

597.0977-  
F746m  
1919

# ATLAS

To Accompany a Report on the  
Fishes of Illinois

---

S. A. FORBES      R. E. RICHARDSON

UNIVERSITY OF  
ILLINOIS LIBRARY  
AT URBANA-CHAMPAIGN

ILLINOIS HISTORICAL SURVEY





STATE OF ILLINOIS  
DEPARTMENT OF REGISTRATION AND EDUCATION  
FRANCIS W. SHEPARDSON, Director

DIVISION OF THE  
NATURAL HISTORY SURVEY  
STEPHEN A. FORBES, Chief

---

# Maps

## Showing Distribution of Illinois Fishes to Accompany a Report on the Fishes of Illinois

BY

STEPHEN ALFRED FORBES, PH.D., LL.D.

AND

ROBERT EARL RICHARDSON, A.M.



SECOND EDITION, 1919

PUBLISHED BY  
AUTHORITY OF THE STATE OF ILLINOIS



SPRINGFIELD, ILL.  
ILLINOIS STATE JOURNAL CO., STATE PRINTERS  
1919  
(18050-2M-6-19)

597.09773

F 72 m

1913

~~597.09773~~  
~~F 69 m~~

## LIST OF MAPS

The general map of the distribution of collections (Map IV.) shows, by the location of the red spots, all the localities from which collections of fishes have been made by us in the work of the Natural History Survey. The distribution maps for the various species indicate in the same way all the localities from which representatives of the species have been taken. *For an accurate idea of the significance of these species maps, each should be compared with Map IV.*

The following numbered list of the counties of the state corresponds to the figures on these maps.

|                 |                |                |
|-----------------|----------------|----------------|
| 1. Jo Daviess   | 35. Hancock    | 69. Madison    |
| 2. Stephenson   | 36. McDonough  | 70. Bond       |
| 3. Winnebago    | 37. Fulton     | 71. Fayette    |
| 4. Boone        | 38. Mason      | 72. Effingham  |
| 5. McHenry      | 39. Tazewell   | 73. Jasper     |
| 6. Lake         | 40. McLean     | 74. Crawford   |
| 7. Cook         | 41. Vermilion  | 75. Lawrence   |
| 8. Du Page      | 42. Champaign  | 76. Richland   |
| 9. Kane         | 43. Piatt      | 77. Clay       |
| 10. DeKalb      | 44. Dewitt     | 78. Marion     |
| 11. Ogle        | 45. Logan      | 79. Clinton    |
| 12. Lee         | 46. Menard     | 80. St. Clair  |
| 13. Carroll     | 47. Cass       | 81. Monroe     |
| 14. Whiteside   | 48. Schuyler   | 82. Randolph   |
| 15. Rock Island | 49. Brown      | 83. Washington |
| 16. Mercer      | 50. Adams      | 84. Perry      |
| 17. Henry       | 51. Pike       | 85. Jefferson  |
| 18. Bureau      | 52. Scott      | 86. Wayne      |
| 19. Putnam      | 53. Morgan     | 87. Edwards    |
| 20. La Salle    | 54. Sangamon   | 88. Wabash     |
| 21. Kendall     | 55. Christian  | 89. White      |
| 22. Grundy      | 56. Macon      | 90. Hamilton   |
| 23. Will        | 57. Moultrie   | 91. Franklin   |
| 24. Kankakee    | 58. Douglas    | 92. Jackson    |
| 25. Iroquois    | 59. Edgar      | 93. Williamson |
| 26. Ford        | 60. Clark      | 94. Saline     |
| 27. Livingston  | 61. Coles      | 95. Gallatin   |
| 28. Marshall    | 62. Cumberland | 96. Hardin     |
| 29. Woodford    | 63. Shelby     | 97. Pope       |
| 30. Stark       | 64. Montgomery | 98. Johnson    |
| 31. Peoria      | 65. Macoupin   | 99. Union      |
| 32. Knox        | 66. Greene     | 100. Alexander |
| 33. Warren      | 67. Calhoun    | 101. Pulaski   |
| 34. Henderson   | 68. Jersey     | 102. Massac    |

I. & II. The three sections of Illinois, northern, central, and southern, and the ten stream systems of the state: I., the Galena District, II., the Rock River System, III., the Illinois River System, IV., the Lake Michigan drainage, V., the Mississippi River drainage, VI., the Kaskaskia River System, VII., the Wabash System, VIII., the Big Muddy River System, IX., the Saline River System, and X., the Cairo District.

III. Glacial geology of Illinois.

IV. Localities from which collections were made.

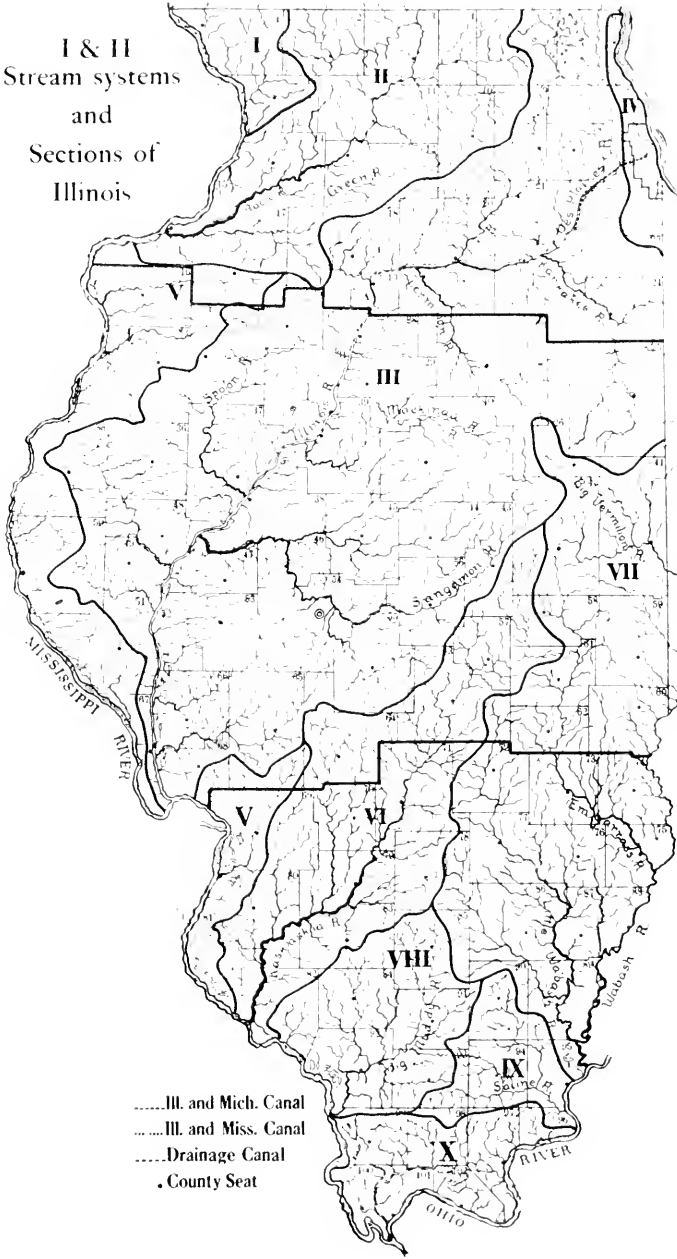
V.—CII. Distribution of species.

CIII. Northern species (●) and southern species (▲) in Illinois.

|  | MAP No   |   | MAP No. |
|--|----------|---|---------|
| Banded Darter, <i>Etheostoma zonule</i> .....                          | XCHH     | <i>Notropis cayuga</i> .....  | XXXIII  |
| Big-eyed Chub, <i>Hybopsis amblops</i> .....                           | XLIX     | <i>Notropis gilberti</i> .....  | XXXVI   |
| Black Bullhead, <i>Ameiurus melas</i> .....                            | LV       | <i>Notropis heterodon</i> .....                                       | XXXIV   |
| Black Crappie, <i>Pomoxis sparoides</i> .....                          | LXXI     | <i>Notropis illecebrosus</i> .....                                    | XXXVII  |
| Black-head Minnow, <i>Pimephales</i><br><i>promelas</i> .....          | XXVII    | <i>Notropis jejunus</i> .....   | XLII    |
| Black-sided Darter, <i>Hadropterus aspro</i> ..                        | LXXXVII  | <i>Opsopoeodus emilix</i> .....                                       | XXX     |
| Blackfin, <i>Notropis umbratilis atripes</i> ....                      | XLV      | Orange-spotted Sunfish, <i>Lepomis humilis</i>                        | LXXVII  |
| Bluegill, <i>Lepomis pallidus</i> .....                                | LXXXVIII | Pirate-perch, <i>Aphredoderus sayanus</i> ....                        | LXIX    |
| Blunt-nosed Minnow, <i>Pimephales</i><br><i>notatus</i> .....          | XXVIII   | Pumpkinseed, <i>Eupomotis gibbosus</i> .....                          | LXXXIX  |
| Blunt-nosed River Carp, <i>Carpiodes</i><br><i>difformis</i> .....     | XIII     | Quillback, <i>Carpiodes velifer</i> .....                             | XIV     |
| <i>Boleichthys fusiformis</i> .....                                    | XCVIII   | Rainbow Darter, <i>Etheostoma caeruleum</i>                           | XCV     |
| <i>Boleosoma canurum</i> .....   | XCI      | Red-bellied Dace, <i>Chrosomus</i><br><i>erythrogaster</i> .....      | XXIV    |
| Brindled Stonecat, <i>Schilbodes miurus</i> ..                         | LIX      | Redfin, <i>Notropis lutrensis</i> .....                               | XXXIX   |
| Brook Silverside, <i>Labidesthes sicculus</i> ..                       | LXVIII   | Red-mouth Buffalo, <i>Ictiobus cyprinellu</i>                         | IX      |
| Bullhead Minnow, <i>Ctiola vigilax</i> .....                           | XXXII    | River Chub, <i>Hybopsis kentuckiensis</i> ....                        | LJ      |
| Channel-cat, <i>Ictalurus punctatus</i> .....                          | LII      | Rock Bass, <i>Ambloplites rupestris</i> .....                         | LXXXIII |
| Chub-sucker, <i>Erimyzon sucetta oblongus</i>                          | XVI      | Rosy-faced Minnow, <i>Notropis rubrifrons</i>                         | XLIV    |
| Common Pike, <i>Esox lucius</i> .....                                  | LXII     | Round Sunfish, <i>Centrarchus macropterus</i>                         | LXXII   |
| Common Red-horse, <i>Moxostoma</i><br><i>aureolum</i> .....            | XXI      | Sand Darter, <i>Ammocrypta pellucida</i> ....                         | XCII    |
| Common River Carp, <i>Carpiodes carpio</i> ..                          | XII      | Sheepshead, <i>Aplodinotus grunniens</i> ....                         | CII     |
| Common Shiner, <i>Notropis cornutus</i> ....                           | XLJ      | Shiner, <i>Notropis atherinoides</i> .....                            | XLIII   |
| Common Sucker, <i>Catostomus</i><br><i>commersonii</i> .....           | XVIII    | Short-headed Red-horse, <i>Moxostoma</i><br><i>breviceps</i> .....    | XXII    |
| <i>Cottogaster shumardi</i> .....                                      | LXXXVIII | Short-nosed Gar, <i>Lepisosteus platostomus</i>                       | VI      |
| Dogfish, <i>Amia calva</i> .....                                       | VII      | Silver-mouthed Minnow, <i>Ericymba</i><br><i>buccata</i> .....        | XLVI    |
| <i>Etheostoma jessie</i> .....   | XCIV     | Silvery Minnow, <i>Hybognathus nuchalis</i>                           | XXV     |
| <i>Etheostoma squamiceps</i> .....                                     | XCVI     | Small-mouth Buffalo, <i>Ictiobus bubalus</i>                          | XI      |
| Fan-tailed Darter, <i>Etheostoma flabellare</i>                        | XCVII    | Small-mouthed Black Bass, <i>Micropterus</i><br><i>dolomieu</i> ..... | LXXX    |
| <i>Fundulus dispar</i> .....   | LXIV     | Speckled Bullhead, <i>Ameiurus nebulosus</i>                          | LIV     |
| Gizzard-shad, <i>Dorosoma cepedianum</i> ....                          | VIII     | Spot-tailed Minnow, <i>Notropis hudsonius</i>                         | XXXVIII |
| Golden Shiner, <i>Abramis crysolucas</i> ....                          | XXXI     | Spotted Shiner, <i>Hybopsis dissimilis</i> ....                       | XLVIII  |
| Gray Pike, <i>Stizostedion canadense grisceum</i>                      | LXXXIII  | Spotted Sucker, <i>Minytrema melanops</i> ..                          | XVII    |
| Green-sided Darter, <i>Diplesion biennius</i>                          | LXXXIX   | Steel-colored Minnow, <i>Notropis whipplii</i>                        | XL      |
| <i>Hadropterus phoxocephalus</i> .....                                 | LXXXVI   | Stonecat, <i>Noturus flavus</i> .....                                 | LVII    |
| Hogsucker, <i>Catostomus nigricans</i> .....                           | XIX      | Stone-roller, <i>Campostoma anomalum</i> ....                         | XXIII   |
| Horned Dace, <i>Semotilus atromaculatus</i> ..                         | XXIX     | Storer's Chub, <i>Hybopsis storerianus</i> .....                      | L       |
| <i>Hybognathus nuchalis</i> .....                                      | XXV      | Straw-colored Minnow, <i>Notropis</i><br><i>biennius</i> .....        | XXXV    |
| <i>Hybognathus nubilus</i> .....                                       | XXVI     | Sucker-mouthed Minnow, <i>Phenacobius</i><br><i>mirabilis</i> .....   | XLVII   |
| Johnny Darter, <i>Boleosoma nigrum</i> .....                           | XC       | Tadpole Cat, <i>Schilbodes gyrinus</i> .....                          | LVIII   |
| Lake Carp, <i>Carpiodes thompsoni</i> .....                            | XV       | Top-minnow, <i>Fundulus notatus</i> .....                             | LXV     |
| Large-mouthed Black Bass, <i>Micropterus</i><br><i>salmoides</i> ..... | LXXXI    | Trout-perch, <i>Percopsis guttatus</i> .....                          | LXVII   |
| Least Darter, <i>Microperca punctulata</i> ....                        | XCIX     | Viviparous Top-minnow, <i>Gambusia</i><br><i>affinis</i> .....        | LXVI    |
| <i>Lepomis miniatus</i> .....  | LXXV     | Wall-eyed Pike, <i>Stizostedion vitreum</i> ....                      | LXXXII  |
| Little Pickerel, <i>Esox vermiculatus</i> .....                        | LXI      | Warmouth Bass, <i>Chaenobryttus gulosus</i> ..                        | LXXIV   |
| Log-perch, <i>Percina caprodes</i> .....                               | LXXXV    | White Bass, <i>Roccus chrysops</i> .....                              | C       |
| Long-eared Sunfish, <i>Lepomis megalotis</i>                           | LXXXVI   | White Crappie, <i>Pomoxiz annularis</i> ....                          | LXX     |
| Long-nosed Gar, <i>Lepisosteus osseus</i> ....                         | V        | White-nosed Sucker, <i>Moxostoma</i><br><i>anisurum</i> .....         | XX      |
| Menoua Top-minnow, <i>Fundulus</i><br><i>diaphanus menona</i> .....    | LXIII    | Yellow Bass, <i>Morone interrupta</i> .....                           | CI      |
| Mongrel Buffalo, <i>Ictiobus urus</i> .....                            | X        | Yellow Bullhead, <i>Ameiurus natalis</i> ....                         | LIII    |
| Mud-cat, <i>Leptops olivaris</i> .....                                 | LVI      | Yellow Perch, <i>Perca flavescens</i> .....                           | LXXXIV  |
| Mud-minnow, <i>Umbra limi</i> .....                                    | LX       |   |         |












I & II  
Stream systems  
and  
Sections of  
Illinois





III  
 Map of the  
 Glacial Geology  
 of Illinois



-  Unglaciated Areas.
-  Lower Illinoian Glaciation.
-  Middle Illinoian Glaciation.
-  Upper Illinoian Glaciation.
-  Iowan and Pre-Iowan Glaciation.
-  Deep Loess Areas.
-  Wisconsin Glaciation.
-  Moraines in Wisconsin Glaciation.
-  Bottom-Lands (old and late) Sand and Swamp Areas.

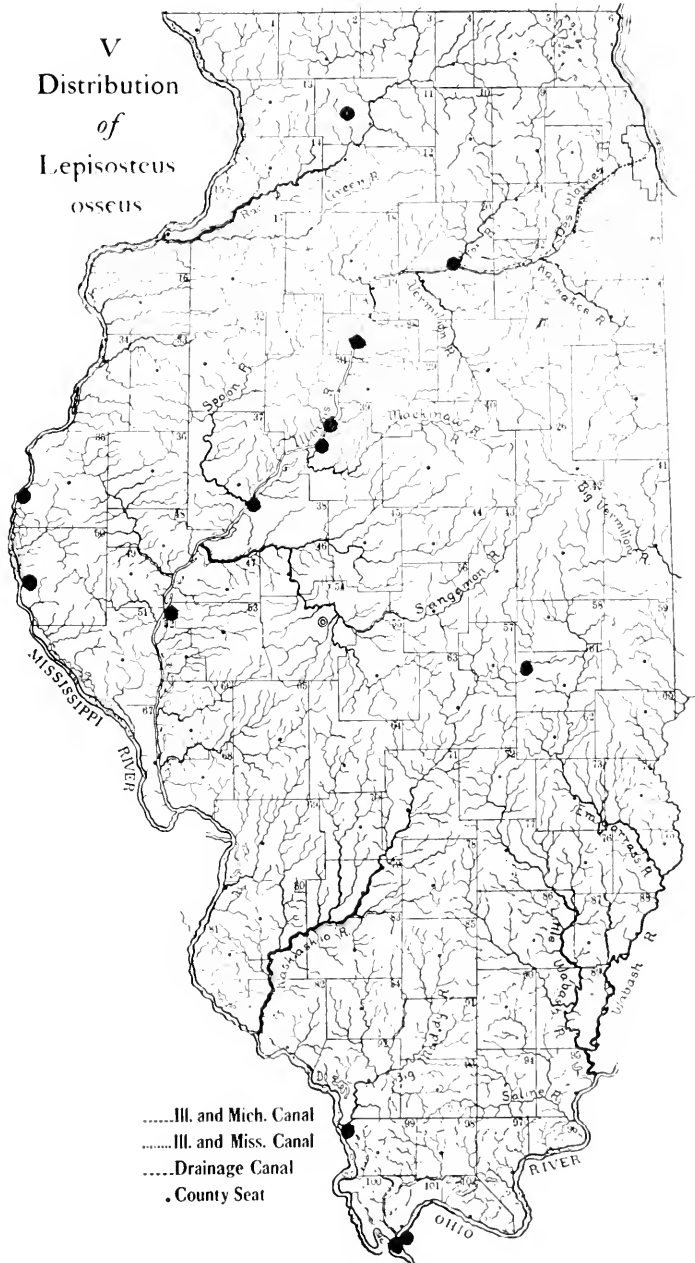


IV  
 Water Courses  
 and  
 Distribution  
 of  
 Collections





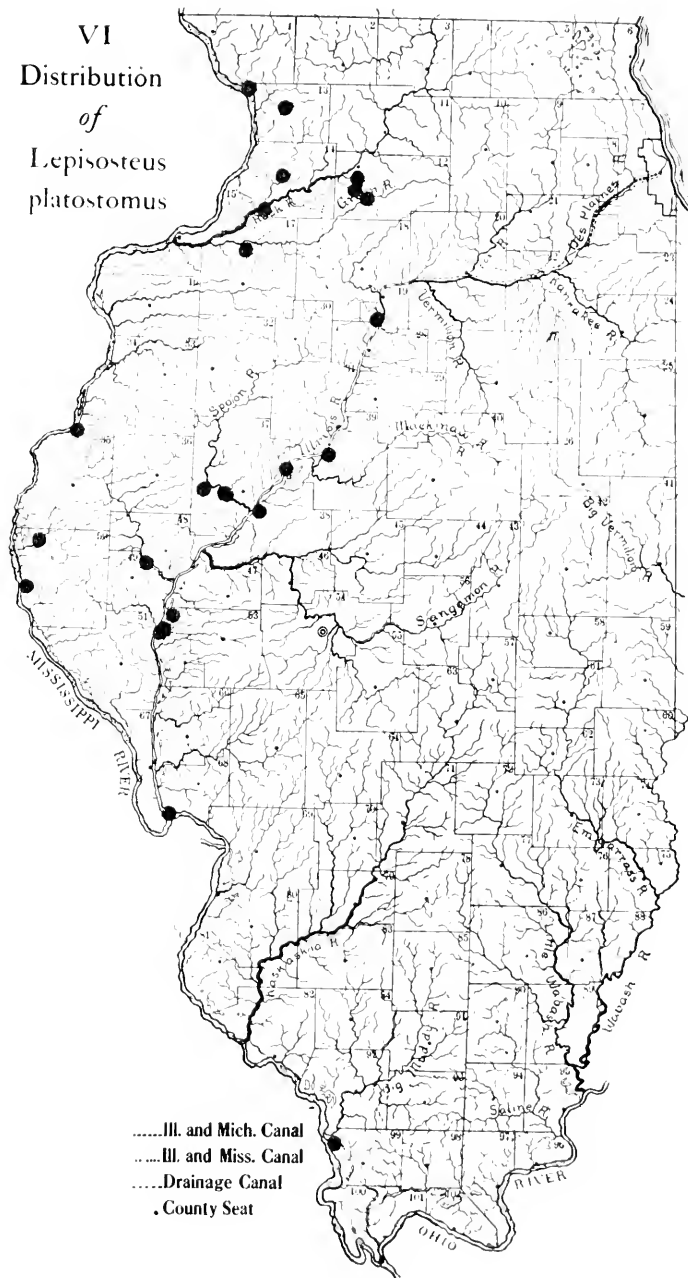
V  
 Distribution  
 of  
*Lepisosteus*  
*osseus*





