lata</i> : 1 <i>A. rupe</i> : 1 <i>E. nigr</i> : 4 <i>P. macu</i> : 1	LOC: 49° 39'; 99° 16'	DATE: 30.09.84	INST: UMZ	COLL: Biology of Fishes Class	
SITE: at Beaudry Park <i>H. alas</i> : X	LOC: 49° 52'; 97° 29'	DATE: 1985	INST: UMZ	COLL: K.W. Stewart	
SITE: at Hwy 340 METHOD: Seine <i>N. atche</i> : 10 <i>N. stra</i> : 27 <i>M. anis</i> : 1 <i>I. punc</i> : 1 <i>P. omis</i> : 4 <i>P. macu</i> : 1	LOC: 49° 41'; 99° 37'	DATE: 22.09.85	INST: UMZ	COLL: Biology of Fishes Class	
SITE: boat launch SWPP METHOD: Seine <i>WT(°C)</i> : 13 <i>C. carp</i> : 3 <i>L. corn</i> : 15 <i>N. atche</i> : 15 <i>N. dors</i> : 5 <i>N. stra</i> : 849 <i>P. prom</i> : 2 <i>P. grac</i> : 13 <i>R. atra</i> : 15 <i>R. cata</i> : 132 <i>C. comm</i> : 27 <i>M. macr</i> : 3 <i>I. punc</i> : 1 <i>N. flav</i> : 3 <i>P. omis</i> : 31 <i>L. lata</i> : 1 <i>A. rupe</i> : 6 <i>E. nigr</i> : 40 <i>P. macu</i> : 6 <i>P. shum</i> : 2	LOC: 49° 40'; 99° 16'	DATE: 21.09.86	INST: UMZ	COLL: Biology of Fishes Class	
SITE: mouth of Epinette Cr METHOD: Seine <i>L. corn</i> : 12 <i>N. atche</i> : 1 <i>N. dors</i> : 1 <i>N. dors</i> : 82 <i>C. cypr</i> : 2 <i>C. comm</i> : 1 <i>M. anis</i> : 1 <i>P. omis</i> : 20 <i>A. rupe</i> : 5 <i>E. nigr</i> : 3 <i>P. macu</i> : 3	LOC: 49° 43'; 99° 13'	DATE: 22.08.87	INST: UMZ	COLL: K.W. Stewart	
SITE: Kiche Manitou Lake METHOD: Seine <i>N. crys</i> : 1 <i>N. hdon</i> : 9 <i>N. hlep</i> : 1 <i>P. flav</i> : 1	LOC: 49° 39'; 99° 16'	DATE: 20.09.87	INST: UMZ	COLL: Biology of Fishes Class	
SITE: boat launch SWPP METHOD: Seine <i>C. carp</i> : 1 <i>N. dors</i> : 2 <i>N. stra</i> : 840 <i>P. prom</i> : 2 <i>R. cata</i> : 7 <i>C. comm</i> : 8 <i>N. flav</i> : 1 <i>P. omis</i> : 3 <i>E. nigr</i> : 1 <i>P. macu</i> : 1 <i>P. shum</i> : 2	LOC: 49° 39' 99° 16'	DATE: 20.09.87	INST: UMZ	COLL: Biology of Fishes Class	
SITE: at Hwy 34 METHOD: shock into seine <i>L. corn</i> : 51 <i>M. stor</i> : 1 <i>N. stra</i> : 696 <i>P. grac</i> : 1 <i>R. cata</i> : 5 <i>WT(°C)</i> : 11.5 <i>C. comm</i> : 1	LOC: 49° 42'; 98° 54'	DATE: 25.09.88	INST: UMZ	COLL: Biology of Fishes Class	
SITE: Port la Prairie Park METHOD: Electroshocker <i>C. carp</i> : 1 <i>N. blen</i> : 5 <i>M. anis</i> : 1 <i>M. macr</i> : 1 <i>A. rupe</i> : 1 <i>WT(°C)</i> : 12	LOC: 49° 58'; 98° 05'	DATE: 25.09.88	INST: UMZ	COLL: Biology of Fishes Class	
SITE: Port. la Prairie Park METHOD: Seine <i>M. stor</i> : 7 <i>N. atche</i> : 4 <i>N. blen</i> : 27 <i>N. stra</i> : 26 <i>P. prom</i> : 6 <i>P. grac</i> : 43 <i>C. cypr</i> : 1 <i>I. punc</i> : 1 <i>WT(°C)</i> : 12	LOC: 49° 58'; 98° 05'	DATE: 25.09.88	INST: UMZ	COLL: Biology of Fishes Class	
SITE: at Hwy 34 METHOD: Electroshocker <i>N. stra</i> : 1 <i>P. grac</i> : 2 <i>R. cata</i> : 2 <i>M. macr</i> : 13 <i>N. flav</i> : 11 <i>WT(°C)</i> : 20.5	LOC: 49° 42'; 98° 55'	DATE: 15.05.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson	
SITE: at Hwy 101 METHOD: Electroshocker <i>C. carp</i> : 1 <i>N. blen</i> : 10 <i>P. prom</i> : 1 <i>M. macr</i> : 1 <i>A. mel</i> : 2 <i>WT(°C)</i> : 20	LOC: 49° 52'; 97° 12'	DATE: 15.05.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson	
			DEPTH(m): 0.9	SUBS: rocks, mud, branches	
			DEPTH(m): 0.4	SUBS: silt, branches	
			DEPTH(m): 0.9	VEL(m/sec): 1.54	SUBS: gravel, rock
			DEPTH(m): 0.78	VEL(m/sec): 0.46	SUBS: rock, mud

SITE: Port la Prairie Park METHOD: Electroshocker <i>C. carp:</i> 1 <i>A. mel:</i> 4 <i>N. flav:</i> 8 <i>A. rupe:</i> 1 <i>E. nigr:</i> 2	LOC: 49° 58'; 98° 05' WT(°C): 20.5	DATE: 15.05.89 DEPTH(m): 0.73	INST: UMZ VEL(m/sec): 0.36	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, mud
SITE: at Hwy 242 METHOD: Electroshocker <i>N. stra:</i> 1 <i>R. cata:</i> 1 <i>A. mel:</i> 7 <i>N. flav:</i> 3 <i>L. lota:</i> 5	LOC: 49° 45'; 98° 38' WT(°C): 25	DATE: 20.05.89 DEPTH(m): 0.85 <i>A. rupe:</i> 7	INST: UMZ VEL(m/sec): 0.46	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 305 METHOD: Electroshocker <i>N. stra:</i> 2 <i>P. grac:</i> 18 <i>R. cata:</i> 3 <i>A. mel:</i> 1 <i>N. flav:</i> 1	LOC: 49° 52'; 98° 26' WT(°C): 25	DATE: 20.05.89 DEPTH(m): 0.52 <i>A. rupe:</i> 5	INST: UMZ SUBS: gravel, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Shellmouth Dam METHOD: Electroshocker <i>C. cypr:</i> 1 <i>L. lota:</i> 9 <i>P. macu:</i> 1 <i>S. vitr:</i> 1	LOC: 50° 58'; 101° 37' WT(°C): 13	DATE: 24.05.89 DEPTH(m): 1.0	INST: UMZ VEL(m/sec): 0.29	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks
SITE: at Hwy 41 METHOD: Seine <i>N. athe:</i> 9 <i>L. corn:</i> 1 <i>N. stra:</i> 2 <i>A. rupe:</i> 2	LOC: 50° 27'; 101° 18' WT(°C): 15	DATE: 24.05.89 DEPTH(m): 1.1	INST: UMZ VEL(m/sec): 0	COLL: B.R. McCulloch, J.D. Tyson SUBS: sand
SITE: at Hwy 83 METHOD: Electroshocker <i>E. luci:</i> 1 <i>L. corn:</i> 1 <i>N. stra:</i> 1 <i>P. prom:</i> 12 <i>S. atro:</i> 1	LOC: 50° 07'; 101° 02' WT(°C): 16	DATE: 24.05.89 DEPTH(m): 0.65 <i>A. rupe:</i> 3 <i>P. macu:</i> 1	INST: UMZ VEL(m/sec): 0	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, clay
SITE: at Hwy 250 METHOD: Electroshocker <i>I. cast:</i> 1 <i>L. corn:</i> 1 <i>N. flav:</i> 4 <i>A. rupe:</i> 13	LOC: 49° 54'; 100° 18'	DATE: 26.05.89 DEPTH(m): 0.32	INST: UMZ VEL(m/sec): 0.42	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, mud
SITE: Assiniboine Park METHOD: Electroshocker <i>C. carp:</i> 2 <i>C. spil:</i> 1 <i>N. athe:</i> 29 <i>N. blen:</i> 3 <i>P. prom:</i> 1 <i>P. shum:</i> 2 <i>S. cana:</i> 1 <i>A. grun:</i> 1	LOC: 49° 52'; 97° 12' WT(°C): 22	DATE: 27.05.89 DEPTH(m): 0.47	INST: UMZ VEL(m/sec): 0.67	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, gravel
SITE: at Hwy 34 METHOD: Seine <i>M. stor:</i> 1 <i>N. stra:</i> 68	LOC: 49° 46'; 98° 54' WT(°C): 16.5	DATE: 31.05.89 DEPTH(m): 0.38	INST: UMZ VEL(m/sec): 0.26	COLL: B.M. Horn SUBS: rock, gravel
SITE: at Hwy 254 METHOD: Gillnet <i>C. comm:</i> 1 <i>M. macr:</i> 2 <i>I. punc:</i> 2 <i>S. vitr:</i> 7 <i>S. cana:</i> 1	LOC: 49° 48'; 100° 39'	DATE: 13.06.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 259 METHOD: Gillnet <i>C. comm:</i> 1 <i>M. macr:</i> 7 <i>A. rupe:</i> 1 <i>S. vitr:</i> 1	LOC: 49° 53'; 100° 50'	DATE: 13.06.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 254 METHOD: Gillnet <i>H. terg:</i> 3	LOC: 49° 48'; 100° 39'	DATE: 14.06.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 250 METHOD: Electroshocker <i>N. athe:</i> 1 <i>N. stra:</i> 29 <i>S. atro:</i> 1 <i>P. omis:</i> 1 <i>A. rupe:</i> 1	LOC: 49° 54'; 100° 18' WT(°C): 17	DATE: 14.06.89 SUBS: gravel, sand	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: boat launch SWPP METHOD: Electroshocker <i>L. corn:</i> 10 <i>N. stra:</i> 39 <i>P. prom:</i> 2 <i>P. grac:</i> 2 <i>R. cata:</i> 23	LOC: 49° 40'; 99° 16' WT(°C): 19.5	DATE: 14.06.89 DEPTH(m): 0.75	INST: UMZ VEL(m/sec): 0.49	COLL: B.R. McCulloch, J.D. Tyson SUBS: gravel, sand
SITE: near Arrow River METHOD: Electroshocker <i>N. athe:</i> 1 <i>N. stra:</i> 1 <i>S. atro:</i> 1 <i>N. flav:</i> 5 <i>P. omis:</i> 1	LOC: 50° 05'; 100° 55'	DATE: 04.07.89 DEPTH(m): 0.45	INST: UMZ VEL(m/sec): 0.39	COLL: B.R. McCulloch, J.D. Tyson SUBS: gravel, sand
SITE: near Virden METHOD: Electroshocker <i>N. stra:</i> 2 <i>C. comm:</i> 2 <i>N. flav:</i> 3 <i>L. lota:</i> 1 <i>P. macu:</i> 1	LOC: 49° 50'; 100° 49'	DATE: 04.07.89 DEPTH(m): 0.3	INST: UMZ VEL(m/sec): 0.25	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, mud

SITE: at Conjuring Creek	LOC: 50° 48'; 101° 26'	DATE: 05.07.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 25	DEPTH(m): 0.45	VEL(m/sec): 0.34	SUBS: rocks, vegetation
<i>P. prom:</i> 1 <i>S. atro:</i> 2 <i>C. comm:</i> 7 <i>N. flav:</i> 4 <i>E. nigr:</i> 6	<i>P. macu:</i> 1			
SITE: at Hwy 248	LOC: 50° 01'; 97° 45'	DATE: 17.07.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 29	DEPTH(m): 0.34	VEL(m/sec): 0.59	SUBS: silt, rocks
<i>C. spil:</i> 1 <i>P. grac:</i> 6 <i>C. cypr:</i> 1 <i>C. comm:</i> 4 <i>M. macr:</i> 2	<i>A. mel:</i> 1 <i>N. flav:</i> 3 <i>A. rupe:</i> 1 <i>E. nigr:</i> 1			
SITE: at Hwy 26	LOC: 50° 03'; 97° 32'	DATE: 17.07.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Shock and seine	WT(°C): 27	DEPTH(m): 0.36	VEL(m/sec): 0.43	
<i>C. carp:</i> 1 <i>M. stor:</i> 2 <i>N. stra:</i> 1 <i>C. cypr:</i> 14 <i>C. comm:</i> 1	<i>M. macr:</i> 8 <i>I. mel:</i> 3 <i>I. punc:</i> 1 <i>N. flav:</i> 3 <i>E. nigr:</i> 1 <i>P. flav:</i> 6			
SITE: at Hwy 430	LOC: 50° 02'; 98° 01'	DATE: 17.07.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 30	DEPTH(m): 0.41	VEL(m/sec): 0.40	SUBS: mud
<i>C. carp:</i> 22 <i>C. cypr:</i> 8 <i>C. comm:</i> 16 <i>N. flav:</i> 1 <i>E. nigr:</i> 1	<i>P. flav:</i> 1 <i>A. grun:</i> 1			
SITE: at Hwy 101	LOC: 49° 52'; 97° 19'	DATE: 02.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 28	DEPTH(m): 0.15	VEL(m/sec): 0.51	
<i>H. alos:</i> 1 <i>C. carp:</i> 8 <i>M. stor:</i> 3 <i>N. athe:</i> 99 <i>N. blem:</i> 66	<i>R. cata:</i> 1 <i>C. comm:</i> 1 <i>A. mel:</i> 1 <i>N. flav:</i> 28 <i>A. rupe:</i> 1 <i>S. vitr:</i> 1			
SITE: at Shellmouth	LOC: 50° 56'; 101° 29'	DATE: 14.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 19	DEPTH(m): 0.8	VEL(m/sec): 0.56	SUBS: sand
<i>C. carp:</i> 2 <i>P. prom:</i> 1 <i>C. comm:</i> 2 <i>E. nigr:</i> 11				
SITE: Hwy 754, Sask	LOC:	DATE: 14.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 24	DEPTH(m): 0.48	VEL(m/sec): 0.3	SUBS: rocks, sand
<i>L. corn:</i> 20 <i>R. cata:</i> 2 <i>C. comm:</i> 2 <i>M. macr:</i> 3 <i>E. nigr:</i> 19	<i>P. macu:</i> 10			
SITE: Kamsack, Sask	LOC:	DATE: 14.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 22	DEPTH(m): 0.59	VEL(m/sec): 0	SUBS: mud, gravel
<i>C. carp:</i> 2 <i>N. stra:</i> 80 <i>C. comm:</i> 1 <i>P. omis:</i> 1 <i>A. rupe:</i> 1	<i>E. nigr:</i> 3 <i>P. macu:</i> 4			
SITE: Kiche Manitou Lake	LOC: 49° 40'; 99° 16'	DATE: 24.09.89	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Seine	WT(°C): 14	DEPTH(m): 1.0	VEL(m/sec): 0	SUBS: mud
<i>U. limi:</i> 2 <i>N. crys:</i> 100 <i>N. hdon:</i> 154 <i>N. hlep:</i> 86 <i>P. neog:</i> 1	<i>E. exil:</i> 5 <i>P. flav:</i> 1			
SITE: boat launch SWPP	LOC: 49° 40'; 99° 16'	DATE: 24.09.89	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Seine	WT(°C): 14	DEPTH(m): 1.5	SUBS: sand, gravel	
<i>H. terg:</i> 1 <i>L. corn:</i> 11 <i>N. cryo:</i> 80 <i>N. athe:</i> 1 <i>N. dors:</i> 2	<i>N. hlep:</i> 36 <i>N. huds:</i> 4 <i>N. stra:</i> 558 <i>C. cypr:</i> 7 <i>C. comm:</i> 32			
<i>M. macr:</i> 3 <i>P. omis:</i> 174 <i>E. nigr:</i> 18 <i>P. macu:</i> 2 <i>P. shum:</i> 1	<i>P. flav:</i> 16 <i>S. cana:</i> 4			
SITE: Brand Th Pl. back bay	LOC: 49° 50'; 99° 52'	DATE: 28.10.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 7	DEPTH(m): 0.4	VEL(m/sec): 0	SUBS: sand, silt
<i>L. corn:</i> 11 <i>N. athe:</i> 46 <i>N. stra:</i> 171 <i>P. prom:</i> 37 <i>C. comm:</i> 13	<i>M. macr:</i> 1 <i>E. nigr:</i> 3 <i>P. macu:</i> 2			
SITE: Brand Th Pl effluent	LOC: 49° 50'; 99° 52'	DATE: 28.10.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 7	DEPTH(m): 0.7	SUBS: gravel to boulder	
<i>N. stra:</i> 2 <i>R. cata:</i> 1 <i>C. comm:</i> 39 <i>A. rupe:</i> 2 <i>P. macu:</i> 3				
SITE: Brand Th Pl main ch	LOC: 49° 50'; 99° 52'	DATE: 28.10.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Gillnet	WT(°C): 7			
<i>C. comm:</i> 3 <i>S. vitr:</i> 2				
SITE: Brand Th Pl effluent	LOC: 49° 50'; 99° 52'	DATE: 25.11.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 14	DEPTH(m): 0.7	SUBS: gravel to boulder	
<i>R. cata:</i> 3 <i>C. comm:</i> 4 <i>N. flav:</i> 2 <i>P. macu:</i> 1 <i>P. shum:</i> 1				
SITE: Brand Th Pl main ch	LOC: 49° 50'; 99° 52'	DATE: 25.11.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Gillnet				
<i>E. luci:</i> 2 <i>C. comm:</i> 2 <i>S. vitr:</i> 2				
SITE: Brand. Th Pl effluent	LOC: 49° 50'; 99° 52'	DATE: 27.12.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
METHOD: Electroshocker	WT(°C): 16	DEPTH(m): 0.7	SUBS: gravel to boulder	
<i>R. cata:</i> 1 <i>C. comm:</i> 2 <i>N. flav:</i> 1 <i>P. macu:</i> 3 <i>S. vitr:</i> 1				

