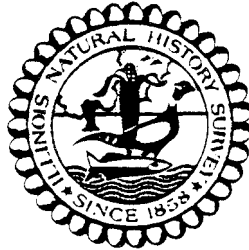


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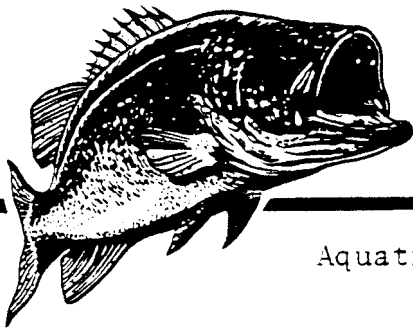
KANKAKEE RIVER FISHES OF THE BRAIDWOOD
STATION AQUATIC MONITORING AREA
AUGUST, 1983



Aquatic Biology Section Technical Report

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ILLINOIS NATURAL HISTORY SURVEY
CHAMPAIGN, ILLINOIS

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by

THOMAS M. SKELLY

and

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ABSTRACT

Forty-five species of fishes representing nine families were collected from the Kankakee River and Horse Creek from within the Braidwood Station Aquatic Monitoring Area in August 1983. An average of 49 (46-53) species were found in previous years. All species collected have been found in at least three previous August samples. None of the species is presently on the Illinois list of endangered or threatened fishes. The presence of the pallid shiner, Notropis amnis, now found in five consecutive collections, suggests that a low-level population of this rare minnow continues to reside at Station 5 of the monitoring area. Total biomass of fishes was 220 kg compared to an average of 255 kg (131-414 kg) from previous years. Total abundance was 2,190 fish. Average abundance from previous years was 5,084 fish (1,072-12,933 fish). Quillback, carp, golden redhorse, smallmouth bass, and silver redhorse accounted for 77.2% of the total biomass. Unusual to the 1983 sample was the large contribution of quillback to both abundance and biomass values. Low water levels and the loss of a dominant year class of fish were probable factors in the decline of shorthead redhorse abundance and biomass noted in August 1983. Striped shiner, spotfin shiner, bluntnose minnow, smallmouth bass, sand shiner, and quillback accounted numerically for 61.6% of all fish caught. Significant differences were found between stations for the abundance, but not biomass, of fishes from electrofishing samples. Biomass, but not abundance values, were significantly different between stations for seine collections. Three-way analysis of

variance revealed highly significant differences between years and stations for both biomass and abundance of seine and electrofishing collections for years 1977-1983. For electrofishing, 1983 collections were intermediate to other years by biomass and the second lowest by abundance. For seine collections, the 1983 values were the lowest of all years except 1982 for both biomass and abundance. Low water level was probably the major factor affecting fish distribution in the Kankakee River and Horse Creek in 1983.

INTRODUCTION

The 1983 fisheries survey of the Kankakee River and Horse Creek within the Braidwood Station Aquatic Monitoring Area marks the sixth year of collections by the Illinois Natural History Survey to assess the status of fish populations in the vicinity of Commonwealth Edison's riverside intake and discharge structures near Custer Park, Will County, Illinois. The Kankakee-Iroquois River system in Illinois has been rated as excellent based on species composition of fishes with particular reference to species diversity of the Kankakee River and most of its tributaries (Smith 1971). Previous studies from within the Braidwood study area (Sule et al. 1978, 1979, 1980; Skelly and Pescitelli 1981, Skelly and Epifanio 1982) have supported conclusions of excellence based on species composition and abundance of fishes, marking the Kankakee, biologically, as one of the finest rivers in Illinois.

Given the dynamic nature of this high quality river ecosystem, the addition of these yearly data sets affords us the opportunity to study its natural fluctuations. It is with regard to the changing values of environmental parameters and the dynamics of a fish's life history that this research is pursued.

MATERIALS AND METHODS

Two sampling methods, electrofishing and seining, were used for collecting Kankakee River fishes during 1-11 August 1983. These same methods were used in previous fisheries investigations in this series (Sule et al. 1978, 1979, 1980, Skelly and Pescitelli 1981, Skelly and Epifanio 1982).

A boat-mounted, boom-type electrofisher which employed a 230-volt, 3000 watt, 3-phase A.C. generator as a power source was used to sample adult and juvenile fishes. At Locations 1, 5, and 6 (Figure 1) each station (L and R, left or right bank as one looks upstream) was electrofished for one-half hour covering a distance of 152.4 meters (500 ft) representing one unit of effort. Because of the proximity of locations 3 and 4, these areas were sampled for only 15 minutes, each covering one-half the unit distance. The entire width of Horse Creek (Location 2) was electrofished from its mouth to a point 304.8 meters (1000 ft) upstream for a period of one hour, representing two units of effort. The boat driver and two other persons captured stunned fish with 12.7-mm (0.5 in.) mesh dip nets. Each electrofishing station was shocked four times, with a two-day repopulation period between each replicate. Electrofishing was conducted with the first "run" of each replicate made in a downstream direction through the middle of the shocking zone. The second "run" at the station was taken proceeding upstream, adjacent to the first run and as close to the bank as water depth would allow. The third "run" was made in a downstream direction outside of, but adjacent to, the two previous runs. This sequence of runs was repeated until the desired length of time had elapsed. The unit area shocked was equivalent to 0.4 hectare (1 acre).

Seine samples were taken at two sites within each sampling station twice within the two-week sampling period, representing four replicates per station. Seining was accomplished using a 7.65 x 1.22-m (25 x 4 ft) nylon seine with a 1.22 x 1.22 x 1.22-m (4 x 4 x 4 ft) bag. The seine was constructed from King 4.76-mm (3/26

in.) square mesh. A shoreline distance of 15 meters (49 ft) was seined in a downstream direction with the first haul being taken downstream of the second. All small fish collected by seine were preserved in formalin and returned to the laboratory for analysis. Large fish were processed in the field and released.

All fish were identified, measured for length and weight, and examined for parasites. Fish were released at the station where they were collected. Dissolved oxygen, water temperature, water velocity, pH, turbidity, and conductivity were measured at each station at the time of each collection. These values are tabulated in Appendices A and B.

A condition factor was calculated for each fish by the following equation:

$$K (TL) = \frac{\text{weight (g)} \times 100,000}{\text{total length (mm)}^3}$$

Each fish collected and its K factor are listed in Appendix C. Diversity indices (Shannon 1948) were computed for collections taken at each station for electrofishing and seine catches, and compared to those calculated in previous years.

Distribution and abundance of fishes were analyzed statistically by analysis of variance. Comparisons were made on a catch-per-unit-effort basis using $\ln(X+1)$ transformations of weight and numbers. August 1983 results were subjected to a one-way analysis of variance with station as the main effect. Three-way analysis of variance models were used with year, station, and replicate as independent class variables for 1977-1983 data. Various environmental parameters were included as covariables in all models. Comparisons of means were made with Duncan's Multiple

Range Test. Results are considered significant at the $P < 0.05$ level.

RESULTS AND DISCUSSION

CATCH INFORMATION

Forty-five species of fishes representing nine families were collected from the Braidwood Aquatic Monitoring Area in August 1983 (Table 1). An average of 49 (46-53) species were found in five previous August samples. All species found in 1983 have been present in at least three previous August collections. None of the species is on the Illinois list of endangered or threatened fishes. The presence of the pallid shiner, Notropis amnis (now found in five consecutive collecting periods), suggests that a low-level population of this rare species continues to reside in the Kankakee River specifically at location 5 of the Braidwood Station Aquatic Monitoring Area.

Total biomass of fishes collected by both methods combined totaled 220 kg (Table 1) accountable primarily to quillback (Carpilodes cyprinus), 36.0%; carp (Cyprinus carpio), 16.0%; golden redhorse (Moxostoma erythrurum), 11.6%; smallmouth bass (Micropterus dolomieu), 8.1%; and silver redhorse (M. anisurum), 5.5%. The average total biomass from previous years was 255 kg (131-414 kg). The total number of fish collected (2,190) was represented primarily by striped shiner (Notropis chrysocephalus), 18.0%; spottin shiner (NB spilopterus), 11.6%; bluntnose minnow (Pimephales notatus), 9.8%; smallmouth bass, 8.4%; sand shiner (N. stramineus), 7.5%; and quillback, 6.3%. Total abundance from previous years averaged 5,084

fish (1,072-12,933). Excluding the large 1977 sample, influenced by the large seine catch, the mean abundance was 3,122 fish (1,072-4,430).

Dominant fishes by abundance and biomass (Tables 2 and 3) collected by electrofishing at each station are similar to those collected in previous years. Quillback, however, were present in number and biomass far greater than in any other sample. In contrast to many other August samples, shorthead redhorse (M. macrolepidotum) was nearly absent from collections in 1983. Only 15 shorthead redhorse were taken in four electrofishing samples, in comparison with 223 collected just 2 years previous. Few (22) were collected in 1982, attributable in part, to the low water levels. It was surmised at that time that shorthead redhorse abandoned shoreline electrofishing areas to seek deeper, more swiftly flowing waters. Low water during 1983 (Figure 2) is again suggested as a major factor influencing shorthead redhorse distribution. Ancillary electrofishing in a mid-river riffle near Station 1 (a known habitat for shorthead redhorse) did raise several more of these fish, suggesting that these fish were seeking more preferred sites (swifter water) than those afforded in our electrofishing stations. Also, the 1977 year class was a dominant year class for shorthead redhorse, and, as adults, contributed greatly to total abundance and biomass in previous collections (Sule et al. 1980, Skelly and Pescitelli 1981). These 1977 year class fish would have been age 6+ during the present August collection which approaches the known average maximum lifespan of 6-7 years for this species in the Kankakee River (Sule et al. 1980). None of the 18 fish examined in 1983 were older than age 5+ (3 = age 1+, 2 = age 2+, 6 = age 3+, 4 =

age 4+, 3 = age 5+); therefore, it appears that the strong 1977 year class may have expired with the resultant loss of shorthead redhorse biomass from the population.

Smallmouth bass, one of the primary sport fishes of the Kankakee River, was a major component of the total abundance of fishes in the electrofishing catch in 1983, and although the percentage of large adults was lower than in 1982, abundant young-of-the-year were indicative of a successful spawn. Channel catfish were not collected by electrofishing, a reflection of the low water levels in the study area.

One-way analysis of variance of electrofishing results from 1983 (Table 4) showed that no significant differences ($P \leq 0.05$) existed between stations on an abundance basis; however, differences between stations by biomass were noted. Duncan's multiple range tests showed these station biomass means to be broadly overlapping (Table 5). However, a trend established previously is still evident, i.e., that Stations 1L vs 1R and 6L vs 6R (stations on opposite sides of the river at the same locations) were significantly different from each other. Reduced biomass at Station 2 was a result, in part, of low water levels and increased sand deposition which reduced the total amount of available habitat and electrofishable area within the mouth of Horse Creek.

No significant differences were noted between stations for the biomass of the seine catch; however, abundances of fish in the seine catches at various stations were significantly different (Table 4). These values, as shown in electrofishing biomass

comparisons, were broadly overlapping in their similarities (Table 5).

The three-way analysis of variance with the main effects of year, station, and replicate were significant models for both electrofishing and seine methods, each showing strongly significant year and station effects for both abundance and biomass estimates (Table 6). Also, for the seine collections, a strong year-station interaction effect was evident for both abundance and biomass, meaning that certain stations were significantly more productive for fish biomass during some years than during others.

The 1983 total biomass for electrofishing collections was shown to be significantly lower than that of the 1981 and 1977 collections, and greater than the total biomass from the 1978 survey, but not significantly different than the 1982 or 1979 samples (Table 7). Stations 1L and 6L were the dominant areas (Table 7) due to the occurrence of the cobble habitat within these stations. Each year these areas yield considerably more fish biomass than other stations in the study area, especially during years of high water. The dominant 1981 and 1977 collections were accompanied by high discharge levels compared to the remaining years which all had similarly low discharges during fish collections (Figure 3).

Abundance results for the same periods do not show the same trend. The 1983 abundance of fishes collected by electrofishing was significantly lower than all other years except 1982 which had previously been the lowest year for abundance (Table 7). Significantly greater numbers of fish collected by electrofishing were found at left-side-of-the-river (L) stations, and Horse Creek

abundance was intermediate to left and right-side stations. A second model was run with the incorporation of discharge parameters which were again shown to be important factors regarding abundance of fishes collected by electrofishing (Table 8).

Seine abundance and biomass were low again in 1983 as compared to 1977-1981 values; however, some recovery in the abundance values from 1982 was evident (Table 9). Low numbers of fish caught in 1982 may have been a result of mortality caused by extremely high late winter and spring water levels (Figure 3). Despite a high, extended discharge event at the end of 1982, relatively low discharge during all of 1982 may, in part, be responsible for the slight recovery of minnows in 1983. The presence of numerous small striped shiners was indicative of a successful spawn. The same trend was not evident for rosyface shiner (Notropis rubellus) which has mimicked the presence of the striped shiner in the past years, but was nearly absent in the 1983 survey. This species may have been in areas of current greater than from which we sampled. Discharge has been observed to be a major factor affecting the distribution of minnows (Starrett 1951). Also, species associations have been shown to be transitory, changing as environmental conditions change; therefore, microhabitat usage and species interactions are probably more a response to physico-chemical limiting factors than to biotic influences (Matthews and Hill 1980).

The mean condition factor, $K(TL)$, for each species (Table 10) was similar to values for those species which Carlander (1969, 1977) discusses. Extremes in sizes and differences in condition of individual fish are reflected in the ranges of condition factors found. Diversity of fishes at each station changed little from

that of 1982 (Table 11). Station 6L, however, dropped substantially, a factor of both electrofishing and seine diversities. Extremely low water at that station was probably the major influence. Ninety-one fish were seined in hauls from Horse Creek in the August 1983 collections versus the eight fish from 1982. The diversity of the seine catch in Horse Creek, however, decreased to its lowest value since the surveys were initiated (Table 10). The sand encroachment in combination with low water levels no doubt reduces the diversity of available habitats. The long-term impact of this deposition on the minnow population remains unclear. The dynamics of minnow distribution and abundance will continue to be an area of interest in these river investigations.

SUMMARY

1. Forty-five species of fishes representing nine families were collected from the Kankakee River and Horse Creek from within the Braidwood Station Aquatic Monitoring Area in August 1983. An average of 49 (46-53) species were found in previous years.
2. All species collected have been found in at least three previous August samples. None of the species are presently on the Illinois list of endangered or threatened fishes. The presence of the pallid shiner, Notropis amnis (now found in five consecutive collections), suggests that a low level population of this rare minnow continues to reside at Station 5 of the monitoring area.
3. Total biomass of fishes was 220 kg compared to an average of 255 kg (131-414 kg) from previous years.
4. Total abundance was 2190 fish. Average abundance from previous years was 5084 fish (1072-12933 fish).
5. Quillback, carp, golden redhorse, smallmouth bass, and silver redhorse accounted for 77.2% of the total biomass. Unusual to the 1983 sample was the large contribution of quillback to both abundance and biomass values. Low water levels and the loss of a dominant year class of fish were probable factors in the decline of shorthead redhorse abundance and biomass collected in August 1983.
6. Striped shiner, spotfin shiner, bluntnose minnow, smallmouth bass, sand shiner, and quillback accounted numerically for 61.6% of all fish caught.

7. Significant differences were found between stations for the abundance, but not biomass, of fishes from electrofishing samples. Biomass, but not abundance values, were significantly different between stations for seine collections.
8. Three-way analysis of variance revealed highly significant differences between years and stations for both biomass and abundance of seine and electrofishing collections for years 1977-1983. For electrofishing, 1983 collections were intermediate to other years by biomass and the second lowest by abundance. For seine collections, the 1983 values were the lowest of all years except 1982 for both biomass and abundance.
9. Low water level was probably the major factor affecting fish distribution in the Kankakee River and Horse Creek in 1983.

LITERATURE CITED

- Carlander, K. D. 1969. Handbook of Freshwater Fishery Biology, Vol. 1. Iowa State University Press, Ames. 752 pp.
- Carlander, K. D. 1977. Handbook of Freshwater Fishery Biology, Vol. 2. Iowa State University Press, Ames. 431 pp.
- Matthews, W.J. and L.G. Hill. 1980. Habitat partitioning in the fish community of a southwestern river. The Southwestern Naturalist 25:51-66.
- Shannon, C.E. 1948. A mathematical theory of communication. Bell System Technical Journal 27:379-423 and 623-656.
- Skelly, T.M. and S.M. Pescitelli. 1981. Sec. 4. Fishes of the Kankakee River and Horse Creek. *in* R.W. Larimore and T.M. Skelly (Eds.). Kankakee River Aquatic Monitoring Program for the Braidwood Station, August 1981. Illinois Natural History Survey, Champaign, Illinois.
- Skelly, T.M. and J.M. Epifanio. 1982. Kankakee River fishes of the Braidwood Aquatic Monitoring Area, August 1982. Illinois Natural History Survey, Champaign, Illinois.
- Smith, P.W. 1979. The fishes of Illinois. University of Illinois Press, Urbana, Illinois. 341 pp.
- Starrett, W. C. 1951. Some factors affecting the abundance of minnows in the Des Moines River, Iowa. Ecology 32:13-24.
- Sule, M.J., D. Myrick, J. Smith, and T. Skelly. 1978. Sec. 4.1. Adult and juvenile fish. *in* R.W. Larimore and M.J. Sule (Eds.). Construction and preoperational aquatic monitoring program for the Kankakee River. Braidwood Station first annual report. Illinois Natural History Survey, Champaign, Illinois.
- _____, _____, T.M. Skelly, J.L. Smith, and S.M. Pescitelli. 1979. Sec. 6. Adult and juvenile fishes of the Kankakee River and Horse Creek. *in* R.W. Larimore and M.J. Sule (Eds.). Construction and preoperational aquatic monitoring program for the Kankakee River. Braidwood Station second annual report. Illinois Natural History Survey, Champaign, Illinois.
- _____, _____, _____, and S.M. Pescitelli. 1980. Sec. 6. Adult and juvenile fishes of the Kankakee River and Horse Creek. *in* R.W. Larimore and M.J. Sule (Eds.). Construction and preoperational aquatic monitoring program for the Kankakee River. Braidwood Station third annual report. Illinois Natural History Survey, Champaign, Illinois.