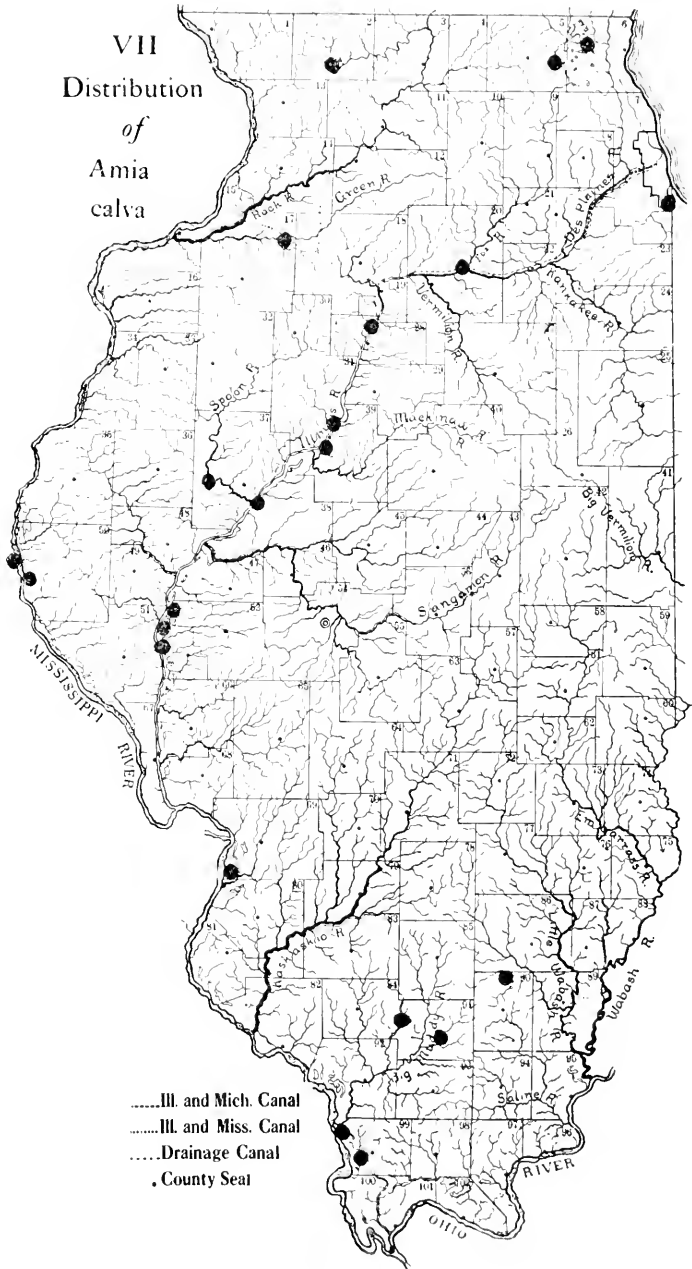


VI  
 Distribution  
 of  
*Lepisosteus  
 platostomus*



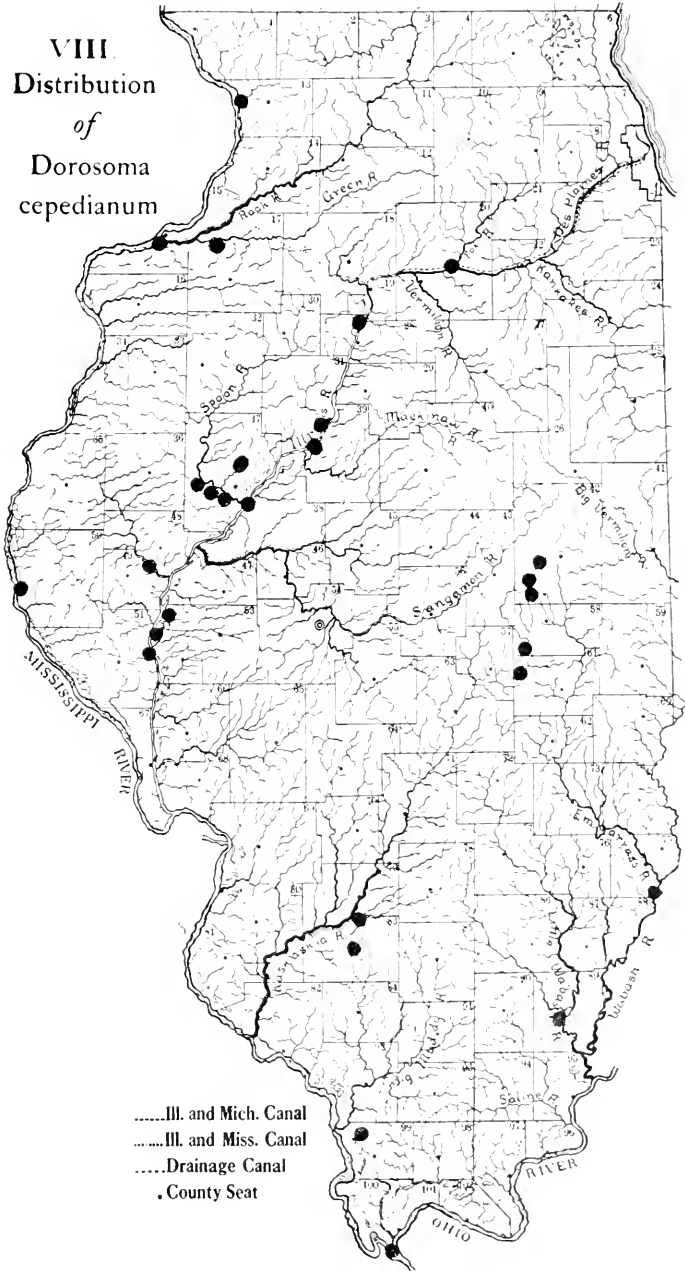


VII  
Distribution  
of  
*Amia*  
*calva*



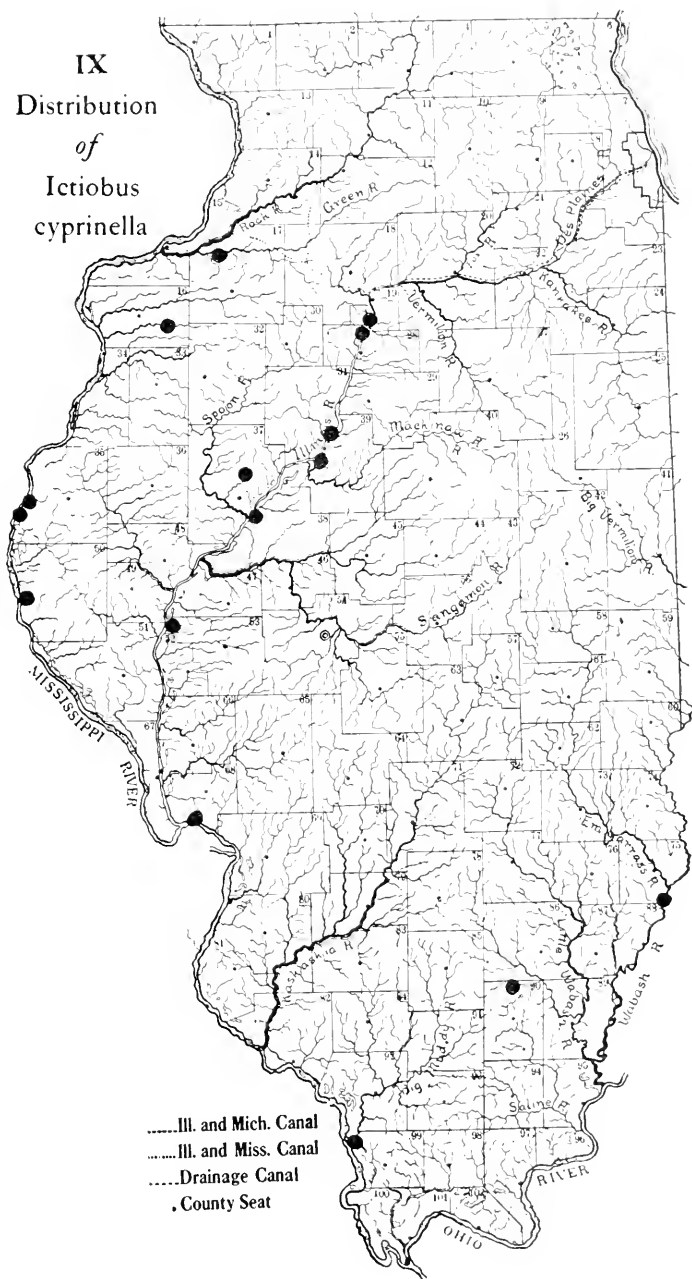


VIII  
 Distribution  
 of  
*Dorosoma*  
*cepedianum*





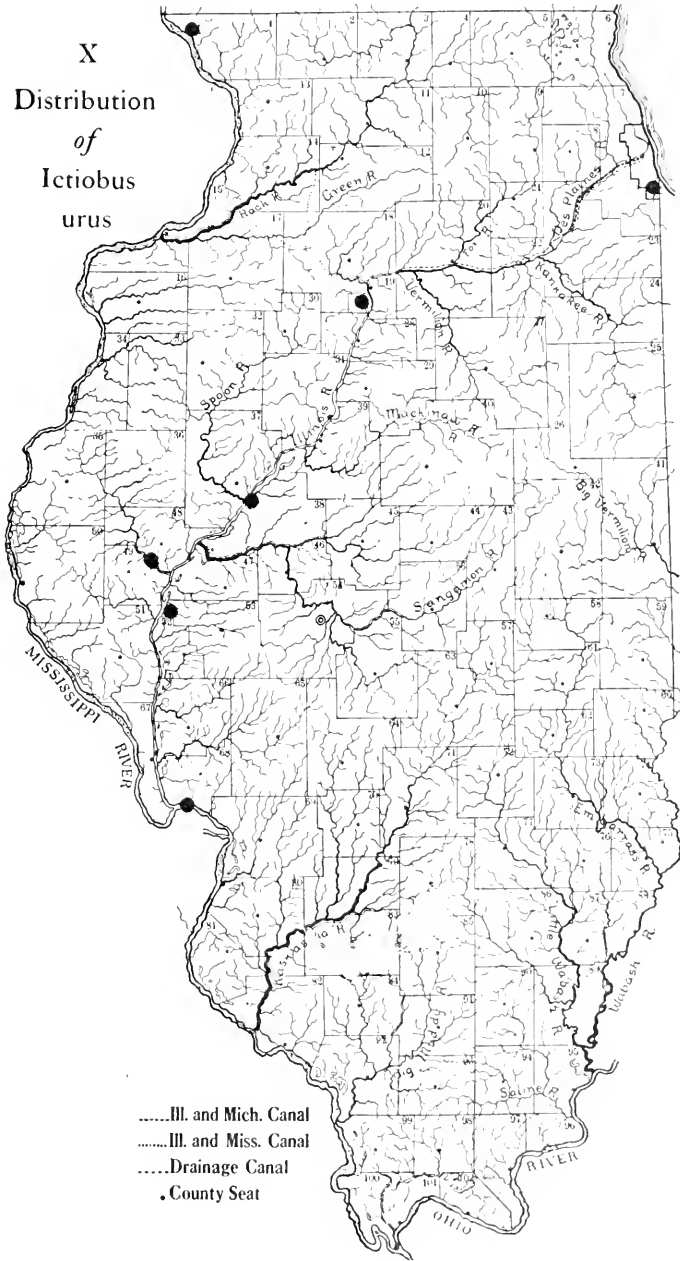
IX  
 Distribution  
 of  
*Ictiobus*  
*cyprinella*





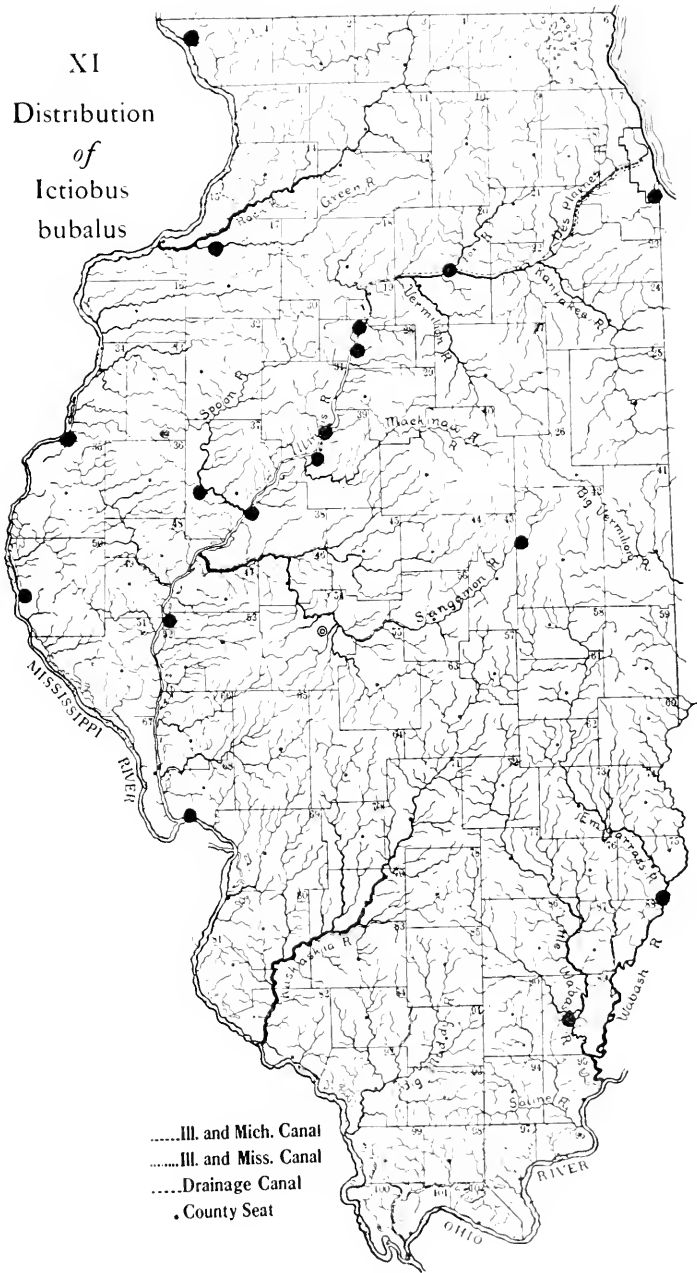


X  
 Distribution  
 of  
*Ictiobus*  
*urus*



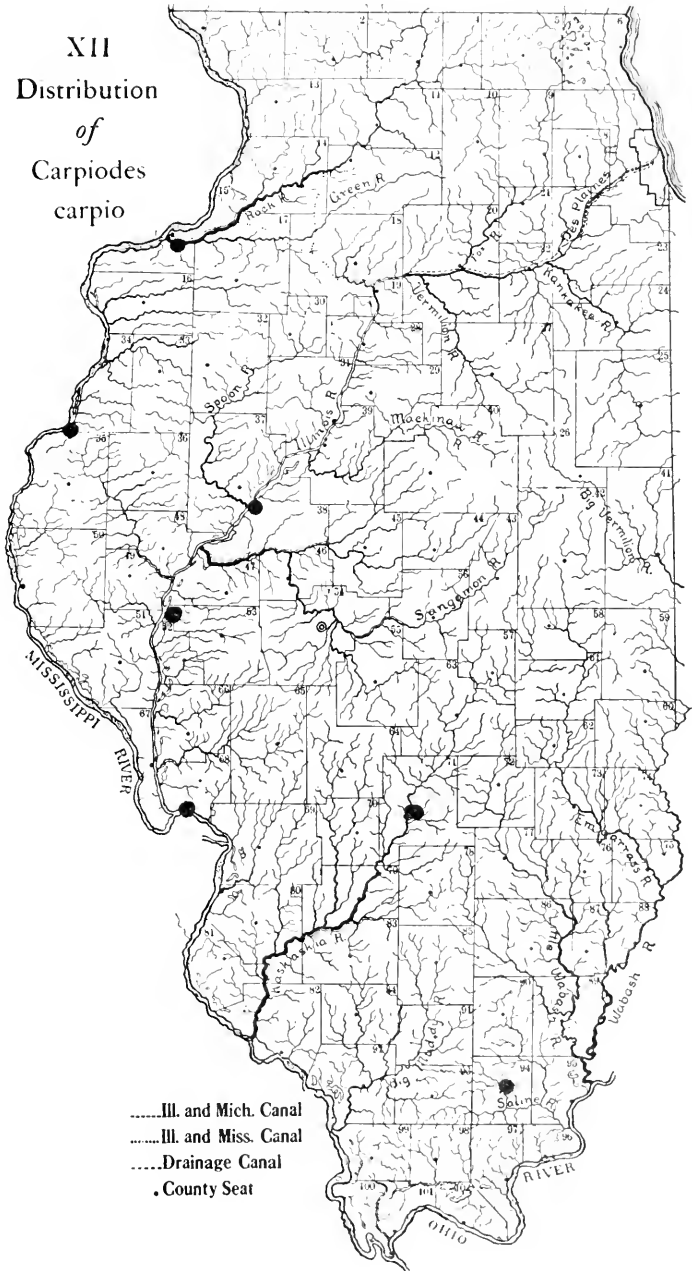


XI  
 Distribution  
 of  
*Ictiobus*  
*bubalus*



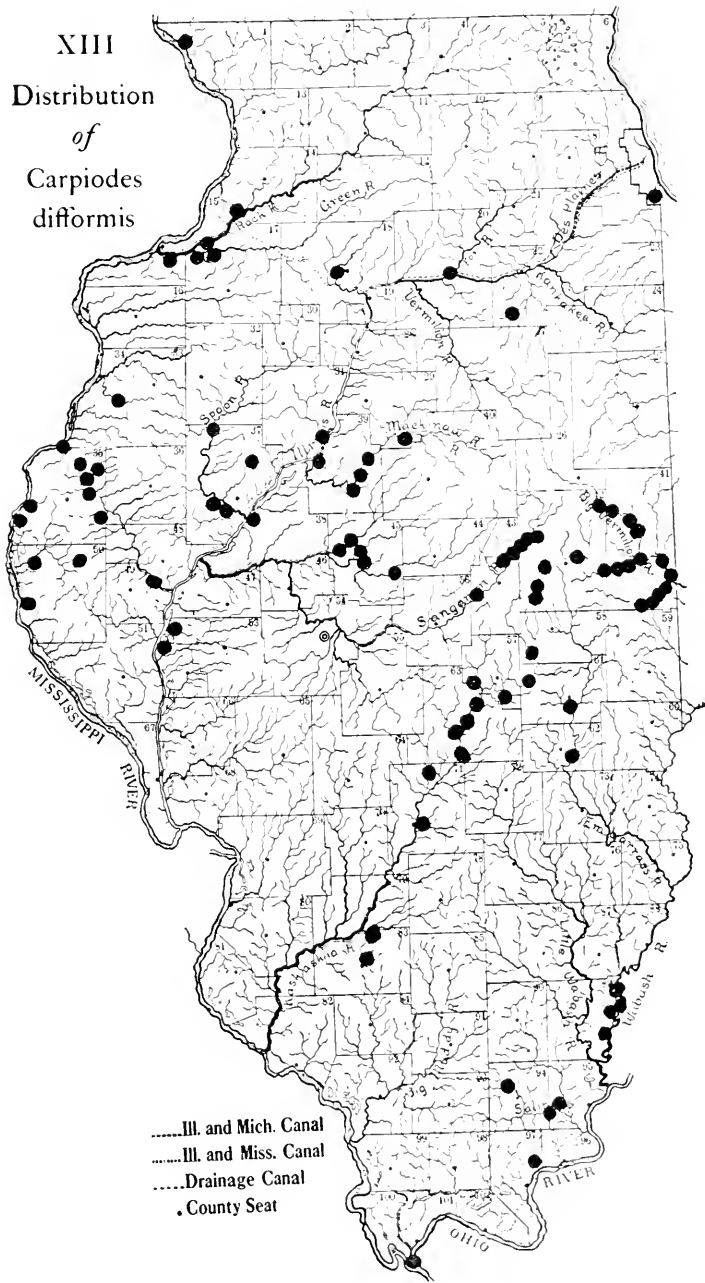


XII  
 Distribution  
 of  
*Carpoides*  
*carpio*





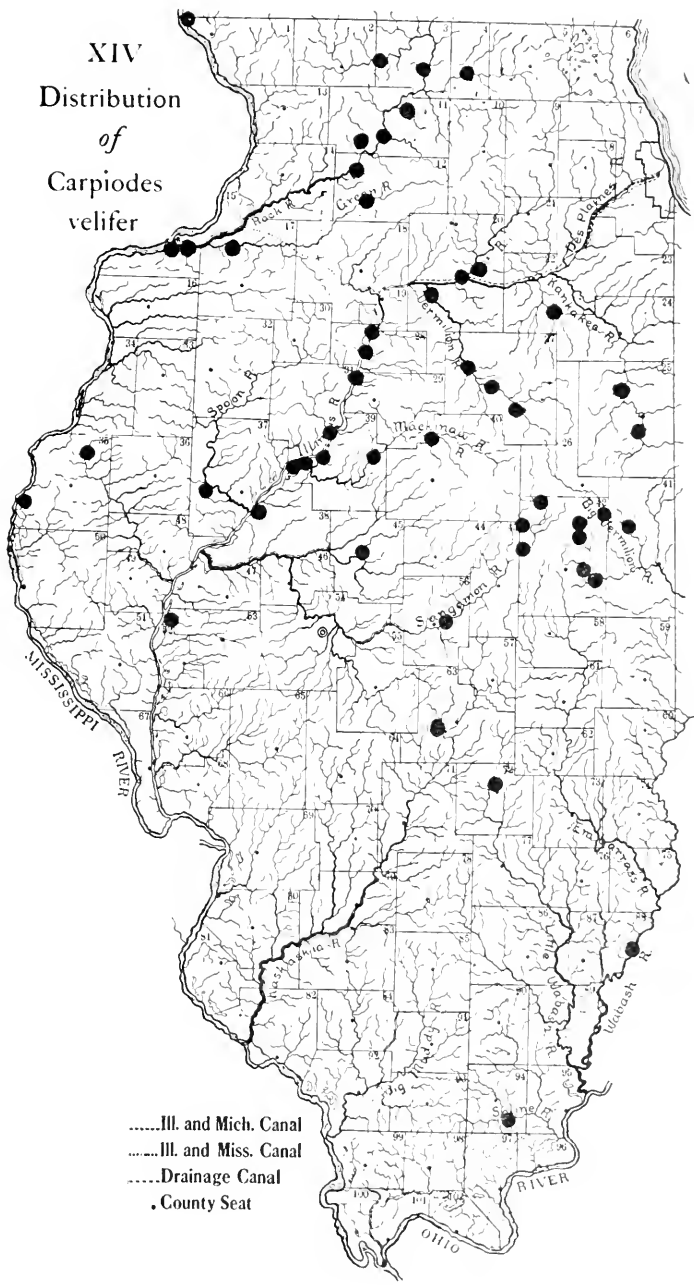
XIII  
 Distribution  
 of  
*Carpodus*  
*difformis*





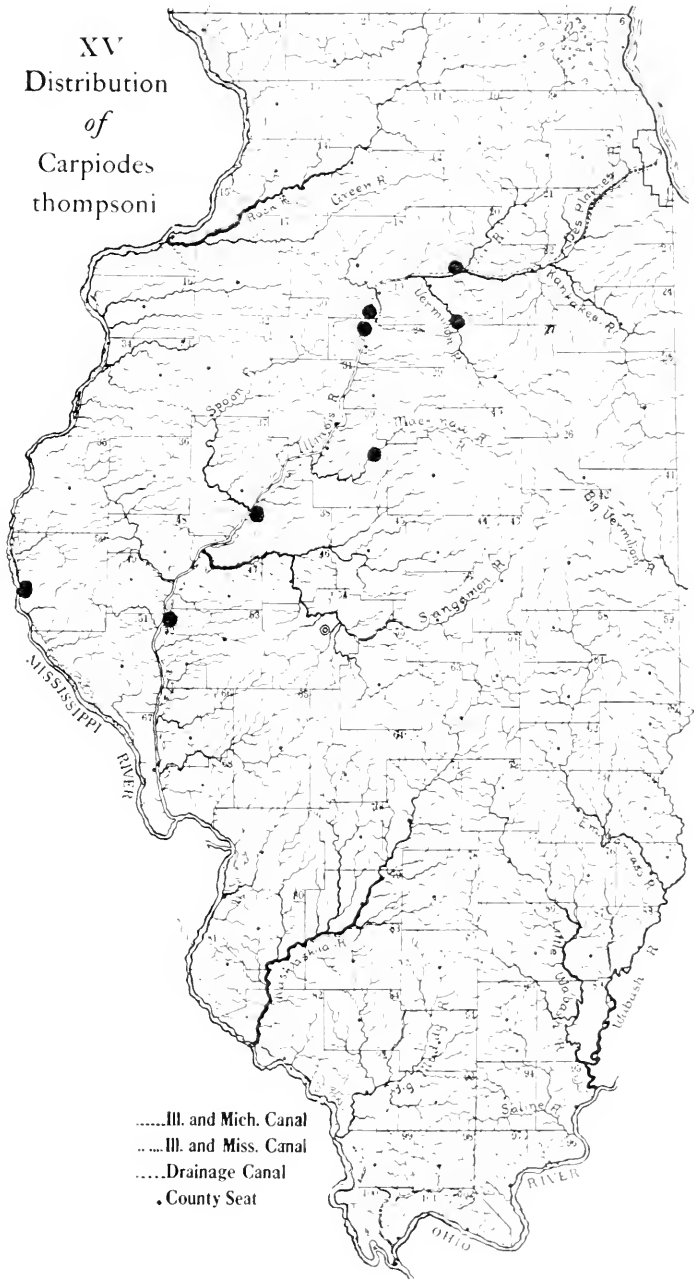


XIV  
 Distribution  
 of  
*Carpodacus  
 velifer*



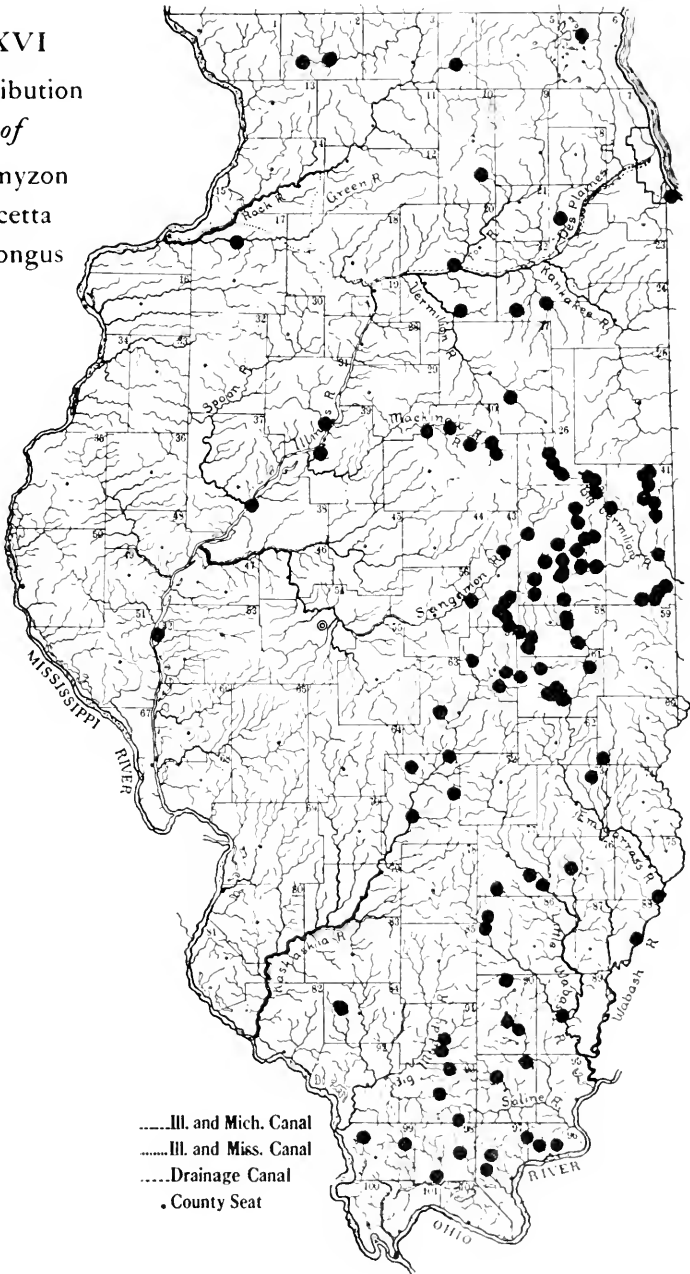


XV  
 Distribution  
 of  
*Carpodites  
 thompsoni*



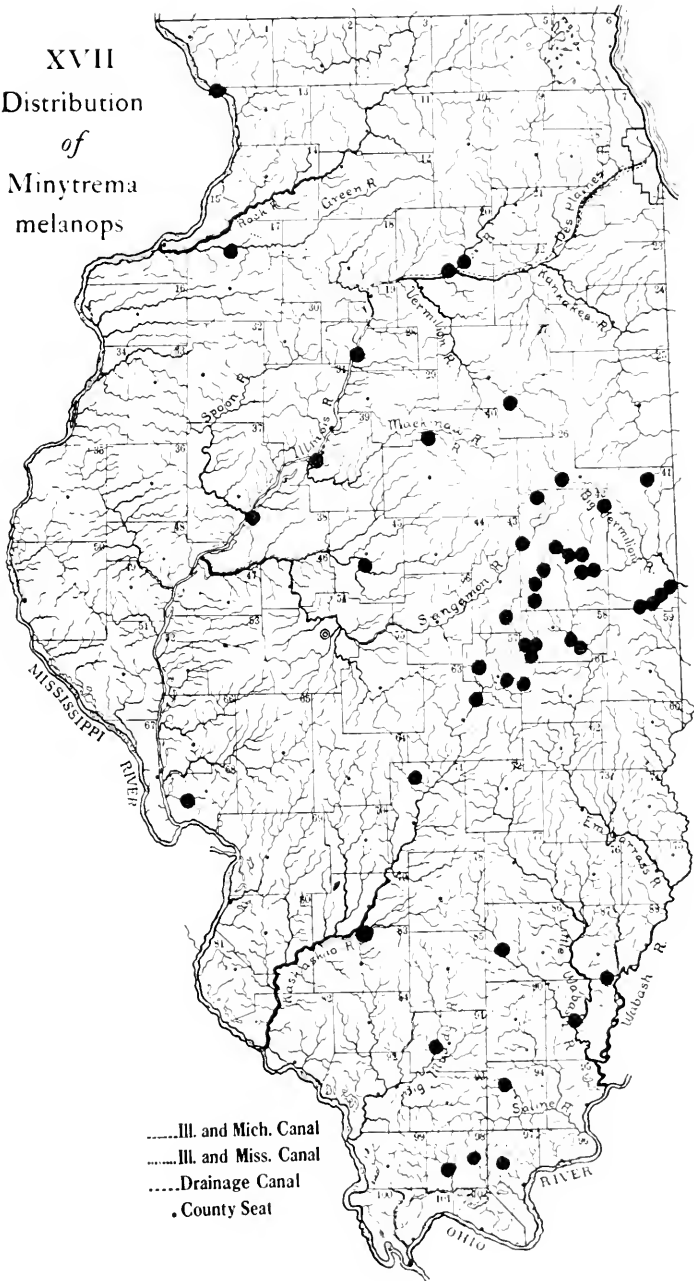


XVI  
 Distribution  
 of  
*Erimyzon*  
*sucetta*  
*oblongus*





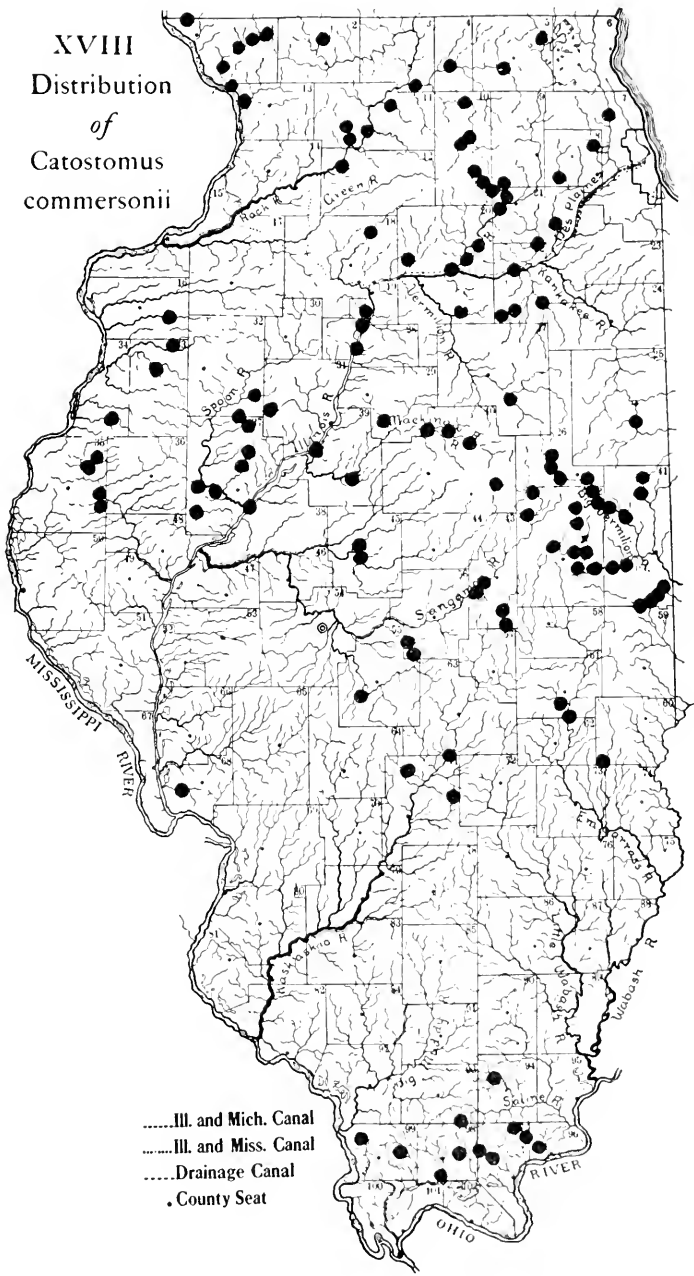
XVII  
 Distribution  
 of  
*Minytrema*  
*melanops*