SITE: Brand Th Pl main ch METHOD: Gillnet <i>H. terg:</i> 1 <i>E. luci:</i> 3 <i>C. cypr:</i> 1 <i>C. comm:</i> 12 <i>M. macr:</i> 8	LOC: 49° 50'; 99° 52' WT(°C): 8.5	DATE: 27.12.89   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl effluent COLL: B.R. McCulloch, J.D. Tyson, K.W. Stewart SUBS: gravel to boulder <i>H. alos:</i> 1 <i>N. stra:</i> 1 <i>R. cata:</i> 5 <i>C. comm:</i> 6 <i>M. macr:</i> 1	LOC: 49° 50'; 99° 52'	DATE: 06.01.90   INST: UMZ METHOD: Electroshocker	WT(°C): 20 DEPTH(m): 0.7
<i>N. flav:</i> 3 <i>P. omis:</i> 1 <i>E. nigr:</i> 2 <i>P. macu:</i> 13 <i>P. shum:</i> 1			
SITE: Brand Th Pl main ch COLL: B.R. McCulloch, J.D. Tyson, K.W. Stewart <i>H. terg:</i> 2 <i>C. comm:</i> 2 <i>M. anis:</i> 1 <i>I. punc:</i> 1 <i>S. vitr:</i> 3	LOC: 49° 50'; 99° 52'	DATE: 06.01.90   INST: UMZ METHOD: Gillnet	WT(°C): 10
<i>S. corn:</i> 3 <i>N. athe:</i> 3 <i>N. stra:</i> 816 <i>P. prom:</i> 4 <i>C. comm:</i> 2			
SITE: Brand Th Pl effluent METHOD: Electroshocker <i>N. stra:</i> 9 <i>R. cata:</i> 7 <i>C. comm:</i> 5 <i>N. flav:</i> 3 <i>E. nigr:</i> 1	LOC: 49° 50'; 99° 52' WT(°C): 16	DATE: 20.01.90   INST: UMZ DEPTH(m): 0.7	COLL: B.R. McCulloch, J.D. Tyson SUBS: gravel to boulder
<i>P. macu:</i> 11			
SITE: Brand Th Pl main ch METHOD: Gillnet <i>E. luci:</i> 2 <i>C. comm:</i> 2 <i>M. anis:</i> 1 <i>P. flav:</i> 2 <i>S. cana:</i> 2 <i>S. vitr:</i> 2	LOC: 49° 50'; 99° 52'	DATE: 20.01.90   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
<i>N. stra:</i> 3			
SITE: Brand Th Pl shale bar METHOD: Seine <i>L. corn:</i> 160 <i>N. athe:</i> 62 <i>N. dors:</i> 3 <i>N. stra:</i> 857 <i>P. prom:</i> 146	LOC: 49° 50'; 99° 52' WT(°C): 8	DATE: 20.01.90   INST: UMZ DEPTH(m): 0.4	COLL: B.R. McCulloch, J.D. Tyson SUBS: eroded shale, silt
<i>P. macu:</i> 15			
SITE: Brand Th Pl effluent METHOD: Electroshocker <i>N. stra:</i> 3 <i>R. cata:</i> 2 <i>C. comm:</i> 2 <i>N. flav:</i> 1 <i>P. macu:</i> 15	LOC: 49° 50'; 99° 52'	DATE: 03.02.90   INST: UMZ DEPTH(m): 0.7	COLL: B.R. McCulloch, J.D. Tyson SUBS: gravel to boulder
<i>S. corn:</i> 1			
SITE: Brand Th Pl main ch METHOD: Gillnet <i>H. terg:</i> 1 <i>E. luci:</i> 4 <i>C. comm:</i> 1	LOC: 49° 50'; 99° 52'	DATE: 03.02.90   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
<i>N. stra:</i> 1			
SITE: Brand Th Pl shale bar METHOD: Seine <i>L. corn:</i> 1 <i>N. stra:</i> 293 <i>P. prom:</i> 1 <i>C. comm:</i> 1	LOC: 49° 50'; 99° 52'	DATE: 03.02.90   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
<i>P. macu:</i> 13 <i>P. shum:</i> 1			
SITE: Brand Th Pl effluent COLL: B.R. McCulloch, J.D. Tyson, G.F. Hanke <i>L. corn:</i> 1 <i>R. cata:</i> 3 <i>N. flav:</i> 1 <i>P. macu:</i> 13 <i>P. shum:</i> 1	LOC: 49° 50'; 99° 52' WT(°C): 16	DATE: 18.02.90   INST: UMZ DEPTH(m): 0.7	METHOD: Electroshocker SUBS: gravel to boulder
<i>E. luci:</i> 1 <i>S. vitr:</i> 2			
SITE: Brand Th Pl main ch COLL: B.R. McCulloch, J.D. Tyson, G.F. Hanke <i>E. luci:</i> 1 <i>S. vitr:</i> 2	LOC: 49° 50'; 99° 52'	DATE: 18.02.90   INST: UMZ METHOD: Gillnet	WT(°C): 5
<i>N. stra:</i> 2 <i>R. cata:</i> 3 <i>C. comm:</i> 2 <i>P. macu:</i> 5			
SITE: Brand Th Pl shale bar COLL: B.R. McCulloch, J.D. Tyson, G.F. Hanke <i>L. corn:</i> 1 <i>N. stra:</i> 2 <i>R. cata:</i> 3 <i>C. comm:</i> 2 <i>P. macu:</i> 5	LOC: 49° 50'; 99° 52'	DATE: 18.02.90   INST: UMZ DEPTH(m): 0.5	METHOD: Electroshocker SUBS: gravel
<i>P. shum:</i> 3			
SITE: Brand Th Pl effluent METHOD: Electroshocker <i>L. corn:</i> 2 <i>R. cata:</i> 1	LOC: 49° 50'; 99° 52'	DATE: 20.03.90   INST: UMZ DEPTH(m): 0.7	COLL: B.R. McCulloch, J.D. Tyson SUBS: gravel to boulder
<i>WT(°C): 16</i>			
SITE: Brand Th Pl main ch METHOD: Gillnet <i>H. terg:</i> 1 <i>E. luci:</i> 1 <i>C. comm:</i> 13 <i>P. flav:</i> 1 <i>S. vitr:</i> 2	LOC: 49° 50'; 99° 52' WT(°C): 8	DATE: 20.03.90   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
<i>N. stra:</i> 2 <i>N. stra:</i> 215 <i>P. prom:</i> 7 <i>C. cypr:</i> 2 <i>C. comm:</i> 1			
SITE: Brand Th Pl shale bar METHOD: Electroshocker <i>N. athe:</i> 2 <i>N. stra:</i> 215 <i>P. prom:</i> 7 <i>C. cypr:</i> 2 <i>C. comm:</i> 1	LOC: 49° 50'; 99° 52'	DATE: 20.03.90   INST: UMZ DEPTH(m): 0.4	COLL: B.R. McCulloch, J.D. Tyson SUBS: eroded shale, silt

SITE: Brand Th Pl effluent METHOD: Electroshocker <i>L. corn:</i> 2 <i>R. cata:</i> 1 <i>P. macu:</i> 1	LOC: 49° 50'; 99° 52' WT(°C): 5	DATE: 28.03.90 DEPTH(m): 0.7	INST: UMZ SUBS: gravel to boulder	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl main ch METHOD: Gillnet <i>C. comm:</i> 3 <i>S. vitr:</i> 2	LOC: 49° 50'; 99° 52' WT(°C): 1	DATE: 28.03.90	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl shale bar METHOD: Electroshocker <i>L. corn:</i> 1 <i>N. athe:</i> 25 <i>N. dors:</i> 2 <i>N. stra:</i> 575 <i>P. prom:</i> 13 <i>C. comm:</i> 3	LOC: 49° 50'; 99° 52' WT(°C): 1	DATE: 28.03.90 DEPTH(m): 0.4	INST: UMZ SUBS: eroded shale, silt	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl main ch METHOD: Gillnet <i>H. terg:</i> 2 <i>L. lota:</i> 1 <i>S. vitr:</i> 6	LOC: 49° 50'; 99° 52' WT(°C): 1	DATE: 29.03.90	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl main ch METHOD: Gillnet <i>H. terg:</i> 16 <i>P. flav:</i> 1 <i>S. cana:</i> 1 <i>S. vitr:</i> 10	LOC: 49° 50'; 99° 52' WT(°C): 1	DATE: 30.03.90	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 101 METHOD: Electroshocker <i>C. spil:</i> 10 <i>N. athe:</i> 1 <i>N. blen:</i> 59 <i>N. stra:</i> 2 <i>P. prom:</i> 7	LOC: 49° 52'; 97° 19' WT(°C): 8	DATE: 02.05.90 DEPTH(m): 0.71	INST: UMZ VEL(m/sec): 0.28	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, mud
A. mel: 1   C. inco: 4				
SITE: at Hwy 34 METHOD: Electroshocker <i>N. stra:</i> 15 <i>N. flav:</i> 1 <i>A. rupe:</i> 2	LOC: 49° 42'; 98° 55'	DATE: 02.05.90 DEPTH(m): 0.39	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 101 METHOD: Electroshocker <i>C. spil:</i> 14 <i>N. blen:</i> 64 <i>N. stra:</i> 1 <i>C. comm:</i> 1 <i>A. mel:</i> 1	LOC: 42° 52'; 97° 19' WT(°C): 26	DATE: 29.06.90 DEPTH(m): 0.34	INST: UMZ VEL(m/sec): 0.58	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, mud
<i>N. flav:</i> 1 <i>A. rupe:</i> 3				
SITE: spillway both banks METHOD: Electroshocker <i>M. stor:</i> 18 <i>N. athe:</i> 29 <i>N. blen:</i> 97 <i>N. stra:</i> 36 <i>P. prom:</i> 6	LOC: 49° 57'; 98° 18'	DATE: 29.06.90 DEPTH(m): 0.27	INST: UMZ VEL(m/sec): 0.56	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, gravel
<i>WT(°C): 27</i>				
<i>R. cata:</i> 1 <i>N. flav:</i> 7 <i>P. shum:</i> 2 <i>P. flav:</i> 2				
SITE: at Hwy 305 METHOD: Electroshocker <i>N. stra:</i> 13 <i>P. grac:</i> 21 <i>C. comm:</i> 1 <i>M. macr:</i> 1	LOC: 49° 52'; 98° 26'	DATE: 05.07.90 DEPTH(m): 1.0	INST: UMZ SUBS: rock, gravel	COLL: B.R. McCulloch, J.D. Tyson
<i>WT(°C): 21</i>				
SITE: at Hwy 34 METHOD: Electroshocker <i>N. dors:</i> 1 <i>N. stra:</i> 6 <i>S. atro:</i> 1 <i>P. omis:</i> 1 <i>A. rupe:</i> 4	LOC: 49° 42'; 98° 55'	DATE: 05.07.90 DEPTH(m): 0.45	INST: UMZ VEL(m/sec): 0.68	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, gravel
<i>WT(°C): 20</i>				
SITE: spillway north bank METHOD: Electroshocker <i>M. stor:</i> 15 <i>N. athe:</i> 95 <i>N. blen:</i> 208 <i>N. stra:</i> 25 <i>P. prom:</i> 5	LOC: 49° 57'; 98° 18'	DATE: 05.07.90 DEPTH(m): 0.54	INST: UMZ VEL(m/sec): 0.96	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, gravel, mud
<i>WT(°C): 22</i>				
<i>N. flav:</i> 6 <i>A. rupe:</i> 2 <i>P. shum:</i> 12				
SITE: spillway south bank METHOD: Electroshocker <i>C. spil:</i> 3 <i>M. stor:</i> 7 <i>N. blen:</i> 55 <i>N. huds:</i> 1 <i>N. stra:</i> 5	LOC: 49° 57'; 98° 18'	DATE: 13.07.90 DEPTH(m): 0.57	INST: UMZ VEL(m/sec): 0.84	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, gravel, mud
<i>WT(°C): 24</i>				
<i>C. comm:</i> 2 <i>A. mel:</i> 11 <i>N. flav:</i> 11 <i>A. rupe:</i> 5				
SITE: Diversion @ Lk. Man. METHOD: Electroshocker <i>C. carp:</i> 1 <i>N. athe:</i> 1 <i>N. huds:</i> 6 <i>N. stra:</i> 1 <i>P. prom:</i> 8	LOC: 50° 10'; 98° 23'	DATE: 13.07.90 DEPTH(m): 0.45	INST: UMZ VEL(m/sec): 0	COLL: B.R. McCulloch, J.D. Tyson SUBS: mud, rocks
<i>WT(°C): 25</i>				
<i>C. comm:</i> 8 <i>A. mel:</i> 3 <i>P. omis:</i> 1 <i>L. lota:</i> 4 <i>A. rupe:</i> 2 <i>E. nigr:</i> 2				
SITE: spillway north bank METHOD: Electroshocker <i>M. stor:</i> 2 <i>N. athe:</i> 45 <i>N. stra:</i> 2 <i>A. mel:</i> 10 <i>N. flav:</i> 10	LOC: 49° 57'; 98° 18'	DATE: 20.07.90 DEPTH(m): 0.47	INST: UMZ VEL(m/sec): 1.22	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, gravel, mud
<i>WT(°C): 23</i>				
<i>A. rupe:</i> 1 <i>P. macu:</i> 1 <i>P. shum:</i> 1				
SITE: spillway south bank METHOD: Electroshocker <i>M. stor:</i> 3 <i>N. blen:</i> 53 <i>A. mel:</i> 12 <i>N. flav:</i> 10 <i>L. lota:</i> 1	LOC: 49° 57'; 98° 18'	DATE: 27.07.90 DEPTH(m): 0.49	INST: UMZ VEL(m/sec): 1.42	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, gravel, mud
<i>WT(°C): 23</i>				
<i>A. rupe:</i> 1 <i>E. nigr:</i> 1 <i>P. shum:</i> 1				