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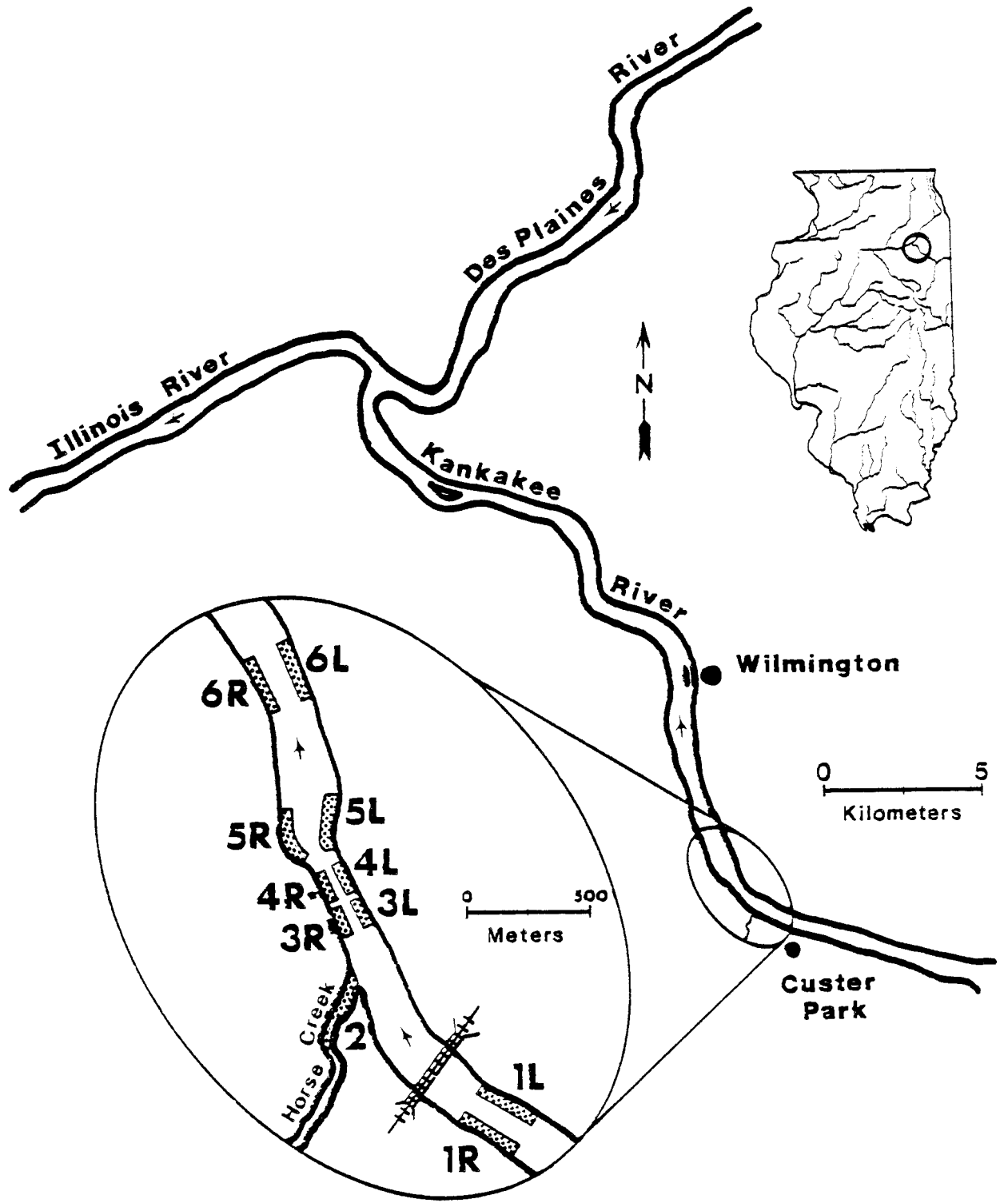
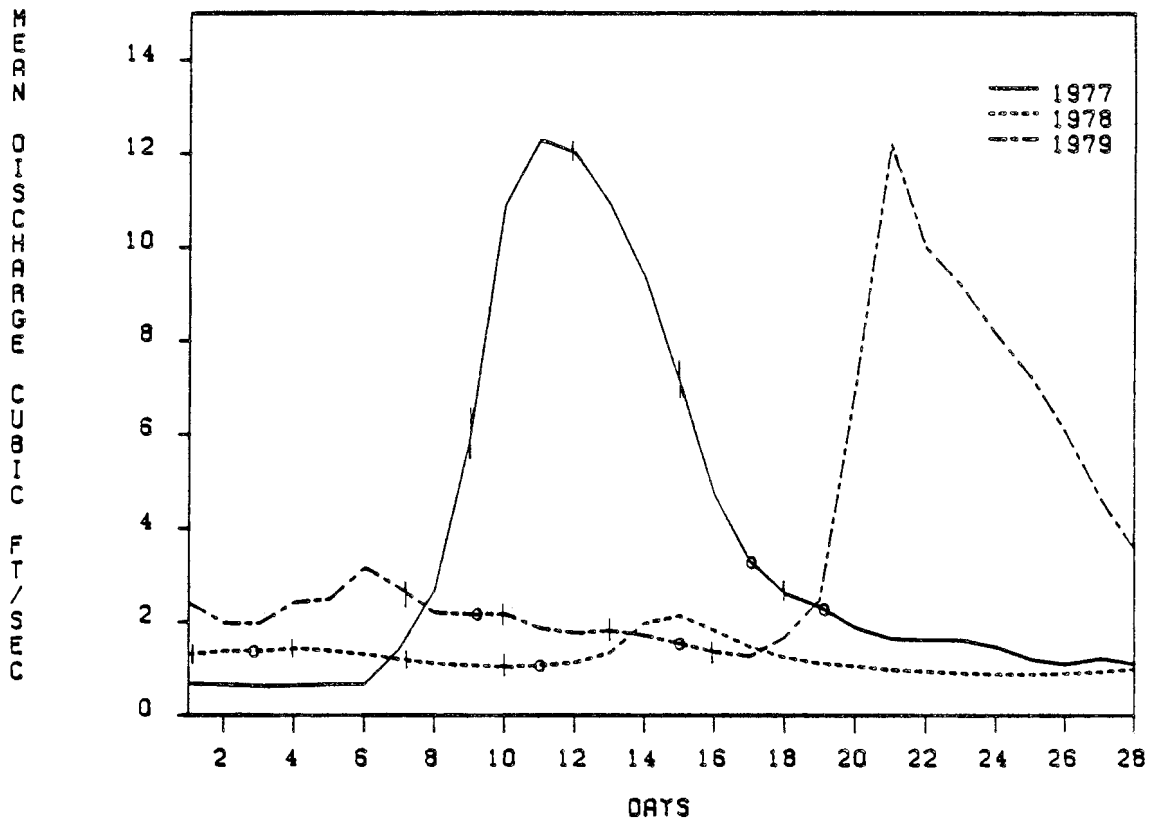


Figure 1. Locations of sampling stations within the Braidwood Station Aquatic Monitoring Area of the Kankakee River.

THOUSANDS



THOUSANDS

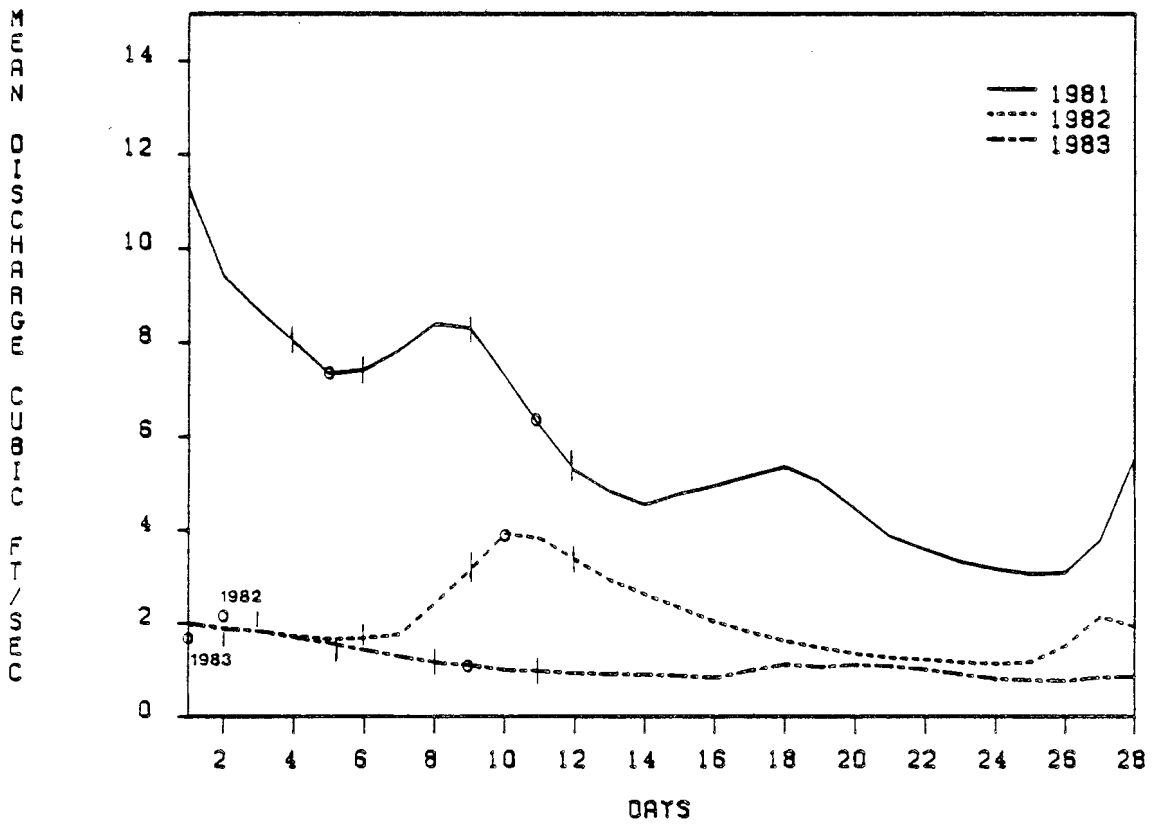


Figure 2. Mean daily discharge (USGS) for the Kankakee River near Wilmington, Illinois during August 1977-1979 and 1981-1983.

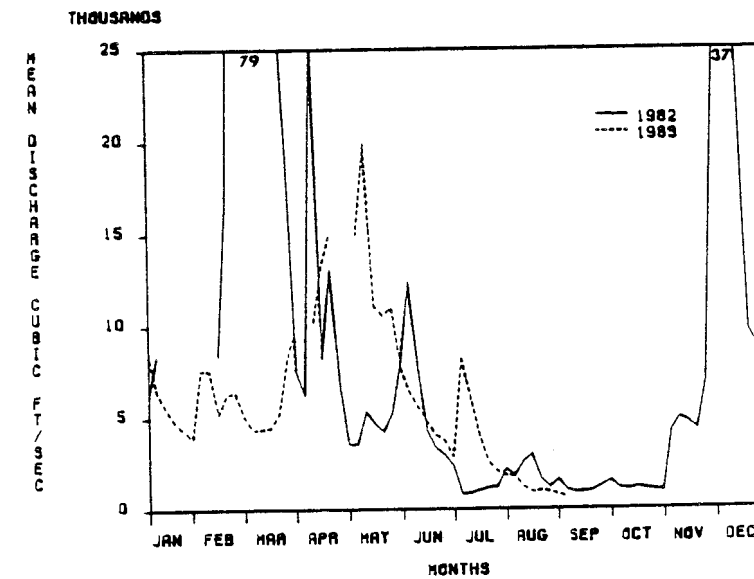
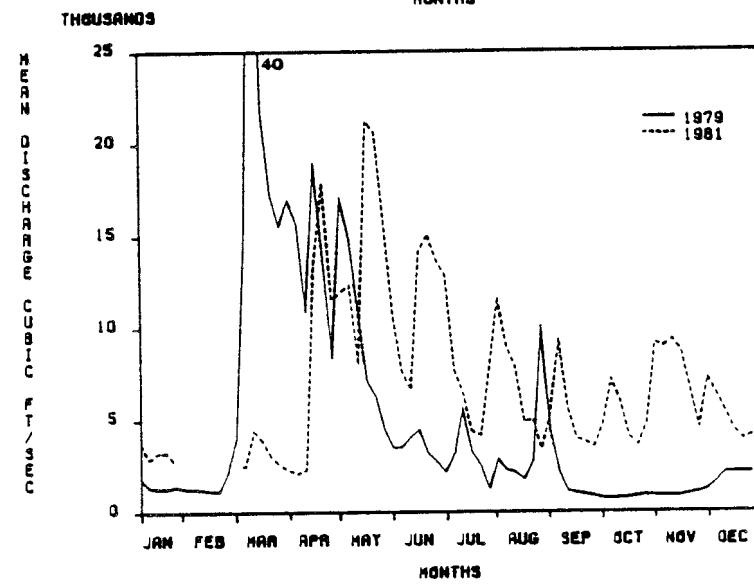
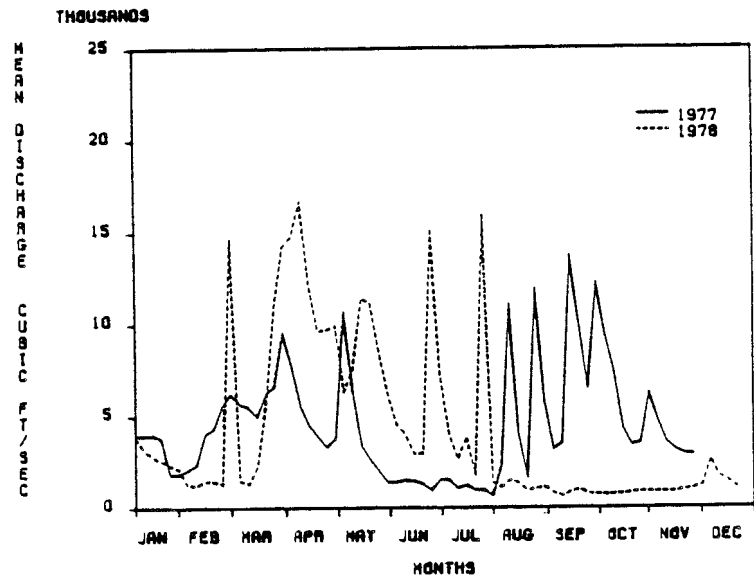


Figure 3. Five-day mean discharge (USGS) for the Kankakee River near Wilmington, Illinois during 1977-1979 and 1981-1983.

Table 1. Total catch (by method) for each species collected from the Kankakee River and Horse Creek during August 1983.

Species	Electrofishing				Seining				Total			
	No.	%No.	Wt(g)	%Wt	No.	%No.	Wt(g)	%Wt	No.	%No.	Wt(g)	%Wt
Longnose gar	2	0.2	164.00	0.1	1	0.1	9.37	1.1	3	0.1	173.37	0.1
Gizzard shad	42	4.1	7269.20	3.3	0	0.0	0.00	0.0	42	1.9	7269.20	3.3
Grass pickerel	3	0.3	141.00	0.1	2	0.2	10.82	1.3	5	0.2	151.82	0.1
Northern pike	5	0.5	2176.00	1.0	0	0.0	0.00	0.0	5	0.2	2176.00	1.0
Stoneroller	0	0.0	0.00	0.0	1	0.1	0.51	0.1	1	0.0	0.51	0.0
Carp	29	2.8	35051.46	16.0	0	0.0	0.00	0.0	29	1.3	35051.46	16.0
Silverjaw minnow	0	0.0	0.00	0.0	1	0.1	0.43	0.1	1	0.0	0.43	0.0
Hornyhead chub	0	0.0	0.00	0.0	2	0.2	0.44	0.1	2	0.1	0.44	0.0
Golden shiner	1	0.1	7.48	0.0	0	0.0	0.00	0.0	1	0.0	7.48	0.0
Pallid shiner	0	0.0	0.00	0.0	1	0.1	0.46	0.1	1	0.0	0.46	0.0
Emerald shiner	3	0.3	16.74	0.0	0	0.0	0.00	0.0	3	0.1	16.74	0.0
Striped sniner	1	0.1	0.47	0.0	393	33.7	122.02	14.5	394	18.0	122.49	0.1
Red shiner	3	0.3	5.98	0.0	0	0.0	0.00	0.0	3	0.1	5.98	0.0
Rosyface shiner	11	1.1	5.59	0.0	4	0.3	0.47	0.1	15	0.7	6.06	0.0
Spotfin shiner	85	8.3	279.17	0.1	170	14.6	183.91	21.8	255	11.6	463.08	0.2
Sand shiner	28	2.7	36.07	0.0	136	11.7	81.46	9.7	164	7.3	117.53	0.1
Suckermouth minnow	6	0.6	4.94	0.0	36	3.1	16.77	2.0	42	1.9	21.71	0.0
Unidentified minnows	0	0.0	0.00	0.0	24	2.1	1.30	0.2	24	1.1	1.30	0.0
Bluntnose minnow	30	2.9	45.10	0.0	185	15.9	118.36	14.0	215	9.8	163.46	0.1
Bullhead minnow	8	0.8	19.74	0.0	51	4.4	20.15	2.4	59	2.7	39.89	0.0
Creek chub	0	0.0	0.00	0.0	13	1.1	5.11	0.6	13	0.6	5.11	0.0
Quillback	138	13.5	79032.08	36.1	0	0.0	0.00	0.0	138	6.3	79032.08	36.0
White sucker	18	1.8	6693.00	3.1	0	0.0	0.00	0.0	18	0.8	6693.00	3.0
Northern hogsucker	27	2.6	8475.64	3.9	0	0.0	0.00	0.0	27	1.2	8475.64	3.9
Smallmouth buffalo	1	0.1	565.00	0.3	0	0.0	0.00	0.0	1	0.0	565.00	0.3
Bigmouth buffalo	4	0.4	4891.00	2.2	0	0.0	0.00	0.0	4	0.2	4891.00	2.2
Silver redhorse	22	2.1	12184.00	5.6	0	0.0	0.00	0.0	22	1.0	12184.00	5.5
River redhorse	4	0.4	1142.00	0.5	0	0.0	0.00	0.0	4	0.2	1142.00	0.5
Black redhorse	4	0.4	1308.00	0.6	0	0.0	0.00	0.0	4	0.2	1308.00	0.6
Golden redhorse	57	6.5	25387.00	11.6	0	0.0	0.00	0.0	57	3.1	25387.00	11.6
Shorthead redhorse	15	1.5	4627.00	2.1	0	0.0	0.00	0.0	15	0.7	4627.00	2.1
Unidentified redhorse	7	0.7	6.03	0.0	23	2.0	15.53	1.8	30	1.4	21.56	0.0
Channel catfish	0	0.0	0.00	0.0	1	0.1	1.58	0.2	1	0.0	1.58	0.0
Stonecat	2	0.2	78.63	0.0	0	0.0	0.00	0.0	2	0.1	78.63	0.0
Blackstripe topminnow	1	0.1	1.31	0.0	13	1.1	13.89	1.6	14	0.6	15.20	0.0
Rock bass	56	5.5	5612.03	2.6	0	0.0	0.00	0.0	56	2.6	5612.03	2.6
Green sunfish	87	8.5	1586.41	0.7	1	0.1	0.02	0.0	88	4.0	1586.43	0.7
Orangespotted sunfish	11	1.1	172.41	0.1	0	0.0	0.00	0.0	11	0.5	172.41	0.1
Bluegill	32	3.1	983.67	0.4	1	0.1	21.48	2.5	33	1.5	1005.15	0.5
Longear sunfish	42	4.1	775.37	0.4	1	0.1	78.18	9.3	43	2.0	853.55	0.4
Green sunfish x bluegill	1	0.1	38.00	0.0	0	0.0	0.00	0.0	1	0.0	38.00	0.0
Unidentified sunfish	2	0.2	20.70	0.0	54	4.6	10.06	1.2	56	2.6	30.76	0.0
Smallmouth bass	185	18.1	17718.55	8.1	0	0.0	0.00	0.0	185	8.4	17718.55	8.1
Largemouth bass	27	2.6	1014.94	0.5	8	0.7	43.23	5.1	35	1.6	1058.17	0.5
Unidentified black bass	0	0.0	0.00	0.0	3	0.3	0.16	0.0	3	0.1	0.16	0.0
White crappie	7	0.7	798.00	0.4	2	0.2	72.32	8.6	9	0.4	870.32	0.4
Johnny darter	0	0.0	0.00	0.0	34	2.9	10.99	1.3	34	1.6	10.99	0.0
Yellow perch	2	0.2	86.00	0.0	0	0.0	0.00	0.0	2	0.1	86.00	0.0
Blackside darter	3	0.3	1.83	0.0	5	0.4	4.02	0.5	8	0.4	5.85	0.0
Walleye	2	0.2	305.00	0.1	0	0.0	0.00	0.0	2	0.1	305.00	0.1
All species	1024		218726.54		1166		843.04		2190		219569.58	

Table 2. Mean and range biomass (g), percent composition by weight, and rank (R) of the total catch of dominant fishes collected at each station in four electrofishing samples from the Kankakee River and Horse Creek during August 1983.

	Stations										
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R
<u>Carp</u>											
Mean	4046.0	---	---	890.0	415.5	1172.5	363.8	595.1	555.0	---	725.0
Range	0-13114	---	---	0-3560	0-1662	0-4690	0-1455	0-1362	0-2220	---	0-2110
% (R)	29.6(1)	---	---	26.8(1)	11.1(2)	36.6(1)	18.1(2)	10.2(3)	11.7(2)	---	20.1(3)
<u>Golden Redhorse</u>											
Mean	2564.2	263.8	619.0	607.5	---	385.0	107.5	32.5	101.2	1407.2	258.8
Range	1196-4689	0-765	0-1086	0-860	---	0-1000	0-430	0-130	0-405	850-2324	0-825
% (R)	18.7(2)	12.5(4)	13.4(4)	18.3(2)	---	12.0(3)	5.3(4)	0.6(10)	2.1(6)	18.0(2)	7.2(4)
<u>Quillback</u>											
Mean	2298.5	962.5	295.8	562.5	2255.0	1132.5	1066.2	2615.3	3311.8	3935.5	1322.5
Range	1680-3320	0-1805	0-601	0-1190	520-3795	670-2215	645-1600	1110-4175	568-5186	2785-6640	0-2490
% (R)	16.8(3)	45.5(1)	6.4(6)	16.9(3)	60.4(1)	35.4(2)	53.1(1)	44.8(1)	70.0(1)	50.3(1)	36.7(1)
<u>Smallmouth Bass</u>											
Mean	1287.7	295.6	485.2	181.8	135.5	218.8	296.8	316.3	206.5	792.5	215.0
Range	533-1836	0-714	26-1413	0-625	0-285	43-544	0-1048	100-590	0-686	559-1056	0-520
% (R)	9.4(4)	13.9(2)	10.5(5)	5.5(7)	3.6(5)	6.8(4)	14.8(3)	5.4(5)	4.4(3)	10.1(4)	6.0(5)
<u>Silver Redhorse</u>											
Mean	1261.2	279.0	20.0	214.2	222.8	---	21.5	6.00	---	1021.2	---
Range	0-3850	0-835	0-80	0-810	0-891	---	0-86	0-24	---	0-2820	---
% (R)	92.5(5)	13.2(3)	0.4(12)	6.4(6)	6.0(4)	---	1.1(8)	0.1(14)	---	13.1(3)	---
<u>River Redhorse</u>											
Mean	11.5	120.0	---	140.0	---	---	---	---	---	14.0	---
Range	0-46	0-480	---	0-560	---	---	---	---	---	0-56	---
% (R)	0.1(14)	5.7(5)	---	4.2(8)	---	---	---	---	---	0.2(11)	---
<u>White sucker</u>											
Mean	313.8	---	1280.8	---	62.5	---	---	16.2	---	---	---
Range	0-811	---	450-2593	---	0-250	---	---	0-65	---	---	---
% (R)	2.3(7)	---	27.8(1)	---	1.7(8)	---	---	0.3(12)	---	---	---

Table 2. Mean and range biomass (g), percent composition by weight, and rank (R) of the total catch of dominant fishes collected at each station in four electrofishing samples from the Kankakee River and Horse Creek during August 1983 (continued).