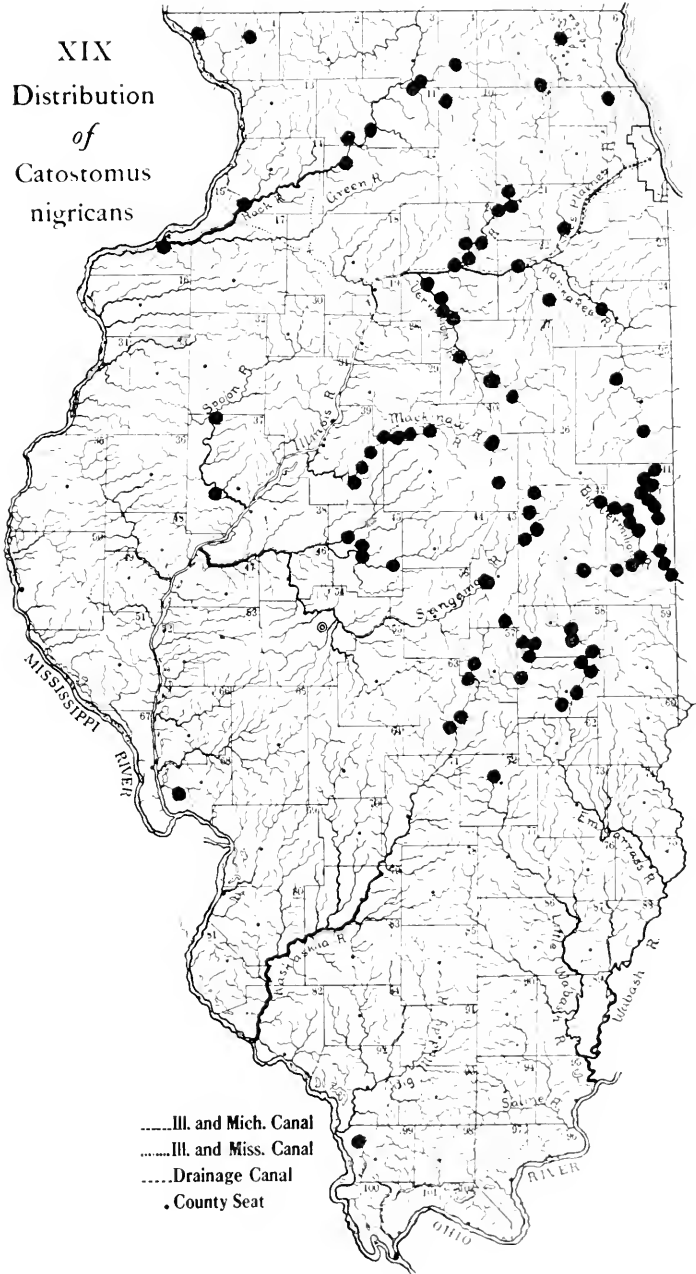
XVIII  
 Distribution  
 of  
*Catostomus*  
*commersonii*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 ....Drainage Canal  
 . County Seat

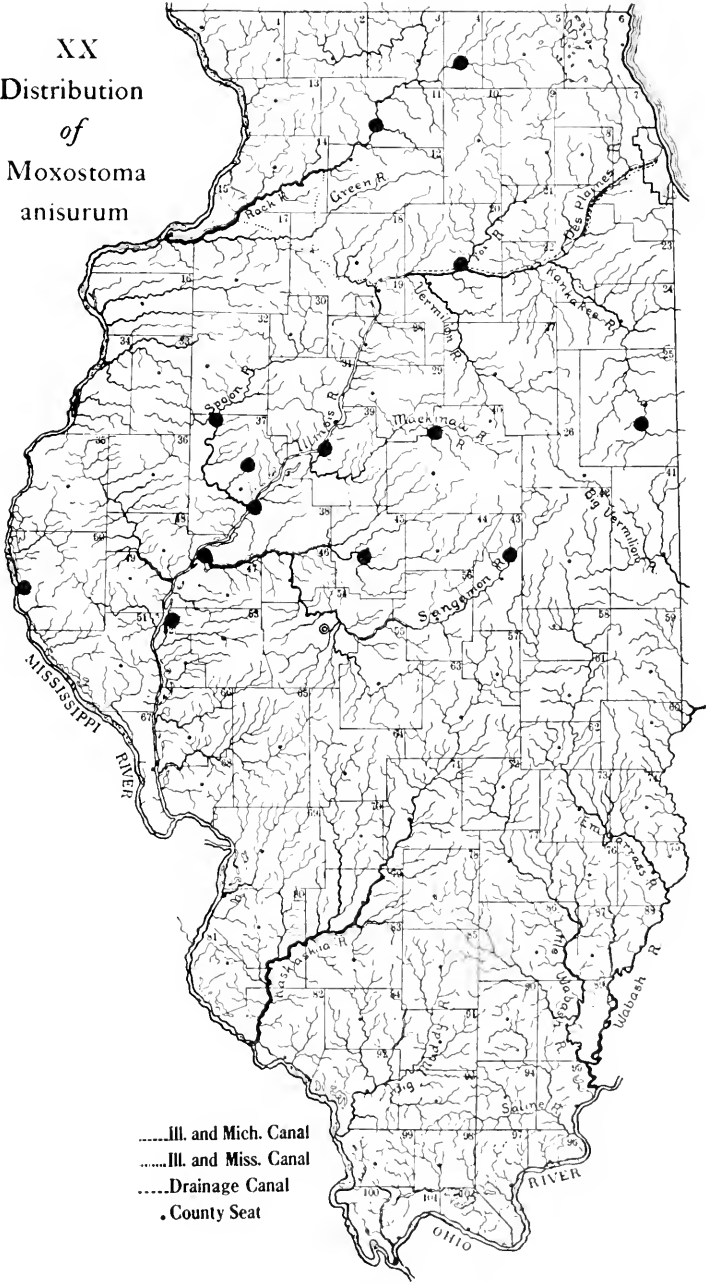


XIX  
 Distribution  
*of*  
*Catostomus*  
*nigricans*





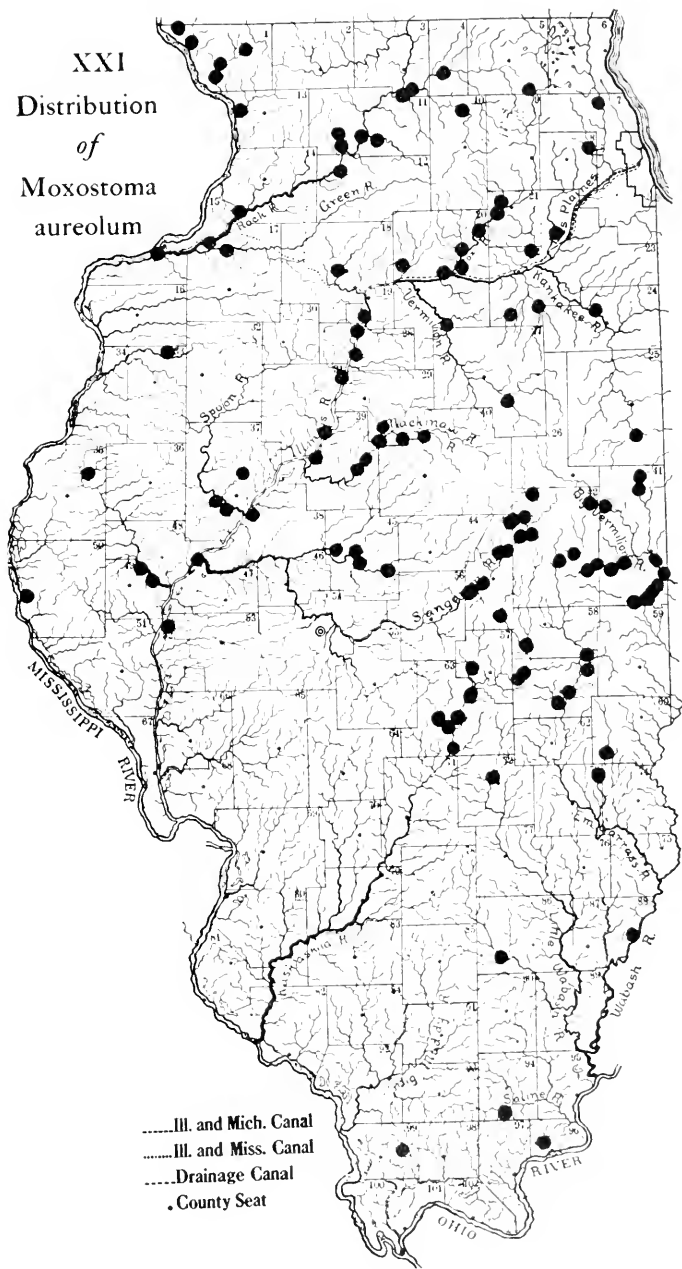
XX  
 Distribution  
 of  
*Moxostoma*  
*anisurum*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 .....Drainage Canal  
 • County Seat



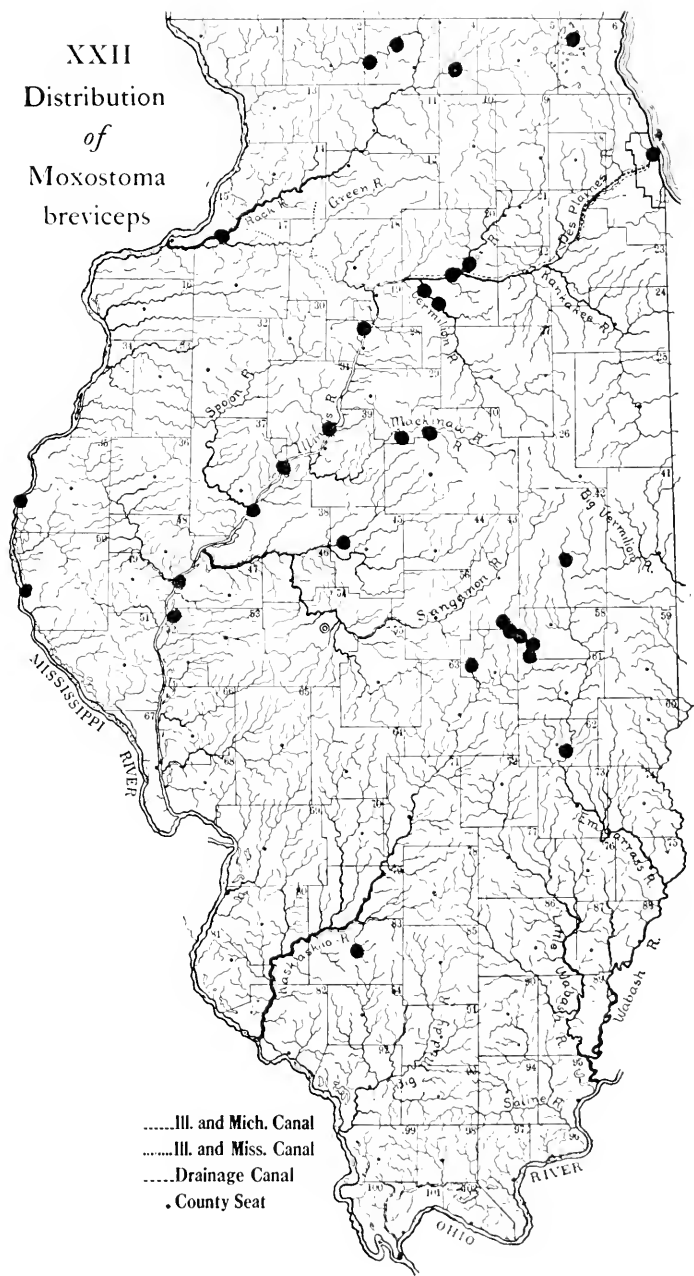
XXI  
 Distribution  
 of  
*Moxostoma*  
*aureolum*





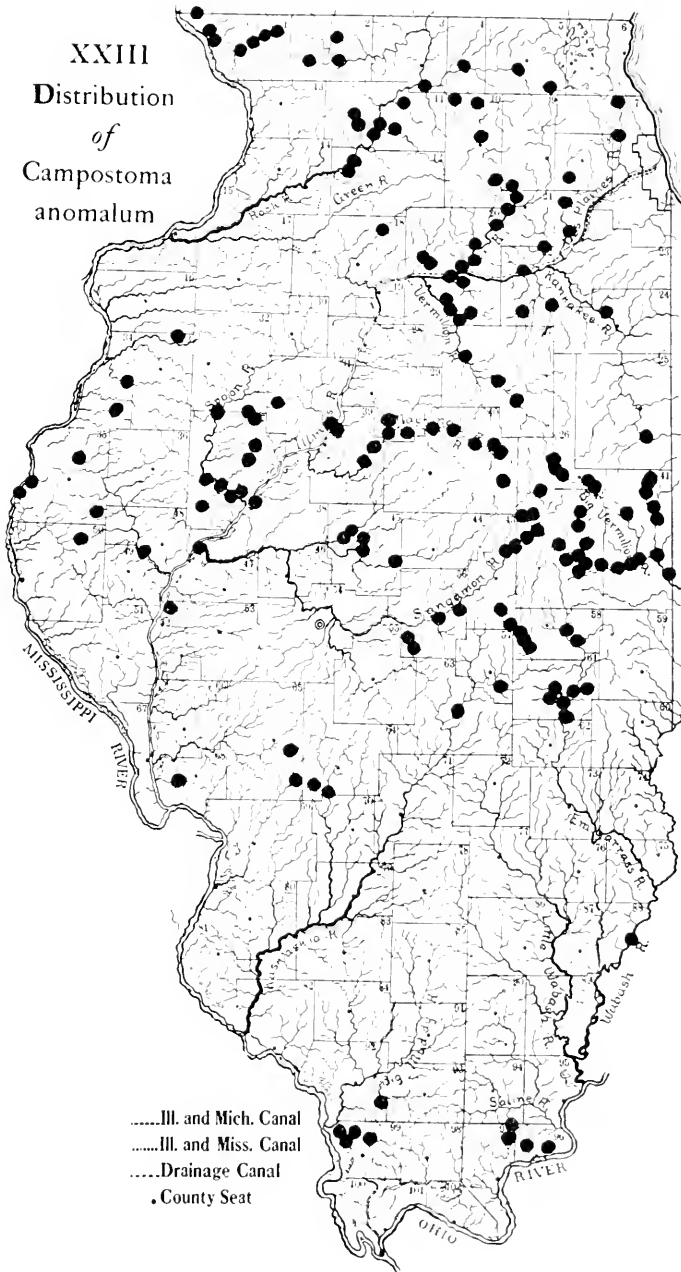


XXII  
 Distribution  
 of  
*Moxostoma*  
*breviceps*



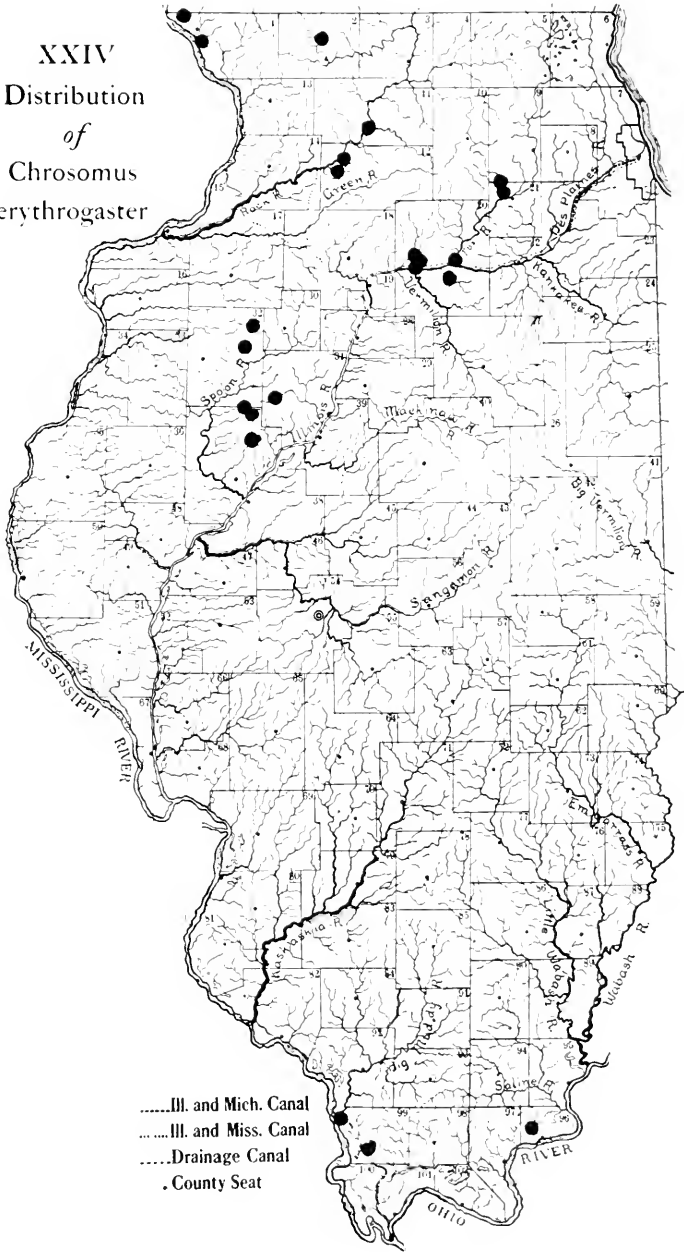


XXIII  
 Distribution  
 of  
*Campostoma*  
*anomalum*



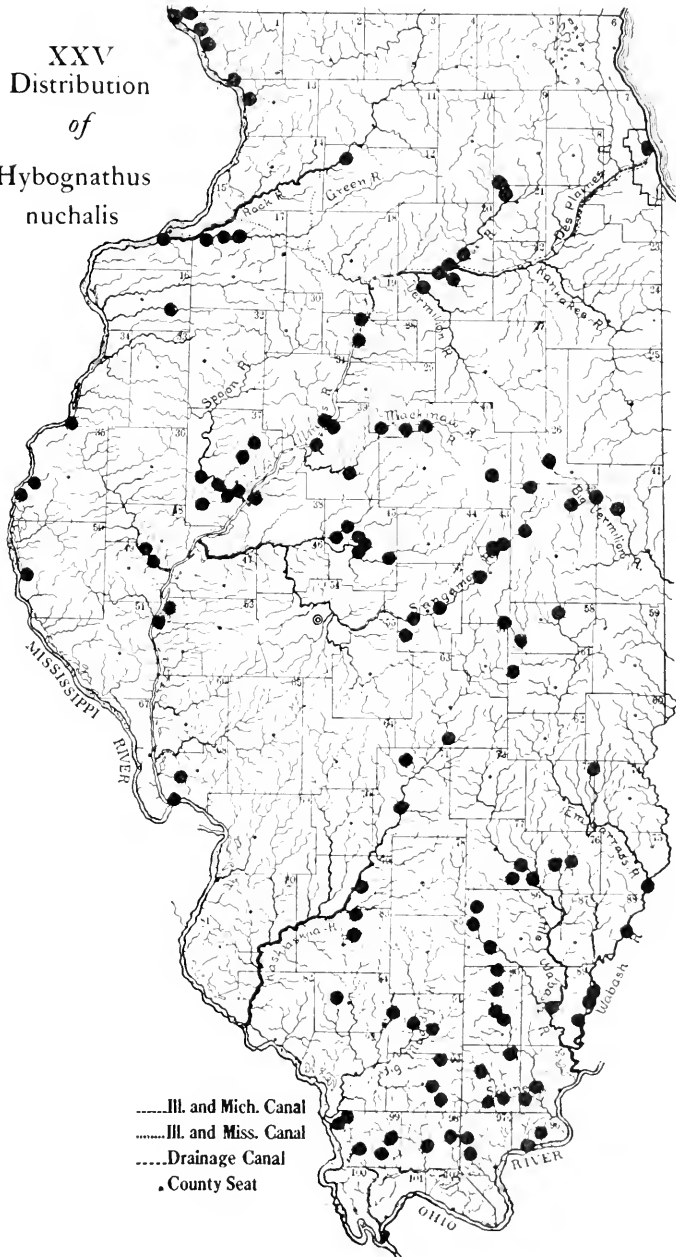


XXIV  
 Distribution  
 of  
*Chrosomus*  
*erythrogaster*





XXV  
 Distribution  
 of  
*Hybognathus  
 nuchalis*





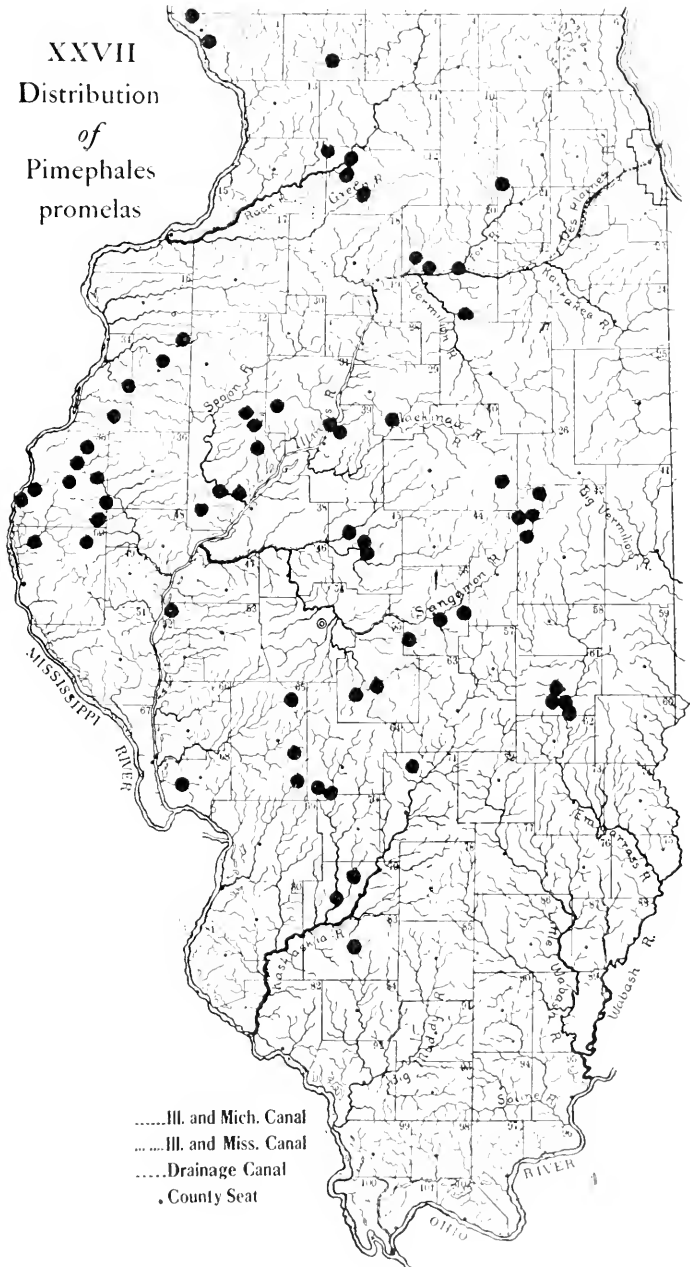


XXVI  
 Distribution  
 of  
*Hybognathus*  
*nubila*



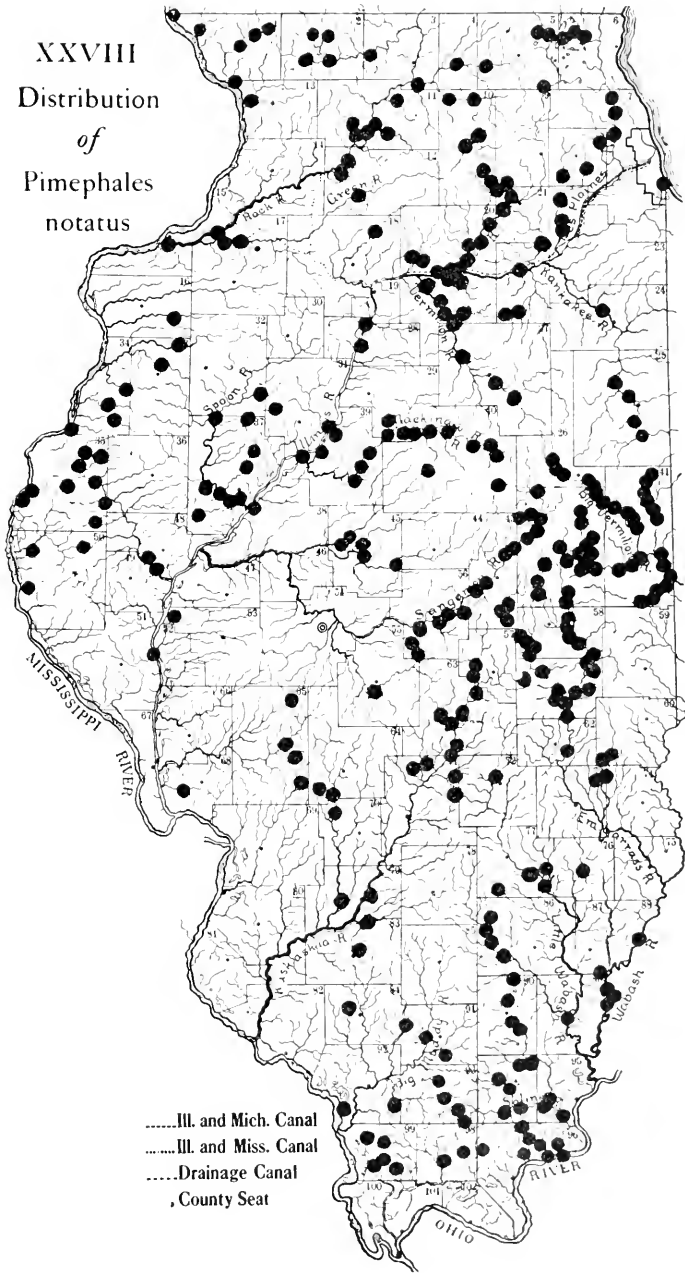


XXVII  
 Distribution  
 of  
*Pimephales*  
*promelas*



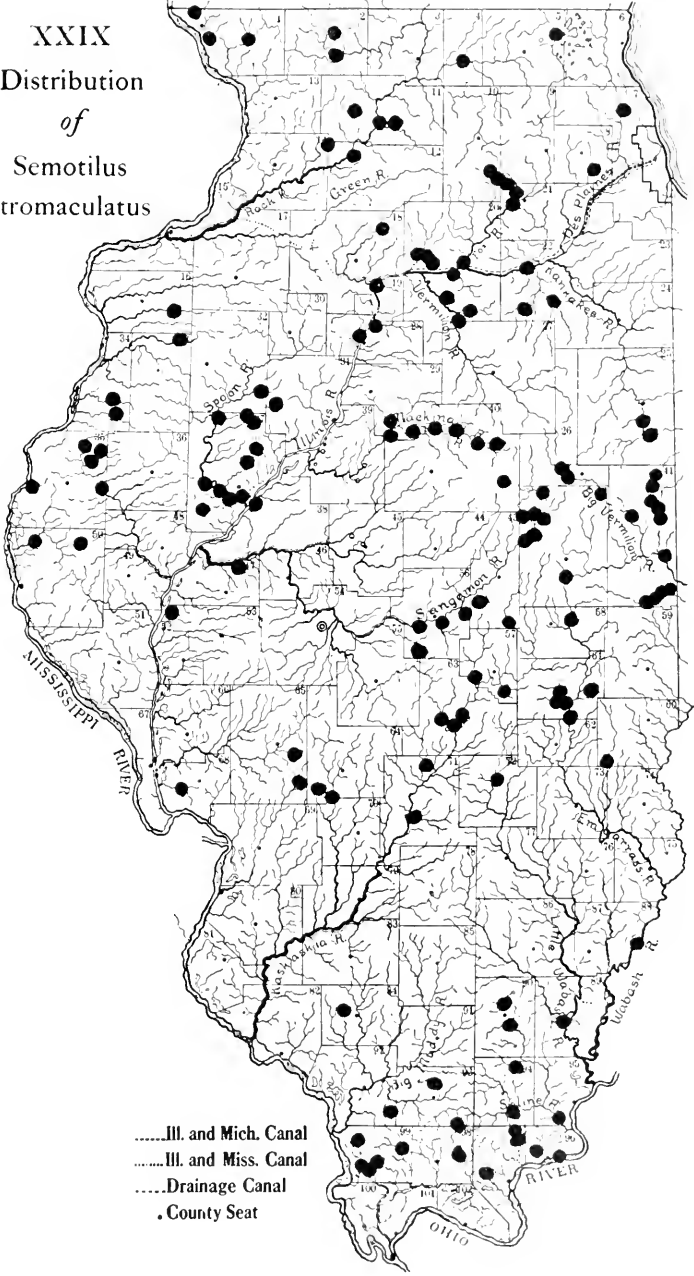


XXVIII  
 Distribution  
 of  
*Pimephales*  
*notatus*





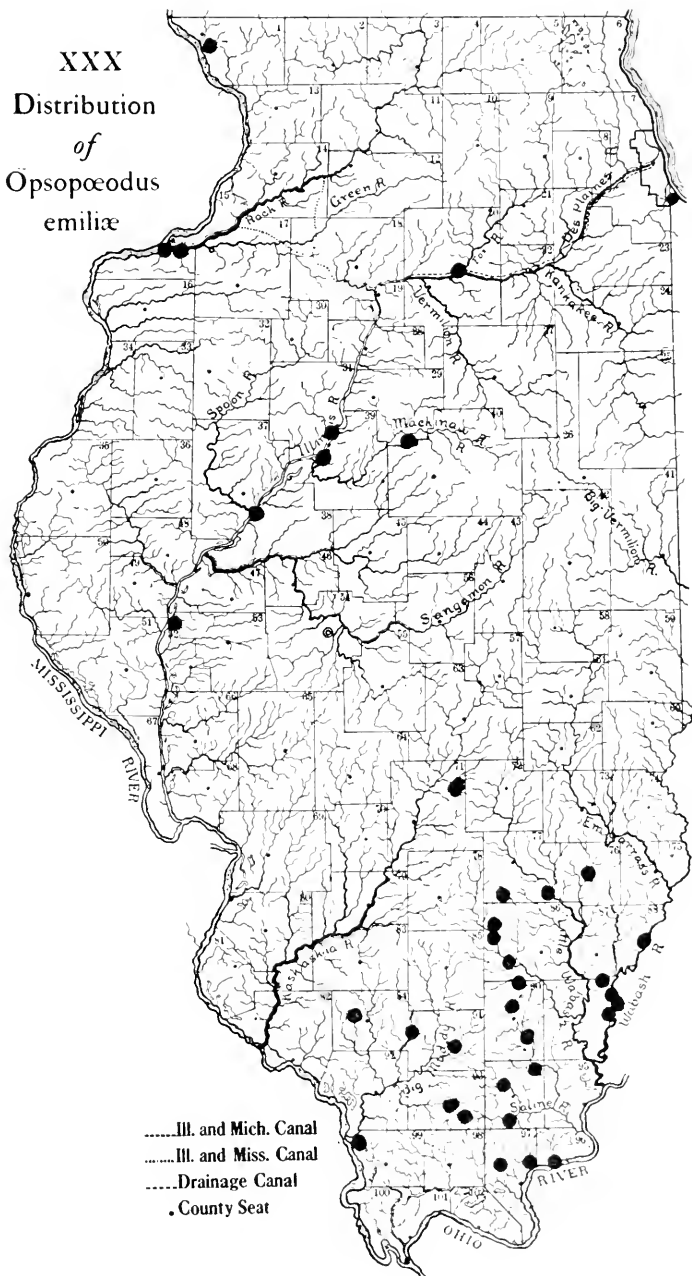
XXIX  
 Distribution  
 of  
*Semotilus*  
*atromaculatus*