SITE: spillway north bank METHOD: Electroshocker <i>N. athe</i> : 18 <i>N. huds</i> : 1 <i>N. stra</i> : 4 <i>P. prom</i> : 1 <i>S. atro</i> : 2	LOC: 49° 57'; 98° 18' WT(°C): 20	DATE: 02.08.90   INST: UMZ DEPTH(m): 0.17   VEL(m/sec): 0.8 <i>N. flav</i> : 2 <i>E. nigr</i> : 8	COLL: B.R. McCulloch, J.D. Tyson SUBS: sand
SITE: at Shellmouth METHOD: Electroshocker <i>N. athe</i> : 18 <i>N. huds</i> : 1 <i>N. stra</i> : 4 <i>P. prom</i> : 1 <i>S. atro</i> : 2	LOC: 50° 56'; 101° 29' WT(°C):	DATE: 16.08.90   INST: UMZ DEPTH(m): 0.17   VEL(m/sec): 0.74 <i>N. flav</i> : 2 <i>E. nigr</i> : 8	COLL: B.R. McCulloch, J.D. Tyson SUBS: sand, rocks, gravel
SITE: spillway north bank METHOD: Electroshocker <i>M. stor</i> : 2 <i>N. blen</i> : 18 <i>R. cata</i> : 1 <i>A. mel</i> : 19 <i>N. flav</i> : 15	LOC: 49° 57'; 98° 18' WT(°C): 20	DATE: 17.08.90   INST: UMZ DEPTH(m): 0.42   VEL(m/sec): 1.04 <i>P. shum</i> : 1	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: Brand Th Pl stone weir METHOD: Electroshocker <i>N. stra</i> : 1 <i>R. cata</i> : 24 <i>N. flav</i> : 30	LOC: 49° 50'; 99° 52' SUBS: rocks, gravel, silt	DATE: 22.08.90   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: Brand Th Pl stone weir METHOD: Electroshocker <i>L. corn</i> : 2 <i>R. cata</i> : 22 <i>C. comm</i> : 4 <i>M. macr</i> : 1 <i>N. flav</i> : 42	LOC: 49° 50'; 99° 52' SUBS: rocks, gravel, silt	DATE: 23.08.90   INST: UMZ <i>A. rupe</i> : 9	COLL: B.R. McCulloch, J.D. Tyson
SITE: spillway south bank METHOD: Electroshocker <i>M. stor</i> : 1 <i>N. blen</i> : 105 <i>N. stra</i> : 1 <i>R. cata</i> : 1 <i>A. mel</i> : 20	LOC: 49° 57'; 98° 18' WT(°C): 23	DATE: 24.08.90   INST: UMZ DEPTH(m): 0.64   VEL(m/sec): 0.96 <i>N. flav</i> : 12 <i>P. shum</i> : 2	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: spillway north bank METHOD: Electroshocker <i>M. stor</i> : 1 <i>A. mel</i> : 10 <i>N. flav</i> : 18 <i>P. shum</i> : 1	LOC: 49° 57'; 98° 18' WT(°C): 22	DATE: 31.08.90   INST: UMZ DEPTH(m): 0.52   VEL(m/sec): 0.96	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: spillway south bank METHOD: Electroshocker <i>M. stor</i> : 2 <i>N. blen</i> : 4 <i>R. cata</i> : 4 <i>A. mel</i> : 9 <i>N. flav</i> : 18	LOC: 49° 57'; 98° 18' WT(°C): 21	DATE: 07.09.90   INST: UMZ DEPTH(m): 0.53   VEL(m/sec): 1.05 <i>L. lota</i> : 1 <i>P. shum</i> : 4 <i>P. flav</i> : 1	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: spillway north bank METHOD: Electroshocker <i>C. carp</i> : 5 <i>A. mel</i> : 12 <i>N. flav</i> : 19 <i>P. macu</i> : 1	LOC: 49° 57'; 98° 18' WT(°C): 16	DATE: 14.09.90   INST: UMZ DEPTH(m): 0.37   VEL(m/sec): 0.75	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: spillway south bank METHOD: Electroshocker <i>M. stor</i> : 6 <i>N. blen</i> : 32 <i>A. mel</i> : 22 <i>N. flav</i> : 12 <i>A. rupe</i> : 5	LOC: 49° 57'; 98° 18' WT(°C): 13	DATE: 21.09.90   INST: UMZ VEL(m/sec): <i>P. shum</i> : 1	COLL: B.R. McCulloch, J.D. Tyson SUBS: rocks, mud, gravel
SITE: at Hwy 34 METHOD: Seine & shock <i>L. corn</i> : 3 <i>N. athe</i> : 4 <i>N. dors</i> : 3 <i>N. stra</i> : 179 <i>P. prom</i> : 1 <i>R. cata</i> : 9 <i>S. atro</i> : 5 <i>N. flav</i> : 16 <i>P. omis</i> : 14 <i>A. rupe</i> : 4 <i>E. nigr</i> : 1 <i>P. macu</i> : 3	LOC: 49° 42'; 98° 55' SUBS: rocks, gravel	DATE: 23.09.90   INST: UMZ	COLL: Biology of Fishes Class
SITE: Oxbow at P la P Park METHOD: Seine <i>P. prom</i> : 3 <i>C. inco</i> : 1	LOC: 49° 58'; 98° 06' SUBS: mud	DATE: 23.09.90   INST: UMZ	COLL: Biology of Fishes Class
SITE: Port. la Prairie Park METHOD: Seine <i>I. cast</i> : 1 <i>C. carp</i> : 3 <i>C. spil</i> : 78 <i>M. stor</i> : 14 <i>N. athe</i> : 58 <i>N. blen</i> : 34 <i>N. stra</i> : 4 <i>M. macr</i> : 1 <i>P. omis</i> : 4	LOC: 49° 58'; 98° 05'	DATE: 23.09.90   INST: UMZ	COLL: Biology of Fishes Class
SITE: spillway both banks METHOD: Electroshocker <i>M. stor</i> : 1 <i>N. athe</i> : 5 <i>N. stra</i> : 1 <i>R. cata</i> : 2 <i>A. mel</i> : 6	LOC: 49° 57'; 98° 18' WT(°C): 13.5	DATE: 28.09.90   INST: UMZ SUBS: rocks, mud, gravel <i>N. flav</i> : 10	COLL: B.R. McCulloch, J.D. Tyson
SITE: spillway south bank METHOD: Electroshocker <i>L. corn</i> : 1 <i>N. stra</i> : 1 <i>R. cata</i> : 1 <i>A. mel</i> : 7 <i>N. flav</i> : 15	LOC: 49° 57'; 98° 18' WT(°C): 4	DATE: 19.10.90   INST: UMZ SUBS: rocks, mud, gravel <i>N. gyr</i> : 5 <i>E. nigr</i> : 1	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 305 METHOD: Electroshocker <i>N. stra</i> : 2 <i>R. cata</i> : 1 <i>N. flav</i> : 4 <i>A. rupe</i> : 2 <i>S. cana</i> : 1	LOC: 49° 52'; 98° 26' WT(°C): 11	DATE: 22.09.91   INST: UMZ SUBS: silt, gravel, rocks	COLL: Biology of Fishes Class

SITE: at Hwy 34 METHOD: Electroshocker <i>N. stra</i> : 3 <i>S. atro</i> : 1 <i>N. flav</i> : 2 <i>A. rupe</i> : 4 <i>P. shum</i> : 1	LOC: 49° 42'; 98° 54' WT(°C): 11	DATE: 22.09.91 DEPTH(m): 1.2	INST: UMZ SUBS: silt, gravel	COLL: Biology of Fishes Class
SITE: at Hwy 34 METHOD: Seine <i>L. corn</i> : 2 <i>N. stra</i> : 270 <i>S. atro</i> : 1 <i>C. comm</i> : 1 <i>M. macr</i> : 4	LOC: 49° 42'; 98° 54' WT(°C): 11	DATE: 22.09.91 DEPTH(m): 0.5	INST: UMZ SUBS: silt, gravel	COLL: Biology of Fishes Class
<i>E. nigr</i> : 5				
SITE: Kiche Manitou Lake METHOD: Seine <i>U. limi</i> : 1 <i>L. corn</i> : 1 <i>N. crys</i> : 12 <i>N. hdon</i> : 365 <i>N. hlep</i> : 30	LOC: 49° 40'; 99° 15' WT(°C): 13	DATE: 22.09.91 DEPTH(m): 0.8	INST: UMZ VEL(m/sec): 0	COLL: Biology of Fishes Class
<i>N. gyr</i> : 1 <i>P. flav</i> : 9				
SITE: Port la Prairie Park METHOD: Seine <i>C. spil</i> : 128 <i>N. athe</i> : 3 <i>N. blen</i> : 144 <i>N. stra</i> : 2 <i>A. mel</i> : 1	LOC: 49° 58'; 98° 05' WT(°C): 12	DATE: 22.09.91 DEPTH(m): 0.8	INST: UMZ SUBS: sand, silt	COLL: Biology of Fishes Class
<i>A. rupe</i> : 1 <i>E. nigr</i> : 2 <i>S. vitr</i> : 1				
SITE: boat launch SWPP METHOD: Seine <i>L. corn</i> : 31 <i>N. dors</i> : 1 <i>N. stra</i> : 317 <i>C. comm</i> : 3 <i>M. macr</i> : 2	LOC: 49° 40'; 99° 15' WT(°C): 12	DATE: 22.09.91 DEPTH(m): 1.0	INST: UMZ SUBS: silt, clay, gravel	COLL: Biology of Fishes Class
<i>P. omis</i> : 10 <i>E. nigr</i> : 28 <i>P. macu</i> : 2 <i>P. flav</i> : 1				
SITE: Kiche Manitou Lake METHOD: Seine <i>N. crys</i> : 74 <i>N. hdon</i> : 115 <i>P. prom</i> : 1 <i>E. exil</i> : 1 <i>P. flav</i> : 4	LOC: 49° 40'; 99° 15' WT(°C): 15.9	DATE: 20.09.92 DEPTH(m): 1.3	INST: UMZ VEL(m/sec): 0	COLL: Biology of Fishes Class
<i>SUBS: sand, silt, sapropel</i>				
SITE: at Hwy 34 METHOD: Electroshocker <i>U. limi</i> : 1 <i>C. carp</i> : 3 <i>L. corn</i> : 14 <i>N. stra</i> : 8 <i>R. cata</i> : 2	LOC: 49° 42'; 98° 54' WT(°C): 13.3	DATE: 19.09.93 DEPTH(m): 0.5	INST: UMZ SUBS: silt, clay, gravel	COLL: Biology of Fishes Class
<i>A. rupe</i> : 2 <i>P. macu</i> : 24 <i>P. flav</i> : 1	<i>S. atro</i> : 10 <i>C. comm</i> : 21 <i>M. anis</i> : 9 <i>M. macr</i> : 2 <i>C. inco</i> : 1			
SITE: at Hwy 34 METHOD: Seine <i>N. stra</i> : 16 <i>R. cata</i> : 11 <i>C. comm</i> : 7 <i>M. anis</i> : 2 <i>N. flav</i> : 1	LOC: 49° 42'; 98° 54' WT(°C): 13.3	DATE: 19.09.93 E. nigr: 1	INST: UMZ SUBS: gravel, cobble	COLL: Biology of Fishes Class
<i>P. macu</i> : 12				
SITE: at Hwy 34 METHOD: Seine <i>L. corn</i> : 23 <i>N. stra</i> : 95 <i>S. atro</i> : 5 <i>C. comm</i> : 2 <i>M. anis</i> : 3	LOC: 49° 42'; 98° 54' WT(°C): 13.3	DATE: 19.09.93 DEPTH(m): 1.0	INST: UMZ SUBS: silt, clay	COLL: Biology of Fishes Class
<i>P. omis</i> : 4 <i>C. inco</i> : 1 <i>A. rupe</i> : 7 <i>E. nigr</i> : 1 <i>P. macu</i> : 2				
SITE: spillway north bank METHOD: Electroshocker <i>E. luci</i> : 1 <i>N. stra</i> : 1 <i>R. cata</i> : 20 <i>C. comm</i> : 22 <i>M. macr</i> : 1	LOC: 49° 57'; 98° 20'	DATE: 19.09.93 DEPTH(m): 0.6	INST: UMZ SUBS: cobble, boulders	COLL: Biology of Fishes Class
<i>N. flav</i> : 1 <i>E. nigr</i> : 2 <i>P. macu</i> : 2 <i>P. shum</i> : 14 <i>P. flav</i> : 4 <i>S. vitr</i> : 3				
SITE: Port la Prairie Park METHOD: Electroshocker <i>N. blen</i> : 48 <i>N. stra</i> : 6 <i>P. prom</i> : 11 <i>P. grac</i> : 1 <i>C. comm</i> : 1	LOC: 49° 58'; 98° 05' WT(°C): 10.2	DATE: 19.09.93 DEPTH(m): 0.6	INST: UMZ SUBS: sand, clay	COLL: Biology of Fishes Class
<i>M. anis</i> : 1 <i>M. eryt</i> : 4 <i>P. omis</i> : 1				
SITE: boat launch SWPP METHOD: Electroshocker <i>C. carp</i> : 1 <i>N. stra</i> : 42 <i>P. prom</i> : 1 <i>R. cata</i> : 5 <i>C. comm</i> : 61 <i>M. macr</i> : 5 <i>P. omis</i> : 1	LOC: 49° 40'; 99° 15' WT(°C): 13.9	DATE: 19.09.93 DEPTH(m): 1.0	INST: UMZ SUBS: silt, clay, gravel	COLL: Biology of Fishes Class
<i>P. macu</i> : 5 <i>P. flav</i> : 1	<i>C. inco</i> : 1 <i>A. rupe</i> : 1 <i>E. nigr</i> : 5			
SITE: boat launch SWPP METHOD: Seine <i>L. corn</i> : 208 <i>N. crys</i> : 18 <i>N. hdon</i> : 72 <i>N. hlep</i> : 36 <i>N. stra</i> : 200 <i>C. comm</i> : 155	LOC: 49° 40'; 99° 15' WT(°C): 13.9	DATE: 19.09.93 DEPTH(m): 1.0	INST: UMZ SUBS: silt, clay, gravel	COLL: Biology of Fishes Class
<i>M. macr</i> : 1 <i>P. omis</i> : 8 <i>C. inco</i> : 7 <i>E. nigr</i> : 11				
<i>P. macu</i> : 13 <i>P. flav</i> : 9				
SITE: Treesbank Ferry Crossing METHOD: Seine <i>L. corn</i> : 2 <i>N. stra</i> : 110 <i>C. comm</i> : 15 <i>E. nigr</i> : 5	LOC: 49° 40'; 99° 36'	DATE: 19.09.93 DEPTH(m): 1.0	INST: UMZ SUBS: sand, clay, gravel	COLL: Biology of Fishes Class
SITE: Port la Prairie Park METHOD: Electroshocker <i>E. luci</i> : 1 <i>C. spil</i> : 11 <i>C. carp</i> : 37 <i>M. stor</i> : 1 <i>N. athe</i> : 20	LOC: 49° 58'; 98° 05'	DATE: 25.09.94 DEPTH(m): 1.0	INST: UMZ SUBS: silt, clay, silt	COLL: Biology of Fishes Class