	Stations										
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R
<u>Rock Bass</u>											
Mean	215.2	104.0	673.0	63.9	30.5		24.5	67.5	52.0	95.0	77.5
Range	0-447	0-186	51-1511	0-165	0-122	---	0-98	0-270	0-126	0-135	0-190
% (R)	1.6(10)	4.9(6)	14.6(2)	1.9(10)	0.8(10)		1.2(7)	1.2(8)	1.1(10)	1.2(6)	2.2(7)
<u>Northern hogsucker</u>											
Mean	287.2		623.9	297.5	100.0			270.0	108.8	296.5	135.0
Range	0-623	---	84-1160	0-710	0-400	---	---	0-640	0-435	0-640	0-505
% (R)	2.1(9)		13.5(3)	9.0(4)	2.7(7)			4.6(6)	2.3(5)	3.8(5)	3.7(6)
<u>Shorthead Redhorse</u>											
Mean	143.5			215.0			18.8			32.5	747.0
Range	0-545	---	---	0-860	---	---	0-75	---	---	0-130	0-1865
% (R)	1.0(11)			6.5(5)			0.9(9)			0.4(10)	20.7(2)
<u>Gizzard Shad</u>											
Mean	60.0				327.3			1209.3	160.7	60.0	
Range	0-240	---	---	---	0-761	---	---	455-2400	0-410	0-240	---
% (R)	0.4(12)				8.8(3)			20.7(2)	3.4(4)	0.8(8)	
<u>Smallmouth buffalo</u>											
Mean						141.2					
Range	---	---	---	---	---	0-565	---	---	---	---	---
% (R)						4.4(5)					
<u>Bluegill</u>											
Mean		11.0	36.3		45.2	6.5	57.5		79.2	2.86	7.2
Range	---	0-28	8-85	---	0-159	0-26	0-191	---	26-129	0-11	0-29
% (R)		0.5(10)	0.8(10)		1.2(9)	0.2(10)	2.9(5)		1.7(7)	0.0(13)	0.2(12)
<u>Bigmouth Buffalo</u>											
Mean	851.2							371.5			
Range	0-3405	---	---	---	---	---	---	0-976	---	---	---
% (R)	6.2(6)							6.4(4)			

Table 3. Mean and range abundance, percent composition by number, and rank (R) of the total catch of dominant fishes collected at each station in four electrofishing samples from the Kankakee River and Horse Creek during August 1983.

Species	Stations										
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R
<u>Smallmouth Bass</u>											
Mean	9.75	1.75	12.25	2.00	1.25	4.25	1.25	4.50	2.00	6.25	1.00
Range	5-15	0-4	7-18	0-4	0-2	1-9	0-2	3-6	0-4	3-9	0-2
% (R)	29.1(1)	11.67(2)	17.75(2)	17.78(1)	10.00(3)	31.48(1)	16.67(3)	15.79(2)	10.39(3)	22.52(2)	5.48(4)
<u>Golden Redhorse</u>											
Mean	7.50	0.75	1.25	1.25		0.75	0.25	0.25	0.25	4.00	0.50
Range	3-12	0-2	0-2	0-2	---	0-2	0-1	0-1	0-1	2-6	0-1
% (R)	22.39(2)	5.00(5)	1.81(11)	11.11(2)		5.56(5)	3.33(5)	0.88(9)	1.30(8)	14.41(3)	2.74(6)
<u>Quillback</u>											
Mean	4.25	2.00	0.50	1.00	3.50	1.75	1.75	4.50	5.75	7.75	1.75
Range	3-6	0-4	0-1	0-2	1-7	1-3	1-2	2-7	1-10	5-12	0-3
% (R)	12.69(3)	13.33(1)	0.72(14)	8.89(3)	28.00(1)	12.96(3)	23.33(1)	15.79(2)	29.87(1)	27.93(1)	9.59(2)
<u>Carp</u>											
Mean	2.25			0.50	0.50	0.75	0.25	2.00	0.50		0.50
Range	0-7	---	---	0-2	0-2	0-3	0-1	0-5	0-2	---	0-1
% (R)	6.72(4)			4.44(5)	4.00(5)	5.56(5)	3.33(5)	7.02(3)	2.60(7)		2.74(6)
<u>Rock Bass</u>											
Mean	2.00	1.25	7.25	0.50	0.50		0.25	0.25	0.50	0.75	0.75
Range	0-3	0-3	2-12	0-1	0-2	---	0-1	0-1	0-1	0-1	0-2
% (R)	5.97(5)	8.33(4)	10.51(3)	4.44(5)	4.00(5)		3.33(5)	0.88(9)	2.60(7)	2.70(6)	4.11(5)
<u>Spottin Shiner</u>											
Mean	0.75	2.00	3.00	0.75	1.25	0.75		1.25	2.00	2.25	7.25
Range	0-2	1-4	1-8	0-2	0-4	0-3	---	0-3	0-5	1-4	3-9
% (R)	2.24(7)	13.33(1)	4.35(8)	6.67(4)	10.00(3)	5.56(5)		4.39(5)	10.39(3)	8.11(4)	39.73(1)
<u>Longear Sunfish</u>											
Mean	0.50	1.50	3.50	1.25	0.25	1.25			0.25	0.75	1.25
Range	0-1	0-6	1-7	0-3	0-1	0-5	---	---	0-1	0-3	0-4
% (R)	1.49(8)	10.00(3)	5.07(6)	11.11(2)	2.00(6)	9.26(4)			1.30(8)	2.70(6)	6.85(3)
<u>Green Sunfish</u>											
Mean	0.25	1.25	14.50		0.25	2.00	1.50	0.25		0.50	1.25
Range	0-1	0-3	5-21	---	0-1	0-8	0-5	0-1	---	0-2	0-4
% (R)	0.75(9)	8.33(4)	21.01(1)		2.00(6)	14.81(2)	20.00(2)	0.88(9)		1.80(7)	6.85(3)
<u>Sand Shiner</u>											
Mean		0.50	6.00						0.50		
Range	---	0-1	0-18	---	---	---	---	---	0-2	---	---
% (R)		3.33(6)	8.70(4)						2.60(7)		

Table 3. Mean and range abundance, percent composition by number, and rank (R) of the total catch of dominant fishes collected at each station in four electrofishing samples from the Kankakee River and Horse Creek during August 1983 (continued).

Species	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
<u>Bluntnose Minnow</u>												
Mean	0.50		4.75	0.75		0.50		0.75	0.75			0.25
Range	0-2	---	0-13	0-1	---	0-1	---	0-3	0-3	---		0-1
% (R)	1.49(8)		6.88(5)	6.67(4)		3.70(6)		2.63(7)	3.90(6)			1.37(7)
<u>Glizzard Shad</u>												
Mean	0.25				1.50			6.25	2.25	0.25		
Range	0-1	---	---	---	0-3	---	---	4-10	0-8	0-1		---
% (R)	0.75(9)				12.00(2)			21.93(1)	11.69(2)	0.90(8)		
<u>Orangespotted Sunfish</u>												
Mean				0.50	0.75	0.50		1.00				
Range	---	---	---	0-2	0-2	0-2	---	0-2	---	---	---	---
% (R)				4.44(5)	6.00(4)	3.70(6)		3.51(6)				
<u>Bluegill</u>												
Mean		0.50	3.00		0.75	0.25	1.25		1.75	0.25		0.25
Range	---	0-1	1-6	---	0-2	0-1	0-4	---	1-2	0-1		0-1
% (R)		3.33(6)	4.35(8)		6.00(4)	1.85(7)	16.67(3)		9.09(4)	0.90(8)		1.37(7)
<u>Rosyface Shiner</u>												
Mean		0.25					0.50	1.75		0.25		
Range	---	0-1	---	---	---	---	0-2	0-5	---	0-1		---
% (R)		6.57(7)					6.67(4)	6.14(4)		0.90(8)		
<u>Largemouth Bass</u>												
Mean	0.25	0.75	2.75	0.25				1.25	1.25	0.25		
Range	0-1	0-1	1-5	0-1	---	---	---	0-4	0-3	0-1		---
% (R)	0.75(9)	5.00(5)	3.99(9)	2.22(6)				4.39(5)	6.49(5)	0.90(8)		
<u>Silver Redhorse</u>												
Mean	1.50	0.75	0.25	0.50	0.25		0.25	0.25		1.75		
Range	1-3	0-2	0-1	0-1	0-1	---	0-1	0-1	---	0-3		---
% (R)	4.48(6)	5.00(5)	0.36(15)	4.44(5)	2.00(6)		3.33(5)	0.88(9)		6.31(5)		
<u>Shorthead Redhorse</u>												
Mean	0.75			0.50			0.25			0.50		1.75
Range	0-2	---	---	0-2	---	---	0-1	---	---	0-2		0-4
% (R)	2.24(7)			4.44(5)			3.33(5)			1.80(7)		9.59(2)

Table 4. One-way analysis of variance of the ln (X + 1) abundance and biomass of fish captured per unit of sampling effort for the Kankakee River and Horse Creek during August 1983. Asterisks denote significance at P < 0.05.

Source of variation	Mean Squares By Method					
	df	Electrofishing		df	Seine	
		Biomass	Abundance		Biomass	Abundance
Station	10	0.8051	0.3458	10	3.2926	4.1664*
Velocity	1	0.1663	0.0112	1	0.3381	0.0852
Water Temperature	1	0.0115	0.0001	1	0.9569	0.5141
Depth	1	0.4751	0.3539	1	0.6786	0.1430
Oxygen	1	0.4251	0.1338	1	0.1109	0.0730
Turbidity	1	0.0322	0.0434	1	0.1486	0.0317
Conductivity	1	0.0074	0.0013	1	0.0534	0.0399
pH	1	2.1769*	0.1086	1	0.0449	0.0674
Error	26	0.3719	0.1962	26	1.6887	1.6223
Model	17	0.9807*	0.2765	17	2.8226	3.9597*
N		44	44		44	44
Coefficient of Determination (r ²)		0.63	0.48		0.52	0.61

Table 5. Duncan's multiple comparisons of the ln (X + 1) biomass and abundance of fish captured per unit of sampling effort for the Kankakee River and Horse Creek during August 1983. Means underscored by the same line are not significantly different (P < 0.05).^a

ELECTROFISHING											
<u>BIOMASS</u>											
Station (N=4)	1L	6L	3R	5L	3L	4L	4R	5R	6R	2	1R
Mean	9.4223	8.9578	8.8246	8.6145	8.6107	8.5109	8.2219	8.1578	7.9022	7.6968	7.5900
<hr/> <hr/> <hr/>											
SEINE											
<u>ABUNDANCE</u>	6L	5R	5L	2	4R	6R	1R	4L	1L	3R	3L
Station (N=4)											
Mean	4.2019	3.8588	3.3600	2.6693	2.3502	2.2924	1.7963	1.6834	1.3902	0.9972	0.5199
<hr/> <hr/> <hr/>											

^aThis test used the error mean square from the one-way analysis of variance of stations in 1983 with velocity, water temperature, depth, oxygen, turbidity, conductivity, and pH used as covariables.

Table 6. Three-way analysis of variance of the $\ln(X + 1)$ abundance and biomass of fish captured per unit of sampling effort for the Kankakee River during August 1977-79 and 1981-83 with water velocity, depth, and water temperature included as covariables. Asterisks denote significance at $P < 0.0001$.

Source of variation	Mean Squares By Method					
	df	Electrofishing		df	Seine	
		Biomass	Abundance		Biomass	Abundance
Year	5	3.4119*	7.8875*	5	13.5077*	14.0784*
Station	10	3.2346*	3.0574*	10	5.1249*	5.6458*
Year vs. station	50	0.5417	0.3334	50	2.7576*	2.6682*
Replicate	3	0.4549	0.1217	3	1.9501	1.3882
Station vs. replicate	30	0.3578	0.2052	30	1.0117	0.5473
Velocity	1	0.5186	0.1703	1	1.8680	2.1335
Depth	1	0.5380	0.2971	1	0.0818	0.4129
Water temperature	1	0.9992	0.0393	1	0.1446	0.0028
Dissolved oxygen	1	0.0565	0.0000	1	3.3619	2.2019
Error	161	0.4674	0.2417	161	1.1964	0.7966
Model	102	1.1915*	1.0626*	102	4.9526*	5.2291*
N		264	264		264	264
Coefficient of Determination(r^2)		0.62	0.74		0.72	0.81

Table 7. Duncan's multiple comparisons of the $\ln(X + 1)$ biomass and abundance of fish captured per unit effort of electrofishing for the Kankakee River and Horse Creek during August 1977-79 and 1981-83. Means underscored by the same line are not significantly different ($P < 0.05$).^a

<u>BIOMASS</u>											
Year (N=44)	1981	1977	1983	1982	1979	1978					
Mean	<u>9.0499</u>	<u>8.7921</u>	<u>8.4124</u>	<u>8.3083</u>	<u>8.1153</u>	<u>7.8759</u>					
Station (N=24)	1L	6L	4L	5L	3L	4R	3R	1R	2	5R	6R
Mean	<u>9.1214</u>	<u>9.0035</u>	<u>8.6050</u>	<u>8.5515</u>	<u>8.5280</u>	<u>8.2517</u>	<u>8.2366</u>	<u>8.2026</u>	<u>8.1785</u>	<u>8.0910</u>	<u>7.9123</u>
<u>ABUNDANCE</u>											
Year (N=44)	1978	1981	1977	1979	1983	1982					
Mean	<u>3.9008</u>	<u>3.8452</u>	<u>3.8341</u>	<u>3.4721</u>	<u>3.1245</u>	<u>2.7693</u>					
Station (N=24)	6L	1L	5L	3L	4L	2	4R	3R	5R	1R	6R
Mean	<u>3.9458</u>	<u>3.9046</u>	<u>3.8893</u>	<u>3.7111</u>	<u>3.7069</u>	<u>3.4959</u>	<u>3.3659</u>	<u>3.3654</u>	<u>3.2275</u>	<u>3.0932</u>	<u>2.6955</u>

^aThis test used the error mean square from the three-way analysis of variance of year, station, and replicate with velocity, depth, water temperature, and dissolved oxygen used as covariables.

Table 8. Three-way analysis of variance of the $\ln(X + 1)$ abundance and biomass of fish captured per unit of electrofishing effort for the Kankakee River during August 1977-79 and 1981-83. Asterisks denote significance at $P < 0.05$ (*1), $P < 0.01$ (*2), $P < 0.001$ (*3), $P < 0.0001$ (*4).

Source of variation	df	Mean Squares By Method	
		Biomass	Abundance
Year	5	1.9472*3	7.0429*4
Station	9	3.5126*4	3.4750*4
Year vs. station	45	0.5047	0.3049
Replicate	3	0.6305	0.1480
Station vs. replicate	27	0.3467	0.1771
Velocity	1	0.0149	0.0038
Depth	1	0.3038	0.0291
Water temperature	1	0.6914	0.4121
Discharge	1	0.3491	0.9422*1
Mean Gauge Height	1	0.2625	0.70471
Delta Gauge Height	1	1.0222	1.9011*2
Error	144	0.4988	0.2215
Model	95	1.1441*4	1.1205*4

Table 9. Duncan's multiple comparisons of the ln (X + 1) biomass and abundance of fish captured per unit of seine effort for the Kankakee River and Horse Creek during August 1977-79 and 1981-83. Means underscored by the same line are not significantly different (P < 0.05).^a

<u>BIOMASS</u>											
Year (N=44)	1977	1979	1981	1978	1983	1982					
Mean	<u>4.7836</u>	<u>3.8116</u>	<u>3.6454</u>	<u>2.7997</u>	<u>2.1586</u>	<u>1.8442</u>					
Station (N=24)	5R	5L	6R	2	1R	1L	4L	3L	6L	3R	4R
Mean	<u>4.1184</u>	<u>3.9041</u>	<u>3.4050</u>	<u>3.3720</u>	<u>3.3169</u>	<u>2.9813</u>	<u>2.9445</u>	<u>2.9424</u>	<u>2.8778</u>	<u>2.5482</u>	<u>2.5018</u>
<u>ABUNDANCE</u>											
Year (N=44)	1977	1979	1978	1981	1983	1982					
Mean	<u>5.0239</u>	<u>3.5939</u>	<u>2.7706</u>	<u>2.6739</u>	<u>2.2836</u>	<u>1.7189</u>					
Station (N=24)	5R	2	5L	6R	1L	1R	6L	3R	4R	3L	4L
Mean	<u>4.3056</u>	<u>3.6418</u>	<u>3.3461</u>	<u>3.0165</u>	<u>2.9228</u>	<u>2.9023</u>	<u>2.7783</u>	<u>2.5812</u>	<u>2.5512</u>	<u>2.5471</u>	<u>2.5260</u>

^aThis test used the error mean square from the three-way analysis of variance of year, station, and replicate with velocity, depth, water temperature, and dissolved oxygen used as covariables.

Table 10. Mean condition factor, K(TL), of all species of fishes collected from the Kankakee River and Horse Creek in August 1983.

Species	N	K(TL)	SD	Range
Longnose gar	3	0.15	0.04	0.11-0.17
Gizzard shad	42	1.18	0.19	0.72-1.75
Grass pickerel	5	0.58	0.10	0.42-0.67
Northern pike	5	0.85	0.71	0.38-2.10
Stoneroller	1	0.86	--	--
Carp	29	1.44	0.25	0.66-2.24
Silverjaw minnow	1	0.78	--	--
Hornyhead chub	2	0.87	0.19	0.74-1.00
Golden shiner	1	0.96	--	--
Pallid shiner	1	0.72	--	--
Emerald shiner	3	0.74	0.13	0.60-0.84
Striped shiner	394	0.78	0.20	0.17-1.44
Red shiner	3	1.07	0.07	1.00-1.15
Rosyface shiner	15	0.59	0.10	0.36-0.79
Spottin shiner	255	0.87	0.14	0.46-1.41
Sand shiner	164	0.86	0.14	0.57-1.56
Suckermouth minnow	42	0.93	0.10	0.71-1.26
Bluntnose minnow	215	0.89	0.14	0.40-1.32
Bullhead minnow	59	0.83	0.23	0.34-1.73
Creek chub	13	1.13	0.30	0.87-2.07
Quillback	138	1.19	0.09	0.83-1.42
White sucker	18	0.98	0.08	0.82-1.10
Northern hogsucker	27	1.14	0.08	0.97-1.27
Smallmouth buffalo	1	1.44	--	--
Bigmouth buffalo	4	1.55	0.10	1.46-1.66
Silver redhorse	22	1.13	0.10	0.90-1.28
River redhorse	4	1.24	0.09	1.17-1.37
Black redhorse	4	1.00	0.14	0.89-1.19
Golden redhorse	67	1.16	0.10	0.99-1.44
Shorthead redhorse	15	1.13	0.08	0.96-1.32
Channel catfish	1	0.85	--	--
Stonecat	2	1.02	0.14	0.92-1.11
Blackstripe topminnow	14	0.93	0.18	0.71-1.30
Rock bass	56	2.10	0.19	1.52-2.53
Green sunfish	87	2.00	0.38	0.49-3.08
Orangespotted sunfish	11	2.12	0.27	1.58-2.73
Bluegill	33	2.01	0.38	1.03-2.57
Longear sunfish	43	2.19	0.31	1.67-2.94
Green x Bluegill sunfish	1	1.95	--	--
Smallmouth bass	184	1.38	0.29	0.99-3.50
Largemouth bass	35	1.33	0.19	1.03-1.74
White crappie	9	1.18	0.24	0.63-1.46
Johnny darter	34	0.73	0.16	0.31-1.11
Yellow perch	2	1.20	0.09	1.14-1.27
Blackside darter	8	0.76	0.07	0.63-0.82
Walleye	2	0.86	0.03	0.84-0.88

Table 11. Mean diversity indices (d) for the catch of fishes at each station during August 1977-1979 and 1981-1983 for electrofishing, seining, and both methods combined.