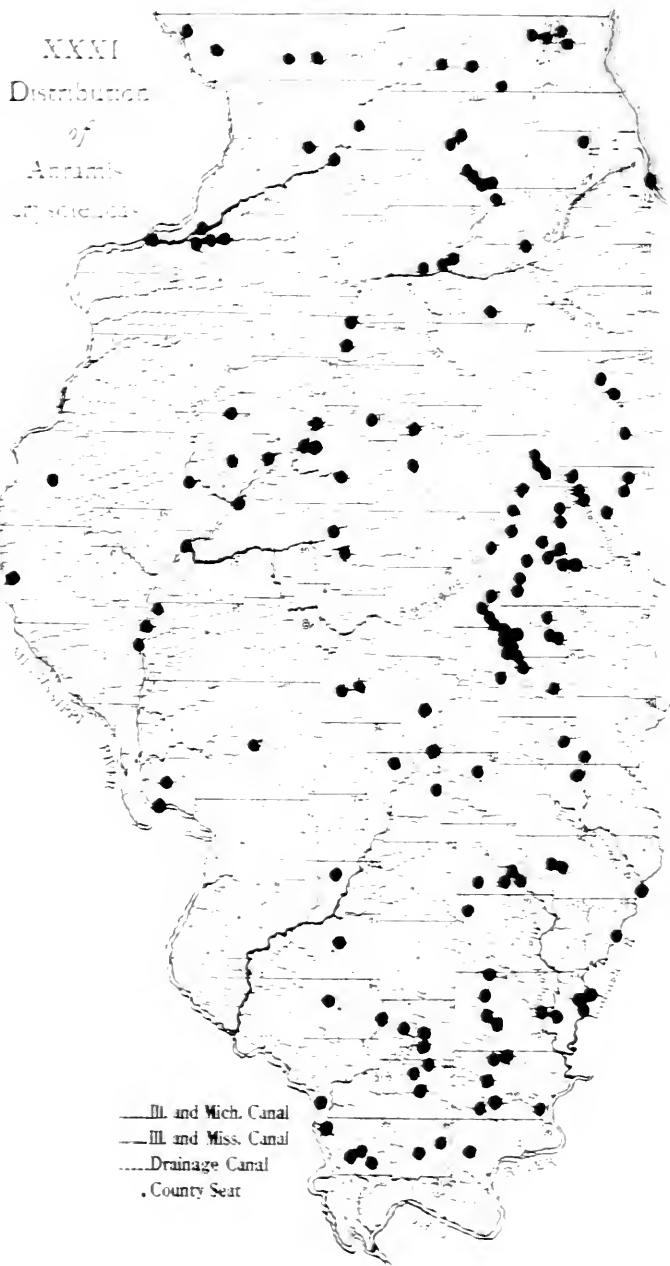




XXX  
 Distribution  
 of  
*Opsopœodus  
 emilæ*

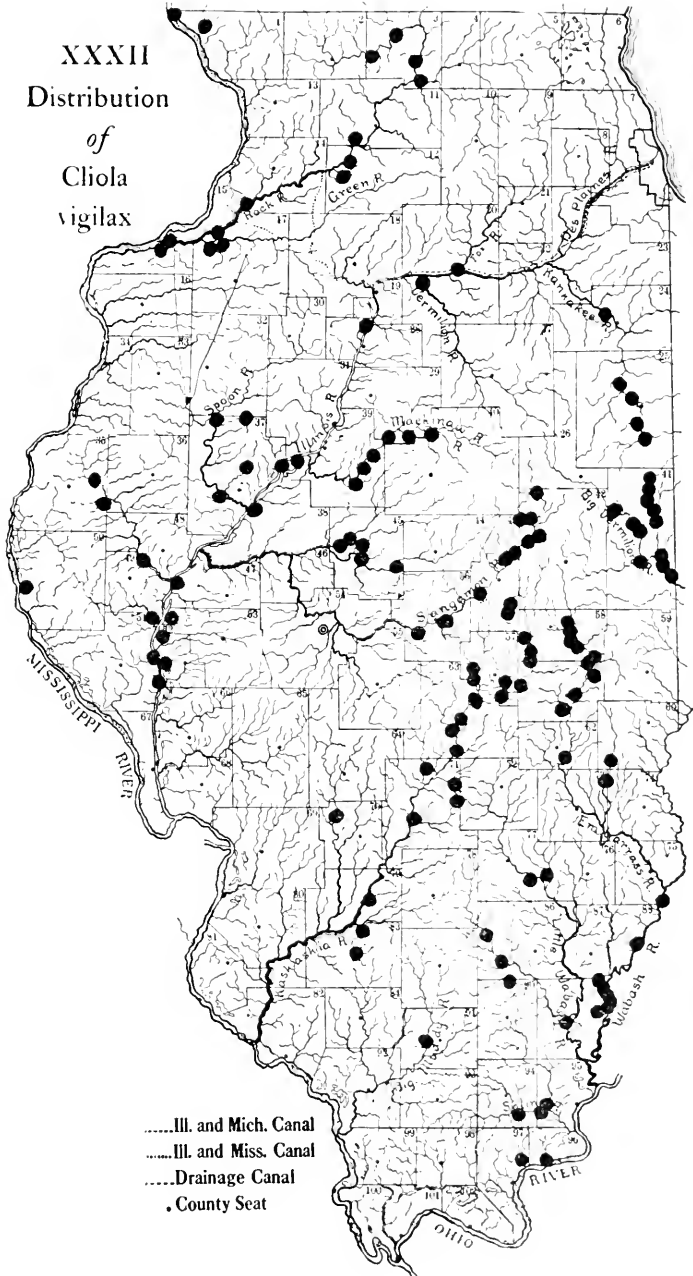






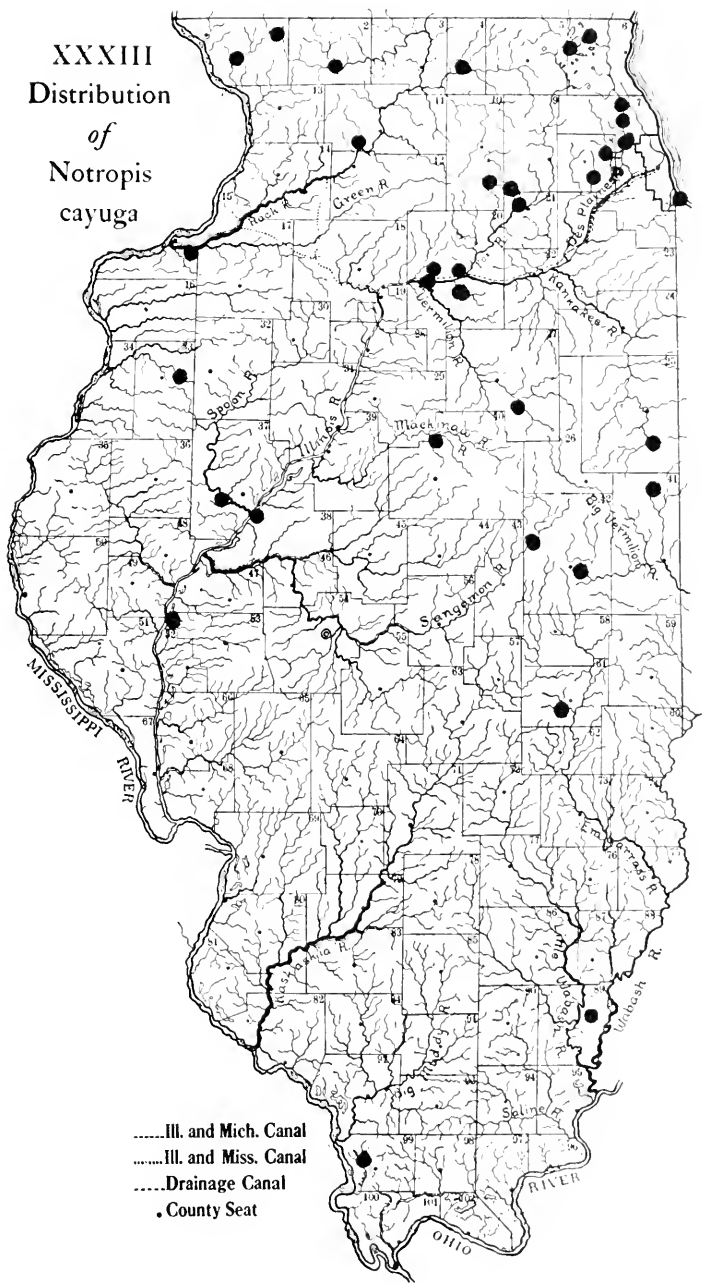


XXXII  
 Distribution  
 of  
*Cliola  
 vigilax*





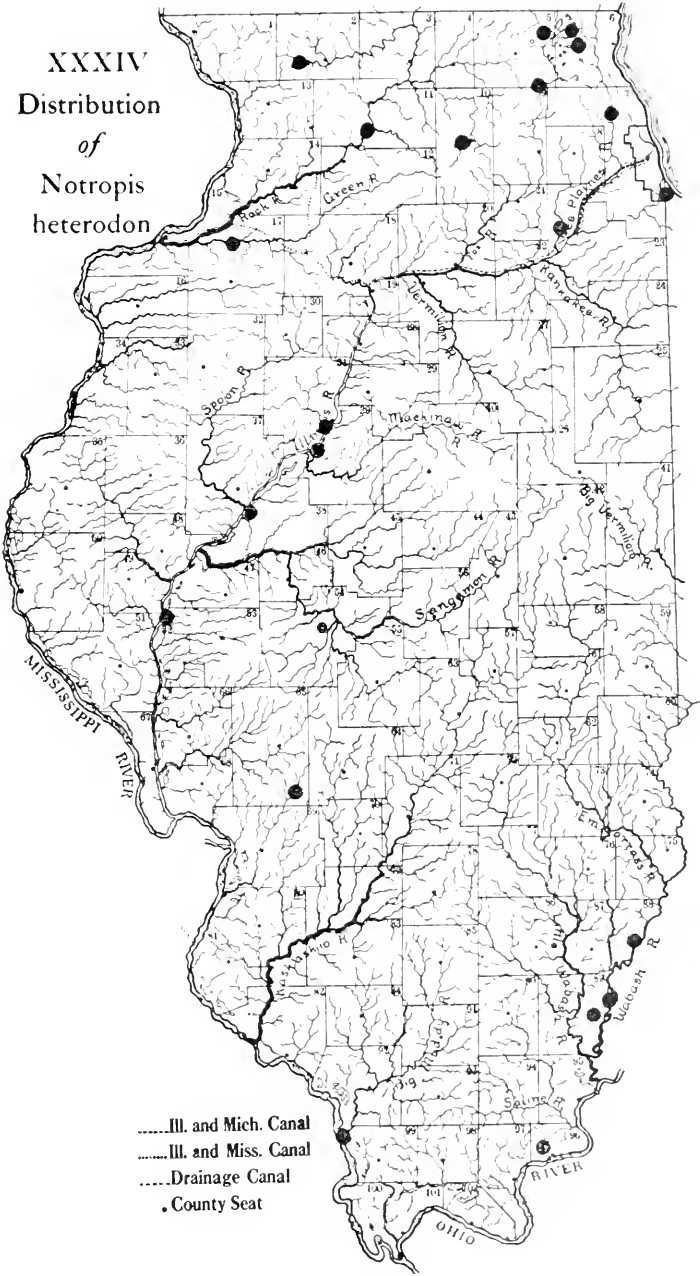
XXXIII  
 Distribution  
 of  
*Notropis  
 cayuga*







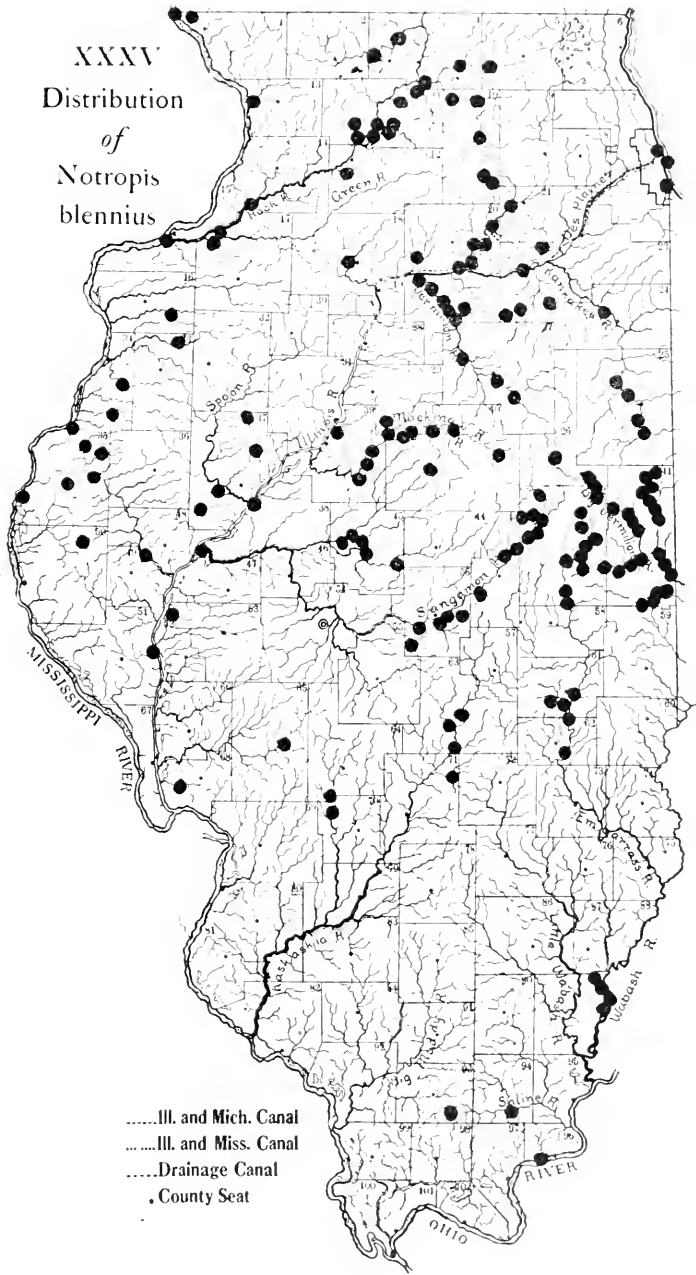
XXXIV  
 Distribution  
 of  
*Notropis heterodon*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat

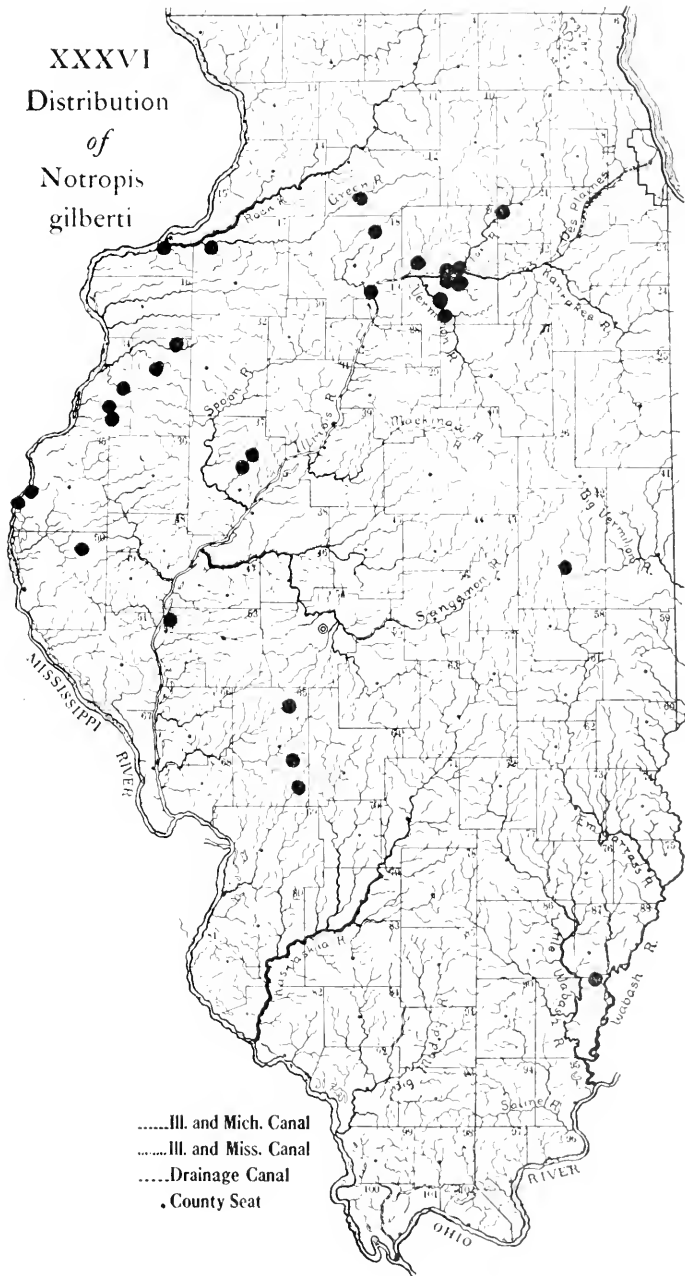


XXXV  
 Distribution  
 of  
*Notropis  
 blennius*





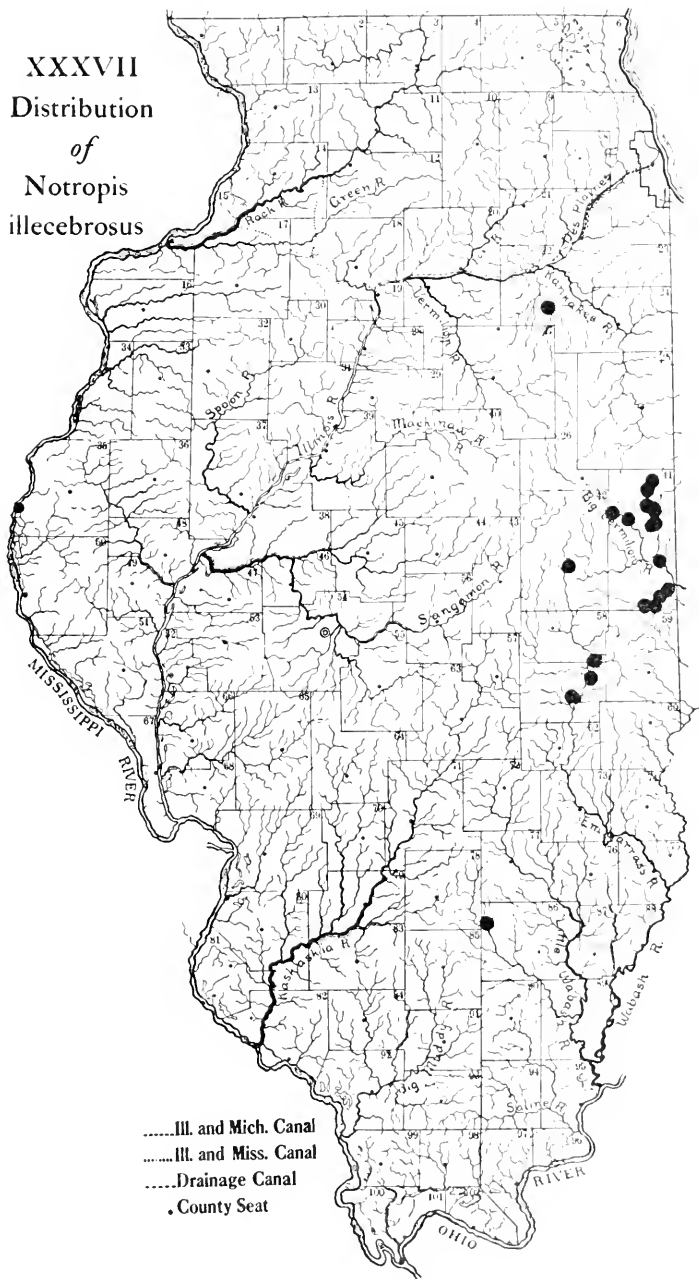
XXXVI  
 Distribution  
 of  
*Notropis  
 gilberti*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



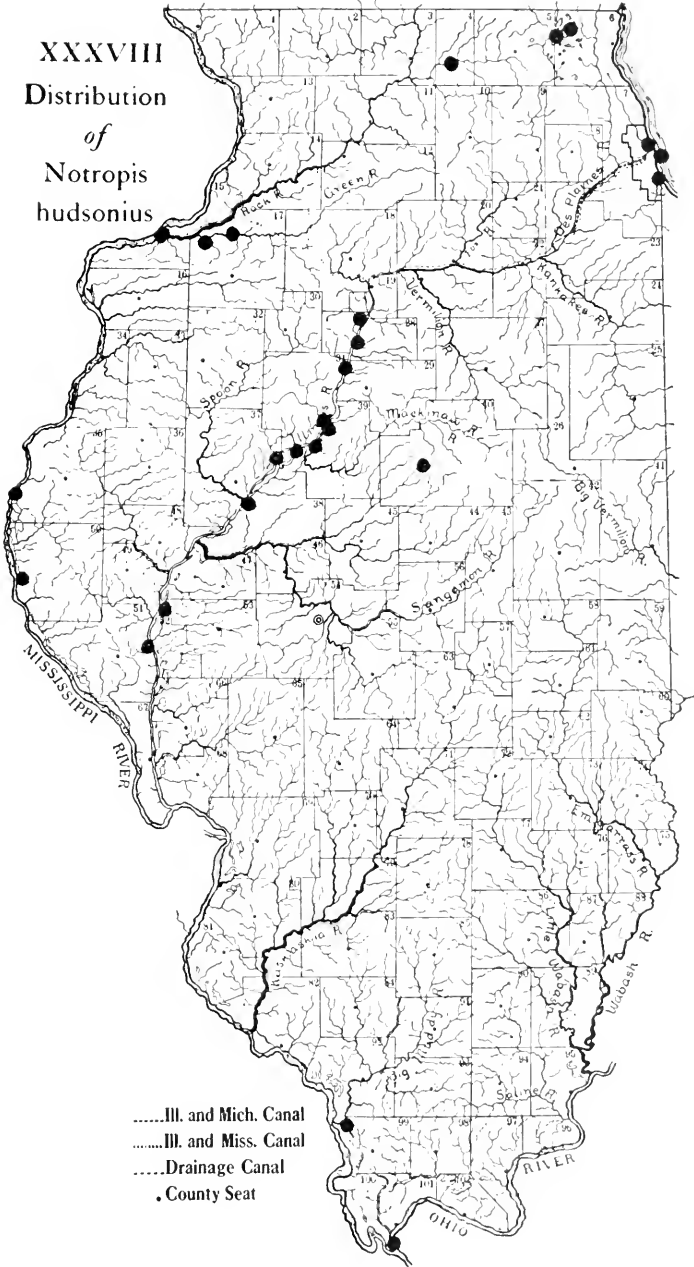
XXXVII  
 Distribution  
*of*  
 Notropis  
 illecebrosus







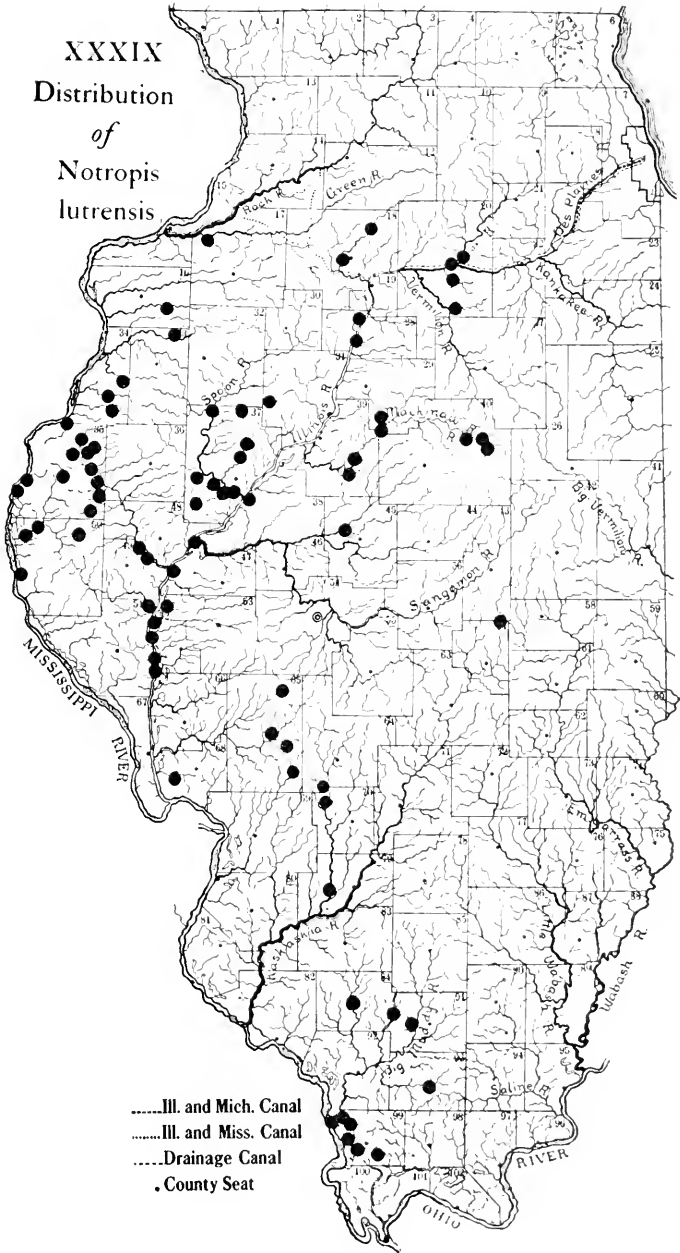
XXXVIII  
 Distribution  
 of  
*Notropis*  
*hudsonius*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat

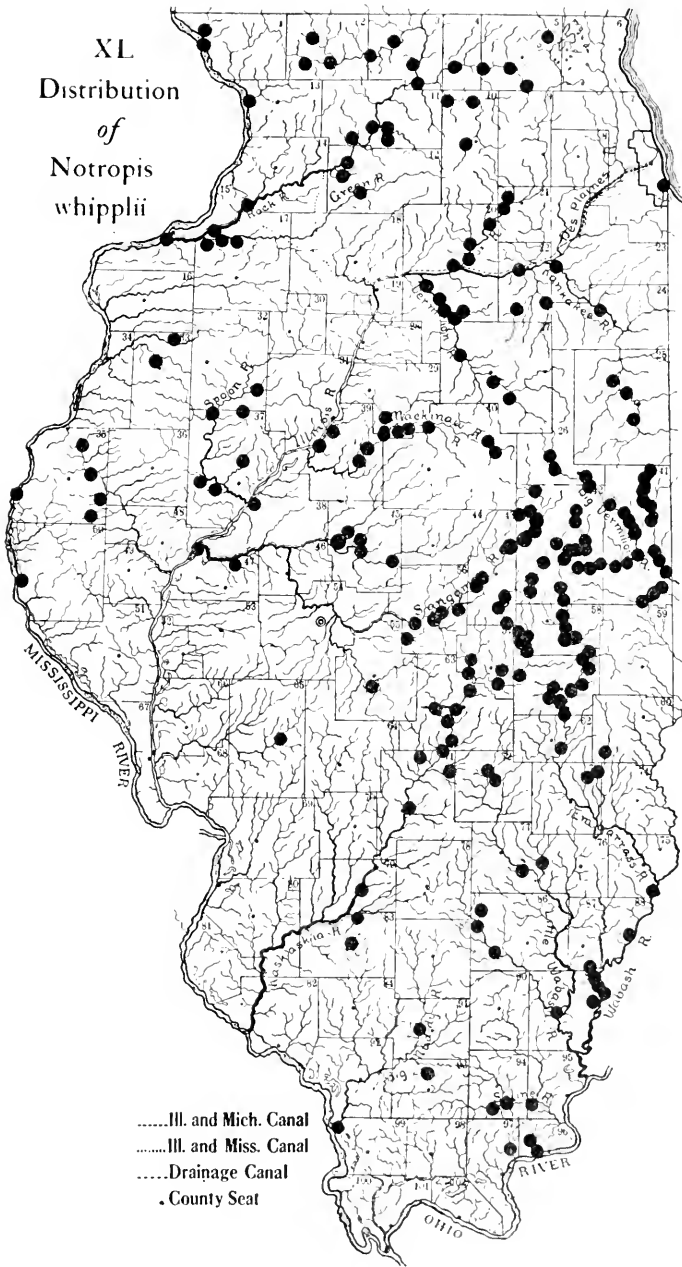


XXXIX  
 Distribution  
 of  
*Notropis  
 lutrensis*





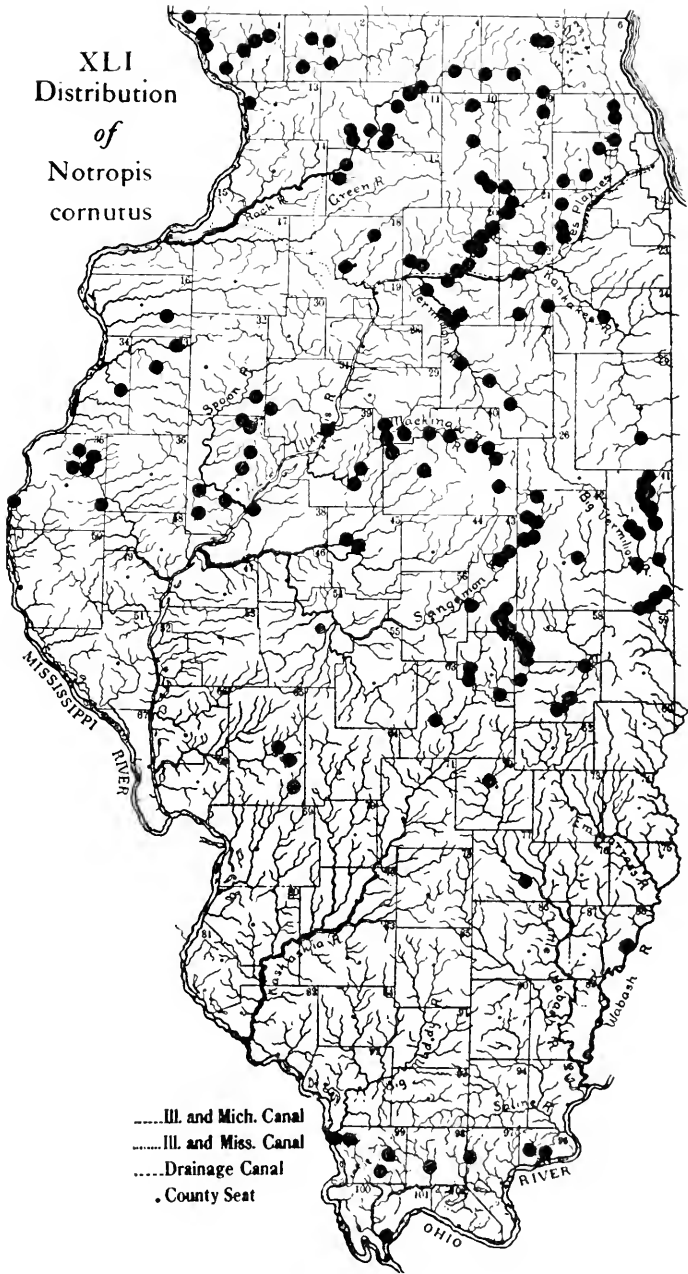
XL  
 Distribution  
 of  
*Notropis  
 whipplii*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



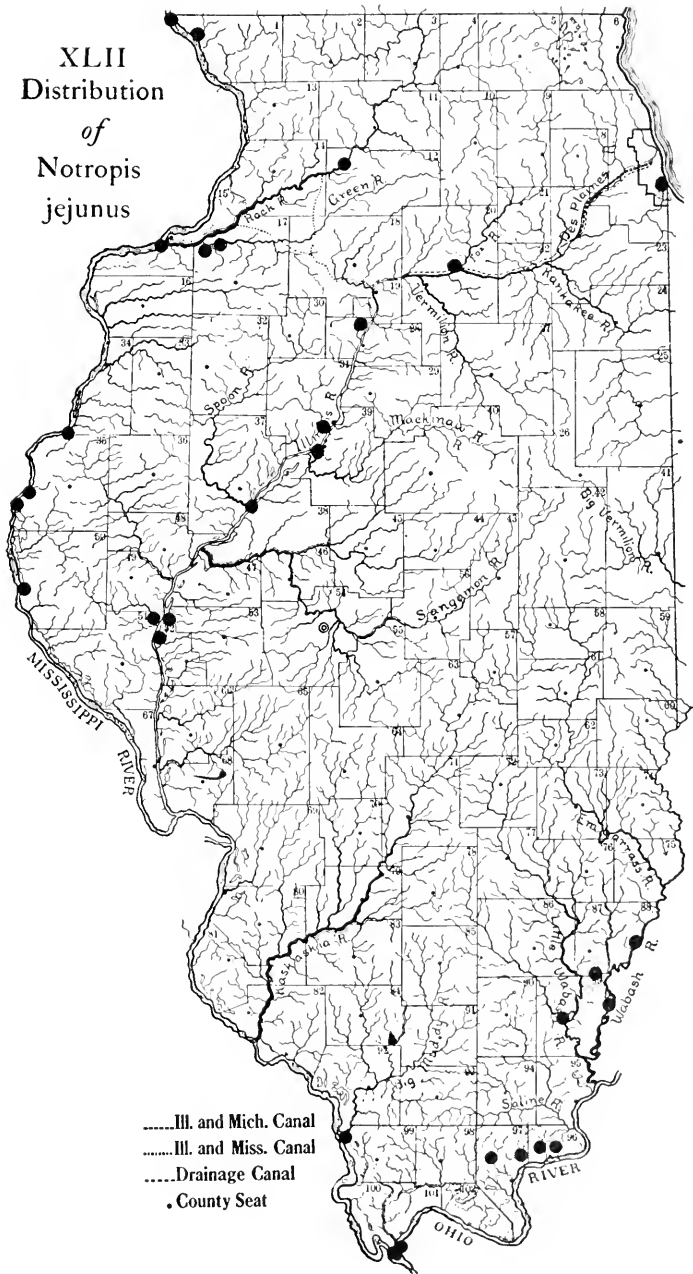
XLI  
 Distribution  
 of  
*Notropis  
 cornutus*

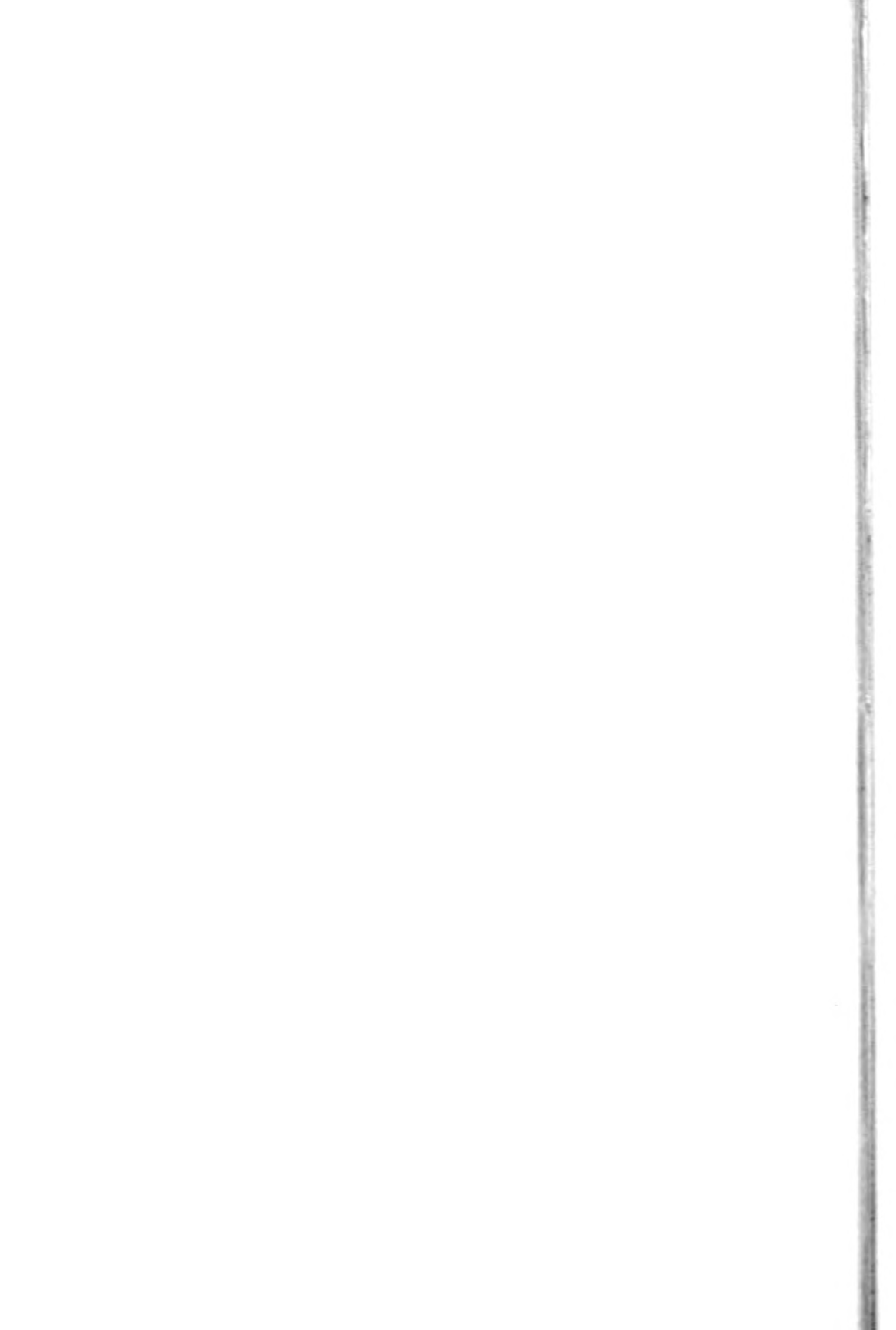




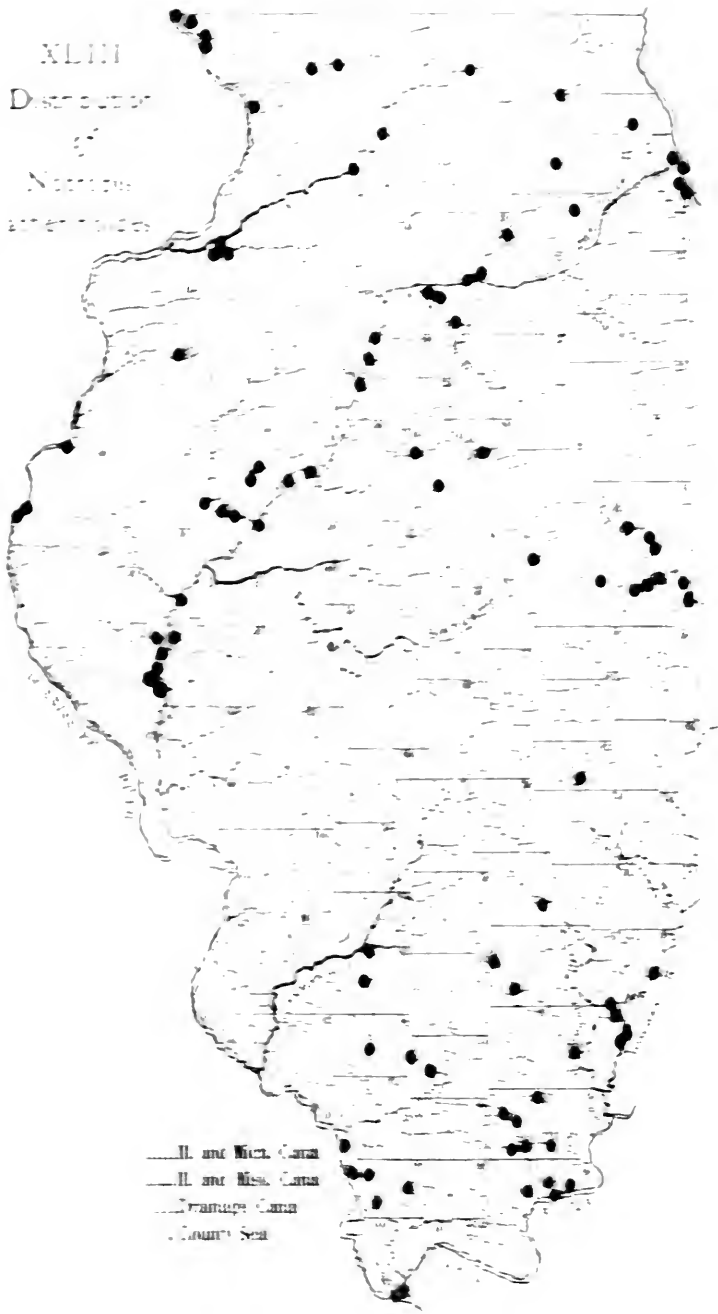


XLII  
 Distribution  
 of  
*Notropis  
 jejunos*



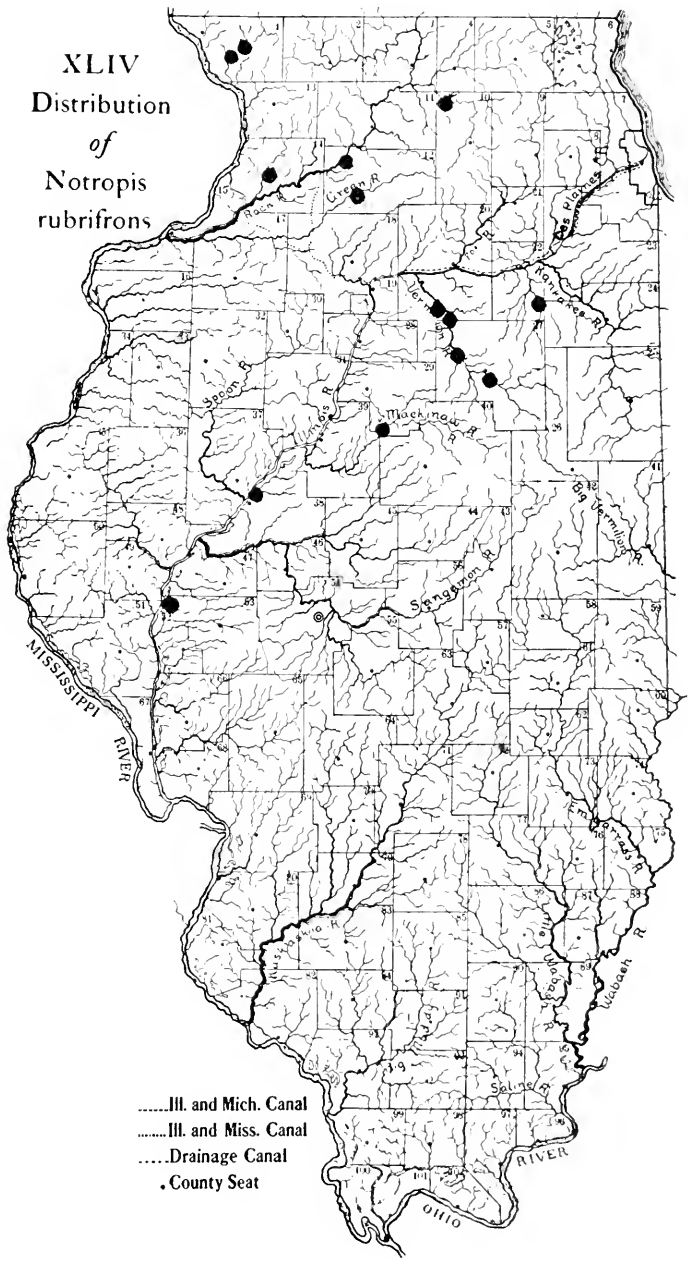


XLIII  
Distribution  
of  
Narrow  
leaves



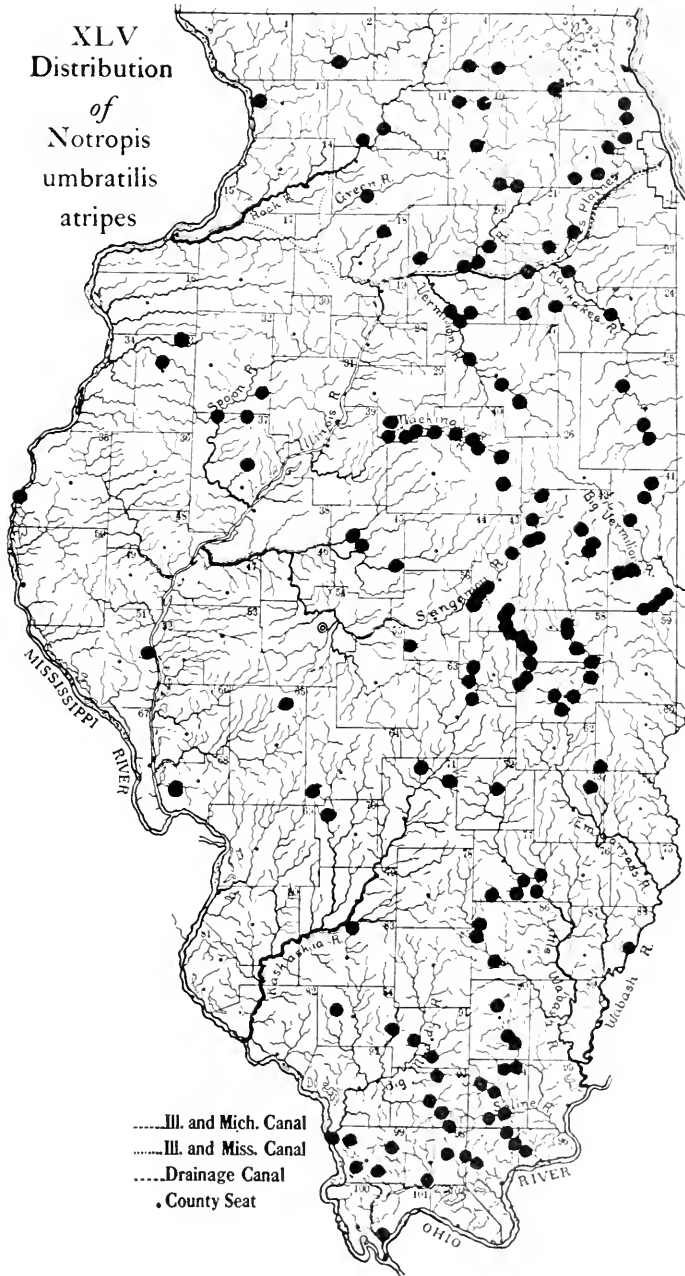


XLIV  
 Distribution  
 of  
*Notropis  
 rubrifrons*





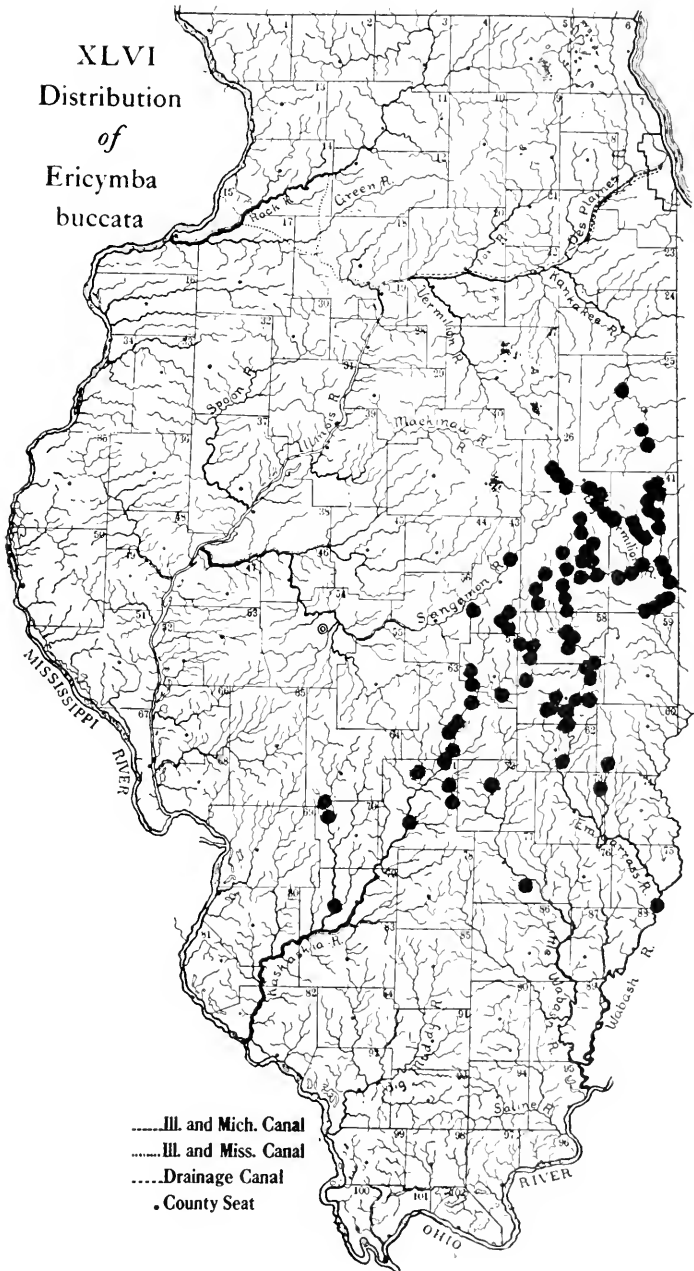
XLV  
 Distribution  
 of  
*Notropis  
 umbratilis  
 atripes*





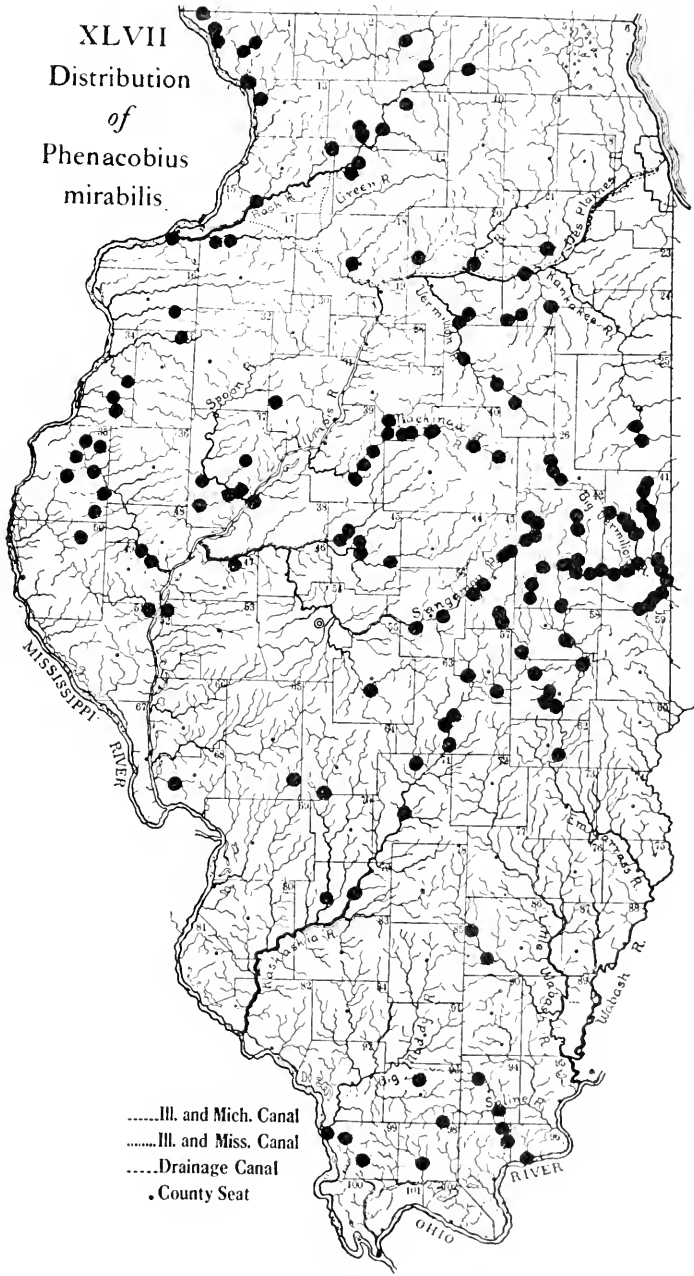


XLVI  
 Distribution  
 of  
*Ericymba*  
*buccata*





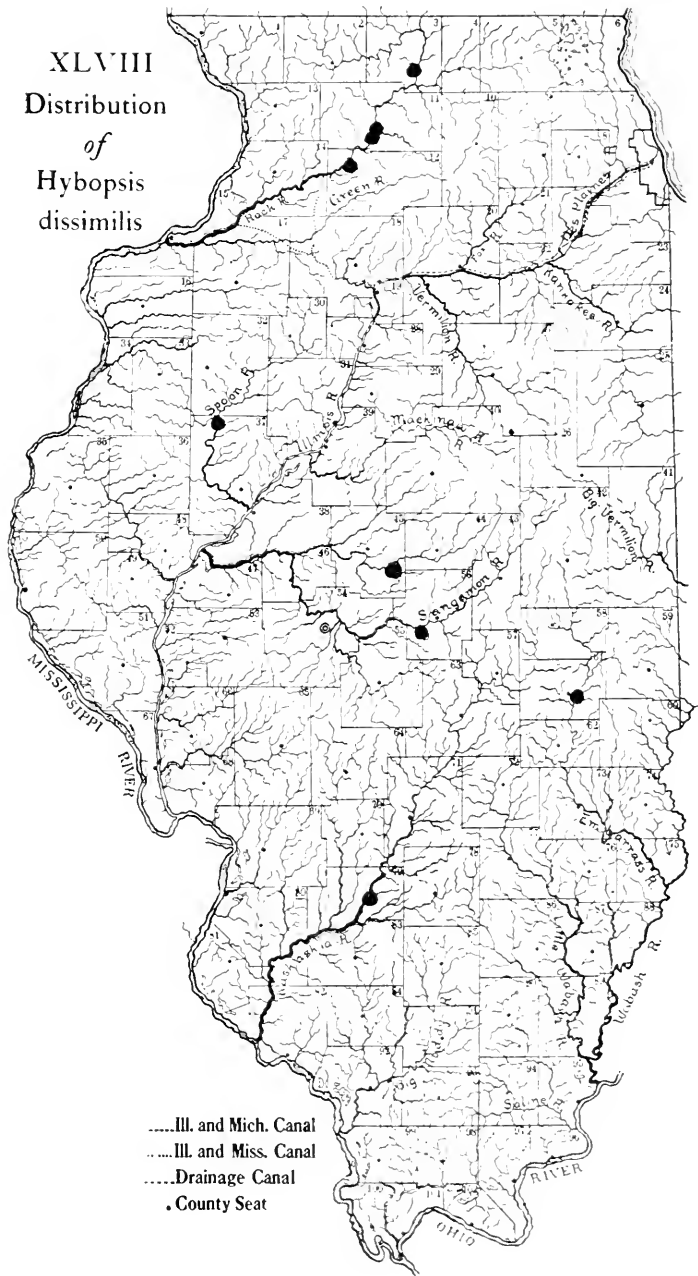
XLVII  
 Distribution  
 of  
*Phenacobius*  
*mirabilis*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat

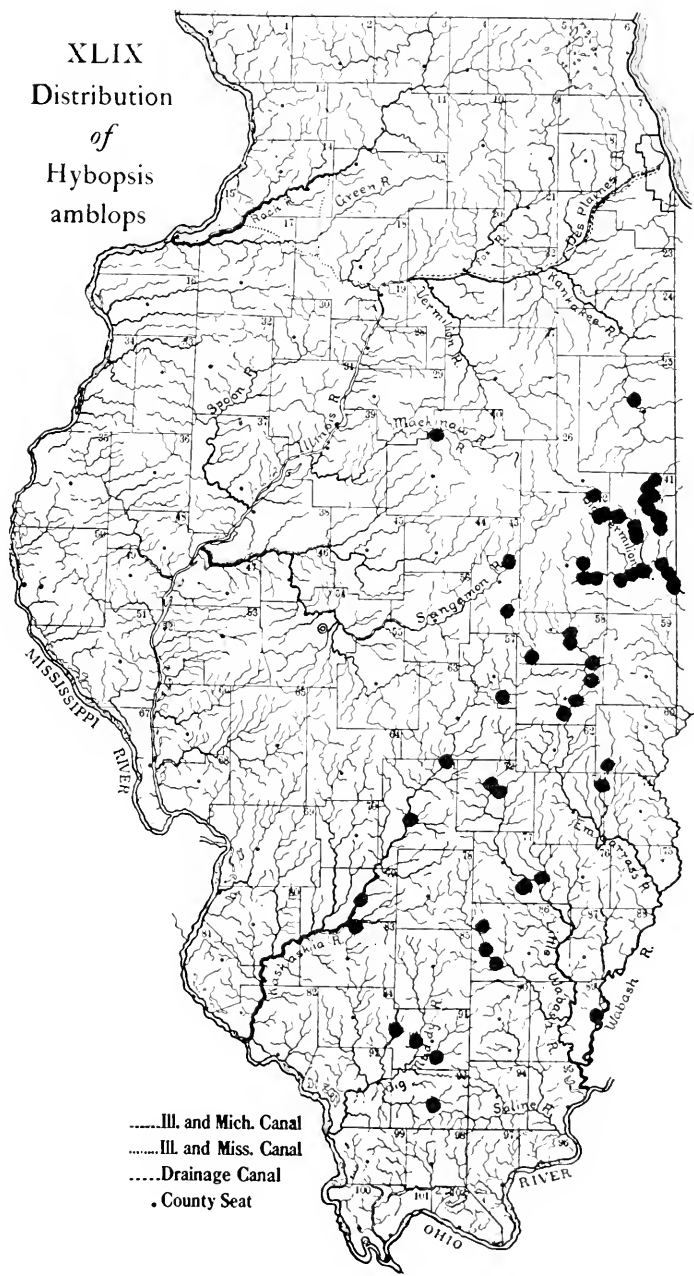


XLVIII  
 Distribution  
 of  
*Hybopsis*  
*dissimilis*





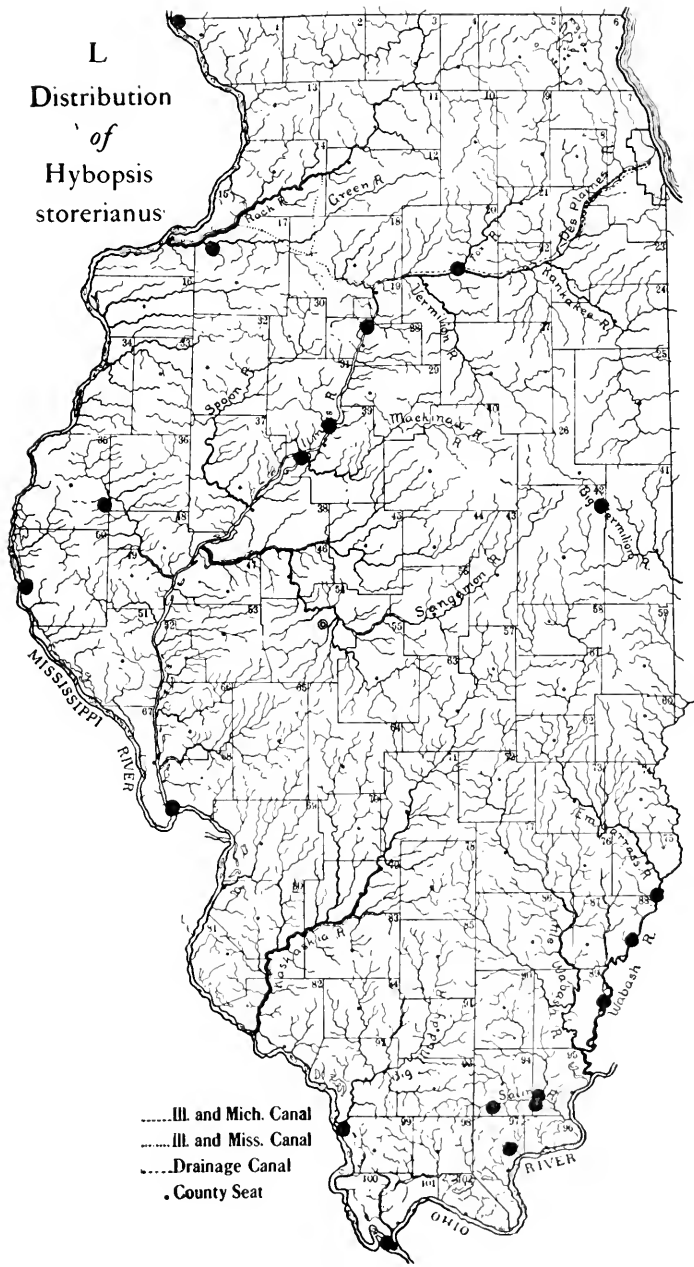
XLIX  
 Distribution  
 of  
*Hybopsis*  
 amblops





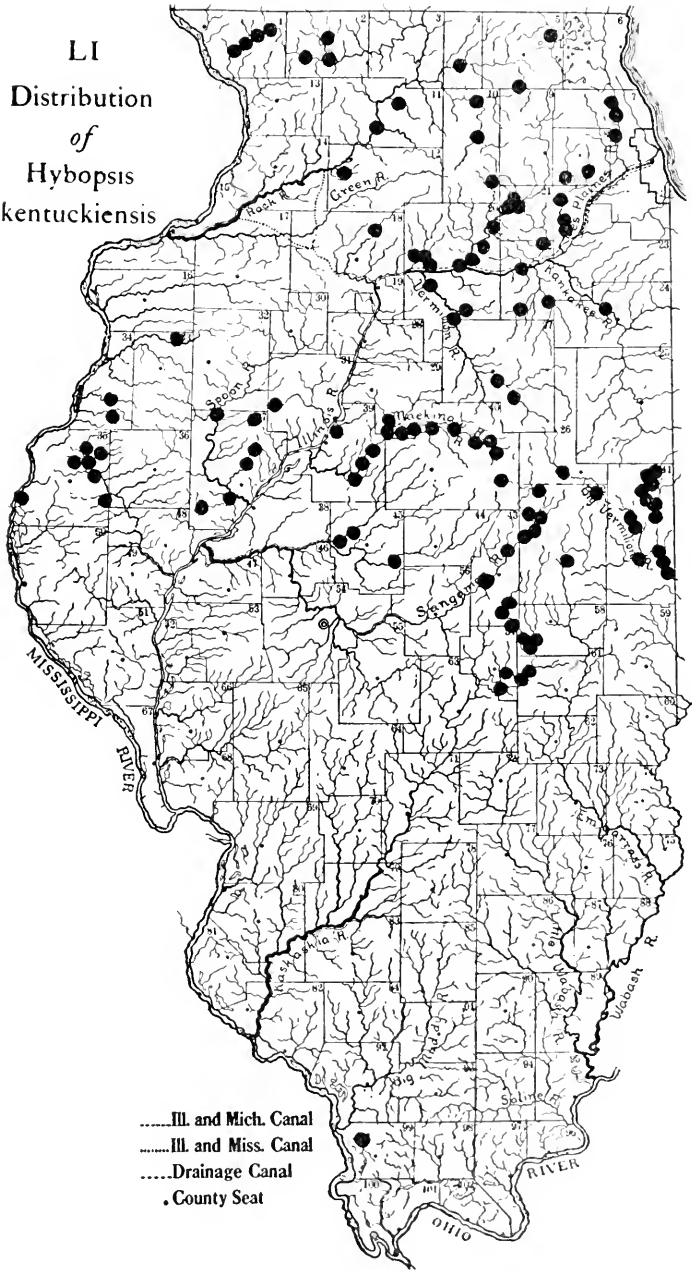


L  
 Distribution  
 of  
*Hybopsis*  
*storerianus*



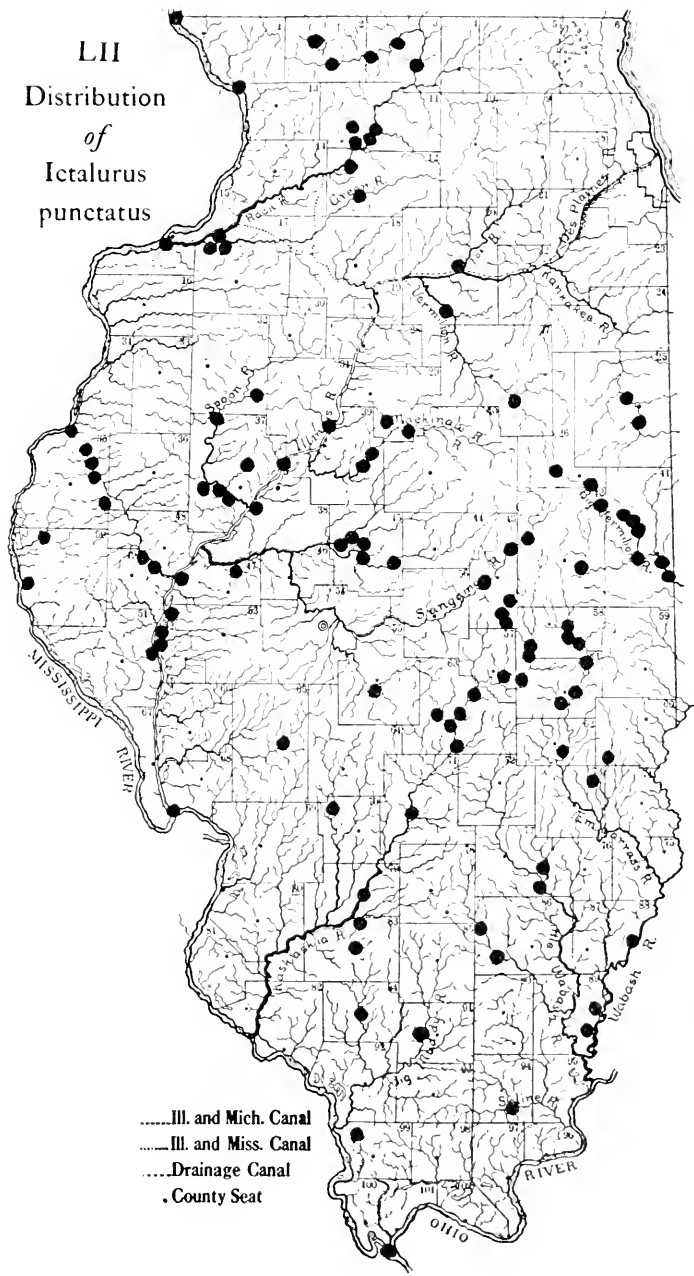


LI  
 Distribution  
 of  
*Hybopsis*  
*kentuckiensis*



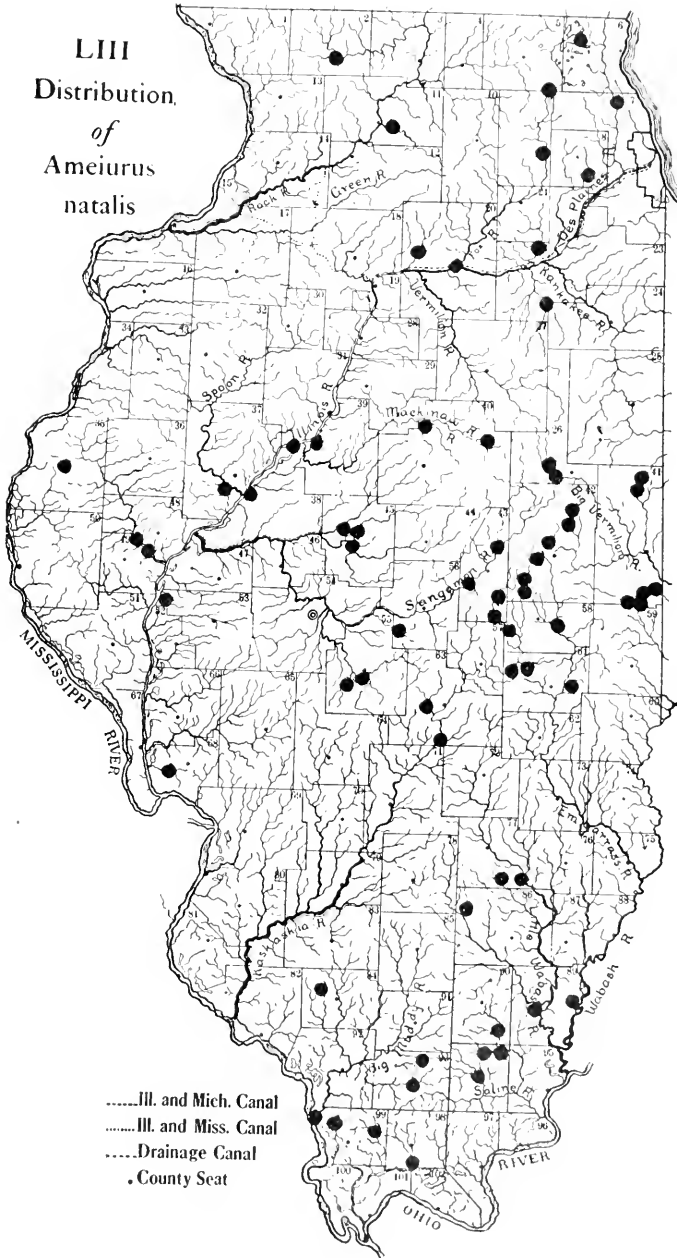


LII  
 Distribution  
 of  
*Ictalurus punctatus*





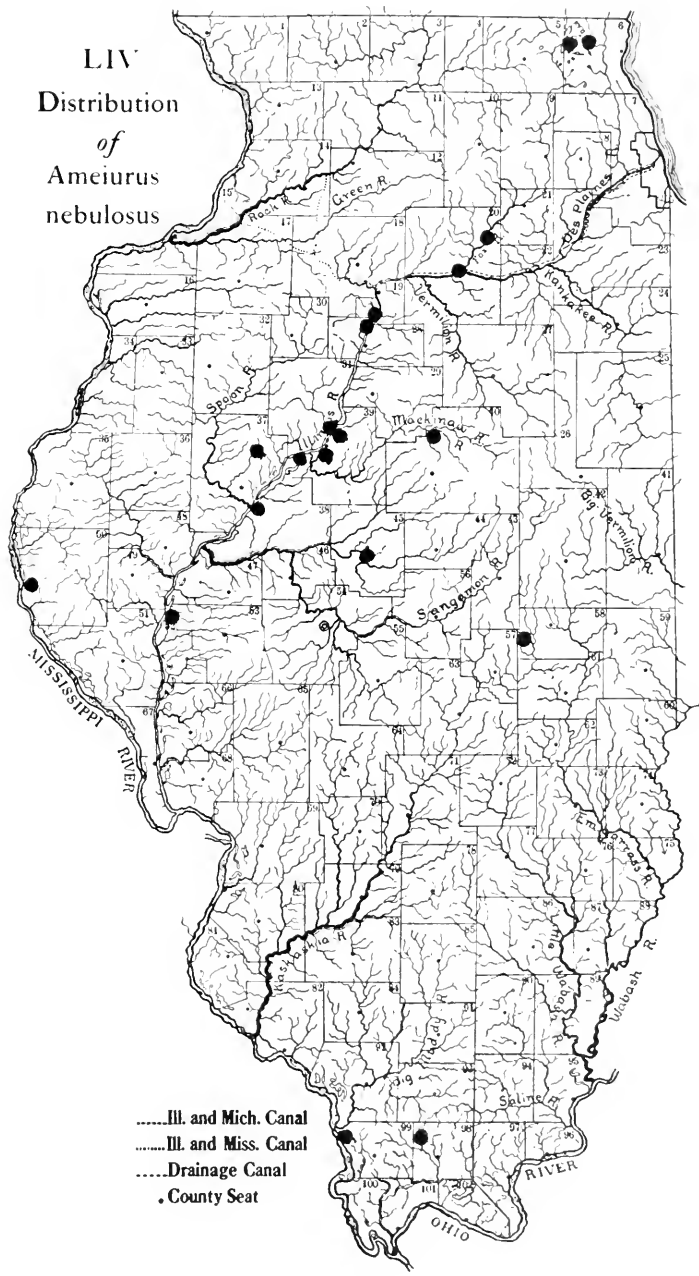
LIII  
 Distribution  
 of  
*Ameiurus*  
*natalis*





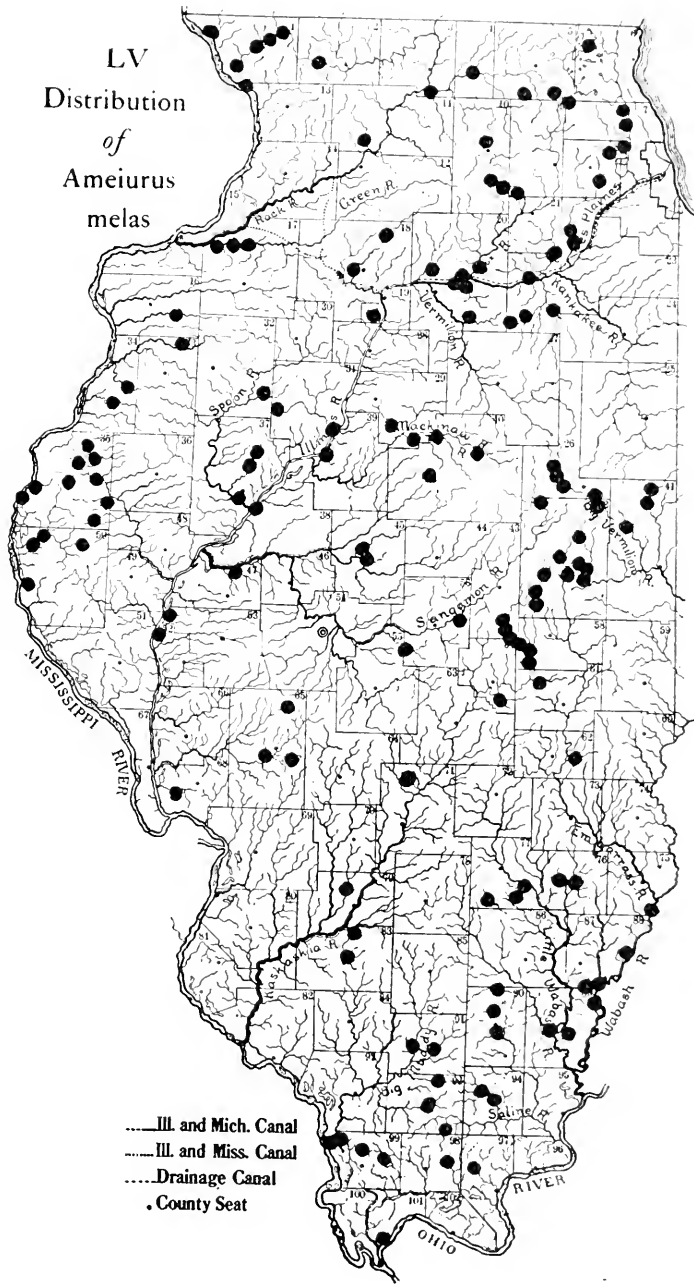


LIV  
 Distribution  
 of  
*Ameiurus  
 nebulosus*



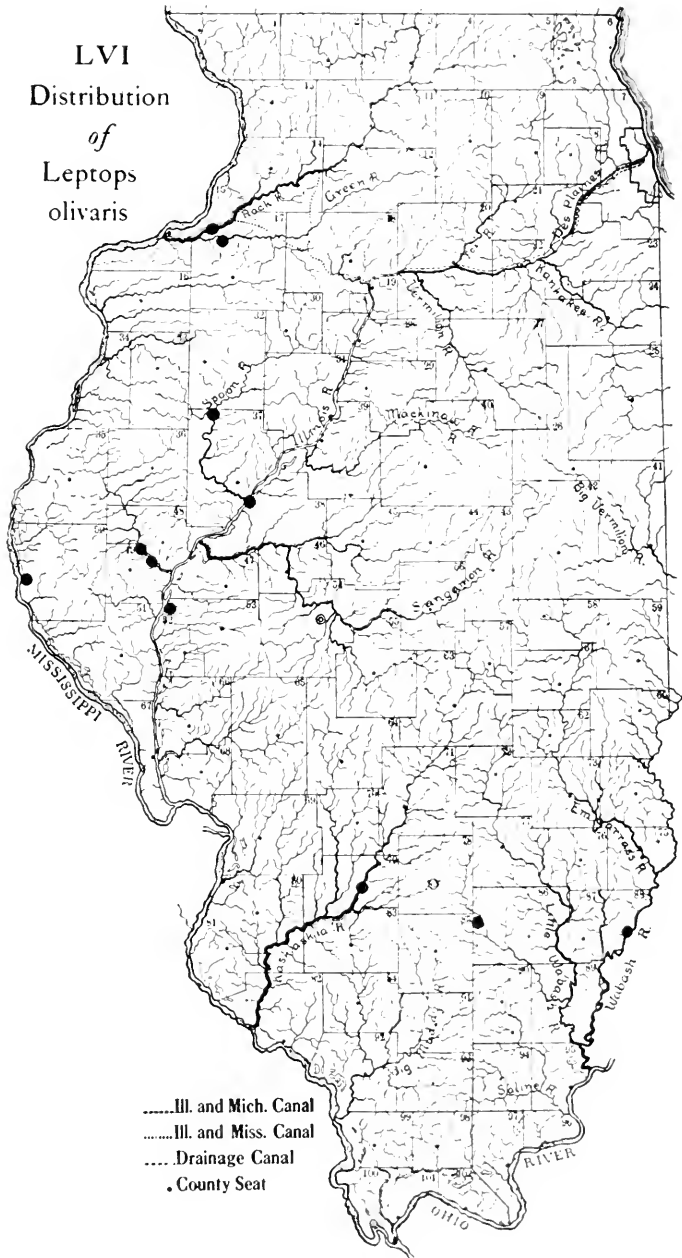


LV  
 Distribution  
 of  
*Ameiurus  
 melas*



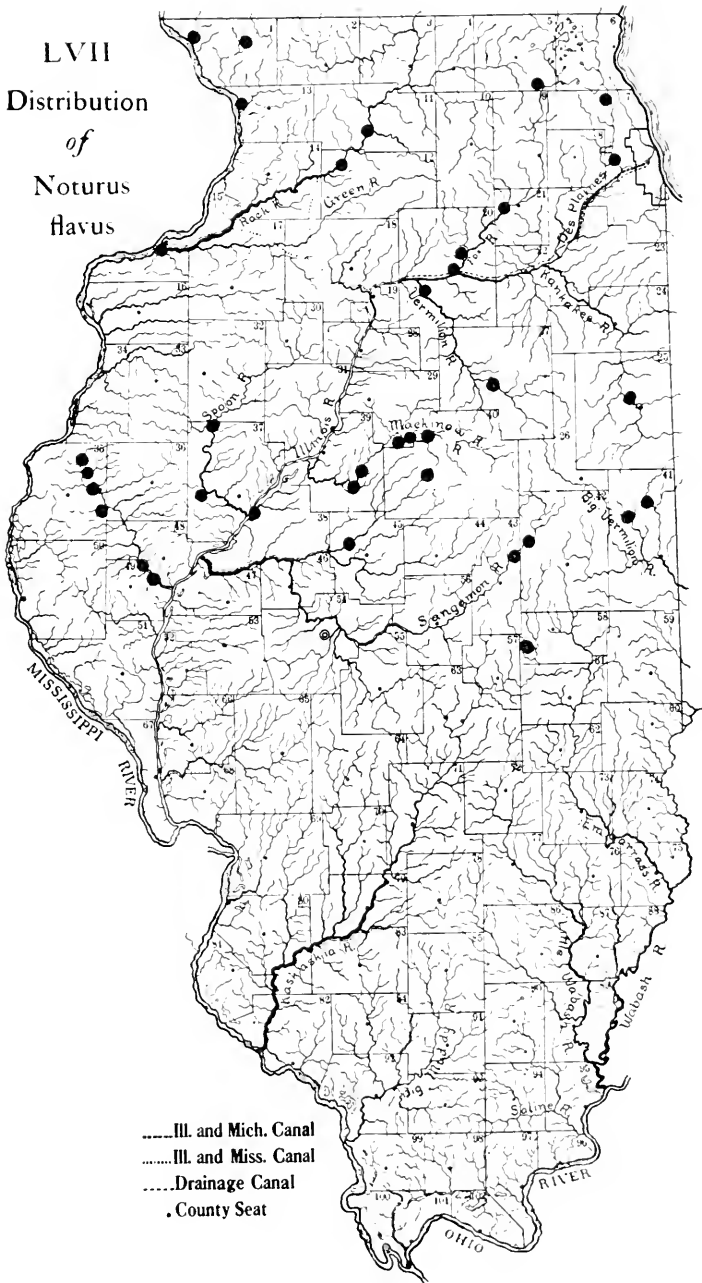


LVI  
 Distribution  
 of  
*Leptops  
 olivaris*





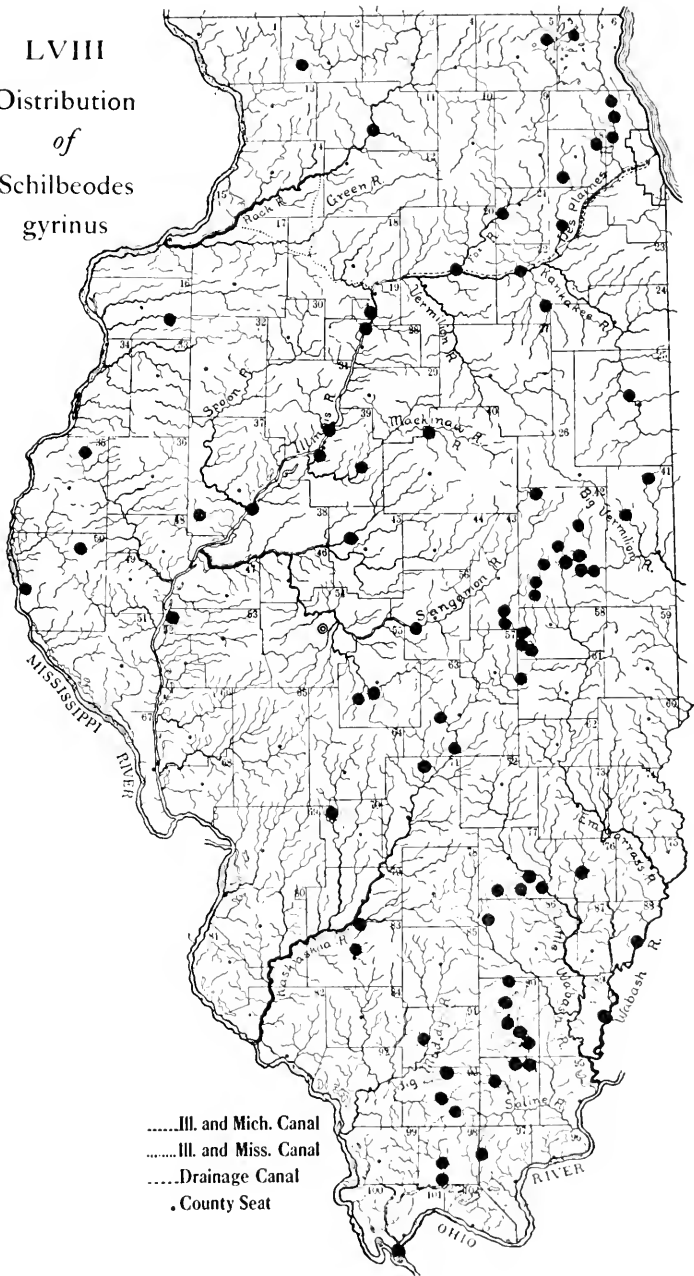
LVII  
 Distribution  
 of  
*Noturus*  
*flavus*