SITE: spillway north bank	LOC: 49° 57'; 98° 21'	DATE: 25.09.94	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Electroshocker	WT(°C): 14.5	DEPTH(m): 0.7	SUBS: cobble, boulders, silt	
<i>H. terg</i> : 2 <i>C. carp</i> : 128 <i>M. stor</i> : 1 <i>N. athe</i> : 233 <i>N. stra</i> : 1		<i>R. cata</i> : 5	<i>C. comm</i> : 2 <i>M. macr</i> : 2 <i>N. flav</i> : 1 <i>L. lota</i> : 1	
<i>P. shum</i> : 6 <i>P. flav</i> : 1 <i>S. vitr</i> : 11				
SITE: at Hwy 34	LOC: 49° 41'; 98° 55'	DATE: 25.09.94	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Electroshocker	WT(°C): 15	DEPTH(m): 1.0	SUBS: silt, gravel, scattered rocks	
<i>U. limi</i> : 1 <i>N. athe</i> : 4 <i>N. stra</i> : 6 <i>R. cata</i> : 2 <i>P. neog</i> : 1		<i>C. comm</i> : 2 <i>M. macr</i> : 1 <i>P. omis</i> : 3 <i>A. rupe</i> : 2 <i>P. macu</i> : 1		
SITE: at Hwy 34	LOC: 49° 41'; 98° 55'	DATE: 25.09.94	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Seine	WT(°C): 15	DEPTH(m): 1.0	SUBS: silt, gravel offshore	
<i>H. terg</i> : 1 <i>E. luci</i> : 1 <i>M. stor</i> : 5 <i>N. athe</i> : 29 <i>N. stra</i> : 18		<i>C. comm</i> : 4 <i>M. anis</i> : 1 <i>M. eryt</i> : 1 <i>P. omis</i> : 51 <i>C. inco</i> : 2		
<i>A. rupe</i> : 5 <i>E. nigr</i> : 1 <i>P. macu</i> : 3 <i>S. cana</i> : 1				
SITE: at SWPP	LOC: 49° 41'; 99° 15'	DATE: 25.09.94	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Seine	WT(°C): 15.5	DEPTH(m): 1.0	SUBS: silt to gravel	
<i>H. terg</i> : 1 <i>E. luci</i> : 2 <i>L. corn</i> : 6 <i>N. crys</i> : 3 <i>N. athe</i> : 29		<i>N. dors</i> : 1 <i>N. hlep</i> : 1 <i>N. stra</i> : 46 <i>P. prom</i> : 1 <i>R. cata</i> : 2		
<i>C. comm</i> : 2 <i>P. omis</i> : 5 <i>P. pung</i> : 2 <i>A. rupe</i> : 5 <i>E. nigr</i> : 4		<i>P. macu</i> : 3		
SITE: at SWPP	LOC: 49° 41'; 99° 15'	DATE: 25.09.94	INST: UMZ	COLL: Biology of Fishes Class
METHOD: Electroshocker	WT(°C): 15.5	DEPTH(m): 0.7	SUBS: silt to gravel	
<i>L. corn</i> : 3 <i>N. stra</i> : 18 <i>R. cata</i> : 9 <i>C. comm</i> : 15 <i>P. omis</i> : 2		<i>C. inco</i> : 1 <i>A. rupe</i> : 2 <i>P. flav</i> : 6 <i>P. macu</i> : 2		

#### APPENDIX 2: SOURIS RIVER COLLECTIONS

SITE: below dam	LOC: 49° 37'; 100° 17'	DATE: 20.06.45	INST: ROM	COLL: B. Falls
<i>P. prom</i> : 25 <i>R. cata</i> : 8 <i>E. exil</i> : 14				
SITE: S34 T7 R21W	LOC: 49° 35'; 100° 13'	DATE: 21.08.54	INST: ROM	COLL: J.J. Keleher
<i>A. nebu</i> : 8				
SITE: S34 T7 R21W	LOC: 49° 36'; 100° 17'	DATE: 22.08.54	INST: ROM	COLL: J.J. Keleher
<i>R. cata</i> : X <i>C. inco</i> : 38				
SITE: at Melita	LOC: 49° 16'; 101° 00'	DATE: 25.07.55	INST: ROM	COLL: W.B. & M.G. Scott
<i>P. prom</i> : 63 <i>P. flav</i> : 2				
SITE: at Souris	LOC: 49° 37'; 100° 15'	DATE: 30.05.67	INST: UMZ	COLL: K.W. Stewart, T. Vincent
<i>A. mel</i> : 10				
SITE: Assin. River junction	LOC: 49° 40'; 99° 34'	DATE: 25.04.73	INST: MMMN	COLL: A. Beck
<i>L. corn</i> : 2				
SITE: at Wawanesa	LOC: 49° 36'; 99° 41'	DATE: 25.04.73	INST: MMMN	COLL: A. Beck
<i>R. cata</i> : 1				
SITE: below dam	LOC: 49° 37'; 100° 14	DATE: 01.05.73	INST: ROM	COLL: D.G. Gillies
<i>P. eos</i> : 1				
SITE: at Treesbank	LOC: 49° 38'; 99° 36'	DATE: 14.09.73	INST: MMMN	COLL: R.K. Keffen, B. Perrin
METHOD: Seine	WT(°C): 12			
<i>M. macr</i> : 5				
SITE: trib. at Margaret	LOC: 49° 27'; 99° 50'	DATE: 10.07.75	INST: MMMN	COLL: Keffen, Nelson, Nowosad, Perrin
COLL: Keffen, Nelson, Nowosad, Perrin		METHOD: Seine	WT(°C): 25.1	SUBS: gravel, sand
<i>R. atra</i> : 5 <i>S. atro</i> : 5 <i>C. comm</i> : 5 <i>E. nigr</i> : 1				
SITE:	LOC: 49° 28'; 99° 52'	DATE: 28.07.75	INST: MMMN	COLL: R.K. Keffen, K. Nowosad
METHOD: Seine	WT(°C): 27.5			
<i>C. comm</i> : 17 <i>P. omis</i> : 2 <i>E. nigr</i> : 1 <i>P. macu</i> : 2 <i>P. flav</i> : 1		SUBS: mud, branches		

SITE: N of Margaret	LOC: 49° 28'; 99° 52'	DATE: 28.07.75	INST: MMMN	COLL: R.K. Keffen, K. Nowosad
METHOD: Seine	WT(°C): 28	SUBS: stones, branches		
<i>E. luci</i> : 1 <i>S. atro</i> : 6 <i>C. comm</i> : 8 <i>A. mel</i> : 18				
SITE: Antler River junction	LOC: 49° 08'; 101° 01'	DATE: 13.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 24	SUBS: mud, gravel	
<i>E. luci</i> : 1 <i>P. omis</i> : 4 <i>E. nigr</i> : 1				
SITE: N. of Melita	LOC: 49° 18'; 100° 57'	DATE: 14.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 23.2	SUBS: sand, mud	
<i>P. macu</i> : 1				
SITE: N. of Napinka	LOC: 49° 19'; 100° 52'	DATE: 14.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 23	SUBS: mud, gravel	
<i>P. prom</i> : 1 <i>R. cata</i> : 4 <i>A. mel</i> : 5 <i>E. nigr</i> : 1				
SITE: at Hartney	LOC: 49° 29'; 100° 35'	DATE: 15.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 27.2	SUBS: sand, branches	
<i>E. luci</i> : 1 <i>C. comm</i> : 2 <i>A. mel</i> : 2 <i>P. omis</i> : 2 <i>E. nigr</i> : 1	<i>P. flav</i> : 1			
SITE: near Lauder	LOC: 49° 26'; 100° 43'	DATE: 15.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 26.3	SUBS: sand, branches	
<i>A. mel</i> : 2				
SITE: at Hartney	LOC: 49° 29'; 100° 31'	DATE: 16.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 22.5	SUBS: sand	
<i>P. prom</i> : 1 <i>C. comm</i> : 2 <i>A. mel</i> : 2				
SITE: Plum Creek junction	LOC: 49° 38'; 100° 15'	DATE: 17.08.75	INST: MMMN	COLL: R.K. Keffen, Perrin
METHOD: Seine	WT(°C): 21	SUBS: gravel, mud		
<i>C. comm</i> : 1				
SITE: at Hwy 10	LOC: 49° 29'; 99° 56'	DATE: 18.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 19	SUBS: mud, shale	
<i>A. mel</i> : 3				
SITE: at Souris	LOC: 49° 36'; 100° 11'	DATE: 18.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 21.5	SUBS: gravel, mud, shale	
<i>P. prom</i> : 3 <i>C. comm</i> : 1 <i>P. omis</i> : 1				
SITE: Assin River junction	LOC: 49° 40'; 99° 34'	DATE: 20.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 23	SUBS: mud, shale	
<i>L. corn</i> : 4 <i>N. huds</i> : 2 <i>C. comm</i> : 3 <i>M. macr</i> : 4 <i>P. omis</i> : 3	<i>E. nigr</i> : 2 <i>P. macu</i> : 1 <i>P. flav</i> : 2	<i>S. vitr</i> : 5		
SITE: at Treesbank	LOC: 49° 38'; 99° 35'	DATE: 20.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 19.2	SUBS: mud, shale	
<i>N. blen</i> : 6 <i>P. prom</i> : 5 <i>P. grac</i> : 1 <i>C. comm</i> : 1 <i>A. mel</i> : 2	<i>E. nigr</i> : 1 <i>P. macu</i> : 1			
SITE: at Wawanesa	LOC: 49° 36'; 99° 41'	DATE: 20.08.75	INST: MMMN	
COLL: Keffen, Nelson, Nowosad, Perrin	METHOD: Seine	WT(°C): 16.5	SUBS: stones, mud, shale	
<i>C. comm</i> : 1 <i>A. mel</i> : 2 <i>P. macu</i> : 3				
SITE: at Hwy 2	LOC: 49° 35'; 99° 43'	DATE: 13.07.84	INST: UMZ	VEL(m/sec): 1.0
COLL: K.W. & J.A. Stewart, D. Pannu	METHOD: Seine	DEPTH(m): 1.5	SUBS: rubble, mud, gravel	
<i>L. corn</i> : X <i>N. stra</i> : X <i>R. cata</i> : X <i>S. atro</i> : 15 <i>C. comm</i> : X <i>M. macr</i> : 5 <i>N. gyr</i> : 4 <i>P. omis</i> : X	<i>E. nigr</i> : 17 <i>P. macu</i> : X			
SITE: at Hwy 21	LOC: 49° 39'; 100° 32'	DATE: 13.07.84	INST: UMZ	
COLL: K.W. & J.A. Stewart, D. Pannu				
<i>A. mel</i> : 1				
SITE: at Souris	LOC: 49° 37'; 100° 15'	DATE: 13.07.84	INST: UMZ	VEL(m/sec): 1.0
COLL: K.W. & J.A. Stewart, D. Pannu	METHOD: Seine	DEPTH(m): 0.75	SUBS: rubble, boulders	
<i>E. luci</i> : 1 <i>N. stra</i> : 20 <i>C. comm</i> : 1 <i>A. mel</i> : 19 <i>N. gyr</i> : 27 <i>P. omis</i> : 2				

SITE: at Hwy 2 LOC: 49° 35'; 99° 43' DATE: 30.09.84 INST: UMZ COLL: Biology of Fishes Class  
 SUBS: shale, rock, gravel  
*L. corn:* X *N. huds:* 1 *N. stra:* X *P. prom:* 2 *R. cata:* X *S. atro:* 19 *C. comm:* 54 *M. macr:* 12 *A. mel:* 2 *E. nigr:* 42  
*P. macu:* 40

SITE: at Hwy 2 LOC: 49° 35'; 99° 43' DATE: 22.09.85 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Seine  
*L. corn:* 212 *N. stra:* 194 *R. cata:* 3 *R. cata:* 132 *S. atro:* 12 *C. comm:* 45 *M. macr:* 2 *N. gyr:* 8 *E. nigr:* 18 *P. macu:* 7

SITE: E. of Hwy 10 bridge LOC: 49° 30'; 99° 59' DATE: 18.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 18 DEPTH(m): 1.08 SUBS: sand  
*L. corn:* 78 *N. stra:* 225 *S. atro:* 2 *C. comm:* 1

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 18.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 21.5 DEPTH(m): 0.55 VEL(m/sec): 0.17 SUBS: sand  
*L. corn:* 117 *N. stra:* 42 *C. comm:* 5

SITE: E. of Hwy 10 bridge LOC: 49° 30'; 99° 59' DATE: 25.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 13 SUBS: sand  
*N. stra:* 81

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 25.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 13 DEPTH(m): 0.49 VEL(m/sec): 0.21 SUBS: sand  
*N. stra:* 79