Year	Station (N=4)												
	1L	1R	2	3L	3R	4L	4R	3-4L	3-4R	5L	5R	6L	6R
Electrofishing													
1977	3.31	2.89	3.15	--	--	--	--	3.31	2.85	3.33	3.31	3.22	2.94
1978	3.12	2.51	3.02	2.68	2.56	2.91	2.75	--	--	2.92	3.73	3.09	2.42
1979	3.04	2.83	3.23	2.75	2.72	2.55	2.65	--	--	3.29	3.05	3.07	2.94
1981	3.16	3.20	3.29	3.11	2.84	2.87	2.90	--	--	3.53	3.38	3.01	2.86
1982	2.65	2.31	3.24	2.15	2.26	2.11	1.93	--	--	2.73	1.17	3.16	2.23
1983	2.72	2.91	3.31	2.63	2.28	2.13	1.66	--	--	3.04	2.46	2.79	2.42
Seining													
1977	2.52	2.21	2.71	2.81	2.16	2.89	2.15	--	--	2.55	2.66	2.60	2.50
1978	1.56	2.15	1.47	1.45	2.19	1.39	1.69	--	--	2.49	2.24	1.29	2.33
1979	2.00	1.85	1.80	1.81	1.31	2.42	1.73	--	--	2.81	2.26	2.28	1.81
1981	1.95	2.25	1.82	2.14	0.78	1.73	1.17	--	--	2.72	2.88	1.67	2.61
1982	1.51	1.10	1.63	0.91	0.00	0.72	0.82	--	--	2.39	2.30	0.80	0.81
1983	1.19	1.11	0.76	0.46	0.23	0.95	0.82	--	--	2.26	2.08	0.47	1.55
Combined													
1977	3.53	3.15	3.15	2.81	2.16	2.89	2.15	3.31	2.85	3.35	3.40	3.84	3.07
1978	3.30	3.17	3.40	2.98	3.01	3.20	3.28	--	--	3.40	3.02	3.22	3.36
1979	3.54	3.09	2.78	3.23	2.65	3.47	3.02	--	--	4.06	2.83	3.62	2.72
1981	3.61	3.72	3.56	3.54	3.23	3.48	3.27	--	--	4.15	4.06	3.29	3.58
1982	3.17	2.85	3.37	2.36	2.39	2.56	2.64	--	--	3.53	2.82	3.11	2.79
1983	2.91	2.84	3.17	2.73	2.15	2.56	2.17	--	--	3.47	3.07	2.01	2.75

APPENDIX

TO

KANKAKEE RIVER FISHES OF THE BRAIDWOOD
STATION AQUATIC MONITORING AREA

AUGUST, 1983

SUBMITTED TO

COMMONWEALTH EDISON COMPANY

DECEMBER 1983

BY

ILLINOIS NATURAL HISTORY SURVEY

CHAMPAIGN, ILLINOIS

R. W. LARIMORE
PRINCIPAL INVESTIGATOR

THOMAS M. SKELLY
PROJECT COORDINATOR

Appendix A-1. Ancillary measurements taken concurrently with electrofishing samples from the Kankakee River and Horse Creek on 2 August 1983.

Parameter	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
Time	0800	0730	1458	0910	0900	1014	0954	1125	1110	1336	1325	
Air Temp. (C)	23.5	23.0	29.0	23.0	24.5	27.0	28.5	27.5	26.5	31.5	31.5	
Water Velocity (cm/sec)	5	16	6	34	0	0	8	0	0	17	23	
pH	8.2	8.2	8.2	8.1	8.3	8.0	8.1	8.4	8.4	8.4	8.2	
Turbidity (N.T.U.)	15	13	6	10	6	7	7	18	12	12	10	
Conductivity (µmhos/cm)	710	720	780	710	720	690	680	710	700	740	710	

Depth (m)	Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.	
0	26.5	6.7	26.5	6.8	26.9	6.8	26.8	6.7	26.1	7.4	26.9	9.5	27.0	7.6	28.9	10.0	29.0	13.3	28.9	9.0	26.9	8.9		
0.5	26.5	6.4	26.7	7.0	26.9	6.7	26.5	6.6	26.1	7.1	26.9	9.0	26.9	7.0	27.9	9.3	28.1	8.8	28.9	8.9	26.5	8.2		
1.0	26.1	6.5	26.7	6.8	26.6	6.3			25.8	7.1	26.9	9.1	26.9	7.1							26.2	8.0		
1.5																					26.0	7.8		

A-1

Appendix A-2. Ancillary measurements taken concurrently with electrofishing samples from the Kankakee River and Horse Creek on 5 August 1983.

Parameter	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
Time	0715	0700	1340	0820	0810	0932	0917	1017	0957	1159	1145	
Air Temp. (C)	24.0	23.1	27.5	23.5	23.5	28.5	25.7	26.8	26.8	26.5	26.5	
Water Velocity (cm/sec)	17	17	45	44	0	11	11	0	0	15	20	
pH	8.1	8.1	7.8	8.2	8.1	8.1	8.0	8.4	8.1	8.2	8.1	
Turbidity (N.T.U.)	12	11	5	4	7	8	6	8	9	13	11	
Conductivity (µmhos/cm)	650	640	680	660	620	650	650	650	650	670	650	

Depth (m)	Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.	
0	26.3	7.3	26.4	6.9	24.5	7.7	26.0	7.2	24.0	6.1	26.9	7.9	25.0	7.1	27.0	12.1	26.0	8.1	27.0	10.1	26.8	10.8						
0.5	26.3	7.1	26.4	7.0	24.4	7.8	26.2	7.1	24.0	5.9	26.9	8.0	25.0	6.9	27.0	11.8	26.0	7.7	27.0	9.9	26.8	10.3						
1.0	26.3	7.1	26.4	6.9					23.9	5.6	26.9	7.9									26.8	10.0						
1.5			26.5	6.7																								

A-2

Appendix A-3. Ancillary measurements taken concurrently with electrofishing samples from the Kankakee River and Horse Creek on 8 August 1983.

Parameter	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
Time	0706	0700	1317	0832	0817	0900	0847	1006	0950	1211	1145	
Air Temp. (C)	23.2	22.2	32.0	25.0	26.5	26.0	28.0	33.5	31.0	32.0	34.0	
Water Velocity (cm/sec)	16	13	9	12	0	6	11	0	0	11	0	
pH	8.2	8.2	8.2	8.2	8.2	8.2	8.0	8.2	8.2	8.3	8.3	
Turbidity (N.T.U.)	7	8	4	7	6	8	7	13	7	12	7	
Conductivity (umhos/cm)	750	750	780	725	725	700	725	725	725	725	725	

Depth (m)	Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.	
0	28.4	6.9	23.0	7.0	26.5	7.8	28.1	7.0	28.0	7.1	28.2	7.2	28.0	7.4	29.2	8.2	28.8	7.2	29.5	8.0	30.2	7.7		
0.5	28.4	7.0	28.2	7.2	27.9	7.8	28.1	6.8	27.9	7.1	28.2	7.1	28.0	7.2	29.0	8.1	28.5	7.3	29.4	8.1	28.8	7.8		
1.0	28.5	6.9	28.2	7.2	27.0	7.7			27.8	7.1	28.2	7.1					28.3	7.4			28.4	7.9		
1.5	28.5	6.8							27.8	6.9	28.2	7.1					28.3	7.5			28.0	7.4		

A-3

Appendix A-4. Ancillary measurements taken concurrently with electrofishing samples from the Kankakee River and Horse Creek on 11 August 1983.

Parameter	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
Time	0742	0711	1338	0843	0827	1026	0954	1101	1051	1215	1158	
Air Temp. (C)	20.5	20.5	22.0	19.0	20.5	20.9	21.0	21.0	22.0	27.0	22.0	
Water Velocity (cm/sec)	6	10	5	5	0	12	13	0	6	12	9	
pH	8.2	8.2	8.0	8.1	8.4	8.1	8.2	8.1	8.0	8.1	8.2	
Turbidity (N.T.U.)	14	14	4	9	13	8	11	24	12	17	18	
Conductivity (µmhos/cm)	700	700	700	705	700	690	668	680	700	700	700	

Depth (m)	Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.	
0	26.5	8.0	27.0	8.0	23.0	7.6	25.7	6.7	25.5	7.6	26.5	7.4	26.2	6.9	26.0	7.7	26.0	7.9	27.0	8.2	26.0	7.8		
0.5	26.5	6.8	27.0	8.1	23.1	7.1	25.7	6.8	25.7	7.3	26.5	7.3	26.2	7.0	25.9	7.8	26.0	7.8	26.9	8.1	26.1	7.7		
1.0							25.8	6.4	25.7	6.8			26.2	6.9			26.0	7.8			26.1	7.6		
1.5									25.7	6.5			26.0	6.6										

A-4

Appendix B-2. Ancillary measurements taken concurrently with seine samples from the Kankakee River and Horse Creek on 9 August 1983.

Parameter	Stations											
	1L	1R	2	3L	3R	4L	4R	5L	5R	6L	6R	
Time	0940	0915	1245	1220	1201	1125	1141	1108	1050	1020	1005	
Air Temp. (C)	22.5	22.5	29.5	33.0	27.0	32.0	25.0	22.8	26.0	23.0	24.5	
Water Velocity (cm/sec)	9	12	0	0	0	0	5	0	0	8	8	
pH	8.2	8.2	8.1	8.2	8.2	8.3	8.2	8.2	8.3	8.2	8.2	
Turbidity (N.T.U.)	21	13	5	7	7	8	8	13	11	9	33	
Conductivity (µmhos/cm)	760	740	775	750	725	725	725	750	750	750	750	

Depth (m)	Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.		Temp		D.O.	
0	28.0	7.9	27.9	6.9	26.9	8.4	29.8	9.1	29.8	9.5	29.2	10.3	28.7	10.0	30.0	10.3	29.0	9.9	28.6	8.4	29.0	8.2		
0.5	28.2	8.0	28.2	6.8	26.3	8.2	29.2	8.8	29.0	9.4	29.0	10.3	28.7	9.5			28.9	9.8			29.0	7.5		
1.0																					29.0	7.8		
1.5																								

A-6

APPENDIX C-1: FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983.

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	CTL	AGE	# EGGS
1L	A	08 02 83	CYPRINUS CARPIO	1	447	1170.00				1.31
				2	661	1900.00				0.66
			NOTROPIS SPILOPTERUS	1	72	3.42				0.92
				2	57	1.50				0.81
			CARPIODES CYPRINUS	1	361	570.00				1.21
				2	316	360.00				1.14
				3	366	560.00				1.14
				4	372	540.00				1.05
			CATOSTOMUS COMMERSONI	1	357	480.00				1.05
				2	317	331.00				1.04
			HYPENTELIUM NIGRICANS	1	327	405.00				1.16
				2	143	34.00				1.16
			MOXOSTOMA ANISURUM	1	354	490.00				1.10
				2	343	470.00				1.16
			MOXOSTOMA ERYTHRURUM	1	373	560.00				1.08
				2	304	280.00				1.00
				3	486	1260.00				1.10
				4	402	700.00				1.08
				5	366	500.00				1.02
				6	365	480.00				0.99
				7	308	335.00				1.15
				8	143	34.00				1.16
				9	300	320.00				1.19
				10	133	28.00				1.19
				11	139	32.00				1.19
				12	242	160.00				1.13
			MOXOSTOMA MACROLEPIDOTUM	1	137	29.00				1.13
			AMBLOPLITES RUPESTRIS	1	170	107.00				2.18
				2	189	160.00				2.37
				3	203	180.00				2.15
			LEPOMIS MEGALOTIS	1	97	24.00				2.63
			MICROPTERUS DOLOMIEUI	1	170	80.00				1.63
				2	136	33.00				1.31
				3	152	56.00				1.59
				4	132	30.00				1.30
				5	241	230.00				1.64

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	MTL	AGE	# EGGS	
1L	A	08 02 83	MICROPTERUS DOLOMIEUI	6	242	160.00		1.13			
				7	138	39.00		1.48			
				8	209	240.00		2.63			
				9	166	160.00		3.50			
				10	247	218.00		1.45			
	B	08 05 83	CARPIODES CYPRINUS	1	352	535.00		1.23			
				2	371	595.00		1.17			
				3	344	475.00		1.17			
				4	361	559.00		1.19			
				1	357	444.00		0.98			
1				157	44.00		1.14				
2				158	43.00		1.09				
1				269	235.00		1.21				
1				157	46.00		1.19				
1				110	15.00		1.13				
2				406	690.00		1.03				
3				336	451.00		1.19				
4				293	299.00		1.19				
5				144	35.00		1.17				
6				126	23.00		1.15				
7	149	37.00		1.12							
8	181	19.00		1.39							
9	132	29.00		1.26							
1	116	29.00		1.86							
1	274	279.00		1.36							
2	267	260.00		1.37							
3	215	139.00		1.40							
4	146	50.00		1.61							
5	66	4.00		1.39							
6	282	364.00		1.62							
7	285	321.00		1.39							
8	175	78.00		1.46							
9	148	41.00		1.26							
C	08 08 83	ESOX LUCIUS	1	613	1230.00		0.53				
			1	596	3405.00		1.61				
			2	431	1050.00		1.31				
			CYPRINUS CARPIO								

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
1L	C	08 08 83	CYPRINUS CARPIO	3	446	1310.00		1.48			
				4	458	1280.00		1.33			
				5	522	2497.00		1.76			
				6	438	1075.00		1.28			
				7	544	2497.00		1.55			
				CARPIODES CYPRINUS	1	388	640.00		1.10		
					2	409	820.00		1.20		
					3	251	220.00		1.39		
				ICTIOBUS CYPRINELLUS	1	612	3405.00		1.49		
					1	146	36.00		1.16		
				MOXOSTOMA ERYTHURUM	2	384	650.00		1.15		
					3	352	510.00		1.17		
					1	126	45.00		2.25		
				AMBLOPLITES RUPESTRIS	2	132	46.00		2.00		
					3	129	45.00		2.10		
1	306	290.00			1.01						
MICROPTERUS DOLOMIEUI	2	308	425.00		1.45						
	3	226	168.00		1.46						
	4	168	62.00		1.31						
	5	153	45.00		1.26						
	6	163	59.00		1.36						
	7	142	37.00		1.29						
	8	242	192.00		1.35						
	9	246	215.00		1.44						
	10	158	50.00		1.27						
	11	167	63.00		1.35						
12	144	39.00		1.31							
13	245	180.00		1.22							
14	74	5.50		1.36							
15	70	5.22		1.52							
D	08 11 83	MICROPTERUS SALMOIDES	1	176	95.00		1.74				
			DOROSOMA CEPEDIANUM	1	261	240.00		1.35			
				1	67	2.77		0.92			
			NOTROPIS SPILOPTERUS	1	69	3.48		1.06			
				2	61	2.08		0.92			
			CARPIODES CYPRINUS	1	305	390.00		1.37			

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
1L	D	08 11 83	CARPIODES CYPRINUS	2	392	700.00		1.16		
				3	363	550.00		1.15		
				4	338	520.00		1.35		
				5	316	400.00		1.27		
				6	404	760.00		1.15		
			HYPLETILIUM NIGRICANS	1	365	580.00		1.19		
				2	152	43.00		1.22		
			MOXOSTOMA ANISURUM	1	468	1100.00		1.07		
				2	505	1450.00		1.13		
			MOXOSTOMA ERYTHRURUM	3	495	1300.00		1.07		
				1	414	820.00		1.16		
				2	328	400.00		1.13		
			MOXOSTOMA MACROLEPIDOTUM	3	425	950.00		1.24		
				4	135	30.00		1.22		
				5	363	535.00		1.12		
				6	148	39.00		1.20		
				1	309	320.00		1.08		
			AMBLOPLITES RUPESTRIS	2	275	225.00		1.08		
				1	189	150.00		2.22		
			LEPOMIS CYANELLUS	2	178	128.00		2.27		
				1	78	11.00		2.32		
			MICROPTERUS DOLOMIEUI	1	212	135.00		1.42		
				2	136	31.00		1.23		
				3	156	49.00		1.29		
				4	276	280.00		1.33		
5	140	38.00			1.38					
1R	A	08 02 83	NOTROPIS RUBELLUS	1	35	0.20		0.47		
				1	62	2.27		0.95		
			NOTROPIS SPILOPTERUS	2	77	4.90		1.07		
				3	74	4.30		1.06		
				4	59	1.46		0.71		
			NOTROPIS STRAMINEUS	1	45	0.90		0.99		
			PHENACOBIVS MIRABILIS	1	47	0.83		0.80		
			AMBLOPLITES RUPESTRIS	1	160	88.00		2.15		
				2	161	90.00		2.16		
				3	77	8.00		1.75		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	CTL	AGE	# EGGS		
1R	A	08 02 83	LEPOMIS CYANELLUS	1	94	19.00				2.29		
				2	105	26.00			2.25			
				3	61	4.00			1.76			
				LEPOMIS MACROCHIRUS	1	95	16.00			1.87		
					LEPOMIS MEGALOTIS	1	110	35.00			2.63	
			2			94	18.00			2.17		
				MICROPTERUS DOLOMIEUI	3	76	9.00			2.05		
			4		112	34.00			2.42			
			5		72	7.00			1.88			
			6		58	3.53			1.81			
	1	142	39.00				1.36					
	2	375	635.00				1.20					
		B	08 05 83	MICROPTERUS SALMOIDES	3	143	38.00			1.30		
	4				58	2.27			1.16			
				NOTROPIS SPILOPTERUS	1	85	8.00			1.30		
	1				81	4.50			0.85			
				NOTROPIS STRAMINEUS	1	51	1.28			0.96		
	1				388	700.00			1.20			
				CARPIODES CYPRINUS	1	267	230.00			1.21		
	2				165	51.00			1.14			
	MOXOSTOMA ANISURUM			1	296	290.00			1.12			
1				175	115.00			2.15				
	AMBLOPLITES RUPESTRIS	1	172	75.00			1.47					
2		287	300.00			1.27						
	MICROPTERUS DOLOMIEUI	1	82	7.00			1.27					
1		137	29.00			1.13						
	C	08 08 83	MICROPTERUS SALMOIDES	1	74	3.91			0.96			
1				130	455.00			1.27				
			POMOXIS ANNULARIS	2	313	400.00			1.30			
3				360	590.00			1.26				
			NOTROPIS SPILOPTERUS	4	308	360.00			1.23			
1				312	355.00			1.17				
			CARPIODES CYPRINUS	2	318	410.00			1.27			
1				57	1.31			0.71				
			MOXOSTOMA ERYTHRURUM	1	174	115.00			2.18			
1				105	28.00			2.42				
	FUNDULUS NOTATUS	1	57	1.31			0.71					
1		174	115.00			2.18						
	AMBLOPLITES RUPESTRIS	1	174	115.00			2.18					
1		105	28.00			2.42						
	LEPOMIS MACROCHIRUS	1	105	28.00			2.42					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
1R	C	08 08 83	MICROPTERUS SALMOIDES	1	165	75.00		1.67			
			NOTROPIS ATHERINOIDES	1	104	9.50		0.84			
			NOTROPIS SPILOPTERUS	1	66	2.42		0.84			
				2	74	4.62		1.14			
			PHENACOBIOUS MIRABILIS	1	50	1.32		1.06			
			PIMEPHALES VIGILAX	1	60	2.57		1.19			
			CARPIODES CYPHRINUS	1	366	570.00		1.16			
				2	347	510.00		1.22			
				3	280	265.00		1.21			
			MOXOSTOMA ANISURUM	1	441	835.00		0.97			
			MOXOSTOMA CARINATUM	1	345	480.00		1.17			
			LEPOMIS CYANELLUS	1	62	4.09		1.72			
				2	57	3.40		1.84			
2	A	08 02 83	MICROPTERUS DOLOMIEUI	1	176	85.00		1.56			
			NOTROPIS SPILOPTERUS	1	59	0.99		0.48			
			NOTROPIS STRAMINEUS	1	51	1.03		0.78			
				2	58	1.65		0.85			
			PHENACOBIOUS MIRABILIS	1	48	0.95		0.86			
			PIMEPHALES NOTATUS	1	56	1.55		0.88			
				2	48	1.05		0.95			
				3	54	1.37		0.87			
				4	55	1.37		0.82			
				5	52	1.29		0.92			
				6	61	2.00		0.88			
				7	55	1.34		0.81			
				8	54	1.37		0.87			
	9	58	1.57		0.80						
	10	51	1.19		0.90						
	11	62	2.10		0.88						
	12	41	0.58		0.84						
	13	55	1.50		0.90						
	1		CATOSTOMUS COMMERSONI	1	256	165.00		0.98			
	2			2	370	538.00		1.06			
	3			3	336	350.00		0.92			
	4			4	342	430.00		1.07			
	5			5	301	260.00		0.95			