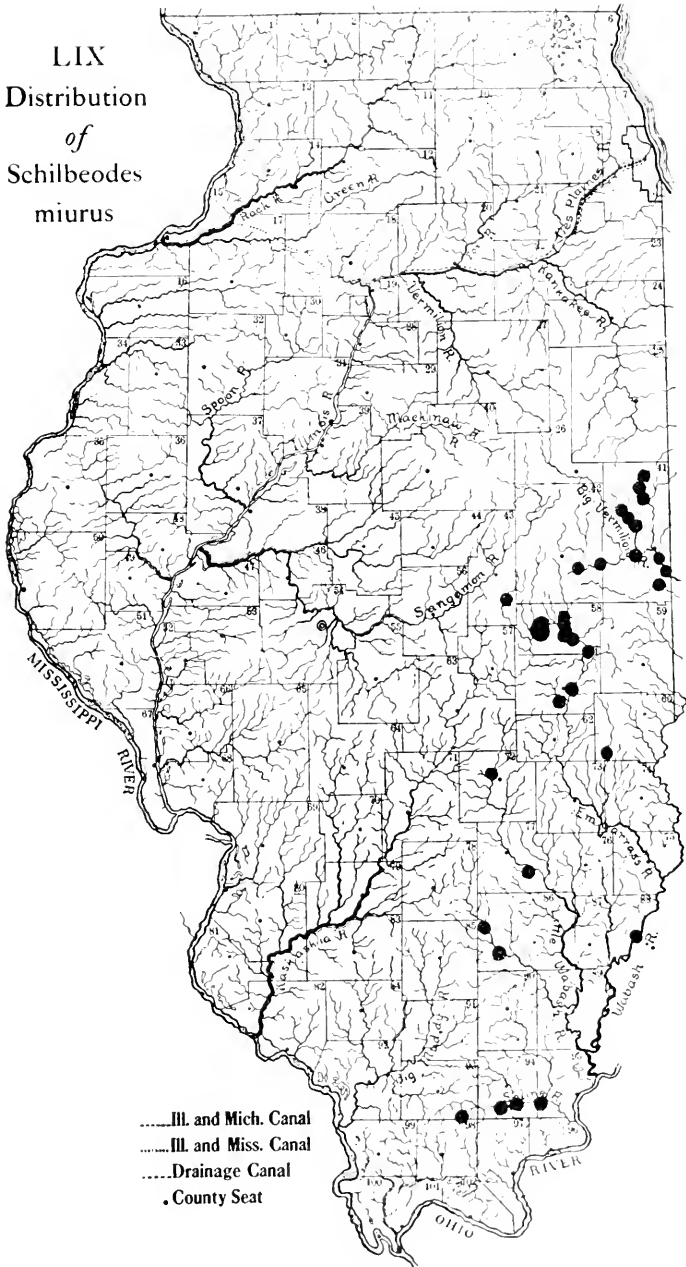


LVIII  
 Distribution  
 of  
*Schilbeodes*  
*gyrinus*





LIX  
 Distribution  
 of  
*Schilbeodes*  
*miurus*



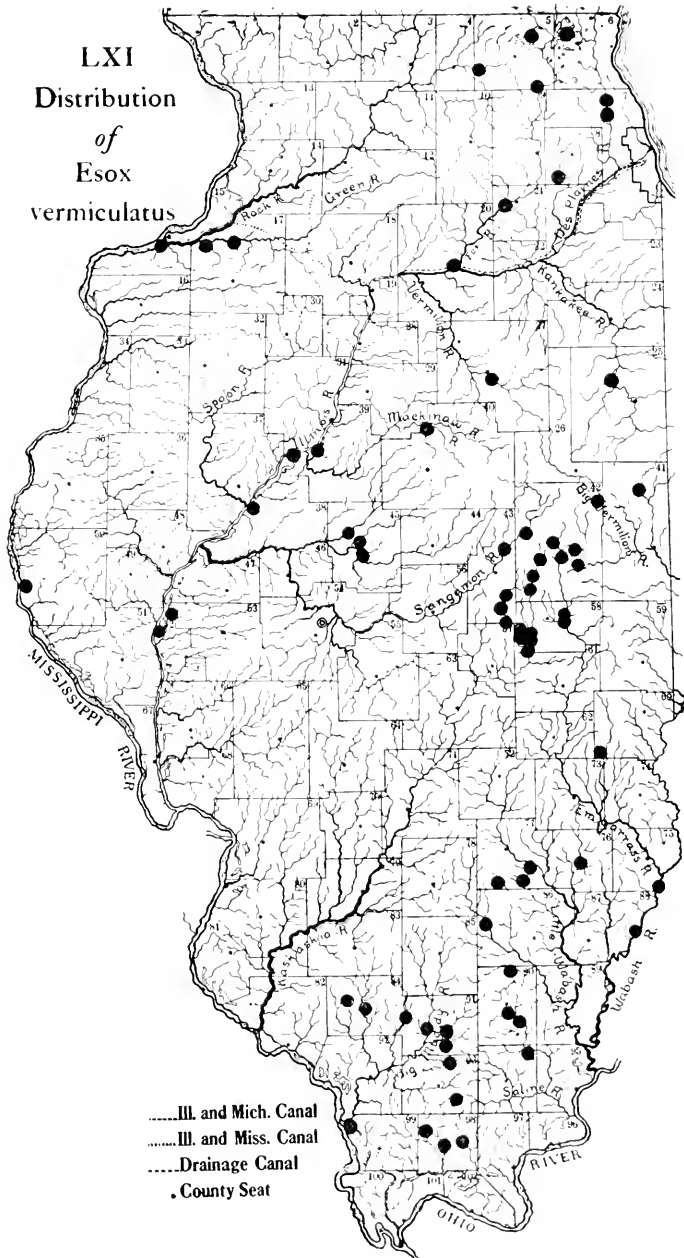


LX  
 Distribution  
 of  
*Umbra*  
 limi





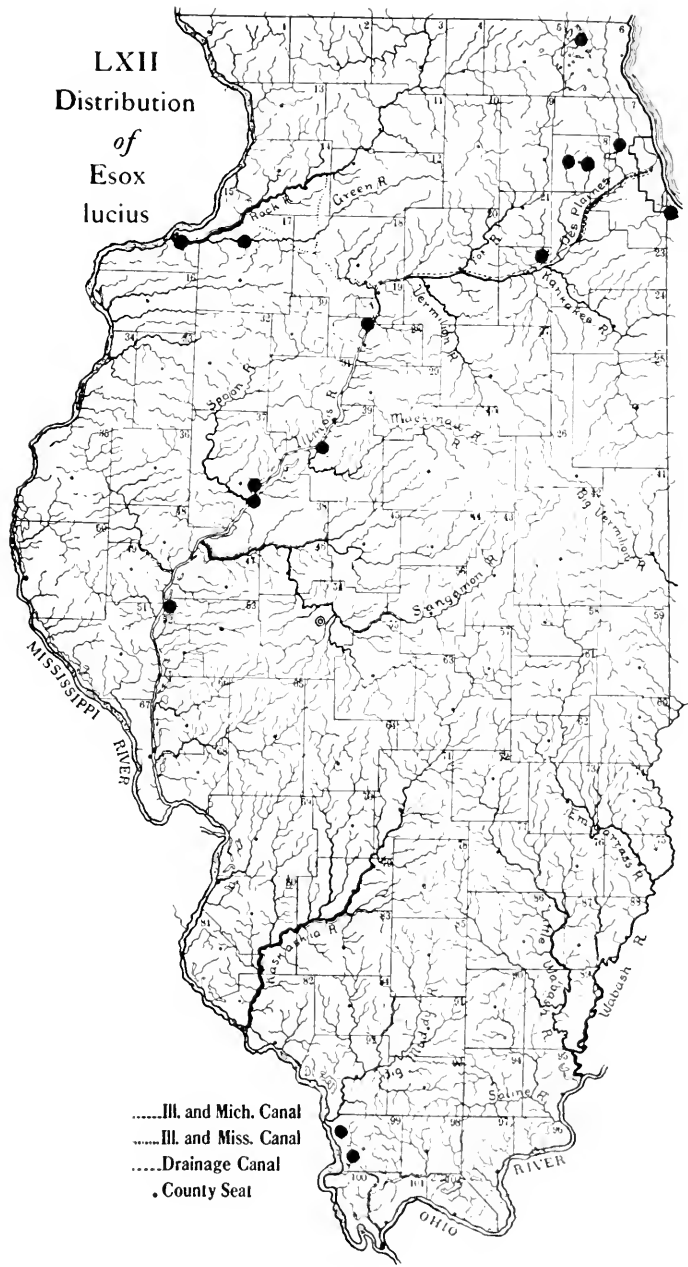
LXI  
 Distribution  
 of  
*Esox*  
*vermiculatus*





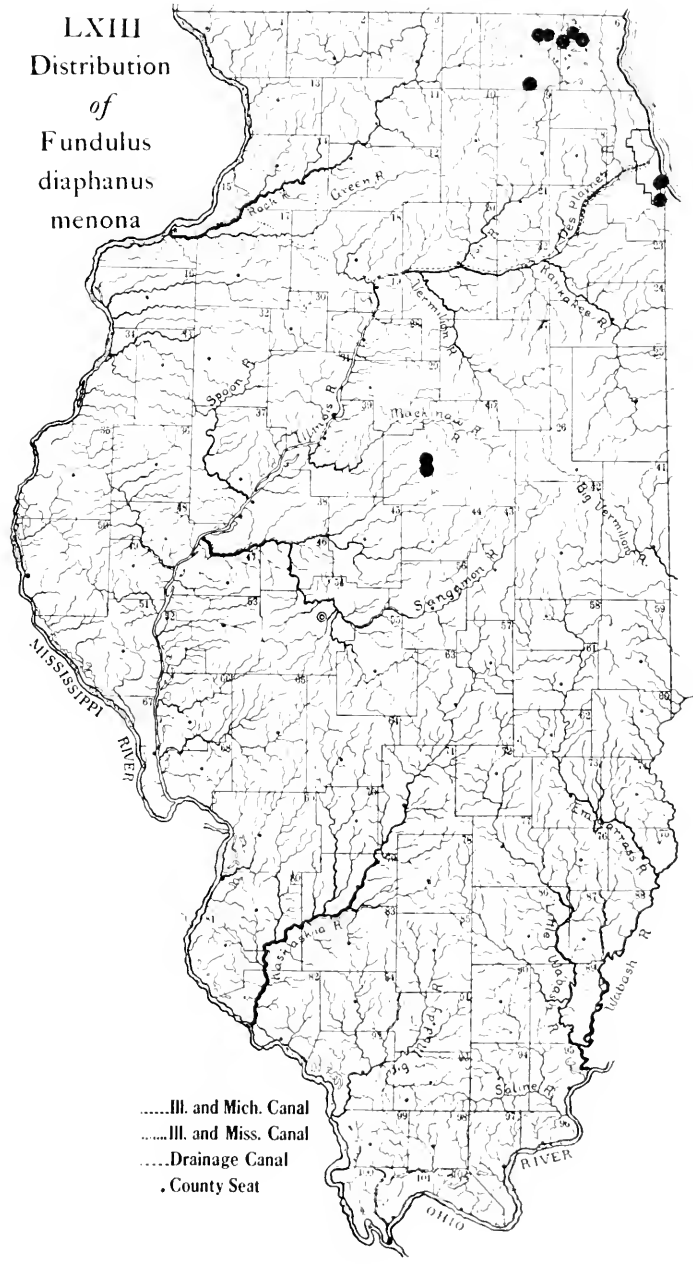


LXII  
 Distribution  
 of  
*Esox*  
*lucius*



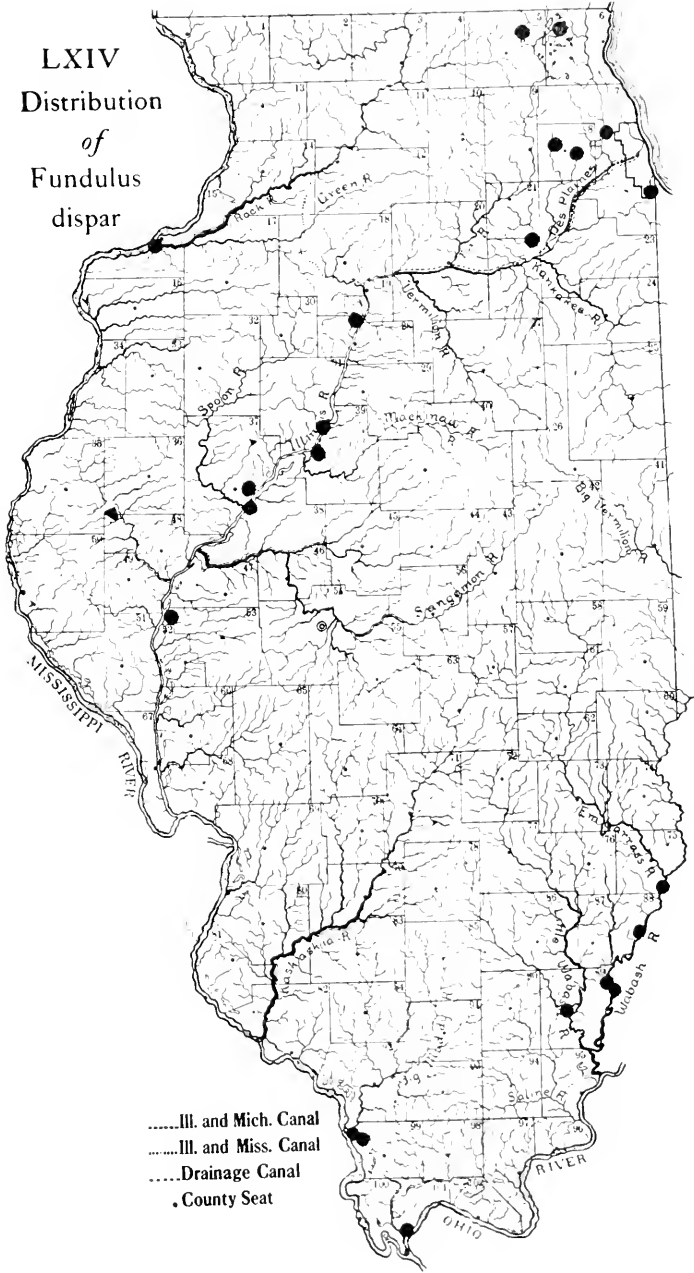


LXIII  
 Distribution  
 of  
*Fundulus*  
*diaphanus*  
*menona*



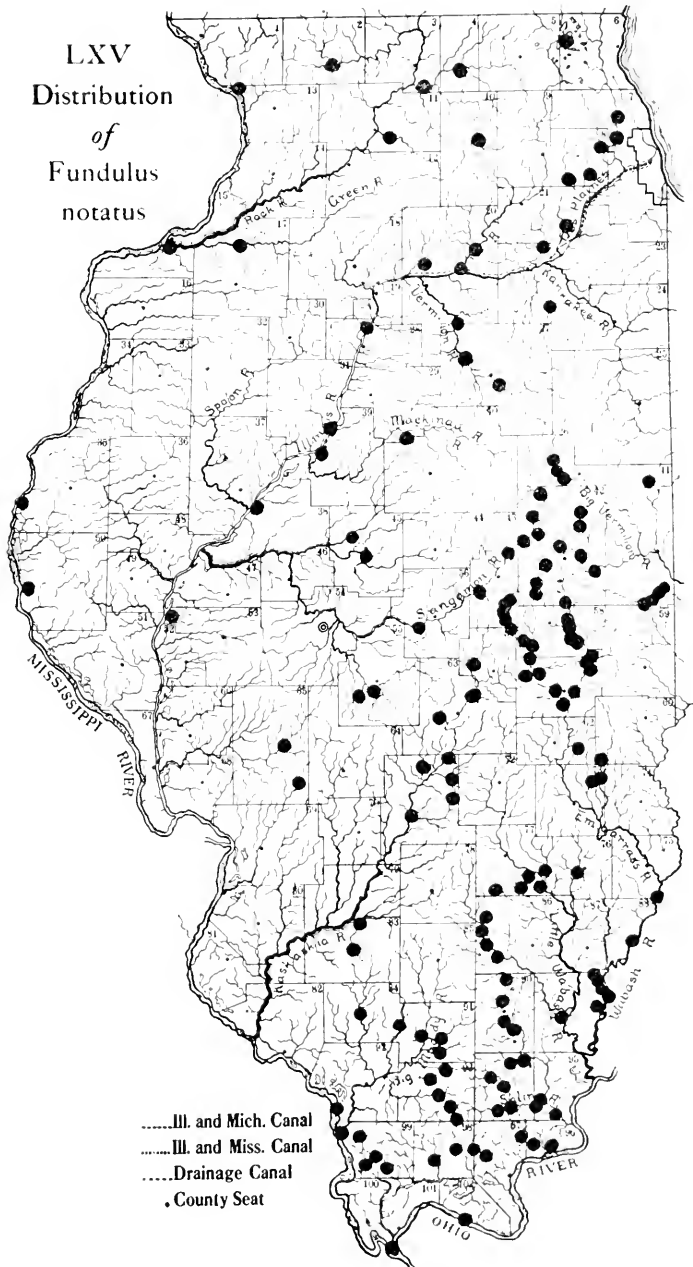


LXIV  
 Distribution  
 of  
*Fundulus*  
*dispar*





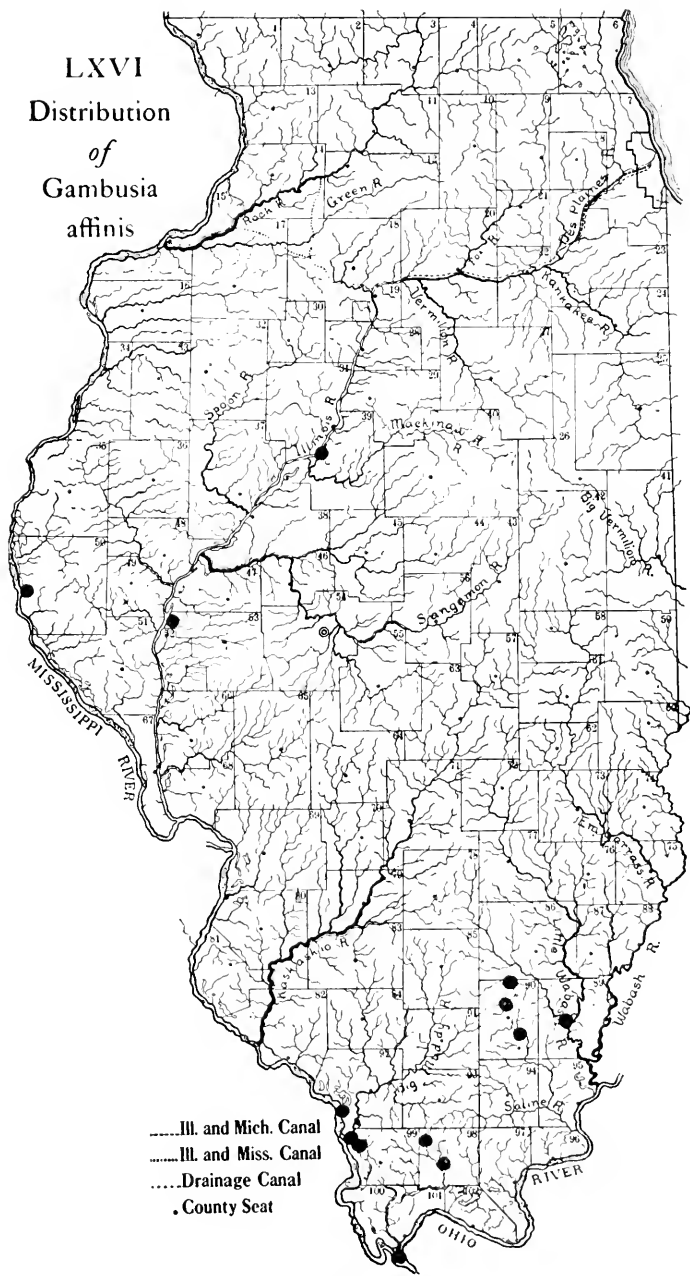
LXV  
 Distribution  
 of  
*Fundulus*  
*notatus*





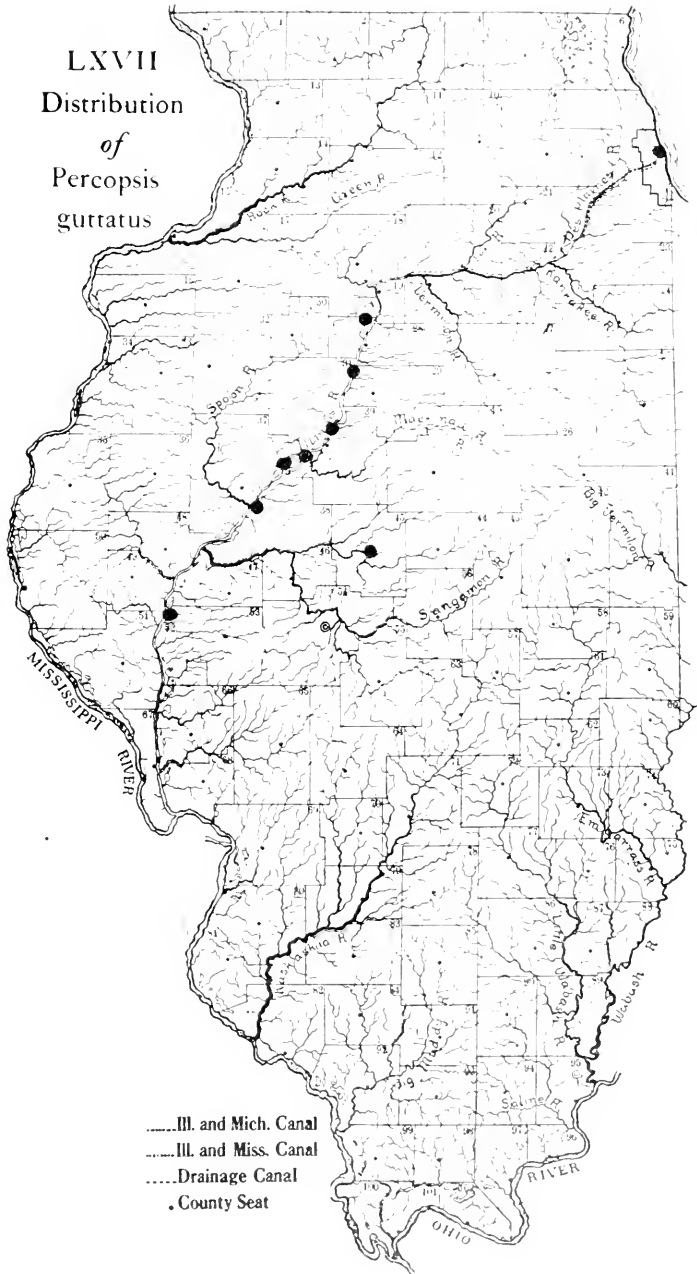


LXVI  
 Distribution  
 of  
*Gambusia*  
 affinis



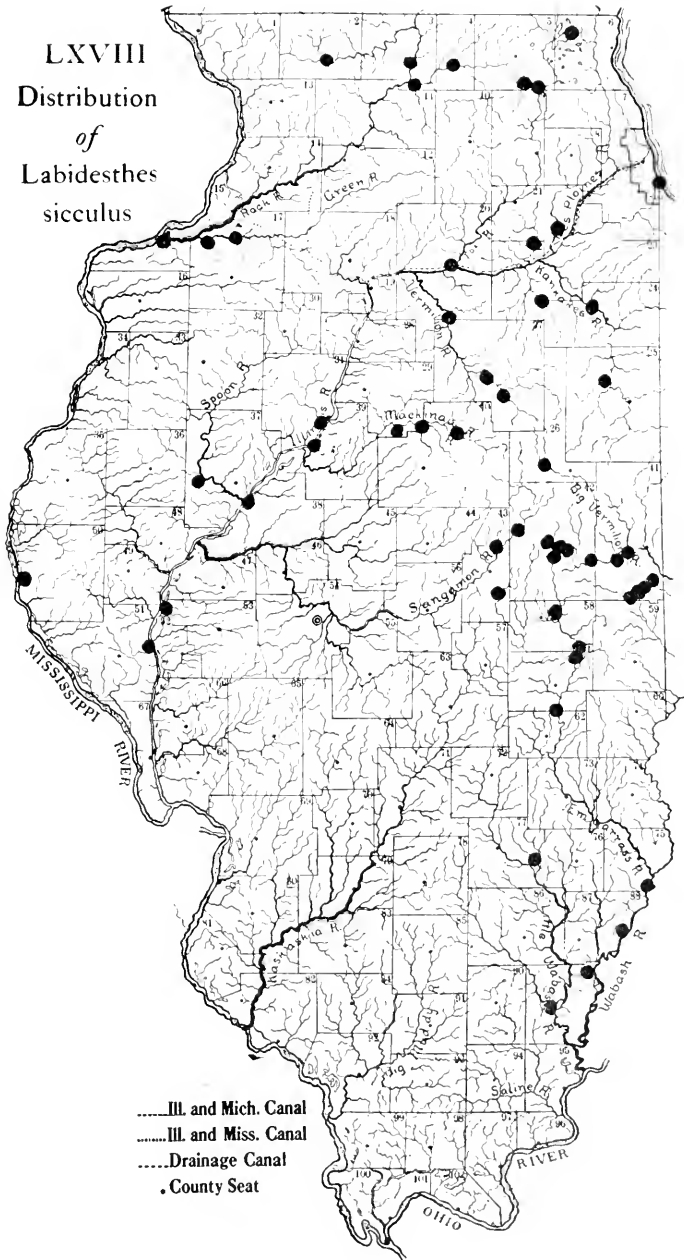


LXVII  
 Distribution  
 of  
*Percopsis  
 guttatus*



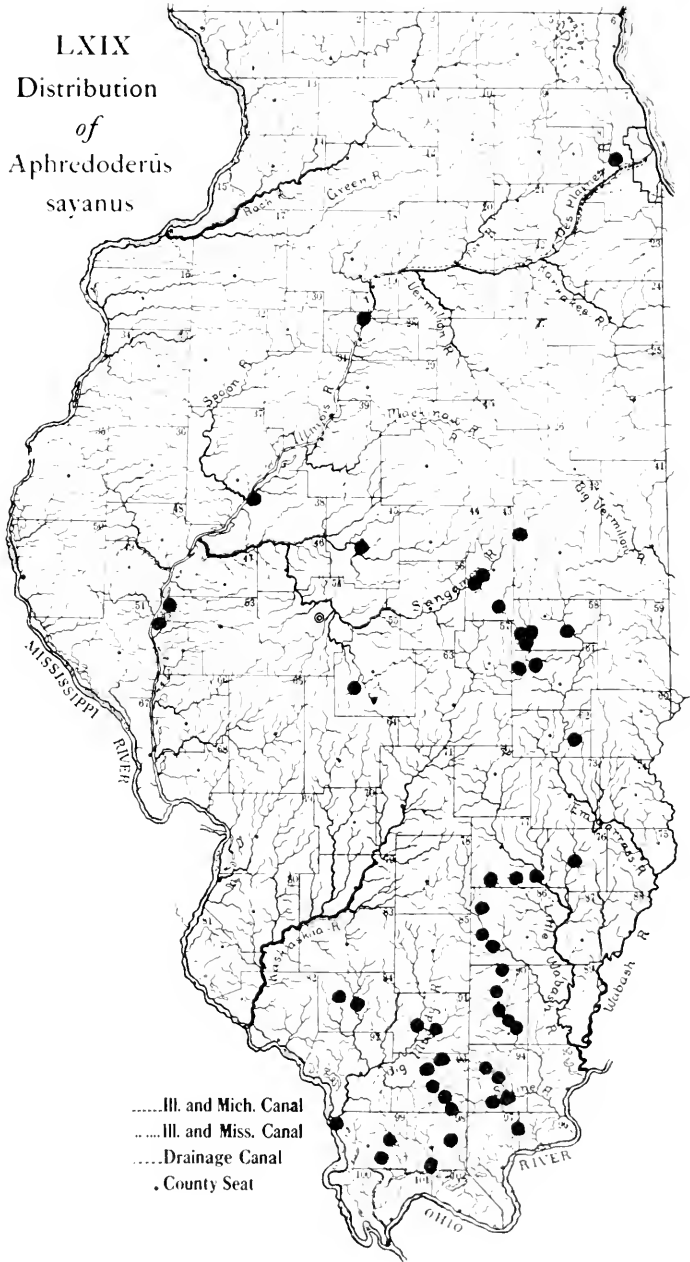


LXVIII  
 Distribution  
 of  
*Labidesthes*  
*sicculus*





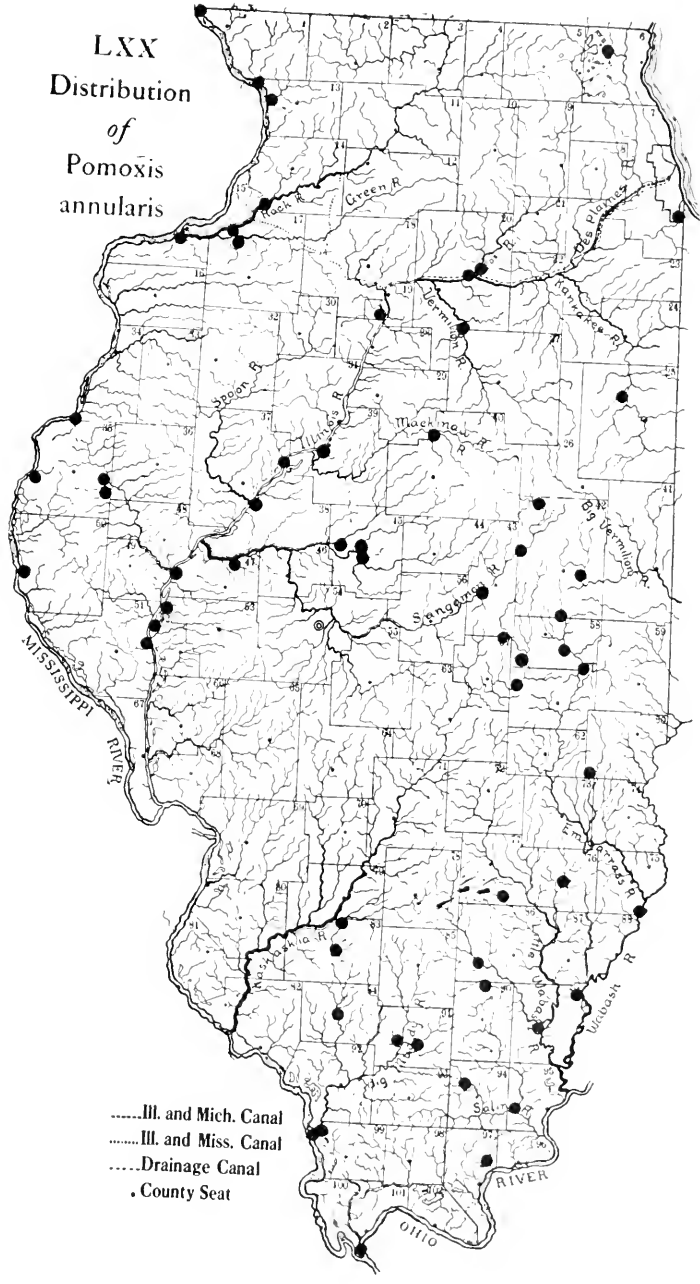
LXIX  
 Distribution  
 of  
*Aphredoderus*  
*sayanus*