SITE: at Hwy 10 LOC: 49° 29'; 99° 56' DATE: 26.05.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 16.5 SUBS: rock, gravel  
*L. corn:* 13 *N. stra:* 9 *R. cata:* 8 *C. comm:* 1 *A. mel:* 4 *E. nigr:* 1 *P. macu:* 1

SITE: E. of Hwy 10 bridge LOC: 49° 30'; 99° 59' DATE: 31.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 21 DEPTH(m): 0.9 VEL(m/sec): 0 SUBS: sand  
*L. corn:* 10 *N. stra:* 53 *P. prom:* 1 *C. comm:* 1

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 31.05.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 21 DEPTH(m): 0.55 VEL(m/sec): 0.36 SUBS: shale  
*L. corn:* 107 *N. stra:* 207 *P. prom:* 1 *R. cata:* 1 *S. atro:* 2 *C. comm:* 10 *M. macr:* 1

SITE: E. of Hwy 10 bridge LOC: 49° 30'; 99° 59' DATE: 08.06.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 15 DEPTH(m): 0.81 VEL(m/sec): 0 SUBS: sand  
*L. corn:* 3 *N. stra:* 25 *R. cata:* 1 *P. macu:* 1

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 08.06.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 15 DEPTH(m): 0.6 VEL(m/sec): 0.11 SUBS: shale  
*L. corn:* 129 *N. stra:* 175 *S. atro:* 2

SITE: at Hwy 2 LOC: 49° 35'; 99° 43' DATE: 15.06.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 22 DEPTH(m): 0.15 VEL(m/sec): 1.0 SUBS: shale, rock, gravel  
*L. corn:* 2 *N. stra:* 18 *R. cata:* 6 *S. atro:* 2 *N. gyr:* 2

SITE: below Wawanesa dam LOC: 49° 36'; 99° 41' DATE: 15.06.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 18 DEPTH(m): 0.5 SUBS: gravel, sand, branches  
*L. corn:* 13 *N. stra:* 21 *R. cata:* 5 *C. comm:* 3 *M. macr:* 7 *A. mel:* 19 *N. flav:* 5 *N. gyr:* 3 *A. rupe:* 2 *P. macu:* 13

SITE: E. of Hwy 10 bridge LOC: 49° 30'; 99° 59' DATE: 13.07.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 23 DEPTH(m): 0.9 VEL(m/sec): 0 SUBS: sand  
*E. luci:* 1 *L. corn:* 18 *N. stra:* 23 *R. cata:* 1 *A. mel:* 1

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 13.07.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 23 DEPTH(m): 0.4 VEL(m/sec): 0.07 SUBS: shale  
*L. corn:* 12 *N. stra:* 55 *R. cata:* 2 *S. atro:* 3 *C. comm:* 2

SITE: PTR 346 LOC: 49° 28'; 99° 52' DATE: 20.07.89 INST: UMZ COLL: B.M. Horn  
 METHOD: Seine WT(°C): 29 DEPTH(m): 0.3 VEL(m/sec): 0.04 SUBS: shale  
*L. corn:* 6 *N. stra:* 30 *R. cata:* 1 *S. atro:* 2 *C. comm:* 2

SITE: E. of Hwy 10 bridge METHOD: Seine <i>L. corn:</i> 132 <i>N. stra:</i> 3	LOC: 49° 30'; 99° 59' WT(°C): 22 <i>P. macu:</i> 2	DATE: 10.08.89 DEPTH(m): 1.05	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: sand
SITE: PTR 346 METHOD: Seine <i>L. corn:</i> 81 <i>N. stra:</i> 61 <i>R. cata:</i> 2 <i>S. atro:</i> 34 <i>C. comm:</i> 6	LOC: 49° 28'; 99° 52' WT(°C): 22 <i>E. nigr:</i> 1	DATE: 10.08.89 DEPTH(m): 0.45	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: shale
SITE: E. of Hwy 10 bridge METHOD: Seine <i>N. huds:</i> 1 <i>N. stra:</i> 3 <i>S. atro:</i> 1 <i>M. macr:</i> 1 <i>P. macu:</i> 1	LOC: 49° 30'; 99° 59' WT(°C): 21.5	DATE: 23.08.89 DEPTH(m): 1.05	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: sand
SITE: PTR 346 METHOD: Seine <i>N. stra:</i> 35	LOC: 49° 28'; 99° 52' WT(°C): 21.5	DATE: 23.08.89 DEPTH(m): 0.4	INST: UMZ VEL(m/sec): 0.25	COLL: B.M. Horn SUBS: shale
SITE: E. of Hwy 10 bridge METHOD: Seine <i>N. stra:</i> 6	LOC: 49° 30'; 99° 59' WT(°C): 17	DATE: 31.08.89 DEPTH(m): 0.92	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: sand
SITE: PTR 346 METHOD: Seine <i>N. stra:</i> 11	LOC: 49° 28'; 99° 52' WT(°C): 19	DATE: 31.08.89 DEPTH(m): 0.53	INST: UMZ VEL(m/sec): 0.22	COLL: B.M. Horn SUBS: shale
SITE: E. of Hwy 10 bridge METHOD: Seine <i>L. corn:</i> 14 <i>N. stra:</i> 9 <i>S. atro:</i> 1 <i>A. mel:</i> 7 <i>E. nigr:</i> 17	LOC: 49° 30'; 99° 59' WT(°C): 16	DATE: 17.09.89 DEPTH(m): 0.92	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: sand <i>P. macu:</i> 57
SITE: PTR 346 METHOD: Seine <i>N. stra:</i> 19	LOC: 49° 28'; 99° 52' WT(°C): 17	DATE: 17.09.89 DEPTH(m): 0.45	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: shale
SITE: PTR 346 METHOD: Seine <i>L. corn:</i> 56 <i>N. stra:</i> 9 <i>R. atra:</i> 1	LOC: 49° 28'; 99° 52' WT(°C): 12	DATE: 01.10.89 DEPTH(m): 0.47	INST: UMZ VEL(m/sec): 0	COLL: B.M. Horn SUBS: shale
SITE: PTR 346 METHOD: Seine <i>N. stra:</i> 12	LOC: 49° 28'; 99° 52' WT(°C): 7	DATE: 15.10.89 DEPTH(m): 0.29	INST: UMZ VEL(m/sec): 0.19	COLL: B.M. Horn SUBS: shale
SITE: below Wawanese dam METHOD: Electroshocker <i>L. corn:</i> 5 <i>N. stra:</i> 3 <i>P. prom:</i> 1 <i>R. cata:</i> 6 <i>S. atro:</i> 3	LOC: 49° 36'; 99° 41' WT(°C): 18	DATE: 24.05.90 DEPTH(m): 0.5	INST: UMZ SUBS: sand, gravel <i>C. comm:</i> 10 <i>M. macr:</i> 1 <i>P. omis:</i> 1 <i>E. nigr:</i> 4 <i>P. macu:</i> 23	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Souris METHOD: Electroshocker <i>N. stra:</i> 1 <i>R. cata:</i> 72 <i>C. comm:</i> 3 <i>A. mel:</i> 2 <i>N. gyr:</i> 1	LOC: 49° 37'; 100° 15' WT(°C): 24	DATE: 04.07.90 DEPTH(m): 0.4	INST: UMZ SUBS: sand, gravel <i>E. nigr:</i> 2 <i>P. macu:</i> 6	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Wawanese dam METHOD: Electroshocker <i>L. corn:</i> 61 <i>N. stra:</i> 8 <i>P. prom:</i> 1 <i>R. cata:</i> 62 <i>S. atro:</i> 16	LOC: 49° 36'; 99° 41' WT(°C): 24	DATE: 04.07.90 DEPTH(m): 0.5	INST: UMZ SUBS: sand, gravel <i>A. mel:</i> 2 <i>N. flav:</i> 2 <i>A. rupe:</i> 2 <i>E. nigr:</i> 29 <i>P. macu:</i> 4	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 2 METHOD: Seine <i>L. corn:</i> 875 <i>N. stra:</i> 548 <i>P. prom:</i> 5 <i>R. cata:</i> 13 <i>S. atro:</i> 33	LOC: 49° 35'; 99° 43' WT(°C): 13	DATE: 22.09.91 DEPTH(m): 0.5	INST: UMZ SUBS: silt, shale <i>C. comm:</i> 25 <i>E. nigr:</i> 3	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Electroshocker <i>L. corn:</i> 82 <i>N. stra:</i> 6 <i>P. prom:</i> 4 <i>S. atro:</i> 9 <i>C. comm:</i> 13 <i>N. gyr:</i> 1	LOC: 49° 35'; 99° 43' WT(°C): 14.6	DATE: 20.09.92 DEPTH(m): 0.7	INST: UMZ SUBS: shale, rock, gravel <i>E. nigr:</i> 2 <i>P. macu:</i> 1	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Seine <i>L. corn:</i> 990 <i>N. stra:</i> 512 <i>P. prom:</i> 38 <i>R. atra:</i> 4 <i>R. cata:</i> 12 <i>S. atro:</i> 96 <i>C. comm:</i> 171 <i>M. macr:</i> 1 <i>N. gyr:</i> 1 <i>E. nigr:</i> 10 <i>P. macu:</i> 1	LOC: 49° 35'; 99° 43' WT(°C): 14.6	DATE: 20.09.92 DEPTH(m): 0.5	INST: UMZ SUBS: shale, rock, gravel	COLL: Biology of Fishes Class

SITE: below Wawanese dam LOC: 49° 36'; 99° 41' DATE: 20.09.92 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Electroshocker WT(°C): 13.2 DEPTH(m): 0.5 SUBS: gravel, shale, rock  
*L. corn:* 26 *N. stra:* 23 *R. cata:* 43 *S. atro:* 2 *C. comm:* 2 *N. gyr:* 1 *E. nigr:* 1 *P. macu:* 7

SITE: below Wawanese dam LOC: 49° 36'; 99° 41' DATE: 20.09.92 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Seine WT(°C): 13.2 DEPTH(m): 0.2 SUBS: gravel, shale, rock  
*L. corn:* 1065 *N. stra:* 524 *P. prom:* 4 *R. cata:* 59 *S. atro:* 22 *C. comm:* 16 *P. omis:* 1 *E. nigr:* 1

SITE: below Wawanese dam LOC: 49° 36'; 99° 41' DATE: 25.09.94 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Seine WT(°C): 15.9 DEPTH(m): 1.0 SUBS: silt to gravel, scattered boulders  
*L. corn:* 87 *N. huds:* 1 *N. stra:* 8 *R. cata:* 1 *S. atro:* 22 *C. comm:* 13 *M. macr:* 6 *A. mel:* 1 *P. omis:* 1 *E. nigr:* 1  
*P. macu:* 2 *P. flav:* 1 *S. vitr:* 1

SITE: below Wawanese dam LOC: 49° 36'; 99° 41' DATE: 25.09.94 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Electroshocker WT(°C): 15.9 DEPTH(m): 0.7 SUBS: gravel & scattered rocks  
*C. carp:* 1 *N. stra:* 38 *R. atra:* 1 *R. cata:* 49 *S. atro:* 43 *C. comm:* 15 *A. mel:* 6 *N. flav:* 4 *N. gyr:* 1 *E. exil:* 4  
*E. nigr:* 8 *P. macu:* 4

#### COLLECTIONS FROM THE SOURIS RIVER IN SASKATCHEWAN

SITE: at oxbox LOC: 49° 14'; 102° 10' DATE: 16.05.53 INST: ROM COLL: F.M. Atton  
*N. stra:* 4 *P. prom:* 2 *P. omis:* 1 *E. nigr:* 4

SITE: near Manor DATE: 15.07.52 INST: ROM COLL: F.M. Atton  
*M. marg:* 1

SITE: at oxbow LOC: 49° 14'; 102° 10' DATE: 21.07.53 INST: ROM COLL: F.M. Atton  
*N. stra:* 3 *P. prom:* 2 *R. cata:* 4 *P. omis:* X *C. inco:* 2 *E. nigr:* X *P. macu:* 3

SITE: at oxbow LOC: 49° 14'; 102° 10' DATE: 27.07.54 INST: ROM COLL: F.M. Atton  
*L. corn:* 5 *N. crys:* 6

SITE: below Glen Ewen LOC: DATE: 25.07.55 INST: ROM COLL: W.B. & M. Scott  
*L. corn:* 9 *N. stra:* 9 *P. prom:* 31 *C. comm:* 2 *P. omis:* 34 *E. nigr:* 9 *P. macu:* 3 *P. flav:* 6

SITE: Midale Dam & Weyburn LOC: DATE: 07.56 INST: ROM COLL: J.K. Frederickson  
*N. gyr:* 1

SITE: at Weyburn Dam LOC: DATE: 05.09.56 INST: ROM COLL: P.H. Edwards  
*A. mel:* 3 *A. nebu:* X *N. gyr:* X

DATE: 1975 COLL: L. Wallin  
*E. luci:* X *L. corn:* X *C. comm:* X *A. nebu:* X *P. omis:* X *S. vitr:* X

DATE: 1976 COLL: G. Pierce  
*E. luci:* X *C. comm:* X

DATE: 1982 COLL: G. Saluski  
*A. mel:* X

DATE: 1982 INST: SMNH COLL: R. MacCulloch  
*N. stra:* X *P. prom:* X *A. mel:* X *N. gyr:* X *C. inco:* X *E. exil:* X *P. flav:* X

DATE: 1983 COLL: E.L. Dean  
*L. corn:* X *N. stra:* X *P. prom:* X *C. comm:* X *A. mel:* X *N. gyr:* X *P. omis:* X *E. nigr:* X *P. macu:* X *P. flav:* X