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APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS		
2	A	08 02 83	CATOSTOMUS COMMERSONI	6	368	550.00					1.10	
				7	312	300.00						0.99
			HYPENTELIUM NIGRICANS	1	412	840.00						1.20
				2	291	290.00						1.18
				3	137	30.00						1.17
			MOXOSTOMA SPP.	1	40	0.57						0.89
				2	43	0.73						0.92
			AMBLOPLITES RUPESTRIS	1	165	99.00						2.20
				2	176	117.00						2.15
				3	189	148.00						2.19
				4	182	125.00						2.07
				5	211	202.00						2.15
				6	203	176.00						2.10
				7	164	92.00						2.09
				8	121	37.00						2.09
				9	147	63.00						1.98
				10	142	60.00						2.10
	11	212	212.00						2.22			
	12	208	180.00						2.00			
		LEPOMIS CYANELLUS	1	110	29.00					2.18		
			2	140	61.00					2.22		
			3	107	24.00					1.96		
			4	70	6.00					1.75		
			5	67	6.00					1.99		
			6	83	11.00					1.92		
			7	67	6.00					1.99		
			8	60	4.00					1.85		
			9	68	6.00					1.91		
			10	131	39.00					1.73		
			11	56	2.00					1.14		
			12	57	3.00					1.62		
			13	96	16.00					1.81		
			14	78	11.00					2.32		
			15	110	30.00					2.25		
			16	109	30.00					2.32		
			17	50	2.11					1.69		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
2	A	08 02 83	LEPOMIS CYANELLUS	18	82	8.89		1.61			
				19	66	4.96		1.73			
				20	65	4.64		1.69			
				21	70	6.00		1.75			
			LEPOMIS MACROCHIRUS	1	95	13.00		1.52			
				2	114	34.00		2.29			
				3	88	16.00		2.35			
				4	77	6.57		1.44			
			LEPOMIS MEGALOTIS	5	80	7.54		1.47			
				6	79	7.83		1.59			
				1	99	19.00		1.96			
				2	98	26.00		2.76			
			LEPOMIS SPP.	3	98	24.00		2.55			
				4	59	3.42		1.67			
	1	95		20.00		2.33					
	MICROPTERUS DOLONIEUI	1		282	305.00		1.36				
		2	323	465.00		1.38					
		3	277	270.00		1.27					
		4	260	270.00		1.54					
		5	148	46.00		1.42					
		6	146	40.00		1.29					
7		55	1.91		1.15						
MICROPTERUS SALMOIDES	8	79	5.26		1.07						
	9	63	2.70		1.08						
	10	76	5.00		1.14						
	11	62	2.90		1.22						
	1	150	41.00		1.21						
	2	83	7.00		1.22						
	3	83	6.00		1.05						
	PERCA FLAVESCENS	1	148	37.00		1.14					
		NOTROPIS SPILOPTERUS	1	51	0.90		0.68				
	2		74	4.80		1.18					
1	63		2.32		0.93						
2	63		2.49		1.00						
NOTROPIS STRAMINEUS	3	63	2.27		0.91						
	4	56	1.56		0.89						
B	08 05 83			1	51	0.90		0.68			
				2	74	4.80		1.18			
				1	63	2.32		0.93			
				2	63	2.49		1.00			
3	63	2.27		0.91							
4	56	1.56		0.89							

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
2	B	08 05 83	PIMEPHALES NOTATUS	1	55	1.58		0.95			
			CARPIODES CYPRINUS	1	367	582.00		1.18			
			CATOSTOMUS COMMERSONI	1	382	525.00		0.94			
				2	317	330.00		1.04			
			HYPENTELIUM NIGRICANS	1	325	370.00		1.08			
				2	315	340.00		1.09			
			MOXOSTOMA ANISURUM	1	207	80.00		0.90			
			MOXOSTOMA ERYTHRURUM	1	335	400.00		1.06			
			NOTURUS FLAVUS	1	165	50.00		1.11			
			AMBLOPLITES RUPESTRIS	1	178	140.00		2.48			
				2	180	108.00		1.85			
				3	199	160.00		2.03			
				4	164	87.00		1.97			
				5	120	37.00		2.14			
				6	81	13.00		2.45			
			LEPOMIS CYANELLUS	1	79	11.00		2.23			
				2	105	21.00		1.81			
				3	64	4.90		1.87			
				4	66	4.68		1.63			
				5	76	8.59		1.96			
			LEPOMIS MACROCHIRUS	1	79	8.29		1.68			
			LEPOMIS MEGALOTIS	1	113	32.00		2.22			
				2	96	22.00		2.49			
			MICROPTERUS DOLOMIEUI	1	74	7.00		1.73			
				2	65	3.19		1.16			
				3	63	3.47		1.39			
				4	67	3.84		1.28			
				5	68	3.93		1.25			
				6	58	2.82		1.45			
				7	52	1.62		1.15			
			MICROPTERUS SALMOIDES	1	92	10.00		1.28			
				2	85	8.00		1.30			
	3	75	6.00		1.42						
	4	79	5.97		1.21						
	5	87	7.97		1.21						
STIZOSTEDION VITREUM	1	254	145.00		0.88						

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	C	08 08 83	ESOX AMERICANUS	1	207	58.00		0.65		
			NOTROPIS CHRYSOCEPHALUS	1	39	0.47		0.79		
			NOTROPIS SPILOPTERUS	1	67	3.33		1.11		
				2	48	0.89		0.80		
				3	49	0.99		0.84		
				4	52	1.20		0.85		
				5	43	0.86		1.08		
				6	42	0.64		0.86		
				7	46	0.69		0.71		
			NOTROPIS STRAINEUS	8	41	0.59		0.86		
				1	49	1.01		0.86		
				2	53	1.43		0.96		
				3	45	0.76		0.83		
				4	50	1.15		0.92		
				5	52	1.32		0.94		
				6	49	1.26		1.07		
				7	50	1.13		0.90		
				8	54	1.62		1.03		
				9	48	0.98		0.89		
				10	51	1.32		1.00		
				11	49	1.01		0.86		
				12	48	0.99		0.90		
				13	45	0.90		0.99		
				14	52	1.32		0.94		
				15	40	0.60		0.94		
				16	51	1.07		0.81		
				17	41	0.81		1.18		
				18	46	0.87		0.89		
			PHENACOBIOUS MIRABILIS	1	36	0.50		1.07		
			CARPIOIDES CYPRINUS	1	383	601.00		1.07		
			CATOSTOMUS COMMERSONI	1	390	515.00		0.87		
				2	393	535.00		0.88		
				3	259	175.00		1.01		
			HYPENTELIUM NIGRICANS	1	145	32.00		1.05		
				2	155	41.00		1.10		
				3	101	10.64		1.03		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	C	08 08 83	MOXOSTOMA ERYTHRURUM	1	323	450.00		1.34		
				2	357	540.00		1.19		
			MOXOSTOMA SPP.	1	50	1.04		0.83		
			AMBLOPLITES RUPESTRIS	1	137	41.00		1.59		
				2	78	10.00		2.11		
			LEPOMIS CYANELLUS	1	115	31.00		2.04		
				2	136	49.00		1.95		
				3	111	27.00		1.97		
				4	125	18.00		0.92		
				5	114	29.00		1.96		
				6	66	5.00		1.74		
				7	73	6.00		1.54		
				8	62	7.00		2.94		
				9	130	52.00		2.37		
				10	74	12.00		2.96		
				11	131	55.00		2.45		
				12	115	27.00		1.78		
				13	61	4.87		2.15		
			LEPOMIS MACROCHIRUS	1	84	13.00		2.19		
				2	60	3.00		1.39		
				3	58	2.00		1.03		
			LEPOMIS MEGALOTIS	1	98	20.00		2.12		
			MICROPTERUS DOLOMIEUI	1	272	261.00		1.30		
				2	155	46.00		1.24		
				3	70	4.00		1.17		
				4	93	10.00		1.24		
				5	86	10.00		1.57		
				6	72	4.00		1.07		
				7	77	6.18		1.35		
				8	75	4.56		1.08		
				9	82	7.53		1.37		
				10	49	1.53		1.30		
				11	69	3.94		1.20		
				12	51	1.40		1.06		
				13	60	2.34		1.08		
			MICROPTERUS SALMOIDES	1	70	5.00		1.46		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	C	08 08 83	PERCINA MACULATA	1	44	0.66		0.77		
				2	46	0.68		0.70		
				3	40	0.49		0.77		
D	08 11 83		ESOX AMERICANUS	1	224	75.00		0.67		
				1	503	481.00		0.38		
				1	44	0.77		0.90		
				1	65	2.85		1.04		
				2	52	1.38		0.98		
				3	52	1.50		1.07		
				4	51	1.50		1.13		
				5	52	1.10		0.78		
				1	354	450.00		1.01		
				1	342	500.00		1.25		
				2	152	42.00		1.20		
				1	360	571.00		1.22		
				2	345	515.00		1.25		
				1	54	1.27		0.81		
				1	183	93.00		1.52		
				2	94	18.00		2.17		
				3	203	170.00		2.03		
				4	203	170.00		2.03		
				5	167	90.00		1.93		
				6	92	15.00		1.93		
				7	84	15.00		2.53		
				8	84	13.00		2.19		
				9	39	1.03		1.74		
				1	101	21.00		2.04		
				2	95	19.00		2.22		
				3	103	26.00		2.38		
				4	110	24.00		1.80		
5	85	14.00		2.28						
6	84	11.00		1.86						
7	69	6.00		1.83						
8	61	5.00		2.20						
9	114	30.00		2.02						
10	92	18.00		2.31						

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	D	08 11 83	LEPOMIS CYANELLUS	11	59	3.00		1.46		
				12	90	14.00		1.92		
				13	80	11.00		2.15		
				14	62	5.00		2.10		
				15	129	50.00		2.33		
				16	112	32.00		2.28		
				17	89	17.00		2.41		
				18	76	10.00		2.28		
				19	56	3.03		1.73		
			LEPOMIS MACROCHIRUS	1	97	22.00		2.41		
				2	89	12.00		1.70		
				1	96	20.00		2.26		
			LEPOMIS MEGALOTIS	2	101	25.00		2.43		
				3	99	22.00		2.27		
				4	64	6.11		2.33		
				5	68	5.43		1.73		
				6	59	3.55		1.73		
				7	65	5.14		1.87		
1	153	43.00			1.20					
2	85	10.00			1.63					
3	66	5.00			1.74					
MICROPTERUS DOLOMIEUI	4	58	2.00		1.03					
	5	71	5.00		1.40					
	6	95	13.00		1.52					
	7	100	14.00		1.40					
	8	75	5.00		1.19					
	9	76	11.00		2.51					
	10	63	7.00		2.80					
	11	70	4.00		1.17					
	12	66	2.93		1.02					
	13	71	3.67		1.03					
14	52	1.52		1.08						
15	73	4.26		1.10						
16	61	2.63		1.16						
17	65	3.10		1.13						
18	52	1.70		1.21						

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	D	08 11 83	MICROPTERUS SALMOIDES	1	96	12.00		1.36		
				2	109	18.00		1.39		
3L	A	08 02 83	NOTROPIS SPILOPTERUS	1	47	0.83		0.80		
				2	72	3.93		1.05		
			PIMEPHALES NOTATUS	1	56	1.35		0.77		
			HYPENTELIUM NIGRICANS	1	360	480.00		1.03		
			MOXOSTOMA DUQUESNEI	1	159	48.00		1.19		
			AMBLOPLITES RUPESTRIS	1	197	165.00		2.16		
			LEPOMIS MEGALOTIS	1	99	20.00		2.06		
				2	107	29.00		2.37		
			MICROPTERUS DOLOMIEUI	3	92	17.00		2.18		
				1	157	48.00		1.24		
				2	56	2.13		1.21		
	B	08 05 83	PIMEPHALES NOTATUS	1	52	1.33		0.95		
			CARPIOIDES CYPRINUS	1	345	520.00		1.27		
				2	401	670.00		1.04		
			MOXOSTOMA ANISURUM	1	163	47.00		1.09		
			MOXOSTOMA CARINATUM	1	356	560.00		1.24		
			MOXOSTOMA DUQUESNEI	1	355	410.00		0.92		
			MOXOSTOMA ERYTHRURUM	1	442	860.00		1.00		
			MOXOSTOMA SPP.	1	45	0.94		1.03		
			AMBLOPLITES RUPESTRIS	1	165	90.00		2.00		
			LEPOMIS HUMILIS	1	101	21.00		2.04		
			LEPOMIS MEGALOTIS	2	87	14.00		2.13		
				1	77	10.00		2.19		
				2	80	11.00		2.15		
			MICROPTERUS DOLOMIEUI	1	156	43.00		1.13		
				2	257	225.00		1.33		
				3	262	240.00		1.33		
				4	203	120.00		1.43		
			MICROPTERUS SALMOIDES	1	86	8.00		1.26		
	C	08 08 83	CYPRINUS CARPIO	1	499	1835.00		1.48		
				2	499	1725.00		1.39		
			NOTROPIS SPILOPTERUS	1	68	3.26		1.04		
			PIMEPHALES NOTATUS	1	56	1.34		0.76		
			HYPENTELIUM NIGRICANS	1	418	710.00		0.97		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1933 (CONTINUED).

STN	REF	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
3L	C	08 08 33	MOXOSTOMA ERYTHRURUM	1	311	365.00		1.21			
			MICROPTERUS DOLOMIEUI	2	312	350.00		1.15			
	D	08 11 33	CARPIODES CYPRINUS	1	150	46.00		1.36			
				2	63	3.19		1.28			
			MOXOSTOMA ANISURUM	1	360	620.00		1.33			
				2	329	440.00		1.24			
			MOXOSTOMA ERYTHRURUM	1	420	810.00		1.09			
				1	340	415.00		1.06			
			MOXOSTOMA MACROLEPIDOTUM	2	325	440.00		1.28			
				1	365	520.00		1.07			
3R	A	08 02 33	NOTROPIS SPILOPTERUS	2	305	340.00		1.20			
				1	69	3.43		1.04			
				2	58	1.79		0.92			
				3	69	2.66		0.81			
				CARPIODES CYPRINUS	4	72	4.28		1.15		
					1	395	780.00		1.27		
					2	378	580.00		1.07		
					3	438	920.00		1.09		
					4	444	900.00		1.03		
				5	371	610.00		1.19			
				CATOSTOMUS COMMERSONI	1	299	250.00		0.94		
					1	337	400.00		1.05		
				HYPENTELIUM NIGRICANS	1	139	54.00		2.01		
					2	149	68.00		2.06		
				LEPOMIS CYANELLUS	1	110	27.00		2.03		
					1	93	16.00		1.99		
				LEPOMIS HOMILIS	2	98	19.00		2.02		
					1	134	49.00		2.04		
				LEPOMIS MACROCHIRUS	2	173	110.00		2.12		
					1	67	6.00		1.99		
				LEPOMIS MEGALOTIS	1	251	194.00		1.23		
					2	129	28.00		1.30		
MICROPTERUS DOLOMIEUI	1	52	1.06		0.75						
	1	365	662.00		1.36						
DOROSOMA CEPEDIANUM	2	421	1000.00		1.34						
	1	41	0.54		0.78						
B	08 05 33	CYPRINUS CARPIO	1	52	1.06		0.75				
			1	365	662.00		1.36				
			NOTROPIS SPILOPTERUS	2	421	1000.00		1.34			
				1	41	0.54		0.78			

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS			
3R	B	08 05 83	PHENACOBIVS MIRABILIS	1	42	0.67		0.90					
				2	41	0.67		0.97					
						1	434	915.00		1.12			
						1	448	891.00		0.99			
						1	42	0.69		0.93			
						2	45	0.79		0.87			
						1	87	18.00		2.73			
						1	145	35.00		1.15			
						1	245	191.00		1.30			
						2	296	305.00		1.18			
		08 08 83	C	08 08 83	DOROSOMA CEPEDIANUM	3	269	265.00		1.36			
						1	355	520.00		1.16			
								1	267	250.00		1.31	
								2	135	35.00		1.42	
								1	358	540.00		1.18	
								2	85	7.00		1.14	
								1	327	430.00		1.23	
								2	350	495.00		1.15	
								3	373	605.00		1.17	
								4	394	710.00		1.16	
08 11 83	D	08 11 83	DOROSOMA CEPEDIANUM	5	337	480.00		1.25					
				6	382	640.00		1.15					
						7	327	435.00		1.24			
						1	357	450.00		0.99			
						1	95	22.00		2.57			
						1	71	3.60		1.01			
						2	69	3.00		0.91			
						3	48	1.00		0.90			
						1	47	1.09		1.05			
						1	292	335.00		1.35			
08 02 83	A	08 02 83	CARPIODES CYPRINUS	2	353	530.00		1.20					
				1	98	29.00		3.08					
						2	60	3.93		1.82			
						3	57	3.20		1.73			
						4	58	3.43		1.76			
						5	61	4.54		2.00			
						1	47	1.09		1.05			
						1	292	335.00		1.35			
						2	353	530.00		1.20			
						1	98	29.00		3.08			
			2	60	3.93		1.82						
			3	57	3.20		1.73						
			4	58	3.43		1.76						
			5	61	4.54		2.00						

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
4L	A	08 02 83	LEPOMIS CYANELLUS	6	74	8.40		2.07			
				7	78	8.86		1.87			
				8	83	12.89		2.25			
			LEPOMIS HUMILIS	1	102	23.00		2.17			
				2	90	15.00		2.06			
				1	101	26.00		2.52			
			LEPOMIS MACROCHIRUS	1	113	33.00		2.29			
				2	75	9.00		2.13			
			MICROPTERUS DOLOMIEUI	3	69	6.12		1.86			
				4	68	6.45		2.05			
				5	55	3.12		1.88			
				1	71	5.00		1.40			
				2	285	280.00		1.21			
	3	156		52.00		1.37					
	4	144		44.00		1.47					
	5	147		52.00		1.64					
	6	82		8.00		1.45					
	7	74		4.00		0.99					
	B	08 05 83	NOTROPIS ATERINOIDES CARPIODES CYPRINUS MOXOSTOMA DOQUESNEI MOXOSTOMA ERYTHRURUM MICROPTERUS DOLOMIEUI	9	145	45.00		1.48			
				1	151	54.00		1.57			
				1	78	2.84		0.60			
				1	405	670.00		1.01			
				1	355	400.00		0.89			
1				375	690.00		1.31				
2				293	310.00		1.23				
1				227	160.00		1.37				
2				154	47.00		1.29				
3				60	2.83		1.31				
C	08 08 83	CYPRINUS CARPIO CARPIODES CYPRINUS ICTIOBUS BUBALUS	4	78	5.99		1.26				
			1	461	1390.00		1.42				
			2	515	1935.00		1.42				
			3	466	1365.00		1.35				
			1	378	620.00		1.15				
			2	399	745.00		1.17				
			3	423	850.00		1.12				
			1	340	565.00		1.44				