APPENDIX 3: LITTLE SASKATCHEWAN RIVER COLLECTIONS

SITE: <i>E. exil:</i> 1 <i>E. nigr:</i> 51	LOC:	DATE: 09.08.53	INST: ROM	COLL: I.G. Arnason
SITE: near mouth <i>C. carp:</i> 7 <i>N. dors:</i> 9 <i>N. stra:</i> 9 <i>P. macu:</i> 2	LOC: 49° 51'; 100° 10'	DATE: 21.08.54	INST: ROM	COLL: J.J. Keleher
SITE: near mouth <i>R. cata:</i> 13	LOC: 49° 52'; 100° 09'	DATE: 21.08.54	INST: ROM	COLL: J.J. Keleher
SITE: <i>A. rupe:</i> 1	LOC: 50° 18'; 99° 51'	DATE: 10.08.55	INST: ROM	COLL: I.G. Arnason
SITE: <i>R. atra:</i> 1	LOC: 50° 41'; 100° 10	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson
SITE: <i>P. macu:</i> 1	LOC: 50° 41'; 100° 13'	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson
SITE: <i>P. flav:</i> 1	LOC: 50° 41'; 100° 15'	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson
SITE: <i>E. luci:</i> 2 <i>C. inco:</i> 1	LOC: 50° 43'; 100° 16'	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson
SITE: at Hwy 25 <i>A. rupe:</i> 1 <i>P. flav:</i> 3	LOC:	DATE: 22.09.85	INST: UMZ	COLL: Biology of Fishes Class
SITE: near mouth METHOD: Electroshocker <i>L. corn:</i> 2 <i>N. stra:</i> 2 <i>N. flav:</i> 2 <i>A. rupe:</i> 18	LOC: 49° 51'; 100° 10' WT(°C): 25	DATE: 04.07.89	INST: UMZ DEPTH(m): 0.45	COLL: B.R. McCulloch, J.D. Tyson SUBS: rock, gravel
SITE: above Rivers dam METHOD: Electroshocker <i>N. dors:</i> 1 <i>P. prom:</i> 3 <i>R. cata:</i> 56 <i>L. lota:</i> 10 <i>A. rupe:</i> 6	LOC: 50° 07'; 100° 07' WT(°C): 20	DATE: 13.08.89	INST: UMZ DEPTH(m): 0.69	COLL: B.R. McCulloch, J.D. Tyson SUBS: sand, gravel, rock
SITE: above Rivers dam METHOD: Electroshocker <i>N. huds:</i> 7 <i>P. prom:</i> 1 <i>R. cata:</i> 65 <i>L. lota:</i> 13 <i>A. rupe:</i> 4	LOC: 50° 07'; 100° 07' WT(°C): 23	DATE: 10.07.90	INST: UMZ DEPTH(m):	COLL: B.R. McCulloch, J.D. Tyson SUBS: sand, gravel, rock
SITE: at Kirkham's Bridge METHOD: Electroshocker <i>R. cata:</i> 4 <i>N. flav:</i> 9 <i>A. rupe:</i> 2 <i>E. nigr:</i> 1 <i>P. macu:</i> 3 <i>S. vitr:</i> 1	LOC: 49° 55'; 100° 09' SUBS: sand, gravel	DATE: 10.07.90	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>E. luci:</i> 2 <i>R. cata:</i> 29 <i>C. comm:</i> 1 <i>L. lota:</i> 13 <i>A. rupe:</i> 1	LOC: 50° 07'; 100° 07' WT(°C): 22	DATE: 18.07.90	INST: UMZ SUBS: sand, gravel, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Kirkham's Bridge METHOD: Electroshocker <i>R. cata:</i> 16 <i>N. flav:</i> 14 <i>E. nigr:</i> 2	LOC: 49° 55'; 100° 09' SUBS: sand, gravel	DATE: 19.07.90	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>E. luci:</i> 4 <i>N. huds:</i> 18 <i>R. cata:</i> 58 <i>S. atro:</i> 1 <i>C. comm:</i> 17 <i>N. flav:</i> 10 <i>L. lota:</i> 4 <i>E. nigr:</i> 1 <i>P. flav:</i> 2	LOC: 50° 01' 100° 14' WT(°C): 21	DATE: 19.07.90	INST: UMZ SUBS: gravel, sand, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>P. prom:</i> 1 <i>R. cata:</i> 30 <i>L. lota:</i> 16 <i>A. rupe:</i> 2 <i>E. nigr:</i> 1	LOC: 50° 07' 100° 07' WT(°C): 23	DATE: 24.07.90	INST: UMZ SUBS: sand, gravel, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>N. huds:</i> 2 <i>P. prom:</i> 1 <i>R. cata:</i> 93 <i>S. atro:</i> 7 <i>C. comm:</i> 7	LOC: 50° 01' 100° 14' WT(°C): 22	DATE: 25.07.90	INST: UMZ SUBS: gravel, sand, rock	COLL: B.R. McCulloch, J.D. Tyson

SITE: above Rivers dam METHOD: Electroshocker <i>N. huds:</i> 13 <i>P. prom:</i> 1 <i>R. cata:</i> 16 <i>L. lota:</i> 10 <i>A. rupe:</i> 4	LOC: 50° 07' 100° 07' WT(°C): 23	DATE: 31.07.90 INST: UMZ SUBS: sand, gravel, rock <i>E. nigr:</i> 3 <i>P. macu:</i> 13	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>L. corn:</i> 1 <i>N. huds:</i> 3 <i>R. cata:</i> 17 <i>C. comm:</i> 2 <i>N. flav:</i> 10	LOC: 50° 01' 100° 14' WT(°C): 21	DATE: 01.08.90 INST: UMZ SUBS: gravel, sand, rock <i>L. lota:</i> 3 <i>A. rupe:</i> 4 <i>P. flav:</i> 1	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>E. luct:</i> 1 <i>R. cata:</i> 20 <i>C. comm:</i> 1 <i>M. macr:</i> 1 <i>L. lota:</i> 15	LOC: 50° 07' 100° 07' WT(°C): 24	DATE: 08.08.90 INST: UMZ SUBS: sand, gravel, rock <i>A. rupe:</i> 6 <i>P. macu:</i> 12	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 14 <i>C. comm:</i> 2 <i>N. flav:</i> 11	LOC: 50° 01' 100° 14' WT(°C): 20	DATE: 09.08.90 INST: UMZ SUBS: gravel, sand, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>P. prom:</i> 1 <i>R. cata:</i> 22 <i>C. comm:</i> 2 <i>M. macr:</i> 1 <i>L. lota:</i> 13	LOC: 50° 07' 100° 07' WT(°C): 21	DATE: 15.08.90 INST: UMZ SUBS: sand, gravel, rock <i>A. rupe:</i> 5 <i>E. nigr:</i> 1 <i>P. macu:</i> 20 <i>P. flav:</i> 9	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 12 <i>S. atro:</i> 3 <i>C. comm:</i> 1 <i>N. flav:</i> 12	LOC: 50° 01' 100° 14' WT(°C): 21	DATE: 16.08.90 INST: UMZ SUBS: gravel, sand, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>N. huds:</i> 11 <i>R. cata:</i> 20 <i>M. macr:</i> 1 <i>P. omis:</i> 1 <i>L. lota:</i> 9	LOC: 50° 07' 100° 07' WT(°C): 24	DATE: 22.08.90 INST: UMZ SUBS: sand, gravel, rock <i>E. nigr:</i> 2 <i>P. macu:</i> 16 <i>P. flav:</i> 13	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 23 <i>S. atro:</i> 1 <i>C. comm:</i> 2 <i>N. flav:</i> 24 <i>L. lota:</i> 3	LOC: 50° 01' 100° 14' WT(°C): 20	DATE: 23.08.90 INST: UMZ SUBS: gravel, sand, rock <i>E. nigr:</i> 1	COLL: B.R. McCulloch, J.D. Tyson
SITE: above Rivers dam METHOD: Electroshocker <i>N. huds:</i> 3 <i>P. prom:</i> 18 <i>R. cata:</i> 14 <i>C. comm:</i> 1 <i>L. lota:</i> 11	LOC: 50° 07' 100° 07' WT(°C): 21	DATE: 29.08.90 INST: UMZ SUBS: sand, gravel, rock <i>A. rupe:</i> 3 <i>P. macu:</i> 8 <i>P. flav:</i> 4	COLL: B.R. McCulloch, J.D. Tyson
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 23 <i>S. atro:</i> 1 <i>N. flav:</i> 23 <i>L. lota:</i> 3 <i>A. rupe:</i> 1	LOC: 50° 01' 100° 14' WT(°C): 19	DATE: 30.08.90 INST: UMZ SUBS: gravel, sand, rock	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 10 METHOD: Shock & seine <i>E. luci:</i> 5 <i>C. comm:</i> 6 <i>M. macr:</i> 4 <i>L. lota:</i> 1 <i>A. rupe:</i> 17	LOC: 50° 16' 99° 52' WT(°C):	DATE: 23.09.90 INST: UMZ DEPTH(m): 1.0 VEL(m/sec): 0 <i>E. nigr:</i> 2 <i>P. flav:</i> 4 <i>P. macu:</i> 12	COLL: Biology of Fishes Class SUBS: gravel, sand, rock
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 12 <i>M. macr:</i> 1 <i>N. flav:</i> 11.	LOC: 50° 01' 100° 14' SUBS: gravel, sand, rock	DATE: 23.09.90 INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke
SITE: below Rivers dam METHOD: Electroshocker <i>R. cata:</i> 33 <i>N. flav:</i> 38 <i>L. lota:</i> 3	LOC: 50° 01'; 100° 14'	DATE: 31.05.91 INST: UMZ METHOD: Electroshocker	SUBS: gravel, rocks
SITE: below Rivers Dam METHOD: Electroshocker <i>R. cata:</i> 37 <i>N. flav:</i> 36 <i>L. lota:</i> 3	LOC: 50° 01'; 100° 14' SUBS: gravel, rocks	DATE: 10.07.91 INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke
SITE: below Rivers Dam METHOD: Electroshocker <i>R. cata:</i> 43 <i>N. flav:</i> 36 <i>L. lota:</i> 1	LOC: 50° 01'; 100° 14' SUBS: gravel, rocks	DATE: 04.08.91 INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke
SITE: below Rivers Dam METHOD: Electroshocker <i>R. cata:</i> 43 <i>N. flav:</i> 38 <i>L. lota:</i> 3	LOC: 50° 01'; 100° 14' SUBS: gravel, rocks	DATE: 01.09.91 INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke

SITE: below Rivers Dam METHOD: Electroshocker <i>R. cata</i> : 65	LOC: 50° 01'; 100° 14' SUBS: gravel, rocks	DATE: 17.08.92	INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke
SITE: above Rivers dam METHOD: Electroshocker <i>R. cata</i> : 67	LOC: 50° 07' 100° 07' SUBS: sand, gravel, rock	DATE: 17.08.92	INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke
SITE: below Rapid City Dam METHOD: Electroshocker <i>R. cata</i> : 60 <i>L. lota</i> : 42	LOC: 50° 08' 100° 03' SUBS: sand, gravel, rock	DATE: 06.09.92	INST: UMZ	COLL: B.R. McCulloch, G.F. Hanke

#### APPENDIX 4: CYPRESS RIVER COLLECTIONS

SITE: <i>L. corn</i> : 11	LOC: 49° 35'; 99° 02'	DATE: 25.08.54	INST: ROM	COLL: J.J. Keleher
SITE: <i>S. atro</i> : X	LOC: 49° 42'; 98° 55'	DATE: 25.08.54	INST: ROM	COLL: J.J. Keleher
SITE: at Hwy 2 <i>C. inco</i> : 1	LOC: 49° 33'; 99° 05'	DATE: 29.08.82	INST: UMZ	COLL: I. Suthers
SITE: at Hwy 2 COLL: K.W. Stewart, K. Leavesley, I. Suthers <i>P. macu</i> : 2	LOC: 49° 33'; 99° 05'	DATE: 29.08.82	INST: UMZ	
SITE: <i>R. cata</i> : X <i>S. atro</i> : 21 <i>E. nigr</i> : X	LOC: 49° 41'; 98° 53'	DATE: 29.08.82	INST: UMZ	COLL: Field Ecology Class
SITE: 3km from mouth <i>N. flav</i> : 2	LOC: 49° 39'; 98° 58'	DATE: 11.06.84	INST: UMZ	COLL: K. Dyke, H. Cavadias
SITE: at Hwy 2 METHOD: Seine <i>L. corn</i> : X <i>N. dors</i> : X <i>P. prom</i> : 37 <i>R. cata</i> : 61 <i>S. atro</i> : X	LOC: 49° 33'; 99° 05' WT(°C): 11	DATE: 22.09.85	INST: UMZ DEPTH(m): 0.75   VEL(m/sec): 1.0	COLL: Biology of Fishes Class SUBS: muddy sand
SITE: at Hwy 2 METHOD: Seine <i>U. limi</i> : 1 <i>L. corn</i> : 292 <i>N. dors</i> : 130 <i>P. prom</i> : 63 <i>R. atra</i> : 72	LOC: 49° 33'; 99° 05' WT(°C): 12.8	DATE: 21.09.86	INST: UMZ DEPTH(m): 0.25   SUBS: mud, clay	COLL: Biology of Fishes Class
SITE: at Hwy 245 METHOD: Seine <i>L. corn</i> : 150 <i>N. dors</i> : 58 <i>P. prom</i> : 16 <i>R. atra</i> : 60 <i>S. atro</i> : 61	LOC: 49° 32'; 99° 09' WT(°C): 15	DATE: 30.04.87	INST: UMZ DEPTH(m): 0.4   SUBS: shale, gravel, silt	COLL: K.W. Stewart, B.M. Hom
SITE: S19 T8 R11 METHOD: Shock & seine <i>U. limi</i> : 14 <i>N. blen</i> : 173 <i>N. stra</i> : 18 <i>R. atra</i> : 4 <i>R. cata</i> : 4	LOC: 49° 39'; 98° 58' WT(°C): 10	DATE: 24.09.89	INST: UMZ DEPTH(m): 1.0   SUBS: mud, shale	COLL: Biology of Fishes Class
SITE: METHOD: Shock & seine <i>L. corn</i> : 413 <i>N. dors</i> : 4 <i>N. hdon</i> : 1 <i>N. hlep</i> : 1 <i>N. huds</i> : 165 <i>R. atra</i> : 35 <i>R. cata</i> : 3 <i>S. atro</i> : 131 <i>C. comm</i> : 46 <i>A. rupe</i> : 14 <i>E. nigr</i> : 8 <i>P. macu</i> : 2	LOC: 49° 39'; 98° 58'	DATE: 23.09.90	INST: UMZ	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Electroshocker <i>U. limi</i> : 4 <i>L. corn</i> : 83 <i>N. dors</i> : 17 <i>P. prom</i> : 4 <i>R. atra</i> : 22	LOC: 49° 33'; 99° 05' WT(°C): 11	DATE: 22.09.91	INST: UMZ SUBS: shale chips, cobble	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Seine <i>E. luci</i> : 1 <i>L. corn</i> : 208 <i>N. dors</i> : 52 <i>P. prom</i> : 360 <i>R. atra</i> : 4	LOC: 49° 33'; 99° 05' WT(°C): 11	DATE: 22.09.91	INST: UMZ SUBS: shale chips, cobble	COLL: Biology of Fishes Class
			<i>S. atro</i> : 59 <i>C. comm</i> : 25 <i>C. inco</i> : 12 <i>E. nigr</i> : 7	

SITE: at Hwy 2 METHOD: Electroshocker <i>U. limi</i> : 1 <i>L. corn</i> : 43 <i>P. prom</i> : 2 <i>R. atra</i> : 9 <i>R. cata</i> : 1	LOC: 49° 33'; 99° 05' WT(°C): 13.2	DATE: 20.09.92   INST: UMZ   DEPTH(m): 0.8 <i>S. atro</i> : 12 <i>C. comm</i> : 1 <i>C. inco</i> : 3 <i>E. nigr</i> : 1 SUBS: shale chips, silt	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Seine <i>L. corn</i> : 112 <i>N. dors</i> : 58 <i>R. atra</i> : 14 <i>S. atro</i> : 30 <i>C. comm</i> : 17 <i>M. anis</i> : 4 <i>C. inco</i> : 2 <i>E. nigr</i> : 20	LOC: 49° 33'; 99° 05' WT(°C): 13.2	DATE: 20.09.92   INST: UMZ   DEPTH(m): 0.8 SUBS: shale chips, silt	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Electroshocker <i>U. limi</i> : 1 <i>L. corn</i> : 226 <i>N. dors</i> : 9 <i>P. prom</i> : 20 <i>R. atra</i> : 13	LOC: 49° 33'; 99° 05' WT(°C): 12.5	DATE: 19.09.93   INST: UMZ   DEPTH(m): 1.0 <i>R. cata</i> : 1 <i>S. atro</i> : 27 <i>C. comm</i> : 16 <i>C. inco</i> : 12 <i>E. nigr</i> : 10 <i>P. macu</i> : 1 SUBS: shale chips, silt	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Seine <i>L. corn</i> : 470 <i>N. dors</i> : 60 <i>P. prom</i> : 17 <i>R. atra</i> : 16 <i>S. atro</i> : 33	LOC: 49° 33'; 99° 05' WT(°C): 12.5	DATE: 19.09.93   INST: UMZ   DEPTH(m): 1.0 SUBS: shale chips, silt <i>C. comm</i> : 2 <i>C. inco</i> : 1 <i>E. nigr</i> : 21	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Seine <i>L. corn</i> : 510 <i>N. dors</i> : 60 <i>R. atra</i> : 8 <i>S. atro</i> : 134 <i>C. comm</i> : 33 <i>C. inco</i> : 1 <i>E. nigr</i> : 39	LOC: 49° 33'; 99° 05' WT(°C): 14.5	DATE: 25.09.94   INST: UMZ   DEPTH(m): 1.0 SUBS: silt, gravel, shale	COLL: Biology of Fishes Class
SITE: at Hwy 2 METHOD: Electroshocker <i>U. limi</i> : 3 <i>L. corn</i> : 47 <i>N. dors</i> : 5 <i>R. atra</i> : 17 <i>S. atro</i> : 49	LOC: 49° 33'; 99° 05' WT(°C): 14.5	DATE: 25.09.94   INST: UMZ   DEPTH(m): 1.0 SUBS: silt, gravel, shale <i>C. comm</i> : X <i>E. nigr</i> : 39	COLL: Biology of Fishes Class

#### APPENDIX 5: SHELL RIVER COLLECTIONS

SITE: <i>P. prom</i> : X	LOC: 50° 58'; 101° 22'	DATE: 03.08.53   INST: ROM	COLL: B. Kooyman
SITE: <i>L. corn</i> : 28 <i>R. atra</i> : 29 <i>R. cata</i> : 27 <i>S. atro</i> : 6 <i>P. omis</i> : 3	LOC: 50° 58'; 101° 25' <i>E. nigr</i> : 10 <i>P. macu</i> : 16	DATE: 03.08.53   INST: ROM	COLL: B. Kooyman
SITE: <i>N. dors</i> : 4	LOC: 51° 35'; 101° 10'	DATE: 03.08.53   INST: ROM	COLL: B. Kooyman
SITE: <i>E. exil</i> : 1	LOC: 50° 58'; 101° 24'	DATE: 10.08.55   INST: ROM	COLL: J.J. Keleher
SITE: <i>R. atra</i> : 2	LOC: 51° 17'; 101° 14'	DATE: 10.08.55   INST: ROM	COLL: J.J. Keleher
SITE: <i>M. anis</i> : 6	LOC: 51° 18'; 101° 18'	DATE: 10.08.55   INST: ROM	COLL: J.J. Keleher
SITE: at Hwy 367 <i>I. cast</i> : X <i>L. corn</i> : 1 <i>N. hlep</i> : 1 <i>R. atra</i> : 1 <i>S. atro</i> : 1	LOC: 51° 31'; 101° 19' <i>C. inco</i> : 12 <i>P. macu</i> : X	DATE: 18.07.72   INST: UW	COLL: G.E.E. Moodie
SITE: at Hwy 594 <i>S. atro</i> : 1 <i>C. inco</i> : X	LOC: 51° 28'; 101° 20'	DATE: 18.07.72   INST: UW	COLL: G.E.E. Moodie
SITE: at Hwy 83 METHOD: Electroshocker <i>N. athe</i> : 2 <i>R. atra</i> : 3 <i>R. cata</i> : 13 <i>S. atro</i> : 1 <i>C. comm</i> : 13 <i>M. macr</i> : 3 <i>E. nigr</i> : 7 <i>P. macu</i> : 46	LOC: 50° 58'; 101° 20' WT(°C): 22	DATE: 05.07.89   INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: METHOD: Electroshocker <i>R. cata</i> : 12 <i>C. comm</i> : 5 <i>M. macr</i> : 1 <i>E. nigr</i> : 4 <i>P. macu</i> : 21	LOC: 50° 59'; 101° 21' WT(°C): 23	DATE: 05.07.89   INST: UMZ   DEPTH(m): 0.75   VEL(m/sec): 1.2 SUBS: sand, gravel, rocks	COLL: B.R. McCulloch, J.D. Tyson

SITE: E. of Roblin LOC: 51° 12'; 101° 16' DATE: 14.08.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 19 DEPTH(m): 0.4 VEL(m/sec): 0.5 SUBS: sand, rocks  
*I. cast:* 1 *L. corn:* 9 *N. dors:* 3 *P. prom:* 1 *R. atra:* 2 *R. cata:* 21 *C. comm:* 11 *M. macr:* 2 *L. lota:* 3 *E. nigr:* 6  
*P. macu:* 47

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#### APPENDIX 6: QU'APPELLE RIVER COLLECTIONS

DATE: 1893 COLL: Eigenmann & Eigenmann  
*N. blem:* X *N. hlep:* X *N. huds:* X *E. exil:* X *E. nigr:* X

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DATE: 1907 INST: CMN COLL: A. Halkett  
*E. luci:* X *N. huds:* X *N. stra:* X *P. prom:* X *C. comm:* X *P. omis:* X *P. pung:* X *E. exil:* X *E. nigr:* X *P. flav:* X  
*S. cana:* X *S. vitr:* X

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SITE: below Pasqua Lake DATE: 06.06.41 INST: ROM COLL: E. Moore  
*N. athe:* 37 *N. huds:* X *E. exil:* 11

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SITE: below Echo Lake DATE: 07.06.41 INST: ROM COLL: E. Moore  
*N. athe:* 13 *N. huds:* 11

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SITE: above Pasqua Lake DATE: 11.06.41 INST: ROM COLL: E. Moore  
*E. luci:* 3

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SITE: below Katepwo Lake DATE: 11.06.41 INST: ROM COLL: E. Moore  
*P. prom:* 5 *C. comm:* 2 *C. inco:* 5

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SITE: below Buffalo Pound Lake DATE: 22.06.59 INST: ROM COLL: J. Dosman  
*P. prom:* 450

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DATE: 1961 COLL: Doyle  
*E. exil:* X *P. flav:* X

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SITE: at Tantallon LOC: 50° 32'; 101° 50' DATE: 28.04.77 INST: ROM COLL: I. Godwin  
*I. cast:* 1

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DATE: 1981 INST: SMNH COLL: R. MacCulloch  
*P. prom:* X *C. inco:* X *P. pung:* X *E. exil:* X

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DATE: 1983 COLL: L. Brown  
*I. punc:* 1

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SITE: at Hwy 8 LOC: 50° 28'; 101° 44' DATE: 25.05.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 12 DEPTH(m): 1.0 VEL(m/sec): 0.22 SUBS: sand, gravel  
*N. stra:* 2 *P. prom:* 1 *S. atro:* 3 *P. macu:* 6

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SITE: at Hwy 9 LOC: 50° 30'; 102° 16' DATE: 25.05.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 11 DEPTH(m): 1.0 VEL(m/sec): 0  
*C. carp:* 1 *N. huds:* 1 *N. stra:* 2 *P. prom:* 46 *R. cata:* 1 *S. atro:* 6 *C. comm:* 1 *E. nigr:* 3

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SITE: at Hwy 600 LOC: 50° 29'; 101° 32' DATE: 15.08.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 18 DEPTH(m): 0.43 VEL(m/sec): 0  
*N. athe:* 5 *P. prom:* 2 *M. macr:* 1 *A. rupe:* 4 *E. nigr:* 2 *P. macu:* 4

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SITE: at Hwy 8 LOC: 50° 28'; 101° 44' DATE: 15.08.89 INST: UMZ COLL: B.R. McCulloch, J.D. Tyson  
 METHOD: Electroshocker WT(°C): 20 DEPTH(m): 0.47 VEL(m/sec): 0.34  
*L. corn:* 6 *N. stra:* 27 *R. cata:* 17 *S. atro:* 9 *C. comm:* 6 *A. rupe:* 1 *E. nigr:* 1 *P. macu:* 5

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**APPENDIX 7: COLLECTIONS FOR SEVERAL TRIBUTARIES IN THE ASSINIBOINE RIVER DRAINAGE**

OAK CREEK COLLECTIONS (Souris River tributary)

SITE: at Hwy 340 <i>N. dors</i> : 4	LOC: 49° 38' 99° 35'	DATE: 1973	INST: ROM	COLL: H. Valliant
SITE: at Hwy 340 COLL: K.W. & J.A. Stewart, D. Pannu <i>A. rupe</i> : 8 <i>E. exil</i> : 1 <i>E. nigr</i> : 2 <i>P. macu</i> : 1 <i>P. flav</i> : 10	LOC: 49° 38' 99° 34'	DATE: 28.08.84	INST: UMZ	
SITE: at Hwy 340 METHOD: Seine <i>U. limi</i> : 1 <i>L. corn</i> : X <i>N. dors</i> : 13 <i>N. hdon</i> : 1 <i>N. hlep</i> : 34 <i>P. omis</i> : 1 <i>C. inco</i> : 2 <i>E. exil</i> : 4 <i>E. nigr</i> : 2 <i>P. macu</i> : 3	LOC: 49° 38' 99° 34'	DATE: 22.09.85	INST: UMZ	COLL: Biology of Fishes Class
SITE: at Hwy 340 METHOD: Electroshocker <i>U. limi</i> : 3 <i>L. corn</i> : 71 <i>N. dors</i> : 2 <i>P. prom</i> : 38 <i>R. atra</i> : 2	WT(°C): 16.5	DEPTH(m): 0.5	SUBS: gravel, sand	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 340 METHOD: Shock into seine <i>U. limi</i> : 1 <i>L. corn</i> : 87 <i>N. dors</i> : 2 <i>P. prom</i> : 1 <i>R. atra</i> : 6 <i>E. nigr</i> : 4 <i>P. macu</i> : 2	WT(°C): 13	DEPTH(m): 0.8	SUBS: silt, gravel, shale	COLL: Biology of Fishes Class
SITE: at Hwy 340 METHOD: Electroshocker <i>U. limi</i> : 2 <i>L. corn</i> : 74 <i>N. dors</i> : 2 <i>R. atra</i> : 3 <i>R. cata</i> : 44	WT(°C): 14	DEPTH(m): 1.0	SUBS: silt to gravel, rocks in riffle	COLL: Biology of Fishes Class
SITE: at Hwy 340 METHOD: Seine <i>U. limi</i> : 1 <i>L. corn</i> : 355 <i>N. dors</i> : 7 <i>P. prom</i> : 5 <i>S. atro</i> : 185 <i>C. comm</i> : 169	WT(°C): 14	DEPTH(m): 1.0	SUBS: silt	COLL: Biology of Fishes Class
<i>C. inco</i> : 3 <i>E. exil</i> : 10 <i>E. nigr</i> : 62 <i>P. macu</i> : 2				

BIRDTAIL CREEK COLLECTIONS (Assiniboine River tributary)

LOC: 50° 53' 100° 42' <i>P. prom</i> : 4 <i>S. atro</i> : 2	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson	
LOC: 50° 53' 100° 19' <i>P. macu</i> : 12	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson	
LOC: 50° 51' 100° 42' <i>E. exil</i> : 2	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson	
LOC: 50° 51' 100° 42' <i>U. limi</i> : 4 <i>P. flav</i> : 1	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson	
LOC: 50° 51' 100° 42' <i>U. limi</i> : 4 <i>P. flav</i> : 1	DATE: 1979	INST: DFO	COLL: Kooyman & Hutchinson	
SITE: at Hwy 16 METHOD: Electroshocker <i>E. luci</i> : 3 <i>C. comm</i> : 5 <i>E. nigr</i> : 6 <i>P. macu</i> : 21	LOC: 50° 30' 100° 56' WT(°C): 26	DATE: 05.07.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 359 METHOD: Electroshocker <i>C. comm</i> : 1 <i>E. nigr</i> : 4 <i>P. macu</i> : 17	LOC: 50° 36' 100° 54' WT(°C): 18	DATE: 13.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
SITE: at Hwy 45 METHOD: Electroshocker <i>E. nigr</i> : 1 <i>P. macu</i> : 12	LOC: 50° 43' 100° 50' WT(°C): 17	DATE: 13.08.89	INST: UMZ	COLL: B.R. McCulloch, J.D. Tyson
		DEPTH(m): 0.4		VEL(m/sec): 0

## EPINETTE CREEK COLLECTIONS (Assiniboine River tributary)

SITE: IN SWPP LOC: 49° 43' 99° 14' DATE: 24.09.89 INST: UMZ COLL: Biology of Fishes Class  
 METHOD: Shock into seine WT(°C): 10 DEPTH(m): 1.0 VEL(m/sec): 1.0 SUBS: gravel, sand  
*N. dors*: 6 *R. cata*: 60 *S. atro*: 3 *C. comm*: 2 *E. nigr*: 2 *P. macu*: 1

SITE: IN SWPP LOC: 49° 43' 99° 14' DATE: 02.09.91 INST: UMZ COLL: B.R. McCulloch, G.F.  
 Hanke METHOD: Electroshocker WT(°C): 15 DEPTH(m): 1.0 VEL(m/sec): 0.56 SUBS: gravel, sand  
*N. dors*: 10 *N. hlep*: 1 *P. prom*: 1 *R. cata*: 60 *E. nigr*: 2

## ROLLING RIVER COLLECTIONS (Little Saskatchewan River tributary)

LOC: 50° 22' 99° 57' DATE: 1979 INST: DFO COLL: Kooyman & Hutchinson  
*E. nigr*: 5

LOC: 50° 32' 99° 41' DATE: 1979 INST: DFO COLL: Kooyman & Hutchinson  
*P. macu*: 13

LOC: 50° 32' 99° 43' DATE: 1979 INST: DFO COLL: Kooyman & Hutchinson  
*C. inco*: 35

## WASSAMIN CREEK COLLECTIONS (Little Saskatchewan River tributary)

LOC: 50° 41' 100° 18' DATE: 1979 INST: DFO COLL: Kooyman & Hutchinson  
*C. inco*: 6 *E. nigr*: 7

LOC: 50° 31' 100° 03' DATE: 1979 INST: DFO COLL: Kooyman & Hutchinson  
*P. macu*: 6

## MOOSE MOUNTAIN CREEK COLLECTIONS (Souris River tributary)

SITE: Moose Mountain Creek DATE: 1954 INST: ROM COLL: F.M. Atton  
*M. marg*: X

SITE: Moose Mountain Creek DATE: 1970 INST: NMC COLL: T.A. Willock  
*L. corn*: X *N. stra*: X *P. prom*: X *C. comm*: X *C. inco*: X *E. exil*: X