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS		
4L	C	08 08 83	MICROPTERUS DOLOMIEUI	1	140	31.00		1.13				
				2	148	39.00		1.20				
				3	58	2.29		1.17				
D	08 11 83	PIMEPHALES NOTATUS	1	64	2.27		0.87					
			1	425	780.00		1.02					
			1	358	540.00		1.18					
4R	A	08 02 83	MOXOSTOMA ERYTHRURUM	1	144	43.00		1.44				
			CARPIODES CYPRINUS	1	386	570.00		0.99				
				2	370	530.00		1.05				
			LEPOMIS CYANELLUS	1	87	12.00		1.82				
				2	157	66.00		1.71				
				3	130	46.00		2.09				
				4	123	37.00		1.99				
				5	75							
			LEPOMIS MACROCHIRUS	1	133	45.00		1.91				
				2	144	50.00		1.67				
				3	132	49.00		2.13				
				4	131	47.00		2.09				
				1	147	39.00		1.23				
			B	08 05 83	MICROPTERUS DOLOMIEUI	1	405	755.00		1.14		
					CARPIODES CYPRINUS	2	419	845.00		1.15		
C	08 08 83	CYPRINUS CARPIO	1	457	1455.00		1.52					
			1	351	485.00		1.12					
		CARPIODES CYPRINUS	2	333	435.00		1.18					
		AMBLOPLITES RUPESTRIS	1	166	98.00		2.14					
		MICROPTERUS DOLOMIEUI	1	421	1045.00		1.40					
D	08 11 83	NOTROPIS RUBELLUS	2	62	3.06		1.28					
			1	43	0.50		0.63					
			2	41	0.41		0.59					
			1	380	645.00		1.18					
			1	194	86.00		1.18					
			1	313	430.00		1.40					
			1	187	75.00		1.15					
			1	140	50.00		1.82					
			1	120	39.00		2.26					
			1	160	60.00		1.46					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
4R	D	08 11 83	MICROPTERUS DOLOMIEUI	2	143	40.00		1.37		
5L	A	08 02 83	LEPISOSTEUS OSSEUS	1	179	10.00		0.17		
			DOROSOMA CEPEDIANUM	1	347	400.00		0.96		
				2	281	260.00		1.17		
				3	271	260.00		1.31		
				4	284	300.00		1.31		
				5	246	230.00		1.54		
				6	247	200.00		1.33		
				7	254	220.00		1.34		
				8	242	190.00		1.34		
				9	235	160.00		1.23		
				10	232	180.00		1.44		
			ESOX AMERICANUS	1	110	8.00		0.60		
			CYPRINUS CARPIO	1	304	410.00		1.46		
				1	430	920.00		1.16		
				3	85	9.90		1.61		
				4	77	7.00		1.53		
				5	97	15.56		1.70		
			NOTEMIGONUS CRYSOLEUCAS	1	92	7.48		0.96		
			NOTROPIS RUBELLUS	1	48	0.78		0.71		
				2	37	0.40		0.79		
			NOTROPIS SPILOPTERUS	1	62	1.09		0.46		
			PIMEPHALES VIGILAX	1	68	3.00		0.95		
			CARPIODES CYPRINUS	1	345	460.00		1.12		
				2	155	51.00		1.37		
				3	419	820.00		1.11		
				4	388	580.00		0.99		
				5	388	620.00		1.06		
				6	387	690.00		1.19		
			CATOSTOMUS COMMERSONI	1	199	65.00		0.82		
			HYPENTELIUM NIGRICANS	1	338	440.00		1.14		
			ICTIOBUS CYPRINELLUS	1	317	510.00		1.60		
			MOXOSTOMA ANISURUM	1	130	24.00		1.09		
			LEPOMIS CYANELLUS	1	133	44.00		1.87		
			LEPOMIS HUMILIS	1	89	15.00		2.13		
			MICROPTERUS DOLOMIEUI	1	137	38.00		1.48		

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HOUSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5L	A	08 02 83	MICROPTERUS DOLOMIEUI	2	167	60.00		1.29		
				3	133	33.00		1.40		
				4	167					
				5	75	5.28		1.25		
				6	78	5.50		1.16		
				1	155	48.00		1.29		
	B	08 05 83	MICROPTERUS SALMOIDES LEPISOSTEUS OSSEUS DOROSOMA CEPEDIANUM	1	451	154.00		0.17		
				1	235	161.00		1.24		
				2	326	381.00		1.10		
				3	305	204.00		0.72		
				4	323	381.00		1.13		
				5	80	5.83		1.14		
				6	68	3.43		1.09		
				1	175	34.00		0.63		
				1	58	1.50		0.77		
				2	75	4.56		1.08		
				3	82	5.11		0.93		
				1	56	1.19		0.68		
				2	51	1.17		0.88		
				3	39	0.44		0.74		
				1	72	3.76		1.01		
				1	407	700.00		1.04		
				2	328	410.00		1.16		
				1	348	615.00		1.46		
				2	279	361.00		1.66		
				1	229	270.00		2.25		
				1	95	19.00		2.22		
1	247	228.00		1.51						
2	290	351.00		1.44						
3	83	11.00		1.92						
1	233	192.00		1.52						
2	171	78.00		1.56						
3	154	59.00		1.62						
4	170	73.00		1.49						
1	157	49.00		1.27						
C	08 08 83	PERCA FLAVESCENS DOROSOMA CEPEDIANUM	1	327	445.00		1.27			

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS		
5L	C	08 08 83	DOROSOMA CEPEDIANUM	2	64	3.12				1.19		
				3	40	0.57			0.89			
				4	59	2.29			1.12			
			CYPRINUS CARPIO	5	67	3.67			1.22			
				1	172	70.00			1.38			
				2	392	930.00			1.54			
				NOTROPIS SPILOPTERUS	1	70	3.58			1.04		
					1	403	820.00			1.25		
				CARPIODES CYPRINUS	2	394	675.00			1.10		
					3	421	790.00			1.06		
					4	402	755.00			1.16		
					5	424	635.00			0.83		
					6	344	495.00			1.22		
					7	77	5.08			1.11		
					1	74	8.99			2.22		
				LEPOMIS HUMILIS	2	60	3.42			1.58		
					1	39	0.70			1.18		
			LEPOMIS SPP.	1	141	39.00			1.39			
			MICROPTERUS DOLOMIEUI	2	165	57.00			1.27			
				3	68	4.35			1.38			
				1	215	114.00			1.15			
			D	08 11 83	POMOXIS ANNULARIS	1	317	405.00			1.27	
						2	317	425.00			1.33	
3	83	10.00						1.75				
DOROSOMA CEPEDIANUM	4	84			6.32			1.07				
	1	412			410.00			0.59				
ESOX LUCIUS	1	93			18.00			2.24				
	1	41			0.41			0.59				
CYPRINUS CARPIO	2	50			0.84			0.67				
	3	45			0.52			0.57				
	4	40			0.38			0.59				
	5	40			0.37			0.58				
	1	399			705.00			1.11				
CARPIODES CYPRINUS	2	333			460.00			1.25				
	3	398			790.00			1.25				
HYPENTELIUM NIGRICANS	1	385			640.00			1.12				

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5L	D	08 11 83	MOXOSTOMA ERYTHRURUM MICROPTERUS DOLOMIEUI	1	214	130.00		1.23		
				2	240	167.00		1.21		
				3	158	60.00		1.52		
				4	164	58.00		1.31		
				5	146	62.00		1.99		
				6	170	80.00		1.63		
5R	A	08 02 83	DOROSOMA CEPEDIANUM CYPRINUS CARPIO NOTROPIS SPILOPTERUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS CARPIODES CYPRINUS	1	353	410.00		0.93		
				1	432	1075.00		1.33		
				2	453	1145.00		1.23		
				1	74	3.48		0.86		
				2	69	3.65		1.11		
				3	77	4.86		1.06		
				4	50	1.10		0.88		
				5	49	0.86		0.73		
				1	326	460.00		1.33		
				2	379	660.00		1.21		
				3	399	750.00		1.18		
				4	384	615.00		1.09		
				5	375	640.00		1.21		
				6	402	740.00		1.14		
				7	329	420.00		1.18		
				8	168	56.00		1.18		
				9	338	470.00		1.22		
				10	314	375.00		1.21		
				1	325	435.00		1.27		
				1	336	405.00		1.07		
1	128	52.00		2.48						
2	105	27.00		2.33						
1	127	31.00		1.51						
1	155	50.00		1.34						
1	242	165.00		1.16						
B	08 05 83	NOTROPIS SPILOPTERUS CARPIODES CYPRINUS CARPIODES CYPRINUS	1	77	4.10		0.90			
			2	70	3.34		0.97			
			1	342	460.00		1.15			
			2	429	929.00		1.18			

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS			
5R	B	08 05 83	CARPIODES CYPRINUS	3	373	599.00					1.15		
				4	317	385.00			1.21				
				5	336	472.00			1.24				
				6	414	808.00			1.14				
				7	419	850.00			1.16				
				8	370	580.00			1.15				
				1	157	82.00			2.12				
				1	147	73.00			2.30				
			AMBLOPLITES RUPESTRIS	2	138	56.00			2.13				
				1	125	38.00			1.95				
			LEPOMIS CYANELLUS XMACROCHIRUS	1	138	34.00			1.29				
				2	143	38.00			1.30				
			MICROPTERUS DOLOMIEUI	3	142	34.00			1.19				
				4	64	3.00			1.14				
			MICROPTERUS SALMOIDES	1	202	111.00			1.35				
				2	86	10.00			1.57				
				3	94	10.00			1.20				
			C	00 08 83	POHOXIS ANNULARIS	1	195	100.00					1.35
						1	100	21.00			2.10		
					ESOX LUCIUS	1	69	2.88			0.88		
1	58	1.81						0.93					
NOTROPIS SPILOPTERUS	1	51			1.21			0.91					
	2	63			3.07			1.23					
	2	51			1.39			1.05					
NOTROPIS STRAMINEUS	3	53			1.51			1.01					
	1	380			650.00			1.18					
CARPIODES CYPRINUS	2	410			645.00			0.94					
	3	375			665.00			1.26					
	4	335			450.00			1.20					
AMBLOPLITES RUPESTRIS	1	181			126.00			2.12					
	1	105			24.00			2.07					
LEPOMIS MACROCHIRUS	2	143			59.00			2.02					
	1	344			600.00			1.47					
MICROPTERUS DOLOMIEUI	2	146			34.00			1.09					
	3	159			52.00			1.29					
MICROPTERUS SALMOIDES	1	165			57.00			1.27					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	D	08 11 83	DOROSOMA CEPEDIANUM	1	252	198.00		1.24		
				2	295	12.00		1.24		
				3	76	5.09		1.16		
				4	65	3.09		1.13		
				5	65	2.92		1.06		
				6	70	3.70		1.08		
				7	76	4.70		1.07		
				8	68	3.41		1.08		
6L	A	08 02 83	NOTROPIS ATHERINOIDES	1	83	4.40		0.77		
			CARPIODES CYPRINUS	1	346	568.00		1.37		
			LEPOMIS MACROCHIRUS	1	102	26.00		2.45		
			LEPOMIS MEGALOTIS	1	100	23.00		2.30		
			NOTROPIS SPILOPTERUS	1	70	2.82		0.82		
			CARPIODES CYPRINUS	1	374	600.00		1.15		
				2	392	655.00		1.09		
				3	389	670.00		1.14		
				4	372	605.00		1.18		
				5	327	495.00		1.42		
				6	354	565.00		1.27		
				7	318	445.00		1.38		
	8	375	690.00		1.31					
	9	346	495.00		1.20					
	10	347	480.00		1.15					
	11	305	380.00		1.34					
	12	353	560.00		1.27					
		NOXOSTOMA ERYTHRURUM	1	302	330.00		1.20			
			2	384	600.00		1.06			
			3	237	150.00		1.13			
		NOXOSTOMA MACROLEPIDOTUM	1	180	65.00		1.11			
			2	179	65.00		1.13			
		AMBLOPLITES RUPESTRIS	1	184	135.00		2.17			
		LEPOMIS CYANELLUS	1	135	51.00		2.07			
			2	91	16.00		2.12			
		LEPOMIS MEGALOTIS	1	63	4.82		1.93			
		MICROPTERUS DOLOMIEUI	1	386	685.00		1.19			
			2	211	162.00		1.72			

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APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6L	A	08 02 83	MICROPTERUS DOLOMIEUI	3	144	38.00		1.27		
				4	170	63.00		1.28		
				5	155	43.00		1.15		
	B	08 05 83	POHOXIS ANNULARIS	6	167	65.00		1.40		
				1	209	133.00		1.46		
				DOROSOMA CEPEDIANUM	1	289	240.00		0.99	
			1		73	3.70		0.95		
			NOTROPIS SPILOPTERUS	2	75	3.50		0.83		
				3	74	3.93		0.97		
			CARPIODES CYPRINUS	4	58	1.94		0.99		
				1	320	400.00		1.22		
				2	240	162.00		1.17		
				3	332	470.00		1.28		
				4	333	440.00		1.19		
				5	289	300.00		1.24		
				6	295	325.00		1.27		
				7	327	440.00		1.26		
				8	345	480.00		1.17		
				1	376	640.00		1.20		
			HYPLETELIUM NIGRICANS	1	221	135.00		1.25		
				1	304	335.00		1.19		
			MOKOSTOMA ANISURUM	2	222	140.00		1.28		
				3	300	270.00		1.00		
			MOKOSTOMA ERYTHRURUM	4	257	200.00		1.18		
				5	348	430.00		1.02		
			AMBLOPLITES RUPESTRIS	1	185	130.00		2.05		
				1	122	41.00		2.26		
			LEPOMIS MEGALOTIS	2	84	12.00		2.02		
				1	215	135.00		1.36		
			MICROPTERUS DOLOMIEUI	2	154	44.00		1.20		
	3	159		47.00		1.17				
	4	158		59.00		1.50				
	5	295		365.00		1.42				
6	168	65.00			1.37					
7	162	61.00			1.43					
MICROPTERUS SALMOIDES	1	75	7.00		1.66					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6L	B C	08 05 83 08 08 83	POMOXIS ANNULARIS	1	236	180.00		1.37		
			NOTROPIS SPILOPTERUS	1	72	3.65		1.98		
			CARPIODES CYPRINUS	2	72	4.16		1.11		
				1	399	755.00		1.19		
				2	332	465.00		1.27		
				3	406	735.00		1.10		
				4	368	540.00		1.08		
				5	361	520.00		1.11		
			HYPENTELIUM NIGRICANS	6	276	285.00		1.36		
				1	176	66.00		1.21		
	1	301		350.00		1.28				
	MOXOSTOMA ANISURUM	2	526	1490.00		1.02				
		3	440	980.00		1.15				
	MOXOSTOMA ERYTHRURUM	1	341	455.00		1.15				
		2	331	395.00		1.09				
	AMBLOPLITES RUPESTRIS	1	170	115.00		2.34				
		1	86	11.44		1.80				
	LEPOMIS MACROCHIRUS	1	218	146.00		1.41				
		2	223	168.00		1.51				
	MICROPTERUS DOLOMIEUI	3	259	245.00		1.41				
		1	49	0.78		0.66				
	D	08 11 83	NOTROPIS RUBELLUS	1	68	3.28		1.04		
				2	70	3.36		0.98		
1				64	2.91		1.11			
1				387	710.00		1.22			
CARPIODES CYPRINUS			2	331	445.00		1.23			
			3	328	480.00		1.36			
			4	374	650.00		1.24			
			5	343	500.00		1.24			
HYPENTELIUM NIGRICANS		1	350	480.00		1.12				
		1	347	535.00		1.28				
MOXOSTOMA ANISURUM		2	363	545.00		1.14				
		1	160	50.00		1.22				
MOXOSTOMA CARINATUM		1	160	56.00		1.37				
		1	316	370.00		1.17				
2		394	700.00		1.14					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS				
6L	D	08 11 83	MOXOSTOMA ERYTHRURUM	3	345	430.00				1.05				
				4	338	440.00			1.14					
				5	143	34.00			1.16					
				6	290	350.00			1.44					
				1	148	28.63			0.92					
				1	268	300.00			1.56					
				2	180	88.00			1.51					
				3	144	37.00			1.24					
				4	167	69.00			1.48					
			5	143	39.00			1.33						
			6	178	85.00			1.51						
			7	93	11.00			1.37						
			8	89	12.00			1.70						
			9	216	138.00			1.37						
			1	267	160.00			0.84						
			6R	A	08 02 83	STIZOSTEDION VITREUM	1	523	2110.00				1.47	
						CYPRINUS CARPIO	1	63	2.87				1.15	
						NOTROPIS LUTRENSIS	1	68	3.03				0.96	
NOTROPIS SPILOPTERUS	2	73				3.59				0.92				
	3	73				3.65				0.94				
	4	71				3.53				0.99				
	5	74				4.08				1.01				
	6	81				5.86				1.10				
	7	88				7.52				1.10				
	8	78				5.45				1.15				
	9	79				5.07				1.03				
	1	397				770.00				1.23				
	1	394				765.00				1.25				
	1	148				35.00				1.08				
	1	197				190.00				2.49				
	1	110				29.00				2.18				
	1	184				77.00				1.24				
B	08 05 83	NOTROPIS LUTRENSIS				1	50	1.25				1.00		
			2	56	1.86				1.06					
		NOTROPIS SPILOPTERUS	1	72	3.11				0.83					
			2	77	5.06				1.11					

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS			
6R	B	08 05 83	NOTROPIS SPILOPTERUS	3	78	4.13		0.87					
				4	78	4.38		0.92					
				5	79	4.96		1.01					
				6	74	4.37		1.08					
				7	87	6.90		1.05					
				8	84	6.70		1.13					
				1	53	1.17		0.79					
				1	262	210.00		1.17					
				1	148	75.00		2.31					
				2	132	45.00		1.96					
				1	121	40.00		2.26					
				1	104	32.00		2.84					
				2	108	32.00		2.54					
				3	105	34.00		2.94					
				4	126	48.00		2.40					
				1	64	5.00		1.91					
				1	80	5.42		1.06					
				2	68	3.20		1.02					
				C	08 08 83	08 08 83	NOTROPIS SPILOPTERUS	3	66	3.37		1.17	
4	71	2.96						0.83					
5	79	4.23						0.86					
6	70	3.33						0.97					
7	78	4.57						0.96					
8	59	1.81						0.88					
9	55	1.37						0.82					
1	62	1.53						0.64					
1	420	865.00						1.17					
2	325	400.00						1.17					
1	345	505.00						1.23					
1	424	825.00						1.08					
1	371	580.00						1.14					
2	324	395.00						1.16					
3	249	148.00						0.96					
1	63	4.68						1.87					
1	290	335.00						1.37					
D	08 11 83	08 11 83	CYPRINUS CARPIO					1	365	790.00		1.62	

APPENDIX C-1. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY ELECTROFISHING
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
GR	D	08 11 83	NOTROPIS SPILOPTERUS	1	80	5.83		1.14		
				2	73	3.99		1.03		
				3	81	6.21		1.17		
			CARPIODES CYPRINUS	1	404	810.00		1.23		
				2	389	780.00		1.33		
				3	412	900.00		1.29		
			MOXOSTOMA MACROLEPIDOTUM	1	330	405.00		1.13		
				2	357	530.00		1.16		
				3	356	525.00		1.16		
				4	313	405.00		1.32		
			LEPOMIS CYANELLUS	1	96	21.00		2.37		
				2	84	12.00		2.02		
3	71	9.00			2.51					
4	74	11.00			2.71					
MICROPTERUS DOLOMIEUI	1	282	315.00		1.40					
	2	238	205.00		1.52					