SITE: Moose Mountain Creek DATE: 1976 COLL: G. Pierce  
*E. luci*: X *L. corn*: X *N. stra*: X *P. prom*: X *C. comm*: X *P. omis*: X *E. nigr*: X *P. macu*: X *P. flav*: X

## LONG CREEK COLLECTION (Souris River tributary)

SITE: Long Creek DATE: 1976 COLL: G. Pierce  
*C. comm*: X *C. inco*: X *P. flav*: X

## PIPESTONE CREEK COLLECTIONS (Plum Creek tributary)

SITE: Pipestone Creek DATE: 1976 COLL: D. Chaskavitch  
*M. marg*: X

SITE: Pipestone Creek DATE: 1976 INST: SMNH COLL: R. Hooper  
*C. inco*: X *E. exil*: X

## ANTLER RIVER COLLECTION (Souris River tributary)

SITE: Antler River DATE: 22.07.55 INST: ROM COLL: W.B. & M. Scott  
*L. corn*: 6 *P. prom*: 1 *C. comm*: 3 *E. exil*: 1

## MOOSE JAW CREEK COLLECTION (Qu'Appelle River tributary)

SITE: Moose Jaw Creek DATE: 1961 INST: NMC COLL: F.R. Cook  
*P. prom*: X *C. inco*: X

## SCISSORS CREEK COLLECTIONS (Qu'Appelle River tributary)

DATE: 1973 COLL: R. Mikolas  
*S. atro:* X

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DATE: 1982 COLL: C. Dunn  
*S. atro:* X *R. atra:* X *L. corn:* X *C. comm:* X *C. inco:* X *E. nigr:* X

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## WHITESAND RIVER COLLECTIONS (Assiniboine River tributary)

DATE: 1954 INST: ROM COLL: D.H. Edwards  
*L. corn:* X *A. nebu:* X

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DATE: 1955 COLL: Atton & Johnson  
*L. corn:* X

---

DATE: 1962 INST: ROM COLL: D.H. Edwards  
*I. cast:* X

---

DATE: 1982 COLL: J. Stock  
*M. marg:* X

---

DATE: 1982 COLL: D. Sakal  
*N. athe:* X *E. nigr:* X

---

DATE: 1983 COLL: R. E. Jensen  
*L. corn:* X *P. prom:* X *C. comm:* X *C. inco:* X *E. exil:*; X *E. nigr:* X

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APPENDIX 8: COLLECTIONS FROM THE QU'APPELLE LAKES AND LAKE OF THE PRAIRIES

SITE: Buffalo Pound Lake DATE: 1959 INST: ROM COLL: R.P. Johnson  
*H. alos* *E. luci* *N. blen* *S. cana*

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SITE: Buffalo Pound Lake DATE: 1959 INST: ROM COLL: F.M. Atton  
*S.vitr*

---

SITE: Buffalo Pound Lake DATE: 1959 COLL: R.P. Johnson and G.D. Koshinsky  
*E. luci* *N. athe* *N. blen* *P.prom* *R. cata* *C. comm* *I. cypr* *L.lota* *C. inco* *P. pung*  
*C. rice* *E. exil* *P.flav* *S.vitr* *S. cana*

---

SITE: Buffalo Pound Lake DATE: 1963 COLL: R. P. Johnson  
*I. cypr*

---

SITE: Buffalo Pound Lake DATE: 1969 COLL: D.W. Pegg  
*C. carp*

---

SITE: Buffalo Pound Lake DATE: 1970 INST: CMN COLL: C.G. Gruchy  
*I. cypr*

---

SITE: Buffalo Pound Lake DATE: 1981 COLL: J.K. Durkin  
*N. athe* *P. prom* *C. comm* *P. pung*

---

SITE: Pasqua Lake DATE: 1938 INST: ROM COLL: D.S. Rawson  
*N. athe* *N. huds* *P. pung* *E. exil* *E. nigr*

---

SITE: Pasqua Lake DATE: 1941 INST: ROM COLL: J.E. Moore  
*E. luci* *N. athe* *N. huds* *E. exil*

---

SITE: Pasqua Lake DATE: 1955 INST: ROM COLL: W.B. and M. Scott  
*C. clup* *L.lota* *E. nigr*

---

SITE: Pasqua Lake <i>E. luci</i> <i>C. clup</i> <i>C. arte</i> <i>A. mel</i> <i>P. omis</i> <i>L.lota</i>	DATE: 1962 <i>C. carp</i> <i>N. athe</i> <i>N. huds</i> <i>P.prom</i> <i>C. cypr</i> <i>C. inco</i> <i>P. pung</i> <i>E. exil</i> <i>E. nigr</i> <i>P.flav</i>	COLL: F.M. Atton and R.P. Johnson <i>C. comm</i> <i>I. cypr</i> <i>M. macr</i> <i>S.vitr</i>
SITE: Pasqua Lake <i>C. clup</i> <i>C. carp</i> <i>N. huds</i> <i>C. inco</i> <i>P. pung</i> <i>E. exil</i>	DATE: 1963 <i>P.prom</i> <i>C. cypr</i> <i>C. comm</i> <i>I. cypr</i> <i>P.flav</i> <i>S.vitr</i>	COLL: R.P. Johnson <i>M. macr</i> <i>A. mel</i> <i>P. omis</i> <i>L.lota</i>
SITE: Pasqua Lake <i>C. carp</i> <i>N. athe</i> <i>N. huds</i>	DATE: 1970 <i>P.prom</i> <i>C. comm</i> <i>P. omis</i>	INST: CMN COLL: T.A. Willock <i>C. inco</i> <i>P. pung</i> <i>E. exil</i> <i>S. cana</i>
SITE: Pasqua Lake <i>E. luci</i>	DATE: 1971	INST: UMZ COLL: C.C. Lindsey →
SITE: Round Lake <i>C. carp</i>	DATE: 1954	COLL: M.L. Armbruster
SITE: Round Lake <i>A. rupe</i>	DATE: 1957	INST: ROM COLL: F.M. Atton
SITE: Round Lake <i>C. carp</i>	DATE: 1959	INST: ROM COLL: F.M. Atton
SITE: Round Lake <i>H. terg.</i> <i>E. luci</i> <i>C. arte</i> <i>M. macr</i> <i>P. omis</i> <i>L.lota</i>	DATE: 1962 <i>C. carp</i> <i>N. athe</i> <i>N. hlep</i> <i>N. huds</i> <i>N. stram</i> <i>C. inco</i> <i>P. pung</i> <i>A. rupe</i> <i>E. exil</i> <i>E. nigr</i> <i>P.prom</i> <i>P.flav</i>	COLL: F.M. Atton and R.P. Johnson <i>C. comm</i> <i>I. cypr</i> <i>S.vitr</i>
SITE: Round Lake <i>I. cast</i>	DATE: 1980	COLL: R.E. Jensen
SITE: Round Lake <i>N. athe</i> <i>N. huds</i> <i>P.prom</i>	DATE: 1981 <i>P. pung</i> <i>E. exil</i> <i>E. nigr</i>	INST: SMNH COLL: R. MacCulloch and W. Russon
SITE: Echo Lake <i>E. luci</i> <i>N. athe</i> <i>N. huds</i>	DATE: 1907 <i>P.prom</i> <i>P. omis</i> <i>P. pung</i>	INST: CMN COLL: A. Halkett
SITE: Echo Lake <i>N. huds</i> <i>L. lota</i>	DATE: 1938 <i>S. vitr</i>	INST: ROM COLL: D.S. Rawson
SITE: Echo Lake <i>N. huds</i> <i>I. cypr</i>	DATE: 1941 <i>P. pung</i> <i>E. nigr</i> <i>P.flav</i>	INST: ROM COLL: D.S. Rawson
SITE: Echo Lake <i>I. cypr</i>	DATE: 1952	INST: ROM COLL: W.B. Scott
SITE: Echo Lake <i>I. cypr</i>	DATE: 1953	INST: ROM COLL: F.M. Atton
SITE: Echo Lake <i>E. luci</i> <i>N. athe</i> <i>N. huds</i>	DATE: 1955 <i>P.prom</i> <i>C. comm</i> <i>L.lota</i>	INST: ROM COLL: W.B. and M. Scott <i>P. pung</i> <i>E. nigr</i> <i>P.flav</i> <i>S.vitr</i>
SITE: Echo Lake <i>E. luci</i>	DATE: 1959	INST: ROM COLL: P.H. Edwards
SITE: Echo Lake <i>E. luci</i> <i>C. clup</i> <i>C. arte</i> <i>P. omis</i> <i>L.lota</i> <i>C. inco</i>	DATE: 1962 <i>C. carp</i> <i>N. athe</i> <i>N. huds</i> <i>P.prom</i> <i>C. cypr</i> <i>P. pung</i> <i>E. exil</i> <i>E. nigr</i> <i>P.flav</i> <i>S.vitr</i>	COLL: F.M. Atton and R.P. Johnson <i>C. comm</i> <i>I. cypr</i> <i>M. macr</i>
SITE: Echo Lake <i>C. clup</i> <i>C. carp</i> <i>N. athe</i> <i>L.lota</i> <i>C. inco</i> <i>P. pung</i>	DATE: 1963 <i>N. huds</i> <i>P.prom</i> <i>C. cypr</i> <i>C. comm</i> <i>I. cypr</i> <i>E. exil</i> <i>P.flav</i> <i>S.vitr</i>	COLL: R.P. Johnson <i>M. macr</i> <i>A. mel</i> <i>P. omis</i>
SITE: Echo Lake <i>I. cypr</i>	DATE: 1965	INST: CMN COLL: R.P. Johnson

SITE: Echo Lake <i>E. exil</i>	DATE: 1981	INST: SMNH	COLL: R. MacCulloch and W. Russon
SITE: Last Mountain Lake <i>N. athe</i> <i>C. inco</i> <i>P. pung</i>	DATE: 1938	INST: ROM	COLL: D.S. Rawson
SITE: Last Mountain Lake <i>E. luci</i> <i>C. carp</i> <i>C. comm</i>	DATE: 1942	INST: ROM <i>I. cypr</i> <i>L.lota</i> <i>P.flav</i>	COLL: D.S. Rawson <i>S.vitr</i>
SITE: Last Mountain Lake <i>L.lota</i> <i>S.vitr</i>	DATE: 1949	INST: ROM	COLL: D.S. Rawson
SITE: Last Mountain Lake <i>E. luci</i> <i>C. clup</i> <i>N. athe</i> <i>P.flav</i> <i>S.vitr</i>	DATE: 1950-51	INST: ROM <i>N. huds</i> <i>P.prom</i> <i>C. comm</i>	COLL: F.M. Atton and A.R. Murray <i>I. cypr</i> <i>P. omis</i> <i>L.lota</i> <i>P. pung</i> <i>E. exil</i>
SITE: Last Mountain Lake <i>I. cypr</i>	DATE: 1955	INST: ROM	COLL: F.M. Atton
SITE: Last Mountain Lake <i>I. cypr</i>	DATE: 1963	COLL: R.P. Johnson	
SITE: Last Mountain Lake <i>C. clup</i> <i>P. flav</i>	DATE: 1971	COLL: C.C. Lindsey	
SITE: Last Mountain Lake <i>E. luci</i> <i>C. clup</i> <i>C. carp</i> <i>E. exil</i> <i>E. nigr</i> <i>S.vitr</i>	DATE: 1974	COLL: N.W. Smith <i>N. athe</i> <i>N. huds</i> <i>P.prom</i> <i>C. comm</i> <i>I. cypr</i> <i>L.lota</i> <i>C. inco</i> <i>P. pung</i>	
SITE: Crooked Lake <i>M. macr</i>	DATE: 1960	INST: ROM	COLL: F.M. Atton
SITE: Crooked Lake <i>E. luci</i> <i>C. clup</i> <i>C. carp</i> <i>M. macr</i> <i>A. mel</i> <i>P. omis</i>	DATE: 1961	COLL: J.P. Doyle <i>N. athe</i> <i>N. hlep</i> <i>N. huds</i> <i>N. stra</i> <i>P.prom</i> <i>C. cypr</i> <i>C. comm</i> <i>I. cypr</i> <i>L.lota</i> <i>P. pung</i> <i>A. rupe</i> <i>E. exil</i> <i>P.flav</i> <i>P. macu</i> <i>S.vitr</i>	
SITE: Crooked Lake <i>H. terg.</i> <i>E. luci</i> <i>C. clup</i> <i>C. comm</i> <i>I. cypr</i> <i>M. macr</i> <i>P.flav</i> <i>P. macu</i> <i>S.vitr</i>	DATE: 1962	COLL: F.M. Atton and R.P. Johnson <i>C. arti</i> <i>C. carp</i> <i>N. athe</i> <i>N. hlep</i> <i>N. huds</i> <i>N. stra</i> <i>P.prom</i> <i>C. cypr</i> <i>A. mel</i> <i>P. omis</i> <i>L.lota</i> <i>C. inco</i> <i>P. pung</i> <i>A. rupe</i> <i>E. exil</i> <i>E. nigr</i>	
SITE: Crooked Lake <i>N. athe</i> <i>C. inco</i> <i>A. rupe</i>	DATE: 1981	INST: SMNH <i>E. exil</i>	COLL: R. MacCulloch and W. Russon
SITE: Katepwa Lake <i>E. nigr</i>	DATE: 1941	INST: ROM	COLL: J.E. Moore
SITE: Katepwa Lake <i>A. mel</i> <i>P. omis</i>	DATE: 1955	INST: ROM	COLL: R.P. Johnson
SITE: Katepwa Lake <i>E. luci</i> <i>C. clup</i> <i>C. arti</i> <i>C. inco</i> <i>P. pung</i> <i>E. exil</i>	DATE: 1962	COLL: F.M. Atton and R.P. Johnson <i>C. carp</i> <i>N. athe</i> <i>N. huds</i> <i>P.prom</i> <i>C. comm</i> <i>I. cypr</i> <i>P. omis</i> <i>L.lota</i> <i>E. nigr</i> <i>P.flav</i> <i>S.vitr</i>	
SITE: Katepwa Lake <i>N. huds</i> <i>P. omis</i> <i>E. exil</i>	DATE: 1981	INST: SMNH	COLL: R. MacCulloch and W. Russon
SITE: Lebret Lake <i>E. luci</i> <i>C. clup</i> <i>C. arti</i> <i>C. inco</i> <i>P. pung</i> <i>E. exil</i>	DATE: 1962	COLL: F.M. Atton and R.P. Johnson <i>C. carp</i> <i>N. athe</i> <i>N. huds</i> <i>P.prom</i> <i>C. comm</i> <i>I. cypr</i> <i>P. omis</i> <i>L.lota</i> <i>E. nigr</i> <i>P.flav</i> <i>S.vitr</i>	
SITE: Lebret Lake <i>C. comm</i> <i>L.lota</i> <i>E. exil</i>	DATE: 1981	INST: SMNH	COLL: R. MacCulloch and W. Russon
SITE: Lake of the Prairies <i>H. terg</i> <i>C. carp</i> <i>N. athe</i>	DATE: 1983	COLL: R.E. Jensen <i>N. huds</i> <i>M. anis</i> <i>M. macr</i> <i>C. inco</i> <i>A. rupe</i> <i>E. exil</i> <i>P.flav</i>	