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
1R	A	08 01 83	NOTROPIS SPILOPTERUS	1	75	4.08		0.97		
				2	62	2.12		0.89		
				3	52	1.00		0.71		
			PIMEPHALES NOTATUS	1	49	0.92		0.70		
			FUNDULUS NOTATUS	1	60	1.92		0.89		
	B		NOTROPIS CHRYSOCEPHALUS	1	35	0.34		0.79		
				2	37	0.44		0.87		
				3	38	0.44		0.80		
				4	37	0.41		0.81		
				5	34	0.30		0.76		
				6	36	0.38		0.81		
				7	33	0.29		0.81		
				8	28	0.14		0.64		
				9	36	0.37		0.79		
				10	34	0.32		0.81		
				11	33	0.25		0.70		
				12	30	0.25		0.93		
				13	40	0.51		0.80		
				14	38	0.44		0.80		
				15	38	0.36		0.66		
				16	42	0.64		0.86		
				17	36	0.35		0.75		
				18	36	0.38		0.81		
				19	31	0.22		0.74		
				20	33	0.26		0.72		
				21	43	0.69		0.87		
				22	39	0.50		0.84		
				23	36	0.41		0.88		
				24	39	0.51		0.86		
				25	36	0.42		0.90		
				26	35	0.33		0.77		
				27	34	0.31		0.79		
				28	33	0.34		0.95		
				29	36	0.48		1.03		
				30	36	0.46		0.99		
				31	32	0.38		1.16		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
1R	B	08 01 83	NOTROPIS CHRYSOCEPHALUS	32	31	0.34		1.14		
				33	35	0.43		1.00		
				34	34	0.40		1.02		
				35	37	0.23		0.45		
				36	36	0.44		0.94		
				37	37	0.47		0.93		
				38	33	0.36		1.00		
				39	32	0.36		1.10		
				40	34	0.46		1.17		
				41	29	0.30		1.23		
				42	30	0.33		1.22		
				43	32	0.29		0.89		
				44	31	0.26		0.87		
				45	30	0.29		1.07		
				46	28	0.19		0.87		
			NOTROPIS SPILOPTERUS	47	31	0.23		0.77		
				1	42	0.67		0.90		
				2	54	1.60		1.02		
				3	48	1.04		0.94		
				4	62	2.18		0.91		
				5	63	1.98		0.79		
				6	53	1.48		0.99		
				7	56	1.72		0.98		
				8	52	1.32		0.94		
				9	59	2.02		0.98		
				10	43	0.66		0.83		
				11	59	1.82		0.89		
				12	59	1.82		0.89		
				13	65	2.69		0.98		
				14	46	0.89		0.91		
				15	67	2.82		0.94		
				16	57	1.40		0.76		
			NOTROPIS STRAMINEUS	17	35	0.27		0.63		
				1	50	1.10		0.88		
				2	48	1.05		0.95		
				3	28	0.15		0.68		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	CTL	AGE	# EGGS
1k	B	08 01 83	NOTROPIS STRAMINEUS	4	30	0.26				0.96
				5	34	0.36				0.92
				6	42	0.65				0.88
				7	49	0.95				0.81
				8	43	0.62				0.74
				9	39	0.52				0.88
			PIMEPHALES NOTATUS	1	27	0.24				1.22
				2	30	0.27				1.00
				3	31	0.27				0.91
				4	32	0.26				1.10
				5	38	0.50				0.91
				6	54	1.53				0.97
				7	60	1.99				0.92
				8	53	1.33				0.89
				9	57	1.75				0.94
				10	50	1.19				0.95
				11	55	1.55				0.93
				12	50	1.08				0.86
				13	50	1.16				0.93
				14	55	1.81				1.09
				15	70	3.75				1.09
				16	51	1.20				0.90
				17	53	1.55				1.04
				18	57	1.95				1.05
				19	57	1.88				1.02
				20	49	1.06				0.90
				21	56	1.57				0.89
				22	53	1.53				1.03
				23	52	1.16				0.82
				24	52	1.41				1.00
				25	51	1.50				1.01
				26	55	1.61				0.97
				27	58	1.87				0.96
				28	52	1.35				0.96
				29	48	0.99				0.90
				30	52	1.28				0.91

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
1R	B	08 01 83	PIMEPHALES NOTATUS	31	53	1.53		1.03		
				32	59	2.08		1.01		
			PIMEPHALES VIGILAX	1	56	1.74		0.99		
				2	61	2.26		1.00		
				3	50	1.08		0.86		
2	C D A	08 09 83	MOXOSTOMA SPP.	1	44	0.76		0.89		
			POMOXIS ANNULARIS	1	183	72.00		1.17		
2	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	1	44	0.64		0.75		
			NOTROPIS SPILOPTERUS	1	49	0.88		0.75		
				2	41	0.47		0.68		
				3	39	0.34		0.57		
				4	39	0.36		0.61		
				5	45	0.65		0.71		
				6	43	0.52		0.65		
				7	43	0.52		0.65		
				8	42	0.58		0.78		
				9	48	0.80		0.72		
				10	46	0.80		0.82		
				11	43	0.53		0.67		
	12	41	0.43		0.62					
		PIMEPHALES NOTATUS	1	28	0.13		0.59			
		FUNDULUS NOTATUS	1	27	0.15		0.76			
			2	24	0.12		0.87			
	B		NOTROPIS SPILOPTERUS	1	51	1.28		0.96		
				2	48	0.93		0.84		
				3	52	1.24		0.88		
				4	50	1.08		0.86		
				5	51	1.18		0.89		
				6	52	1.37		0.97		
				7	53	1.36		0.91		
				8	50	1.15		0.92		
				9	50	1.15		0.92		
				10	51	1.16		0.87		
			11	49	1.14		0.97			
			12	48	1.00		0.90			

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	B	08 01 83	NOTROPIS SPILOPTERUS	13	53	1.36		0.91		
				14	48	0.98		0.89		
				15	46	0.96		0.99		
				16	42	0.74		1.00		
				17	46	0.90		0.92		
				18	45	0.90		0.99		
				19	48	1.01		0.91		
				20	45	0.90		0.99		
				21	41	0.56		0.81		
				22	46	0.81		0.83		
				23	41	0.65		0.94		
				24	44	0.75		0.88		
				25	39	0.53		0.89		
				26	44	0.70		0.82		
				27	44	0.74		0.87		
				28	39	0.60		1.01		
				29	43	0.71		0.89		
				30	43	0.71		0.89		
				31	43	0.71		0.89		
				32	40	0.55		0.86		
				33	42	0.59		0.80		
				34	44	0.60		0.70		
				35	41	0.49		0.71		
				36	44	0.62		0.73		
				37	44	0.68		0.80		
				38	44	0.60		0.70		
				39	45	0.66		0.72		
				40	43	0.66		0.83		
				41	46	0.68		0.70		
				42	42	0.57		0.77		
				43	42	0.68		0.92		
				44	48	0.85		0.77		
				45	44	0.69		0.81		
				46	45	0.74		0.81		
				47	36	0.36		0.77		
				48	44	0.68		0.80		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
2	B	08 01 83	NOTROPIS SPILOPTERUS	49	41	0.60		0.87		
			ETHEOSTOMA NIGRUM	1	33	0.21		0.58		
	C	08 09 83	NOTROPIS SPILOPTERUS	1	67	2.58		0.86		
				2	47	0.84		0.81		
				3	47	0.94		0.91		
				4	53	1.16		0.78		
				5	52	1.31		0.93		
				6	47	0.88		0.85		
				1	67	2.52		0.84		
				2	54	1.25		0.79		
				3	53	1.26		0.85		
	4	54	1.34		0.85					
	5	55	1.42		0.85					
	6	56	1.45		0.83					
	1	48	0.69		0.62					
	2	48	0.75		0.68					
	3	48	0.75		0.68					
	4	51	1.03		0.78					
	5	47	0.79		0.76					
	6	48	0.82		0.74					
	7	49	0.79		0.67					
	8	49	0.85		0.72					
	9	47	0.89		0.86					
	10	46	0.77		0.79					
	11	48	0.88		0.80					
	1	31	0.33		1.11					
3L	D A	08 01 83	ETHEOSTOMA NIGRUM	1	26	0.11		0.63		
			ETHEOSTOMA NIGRUM	1	36	0.20		0.43		
			NOTROPIS CHRYSOCEPHALUS	1	70	2.85		0.83		
			PIMEPHALES NOTATUS	2	65	2.30		0.84		
3R	B C D A	08 09 83	LEPOMIS SPP.	1	36	0.65		1.39		
			08 01 83	NOTROPIS CHRYSOCEPHALUS	1	48	0.81		0.73	
	2	36		0.34		0.73				
	3	39		0.46		0.78				

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS				
3R	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	4	33	0.29		0.81						
				5	30	0.17		0.63						
				6	35	0.30		0.70						
				7	29	0.13		0.53						
				8	26	0.13		0.74						
				9	30	0.17		0.63						
				10	31	0.14		0.47						
				11	30	0.18		0.67						
				12	26	0.21		1.19						
				13	30	0.11		0.41						
				14	32	0.19		0.58						
				15	28	0.19		0.87						
				16	30	0.18		0.67						
				17	28	0.18		0.82						
				18	36	0.08		0.17						
				19	30	0.16		0.59						
				20	28	0.12		0.55						
				21	26	0.11		0.63						
				22	24	0.11		0.80						
				23	23	0.09		0.74						
				24	19	0.06		0.87						
				B	C	08 09 83	NOTROPIS SPILOPTERUS	1	49	0.92		0.78		
							NOTROPIS STRAMINEUS	1	29	0.19		0.78		
							NOTROPIS SPILOPTERUS	1	51	0.93		0.70		
4L	A	08 01 83	PIMEPHALES NOTATUS	1	52	1.24		0.88						
			LEPOMIS MEGALOTIS	1	156	78.18		2.06						
			ESOX AMERICANUS	1	102	4.45		0.42						
				2	105	6.37		0.55						
			NOTROPIS SPILOPTERUS	1	58	1.39		0.71						
				2	51	0.97		0.73						
				3	53	1.19		0.80						
				4	46	0.56		0.58						
			C	08 09 83	PIMEPHALES NOTATUS	1	54	1.00		0.64				
						2	52	1.27		0.90				

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	CTL	AGE	# EGGS				
4L	C	08 09 83	PIMEPHALES NOTATUS	1	38	0.43		0.78						
				2	21	0.16		1.73						
			PIMEPHALES VIGILAX	1	26	0.14		0.80						
				1	31	0.23		0.77						
			FUNDULUS NOTATUS	1	26	0.23		1.31						
				2	23	0.13		1.07						
	D		08 09 83	FUNDULUS NOTATUS	3	21	0.13		1.40					
					1	57	1.65		0.89					
					2	58	1.78		0.91					
					3	61	2.20		0.97					
					1	49	0.91		0.77					
					1	47	0.68		0.65					
4R	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	1	47	0.68		0.65						
				2	61	1.58		0.70						
				3	48	0.73		0.66						
			NOTROPIS SPILOPTERUS	4	45	0.61		0.67						
				1	37	0.40		0.79						
				2	37	0.43		0.85						
			B		08 01 83	NOTROPIS CHRYSOCEPHALUS	3	35	0.40		0.93			
							4	36	0.39		0.84			
							5	33	0.29		0.81			
	6	38					0.37		0.67					
	7	33					0.32		0.89					
	8	34					0.32		0.81					
			08 01 83	NOTROPIS SPILOPTERUS	9	34	0.32		0.81					
					10	31	0.19		0.64					
					11	24	0.08		0.58					
					12	24	0.10		0.72					
					1	73	3.27		0.84					
					2	52	0.96		0.68					
3					59	1.75		0.85						
4					54	1.16		0.74						
5					49	0.95		0.81						
6	57	1.66		0.90										
7	56	1.22		0.69										
8	62	1.77		0.74										
9	61	1.84		0.81										

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5L	A	08 01 83	MICROPTERUS SPP.	2	18	0.05		0.86		
				3	18	0.04		0.69		
			POMOXIS ANNULARIS	1	37	0.32		0.63		
			ETHEOSTOMA NIGRUM	1	28	0.12		0.55		
	B		CAMPSTOMA ANOMALUM	1	39	0.51		0.86		
			NOCOMIS BIGUTTATUS	1	28	0.22		1.00		
			NOTROPIS STRAMINEUS	1	36	0.40		0.86		
				2	23	0.12		0.99		
				3	44	0.87		1.02		
				4	39	0.53		0.89		
			PHENACOBIOUS MIRABILIS	1	38	0.43		0.78		
				2	36	0.40		0.86		
				3	41	0.56		0.81		
			NOTROPIS SPP.	1	13	0.05		2.28		
				2	19	0.06		0.87		
			PIMEPHALES NOTATUS	1	55	1.60		0.96		
				2	53	1.39		0.93		
				3	31	0.27		0.91		
				4	27	0.19		0.97		
				5	25	0.15		0.96		
				6	31	0.28		0.94		
				7	29	0.21		0.86		
				8	30	0.22		0.81		
				9	29	0.22		0.90		
				10	31	0.26		0.87		
				11	31	0.23		0.77		
				12	29	0.21		0.86		
				13	31	0.24		0.81		
				14	29	0.29		1.19		
				15	26	0.15		0.85		
				16	25	0.11		0.70		
				17	25	0.15		0.96		
				18	32	0.25		0.76		
				19	30	0.21		0.78		
				20	29	0.16		0.66		
				21	29	0.17		0.70		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	RTL	AGE	# EGGS			
5L	B	08 01 83	PIMEPHALES NOTATUS	22	30	0.22		0.81					
				23	28	0.12		0.55					
				24	31	0.22		0.74					
				25	32	0.28		0.85					
				26	26	0.14		0.80					
				27	23	0.09		0.74					
				28	24	0.17		1.23					
				29	26	0.07		0.40					
					1	30	0.28		1.04				
				2	35	0.45		1.05					
				1	57	1.58		0.85					
				1	34	0.50		1.27					
				2	28	0.27		1.23					
				3	27	0.28		1.42					
				4	26	0.22		1.25					
				5	29	0.34		1.39					
				6	31	0.43		1.44					
				1	67	3.56		1.18					
				1	41	0.41		0.59					
				2	29	0.17		0.70					
			C	08 09 83		NOTROPIS CHRYSOCEPHALUS	1	37	0.42		0.83		
							1	58	1.79		0.92		
						NOTROPIS SPILOPTERUS	1	36	0.33		0.71		
							1	61	2.09		0.92		
						NOTROPIS STRAMINEUS	2	35	0.34		0.79		
							3	35	0.36		0.84		
							4	35	0.32		0.75		
						PIMEPHALES NOTATUS	5	33	0.28		0.78		
							6	33	0.28		0.78		
LEPOMIS SPP.	1	33				0.45		1.25					
	2	25				0.25		1.60					
	3	22				0.15		1.41					
	4	14				0.06		2.19					
	1	69				4.17		1.27					
MICROPTERUS SALMOIDES	2	92				8.00		1.03					
	1	40				0.46		0.72					
	1	40				0.46		0.72					
D			NOTROPIS AMNIS	1	40	0.46		0.72					

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5L	D	08 09 83	NOTROPIS SPP. PIMEPHALES NOTATUS	1	37	0.04		0.81		
				2	32	0.41		1.25		
				3	30	0.30		1.11		
				4	33	0.33		0.92		
				5	30	0.23		0.85		
				6	31	0.27		0.91		
				7	32	0.32		0.98		
				8	27	0.16		0.81		
				9	29	0.23		0.94		
				10	32	0.33		1.01		
				11	24	0.16		1.16		
				12	34	0.35		0.89		
				13	33	0.36		1.00		
				14	32	0.27		0.82		
				15	31	0.27		0.91		
				16	28	0.15		0.68		
				17	30	0.25		0.93		
				18	39	0.59		0.99		
				19	35	0.37		0.86		
				20	32	0.34		1.04		
				21	29	0.20		0.82		
				22	32	0.29		0.89		
				23	29	0.25		1.03		
				24	28	0.21		0.96		
				25	26	0.14		0.80		
				26	24	0.14		1.01		
PIMEPHALES VIGILAX	1	31	0.30		1.01					
	2	27	0.14		0.71					
	3	28	0.18		0.82					
	4	24	0.11		0.80					
	5	23	0.14		1.15					
	6	21	0.11		1.19					
	7	26	0.15		0.85					
	8	21	0.04		0.43					
	9	19	0.08		1.17					
				0.06		0.87				

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
5L	D	08 09 83	MOXOSTOMA SPP. FUNDULUS NOTATUS LEPOMIS SPP.	1	44	0.80		0.94			
				1	21	0.12		1.30			
				1	34	0.53		1.35			
				2	29	0.34		1.39			
				3	20	0.14		1.75			
				4	21	0.17		1.84			
			5	21	0.09		0.97				
			6	19	0.12		1.75				
			7	16	0.10		2.44				
			1	85	7.00		1.14				
			1	40	0.53	MICROPTERUS SALMOIDES					
			1	40	0.53	ETHEOSTOMA NIGRUM					
			2	38	0.40		0.73				
			3	34	0.28		0.71				
			4	34	0.31		0.79				
			5	32	0.28		0.85				
			6	30	0.24		0.89				
			5R	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	1	26	0.12		0.68
1	43	0.54						0.68			
NOTROPIS SPILOPTERUS	2	44				0.60		0.70			
	3	41				0.39		0.57			
	4	38				0.35		0.64			
	5	38				0.33		0.60			
	6	50				0.77		0.62			
	7	47				0.73		0.70			
	8	36				0.30		0.64			
	9	48				0.85		0.77			
	10	40				0.39		0.61			
	11	56				1.50		0.85			
	12	48				0.95		0.86			
	13	58				1.69		0.87			
	14	41				0.52		0.75			
	15	46				0.65		0.67			
	16	46				0.82		0.84			
	17	46				0.62		0.64			
18	45	0.62		0.68							
NOTROPIS STRAMINEUS	1	52	1.27		0.90						

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	A	08 01 83	NOTROPIS STRAMINEUS	2	54	1.34		0.85		
				3	45	0.80		0.88		
				4	44	0.58		0.68		
				5	40	0.84		1.31		
				6	46	0.68		0.70		
				7	54	1.30		0.83		
				8	48	0.95		0.86		
				9	49	0.97		0.82		
				10	46	0.78		0.80		
				11	47	0.96		0.92		
				12	44	0.62		0.73		
				13	47	0.70		0.67		
				14	45	0.81		0.89		
				15	46	0.78		0.80		
				16	45	0.76		0.83		
				17	45	0.73		0.80		
				18	41	0.57		0.83		
				19	50	0.90		0.72		
				20	44	0.73		0.86		
				21	40	0.46		0.72		
				22	46	0.80		0.82		
				23	44	0.67		0.79		
				24	42	0.52		0.70		
				25	44	0.66		0.77		
				26	47	0.81		0.78		
				27	46	0.76		0.78		
				28	47	0.88		0.85		
				29	47	0.70		0.67		
				30	44	0.70		0.82		
				31	46	0.86		0.88		
				32	46	0.81		0.83		
				33	41	0.63		0.91		
				34	47	0.87		0.84		
				35	41	0.63		0.91		
				36	38	0.41		0.75		
				37	38	0.43		0.78		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	MTL	AGE	# EGGS
5R	A	08 01 83	NOTROPIS STRAMINEUS	38	35	0.35		0.82		
				39	33	0.26		0.72		
				40	33	0.25		0.70		
				41	33	0.28		0.78		
				42	34	0.31		0.79		
				43	37	0.38		0.75		
				44	33	0.26		0.72		
				45	33	0.22		0.61		
				46	32	0.25		0.76		
				47	34	0.28		0.71		
				48	31	0.17		0.57		
				49	30	0.20		0.74		
				1	39	0.42		0.71		
					54	1.05		0.67		
					2	51	1.00	0.75		
					1	41	0.57	0.83		
						102	21.48	2.02		
						28	0.18	0.82		
						2	24	0.10	0.72	
						3	28	0.16	0.73	
						4	26	0.17	0.97	
						5	27	0.14	0.71	
						6	21	0.05	0.54	
		1	24	0.07	0.51					
			50	0.79	0.63					
B			EPHEOSTOMA NIGRUM	1	46	1.00		1.03		
			PERCINA MACULATA	2	49	1.15		0.98		
			NOTROPIS STRAMINEUS	3	33	0.38		1.06		
				4	41	0.60		0.87		
				5	31	0.27		0.91		
				6	31	0.35		1.17		
				7	29	0.28		1.15		
				8	31	0.33		1.11		
				9	30	0.33		1.22		
				10	30	0.33		1.22		
				11	23	0.19		1.56		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	B	08 01 83	NOTROPIS STRAMINEUS PHENACOBIOUS MIRABILIS	1	29	0.28		1.15		
				2	39	0.54		0.91		
				3	34	0.40		1.02		
				4	39	0.55		0.93		
				5	37	0.45		0.89		
				6	36	0.45		0.96		
				7	29	0.25		1.03		
				8	37	0.49		0.97		
				9	37	0.42		0.83		
				10	30	0.29		1.07		
				11	33	0.35		0.97		
				12	35	0.37		0.86		
				13	36	0.41		0.88		
				14	38	0.51		0.93		
				15	32	0.34		1.04		
				16	38	0.52		0.95		
				17	30	0.34		1.26		
				18	33	0.36		1.00		
				19	34	0.41		1.04		
				20	36	0.45		0.96		
				21	35	0.38		0.89		
				22	36	0.43		0.92		
			PIMEPHALES NOTATUS	22	35	0.47		1.10		
				1	51	1.30		0.98		
				2	34	0.37		0.94		
				3	36	0.43		0.92		
				4	32	0.35		1.07		
				5	34	0.38		0.97		
				6	33	0.38		1.06		
				7	37	0.45		0.89		
				8	31	0.31		1.04		
				9	32	0.38		1.16		
				10	36	0.44		0.94		
				11	31	0.37		1.24		
				12	31	0.33		1.11		
				13	31	0.33		1.11		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS		
5R	B	08 01 83	PIMEPHALES NOTATUS	14	30	0.32		1.19				
				15	28	0.29		1.32				
				16	32	0.35		1.07				
				17	34	0.40		1.02				
				18	32	0.38		1.16				
				19	32	0.36		1.10				
				20	30	0.32		1.19				
				21	27	0.22		1.12				
				22	32	0.30		0.92				
				PIMEPHALES VIGILAX	1	56	1.56		0.89			
					2	57	1.87		1.01			
			3		57	1.71		0.92				
			4		29	0.14		0.57				
			5		31	0.24		0.81				
			6		28	0.17		0.77				
			SEMOTILUS ATROMACULATUS		1	37	0.51		1.01			
					2	37	0.54		1.07			
				3	35	0.40		0.93				
				4	37	0.46		0.91				
				5	33	0.45		1.25				
				6	37	0.53		1.05				
				7	36	0.51		1.09				
8	34	0.42			1.07							
9	22	0.22			2.07							
10	26	0.22			1.25							
MOXOSTOMA SPP.	1	41	0.62		0.90							
	2	31	0.34		1.14							
	3	38	0.52		0.95							
	4	36	0.40		0.86							
	5	33	0.38		1.06							
	6	34	0.41		1.04							
	7	33	0.43		1.20							
MICROPTERUS SALMOIDES	1	31	0.35		1.17							
	2	62	2.57		1.08							
ETHEOSTOMA NIGRUM	1	43	0.70		0.88							
	2	33	0.37		1.03							

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	B	08 01 83	ETHEOSTOMA NIGRUM	1	37	0.42		0.83		
			PERCINA MACULATA	2	45	0.68		0.75		
				3	49	0.96		0.82		
	C	08 09 83	NOCOMIS BIGUTTATUS	1	46	0.79		0.81		
			NOTROPIS SPILOPTERUS	1	31	0.22		0.74		
	D		ERICYMBA BUCATTA	1	52	1.20		0.85		
				NOTROPIS CHRYSOCEPHALUS	2	51	1.08		0.81	
			NOTROPIS SPILOPTERUS	1	38	0.43		0.78		
				1	32	0.34		1.04		
				2	26	0.17		0.97		
				3	39	0.50		0.84		
				4	46	1.12		1.15		
				5	27	0.20		1.02		
				1	28	0.25		1.14		
				2	33	0.40		1.11		
				3	22	0.15		1.41		
				4	32	0.26		0.79		
				5	31	0.28		0.94		
1				28	0.17		0.77			
2				31	0.26		0.87			
3	26	0.12		0.68						
4	31	0.23		0.77						
5	28	0.10		0.82						
6	31	0.25		0.84						
7	25	0.10		0.64						
8	36	0.31		0.66						
9	37	0.42		0.83						
10	31	0.23		0.77						
11	26	0.12		0.68						
12	28	0.21		0.96						
13	40	0.56		0.87						
14	48	0.88		0.80						
15	39	0.51		0.86						
16	51	1.30		0.98						
17	29	0.20		0.82						
18	31	0.25		0.84						

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	D	08 09 83	NOTROPIS STRAMINEUS	19	46	0.94		0.97		
				20	36	0.34		0.73		
				21	36	0.43		0.92		
				22	40	0.57		0.89		
				23	37	0.39		0.77		
				24	43	0.78		0.98		
				25	47	0.96		0.92		
				26	38	0.48		0.87		
				27	39	0.53		0.89		
				28	47	0.95		0.92		
				29	41	0.68		0.99		
				30	50	1.21		0.97		
				31	50	1.08		0.86		
				32	49	1.11		0.94		
				33	38	0.45		0.82		
				34	31	0.29		0.97		
				35	28	0.15		0.68		
				36	32	0.31		0.95		
				37	38	0.42		0.77		
				38	63	2.33		0.93		
				39	53	1.27		0.85		
				40	46	0.89		0.91		
				41	33	0.22		0.61		
				42	34	0.25		0.64		
				43	36	0.34		0.73		
				44	49	1.04		0.88		
				45	49	1.04		0.88		
				46	50	1.01		0.81		
				47	51	1.17		0.88		
				48	51	1.04		0.78		
				49	51	1.02		0.77		
				50	51	1.09		0.82		
				51	46	0.92		0.95		
52	37	0.46		0.91						
53	30	0.18		0.67						
			PHENACOBTIUS MIRABILIS	1	44	0.76		0.89		

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APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5K	D	08 09 83	PHENACOBIOUS MIRABILIS	2	43	0.75		0.94		
				3	41	0.64		0.93		
				4	37	0.50		0.99		
				5	36	0.39		0.84		
				6	36	0.41		0.88		
			NOTROPIS SPP.	7	38	0.49		0.89		
				1	24	0.09		0.65		
				2	19	0.04		0.58		
				3	25	0.12		0.77		
				4	24	0.06		0.43		
			PIREPHELES NOTATUS	5	22	0.09		0.85		
				1	38	0.33		0.60		
				2	33	0.30		0.83		
				3	33	0.31		0.86		
				4	34	0.36		0.92		
				5	35	0.29		0.68		
				6	37	0.35		0.69		
				7	36	0.38		0.81		
				8	36	0.36		0.77		
				9	35	0.39		0.91		
				10	34	0.32		0.81		
				11	31	0.21		0.70		
				12	31	0.23		0.77		
				13	33	0.29		0.81		
				14	34	0.34		0.87		
				15	34	0.29		0.74		
				16	36	0.36		0.77		
				17	32	0.28		0.85		
				18	32	0.30		0.92		
				19	25	0.10		0.64		
				20	25	0.11		0.70		
				21	31	0.18		0.60		
				22	40	0.48		0.75		
				23	32	0.25		0.76		
				24	34	0.32		0.81		
				25	34	0.28		0.71		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	BEP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS	
5R	D	08 09 83	PIMEPHALES NOTATUS	26	34	0.30		0.76			
				27	31	0.18		0.60			
				28	31	0.24		0.81			
				29	29	0.17		0.70			
				PIMEPHALES VIGILAX	1	36	0.36		0.77		
					2	35	0.30		0.70		
					3	40	0.55		0.86		
					4	36	0.37		0.79		
					5	37	0.41		0.81		
					6	33	0.27		0.75		
			7		38	0.43		0.78			
			8		30	0.23		0.85			
			9		32	0.28		0.85			
			10		36	0.44		0.94			
			11		36	0.40		0.86			
			12		40	0.53		0.83			
			13		32	0.25		0.76			
			14		33	0.33		0.92			
			15		30	0.16		0.59			
			16		25	0.08		0.51			
			17		38	0.46		0.84			
			18		29	0.21		0.86			
			19		23	0.08		0.66			
			20		28	0.16		0.73			
			21		31	0.23		0.77			
			22	32	0.26		0.79				
			23	33	0.31		0.86				
			24	25	0.06		0.38				
			25	32	0.25		0.76				
			26	30	0.23		0.85				
			27	32	0.26		0.79				
28	22	0.05		0.47							
29	21	0.04		0.43							
30	22	0.06		0.56							
31	18	0.02		0.34							
SEMOTILUS ATROMACULATUS	1	24		1	24	0.12		0.87			

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	CTL	AGE	# EGGS
5R	D	08 09 83	MOXOSTOMA SPP. LEPOMIS SPP.	1	46	0.94		0.97		
				2	37	0.61		1.20		
				3	36	0.58		1.24		
				4	14	0.03		1.09		
				5	21	0.08		0.86		
				6	28	0.04		0.18		
				7	21	0.07		0.76		
				8	22	0.12		1.13		
				9	28	0.05		0.23		
				10	21	0.10		1.08		
				11	19	0.04		0.58		
				12	18	0.02		0.34		
				13	22	0.10		0.94		
				14	18	0.01		0.17		
				15	21	0.05		0.54		
				16	19	0.05		0.73		
				17	21	0.08		0.86		
				18	20	0.05		0.62		
				19	18	0.03		0.51		
				20	17	0.02		0.41		
				21	19	0.06		0.87		
				17	0.02		0.41			
			MICROPTERUS SALMOIDES	1	99	10.00		1.03		
			ETHEOSTOMA NIGRUM	1	46	0.71		0.73		
				2	34	0.23		0.59		
				3	41	0.49		0.71		
				4	38	0.17		0.31		
				5	30	0.19		0.70		
				6	38	0.39		0.71		
				7	31	0.23		0.77		
				8	28	0.17		0.77		
				9	31	0.25		0.84		
				10	38	0.39		0.71		
				11	28	0.14		0.64		
				12	36	0.29		0.62		
				13	31	0.16		0.54		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1963 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
5R	D	08 09 63	ETHEOSTOMA NIGRUM	14	26	0.12		0.68		
6L	A	08 01 63	NOTROPIS CHRYSOCEPHALUS	1	34	0.25		0.64		
				2	37	0.37		0.73		
				3	40	0.42		0.66		
				4	36	0.32		0.69		
				5	33	0.27		0.75		
				6	32	0.20		0.61		
				7	36	0.32		0.69		
				8	37	0.35		0.69		
				9	37	0.34		0.67		
				10	34	0.30		0.76		
				11	35	0.31		0.72		
				12	37	0.34		0.67		
				13	33	0.22		0.61		
				14	37	0.28		0.55		
				15	34	0.25		0.64		
				16	30	0.19		0.70		
				17	34	0.29		0.74		
				18	32	0.19		0.58		
				19	34	0.24		0.61		
				20	33	0.23		0.64		
				21	38	0.44		0.80		
				22	36	0.28		0.60		
				23	35	0.26		0.61		
				24	37	0.30		0.59		
				25	34	0.19		0.48		
				26	29	0.12		0.49		
				27	37	0.32		0.63		
				28	33	0.24		0.67		
				29	40	0.42		0.66		
				30	41	0.45		0.65		
				31	32	0.18		0.55		
				32	29	0.12		0.49		
				33	29	0.14		0.57		
				34	28	0.11		0.50		
				35	26	0.09		0.51		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6L	B	08 01 83	NOTROPIS CHRYSOCEPHALUS	21	36	0.26		0.56		
				22	39	0.40		0.67		
				23	31	0.14		0.47		
				24	37	0.24		0.47		
				25	38	0.34		0.62		
				26	39	0.38		0.64		
				27	32	0.22		0.67		
				28	32	0.17		0.52		
				29	31	0.14		0.47		
				30	32	0.12		0.37		
				31	32	0.21		0.64		
				32	27	0.07		0.36		
				33	37	0.28		0.55		
				34	35	0.27		0.63		
				35	36	0.23		0.49		
				36	30	0.09		0.33		
				37	35	0.23		0.65		
				38	33	0.15		0.42		
				39	36	0.24		0.51		
				40	34	0.16		0.41		
				41	35	0.24		0.56		
				42	28	0.07		0.32		
				43	27	0.08		0.41		
				44	32	0.16		0.49		
				45	32	0.20		0.61		
				46	31	0.13		0.44		
				47	34	0.22		0.56		
				48	38	0.36		0.66		
				49	32	0.21		0.64		
50	34	0.24		0.61						
51	31	0.12		0.40						
52	35	0.24		0.56						
			FUNDULUS NOTATUS	1	56	1.51		0.86		
				2	59	1.74		0.85		
C	08 09 83		NOTROPIS CHRYSOCEPHALUS	1	26	0.17		0.97		
				2	32	0.30		0.92		

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APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6L	C	08 09 83	NOTROPIS CHRYSOCEPHALUS	3	33	0.33		0.92		
				4	29	0.23		0.94		
				5	37	0.43		0.85		
				6	29	0.21		0.86		
				7	37	0.41		0.81		
				8	30	0.25		0.93		
				9	33	0.35		0.97		
				10	31	0.32		1.07		
				11	32	0.30		0.92		
				12	32	0.30		0.92		
				13	30	0.20		0.74		
				14	39	0.43		0.72		
				15	34	0.32		0.81		
				16	46	0.90		0.92		
				17	42	0.69		0.93		
				18	37	0.51		1.01		
				19	41	0.57		0.83		
				20	36	0.46		0.99		
				21	39	0.55		0.93		
				22	46	0.78		0.80		
				23	38	0.53		0.97		
				24	36	0.43		0.92		
				25	41	0.67		0.97		
				26	36	0.44		0.94		
				27	28	0.25		1.14		
				28	45	0.80		0.88		
				29	40	0.62		0.97		
				30	37	0.50		0.99		
				31	38	0.48		0.87		
				32	33	0.37		1.03		
				33	42	0.72		0.97		
				34	38	0.52		0.95		
				35	36	0.44		0.94		
				36	37	0.50		0.99		
				37	38	0.53		0.97		
				38	38	0.56		1.02		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1963 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	MTL	AGE	# EGGS
6L	C	08 09 83	NOTROPIS CHRYSOCEPHALUS	39	29	0.35		1.44		
				40	28	0.28		1.28		
				41	31	0.32		1.07		
				42	33	0.34		0.95		
				43	32	0.36		1.10		
				44	41	0.62		0.90		
				45	31	0.33		1.11		
				46	32	0.37		1.13		
				47	29	0.35		1.44		
				48	36	0.49		1.05		
				49	38	0.61		1.11		
				50	32	0.35		1.07		
				51	33	0.38		1.06		
				52	38	0.55		1.00		
				53	29	0.30		1.23		
				54	35	0.44		1.03		
				55	37	0.53		1.05		
				56	36	0.48		1.03		
				57	38	0.57		1.04		
				58	39	0.57		0.96		
				59	29	0.31		1.27		
				60	36	0.44		0.94		
				61	36	0.42		0.90		
				62	33	0.39		1.09		
				63	36	0.51		1.09		
				64	39	0.54		0.91		
				65	43	0.85		1.07		
				66	36	0.45		0.96		
				67	31	0.25		0.84		
				68	37	0.49		0.97		
				69	31	0.26		0.87		
				70	32	0.34		1.04		
				71	39	0.52		0.88		
				72	39	0.56		0.94		
				73	42	0.66		0.89		
				74	33	0.39		1.09		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS				
6L	C	08 09 83	NOTROPIS CHRYSOCEPHALUS	75	32	0.28		0.85						
				76	31	0.30		1.01						
				77	31	0.40		0.79						
				78	31	0.28		0.94						
				79	33	0.34		0.95						
				80	30	0.28		1.04						
				81	33	0.35		0.97						
				82	30	0.29		1.07						
				83	35	0.42		0.98						
				84	33	0.34		0.95						
				85	34	0.37		0.94						
				86	33	0.30		0.83						
				87	39	0.54		0.91						
				88	37	0.42		0.83						
				89	39	0.51		0.86						
				90	33	0.33		0.92						
				91	29	0.21		0.86						
				92	34	0.33		0.84						
				93	32	0.29		0.89						
				94	33	0.32		0.89						
				95	27	0.17		0.86						
				96	29	0.22		0.90						
							NOTROPIS SPILOPTERUS	1	46	0.85		0.87		
								2	41	0.62		0.90		
								3	27	0.25		1.27		
							NOTROPIS SPP.	1	23	0.09		0.74		
								2	22	0.10		0.94		
			FUNDULUS NOTATUS	1	61	1.89		0.83						
			LEPOMIS SPP.	1	21	0.15		1.62						
D			NOTROPIS CHRYSOCEPHALUS	1	24	0.07		0.51						
				2	23	0.04		0.33						
				3	25	0.07		0.45						
				4	28	0.10		0.46						
				5	30	0.15		0.56						
				6	29	0.13		0.53						
				7	24	0.06		0.43						

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	MTL	AGE	# EGGS
6L	D	08 09 83	NOTROPIS CHRYSOCEPHALUS	8	27	0.11		0.56		
				9	37	0.36		0.71		
				10	39	0.46		0.78		
				11	36	0.32		0.69		
				12	29	0.13		0.53		
				13	37	0.37		0.73		
				14	42	0.55		0.74		
				15	38	0.42		0.77		
				16	37	0.34		0.67		
				17	43	0.56		0.70		
				18	27	0.11		0.56		
				19	28	0.08		0.36		
				20	44	0.64		0.75		
				21	37	0.32		0.63		
				22	31	0.21		0.70		
				23	34	0.24		0.61		
				24	31	0.16		0.54		
				25	35	0.29		0.68		
				26	34	0.27		0.69		
				27	28	0.16		0.73		
				28	29	0.19		0.78		
				29	32	0.20		0.61		
				30	26	0.14		0.80		
				31	29	0.19		0.78		
				32	31	0.24		0.81		
				33	31	0.24		0.81		
				34	32	0.23		0.70		
				35	39	0.45		0.76		
				36	31	0.25		0.84		
				37	33	0.29		0.81		
				38	31	0.23		0.77		
				39	35	0.35		0.82		
				40	36	0.33		0.71		
				41	46	0.75		0.77		
				42	29	0.26		1.07		
				43	36	0.34		0.73		

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS		
6L	D	08 09 83	NOTROPIS CHRYSOCEPHALUS	44	40	0.50		0.78				
				45	30	0.24		0.89				
				46	31	0.18		0.60				
				47	33	0.32		0.89				
				48	32	0.28		0.85				
				49	31	0.22		0.74				
				50	35	0.31		0.72				
				51	24	0.15		1.09				
					1	22	NOTROPIS RUBELLUS		0.06		0.56	
					1	24	NOTROPIS SPILOPTERUS		0.13		0.94	
					1	21	NOTROPIS SPP.		0.05		0.54	
					2	22			0.08		0.75	
					3	19			0.04		0.58	
	4	18			0.03		0.51					
	5	19			0.05		0.73					
	6	19			0.05		0.73					
	7	13			0.01		0.46					
	8	21			0.04		0.43					
	9	21			0.05		0.54					
	10	18			0.02		0.34					
	11	20			0.03		0.37					
	12	19			0.01		0.15					
	13	20			0.03		0.37					
6R	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	1	30	0.19		0.70				
				2	29	0.22		0.90				
				3	30	0.20		0.74				
				4	28	0.17		0.77				
				5	34	0.26		0.66				
				6	33	0.24		0.67				
				7	32	0.22		0.67				
				8	35	0.27		0.63				
				9	30	0.18		0.67				
				10	36	0.30		0.64				
				11	30	0.13		0.48				
				12	32	0.24		0.73				
				13	36	0.31		0.66				

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6R	A	08 01 83	NOTROPIS CHRYSOCEPHALUS	14	39	0.39		0.66		
				15	36	0.33		0.71		
				16	38	0.40		0.73		
				17	35	0.30		0.70		
				18	38	0.40		0.73		
				19	34	0.23		0.59		
				20	31	0.17		0.57		
				21	37	0.38		0.75		
				22	32	0.21		0.64		
				23	32	0.26		0.79		
				1	51	1.02		0.77		
				2	62	2.38		1.00		
				3	52	1.06		0.75		
			NOTROPIS STAMINEUS	1	44	0.67		0.79		
				2	43	0.67		0.84		
				3	42	0.56		0.76		
				4	41	0.53		0.77		
			PHENACOBIOUS MIRABILIS	5	28	0.19		0.87		
				1	44	0.73		0.86		
				2	41	0.60		0.87		
			PIMEPHALES NOTATUS	3	40	0.51		0.80		
				1	51	1.34		1.01		
				2	54	1.61		1.02		
3	56	1.46			0.83					
4	51	1.18			0.89					
5	52	1.40			1.00					
6	51	1.22			0.92					
7	53	1.38			0.93					
8	38	0.48			0.87					
9	32	0.27			0.82					
10	33	0.29			0.81					
11	31	0.22			0.74					
12	33	0.25		0.70						
13	34	0.30		0.76						
14	31	0.26		0.87						
15	27	0.19		0.97						

APPENDIX C-2. FISH CAUGHT IN THE KANKAKEE RIVER AND HORSE CREEK BY SEINE
 DURING AUGUST 1983 (CONTINUED).

STN	REP	DATE	SPECIES	ID NO.	LENGTH (MM)	WEIGHT (G)	SEX	KTL	AGE	# EGGS
6R	B	08 01 83	LEPISOSTEUS OSSEUS	1	204	9.37		0.11		
			NOTROPIS SPILOPTERUS	1	53	1.15		0.77		
				2	61	1.90		0.84		
	C	08 09 83	PIMEPHALES NOTATUS	1	33	0.36		1.00		
			MICROPTERUS SALMOIDES	1	71	4.07		1.14		
			NOTROPIS CHRYSOCEPHALUS	1	33	0.34		0.95		
				2	36	0.41		0.88		
				3	32	0.41		1.25		
			NOTROPIS SPILOPTERUS	1	64	2.55		0.97		
				2	63	2.30		0.92		
			NOTROPIS STRAMINEUS	1	36	0.35		0.75		
				2	37	0.38		0.75		
			PIMEPHALES NOTATUS	1	33	0.33		0.92		
				2	32	0.29		0.89		
				3	32	0.33		1.01		
	4	34	0.35		0.89					
	5	35	0.41		0.96					
		ETHEOSTOMA NIGRUM	1	38	0.53		0.97			
			2	47	0.94		0.91			
D			PERCINA MACULATA	1	46	0.80		0.82		
			LEPOMIS CYANELLUS	1	16	0.02		0.49		