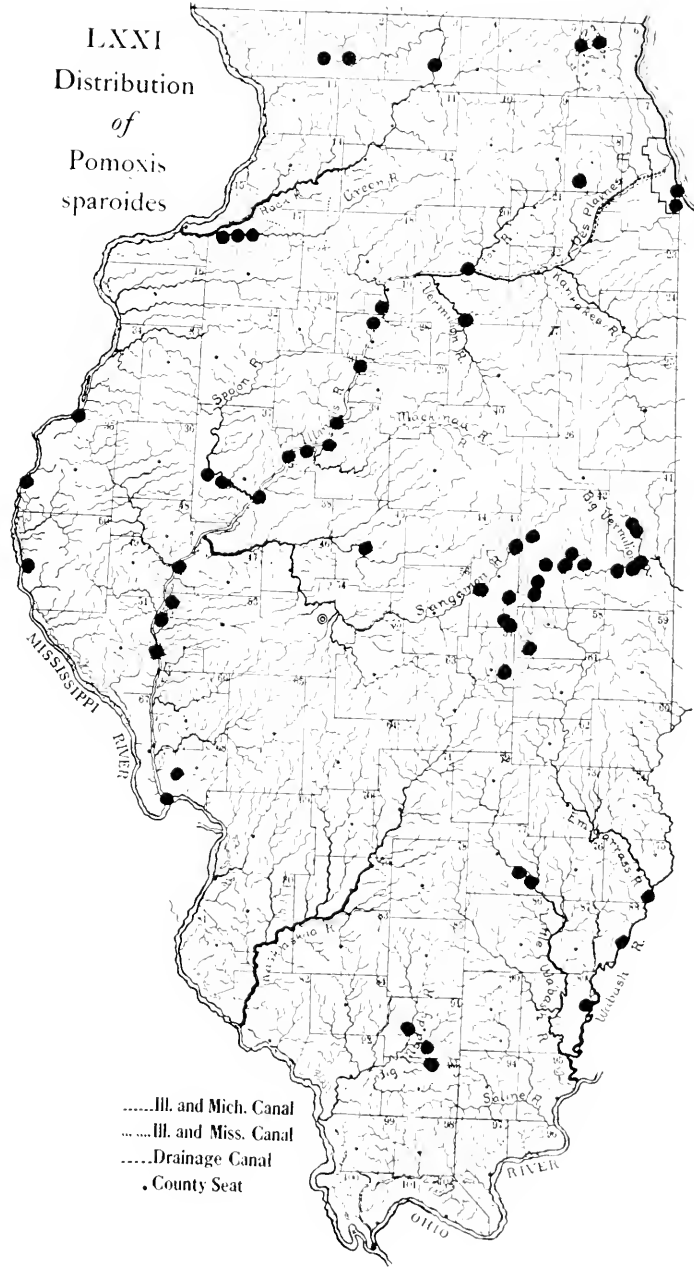


LXX  
 Distribution  
 of  
*Pomoxis*  
*annularis*





LXXI  
 Distribution  
 of  
*Pomoxis*  
*sparoides*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 .....Drainage Canal  
 . County Seat

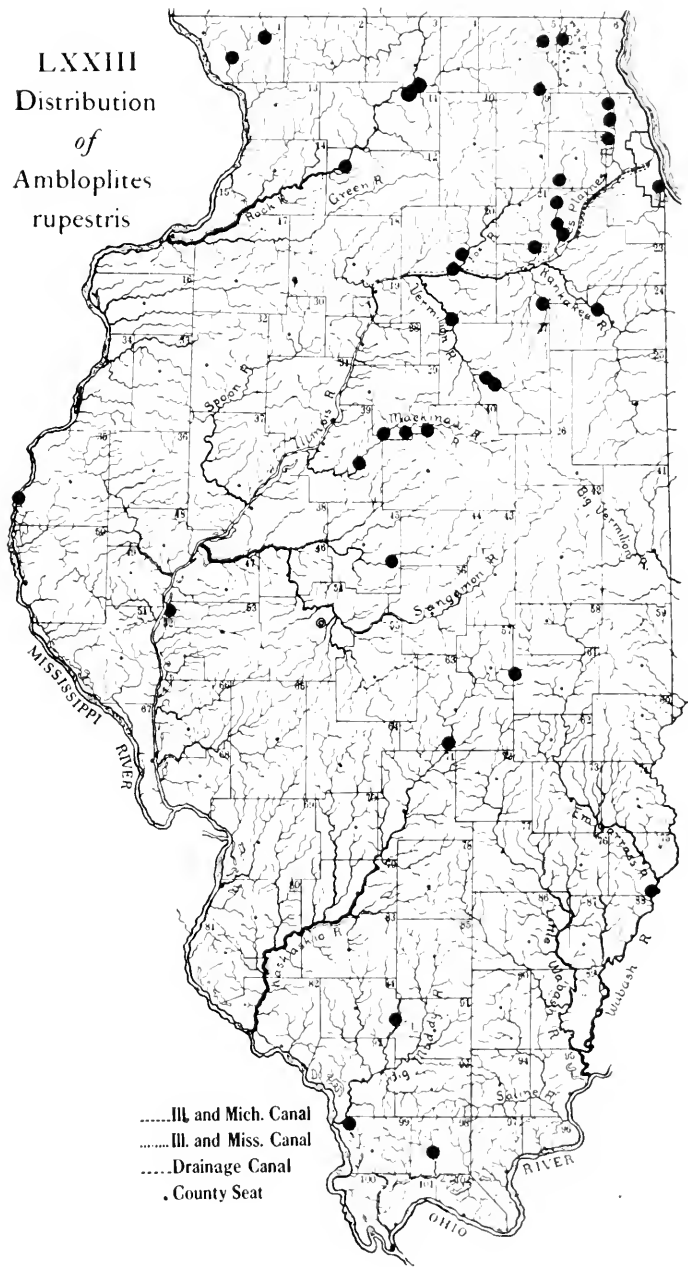


LXXII  
 Distribution  
*of*  
 Centrarchus  
 macropterus





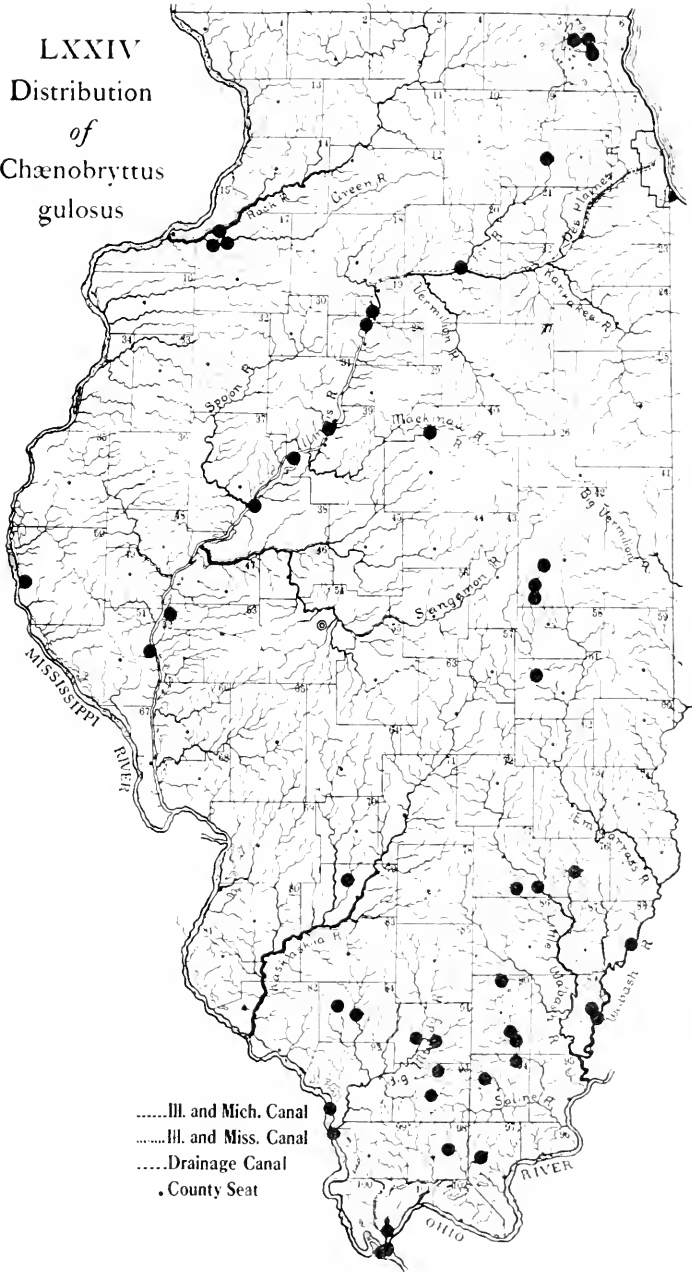
LXXIII  
 Distribution  
 of  
*Ambloplites*  
*rupestris*





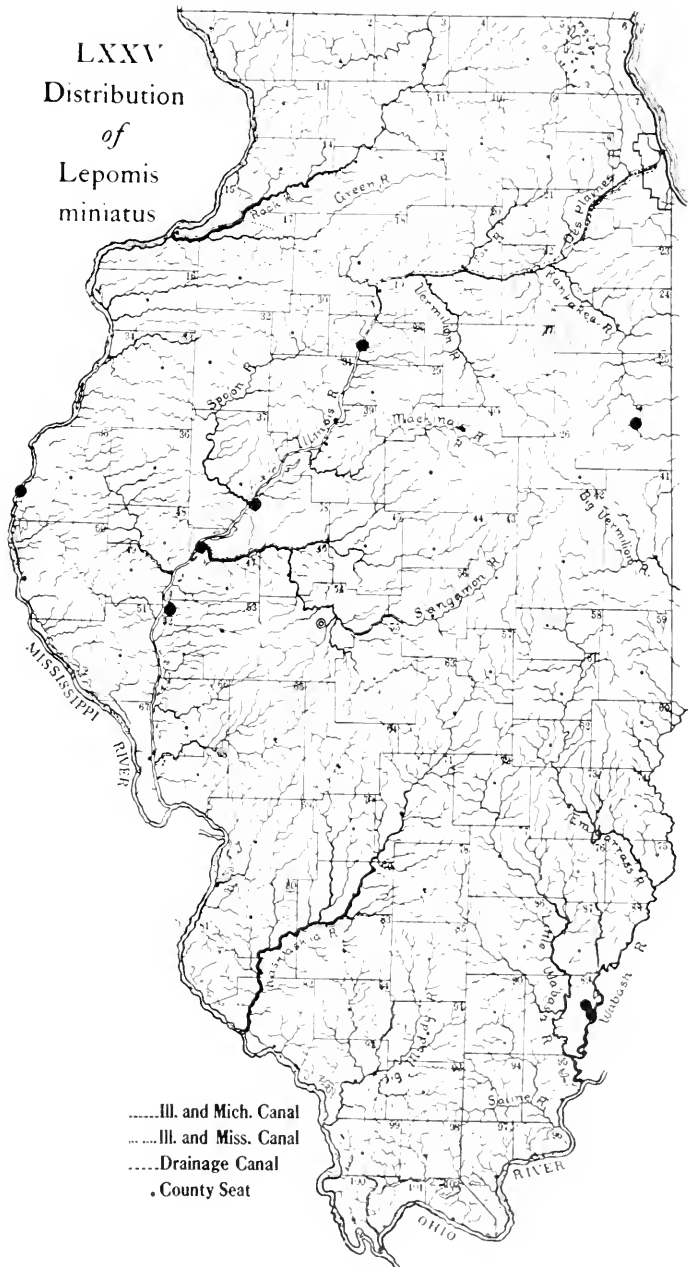


LXXIV  
 Distribution  
 of  
*Chaenobryttus*  
*gulosus*





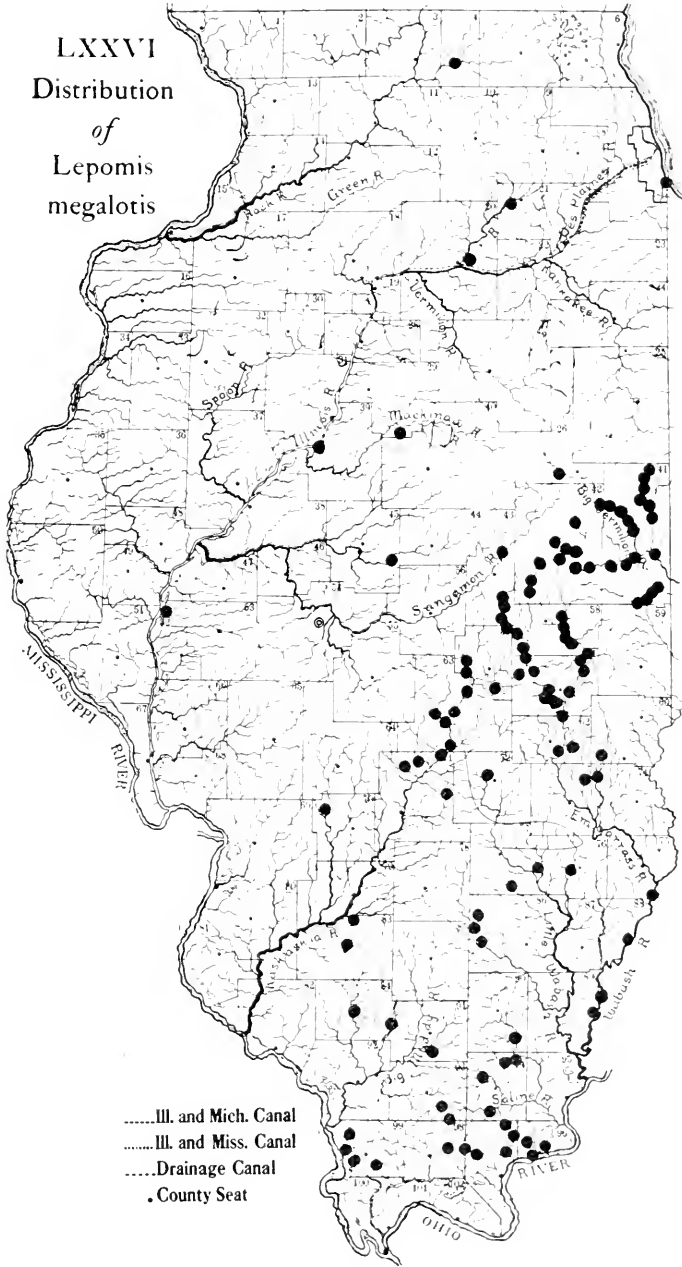
LXXV  
 Distribution  
 of  
*Lepomis  
 miniatus*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 ....Drainage Canal  
 • County Seat

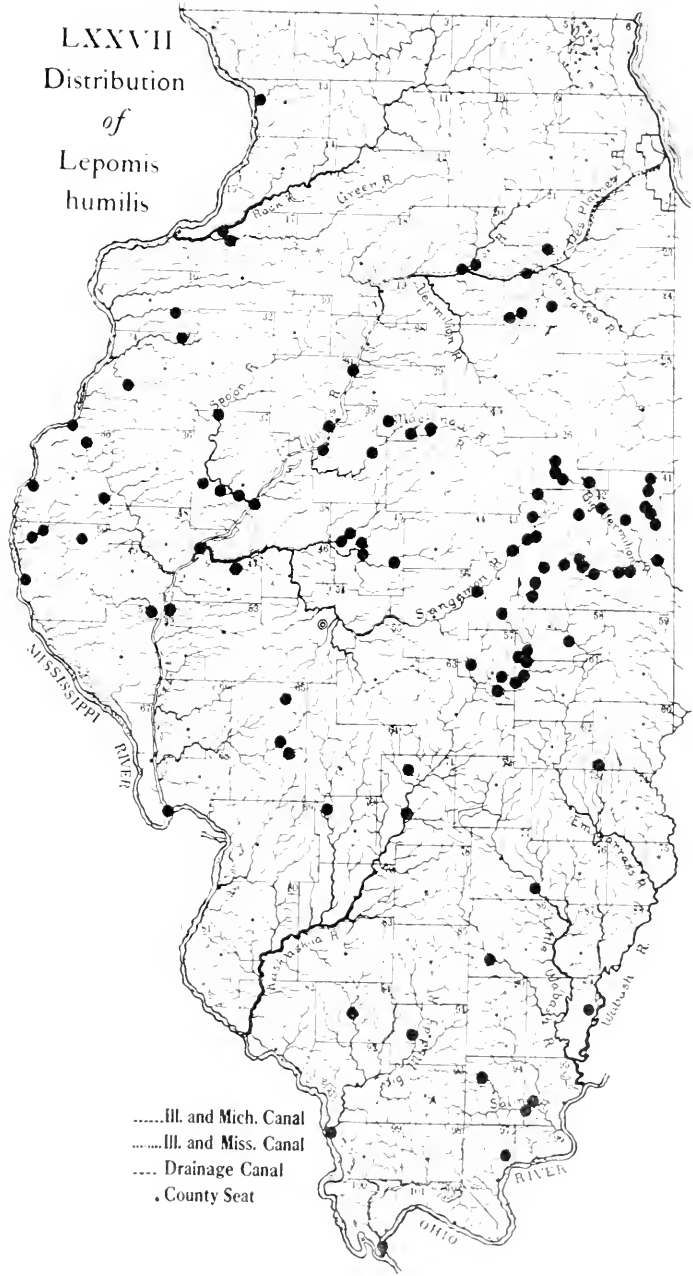


LXXVI  
 Distribution  
 of  
*Lepomis megalotis*





LXXVII  
 Distribution  
 of  
*Lepomis humilis*

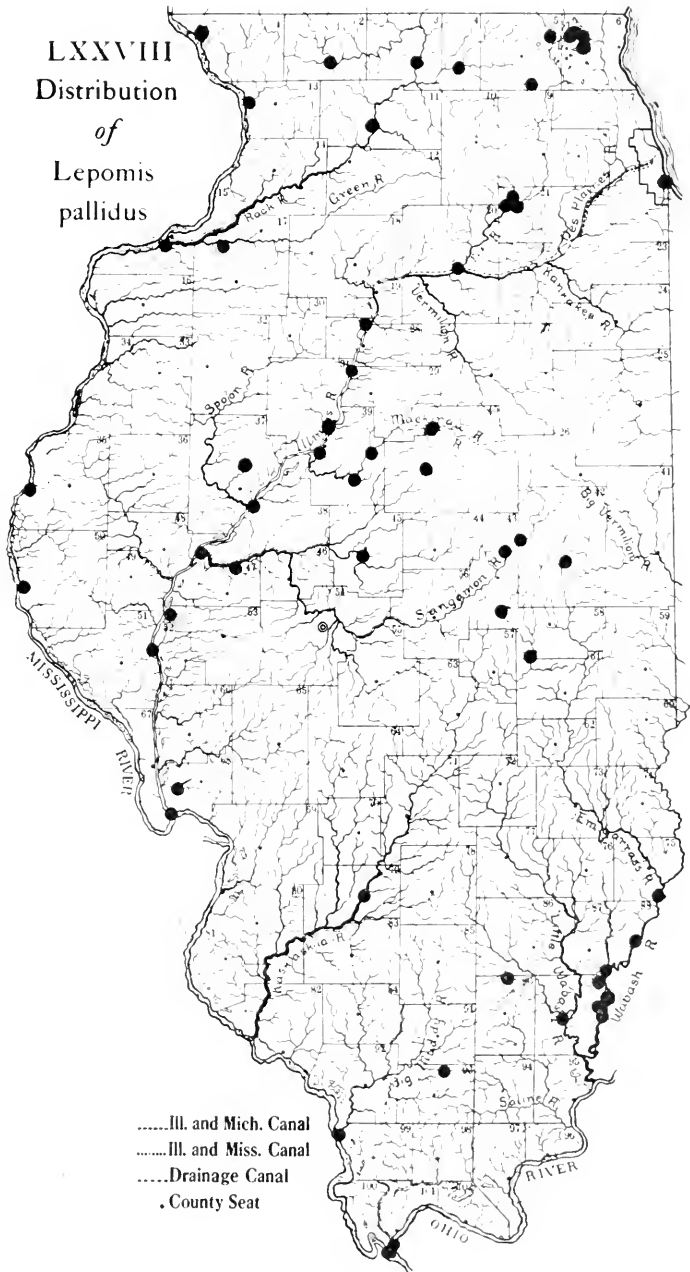


- ..... Ill. and Mich. Canal
- ..... Ill. and Miss. Canal
- .... Drainage Canal
- County Seat



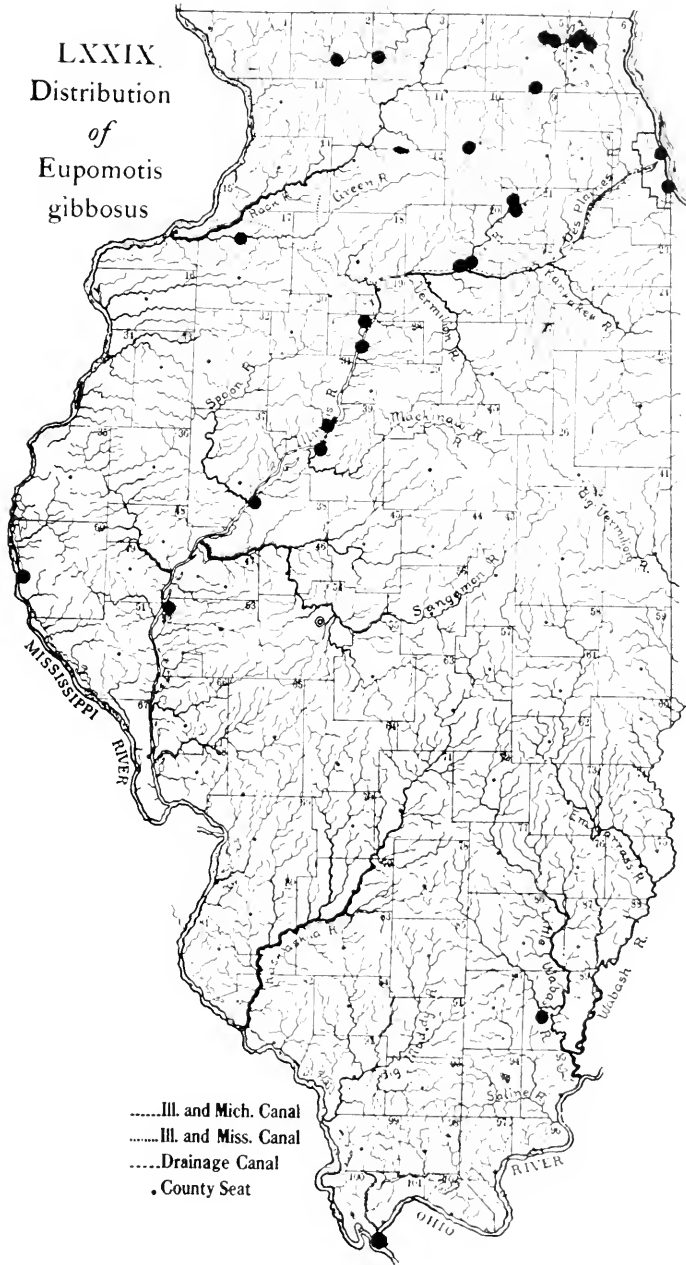


LXXVIII  
 Distribution  
 of  
*Lepomis pallidus*



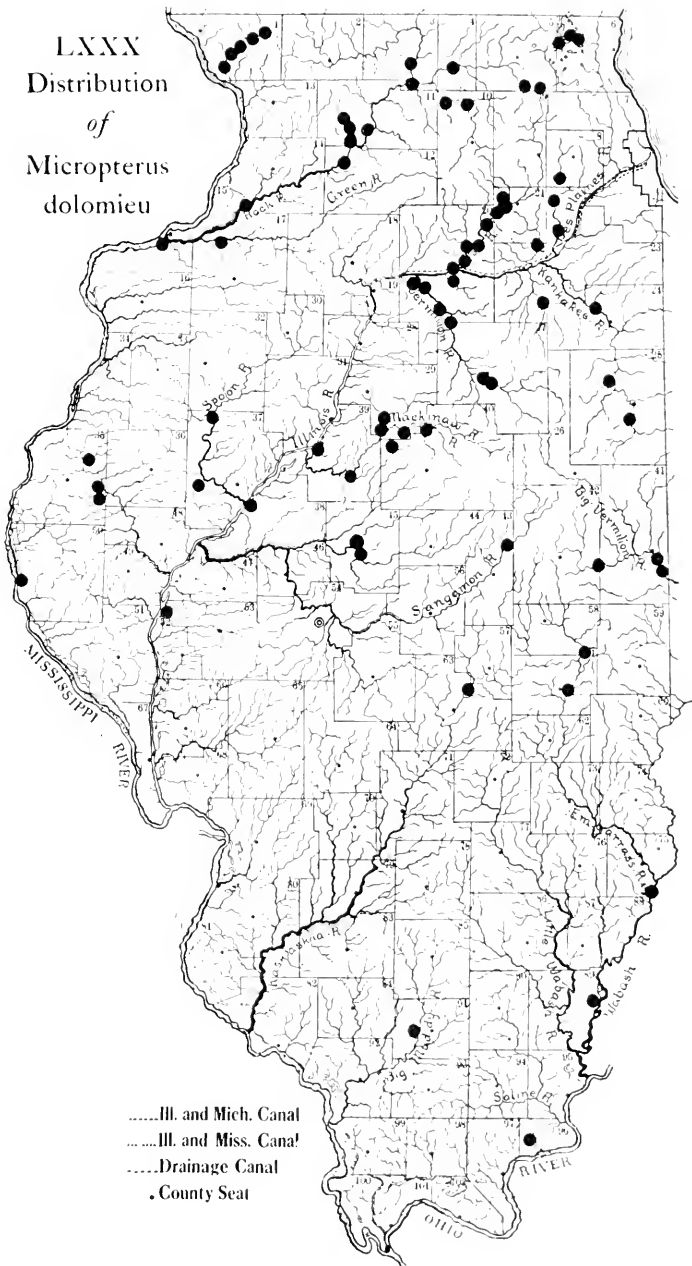


LXXIX.  
 Distribution  
 of  
*Eupomotis*  
*gibbosus*



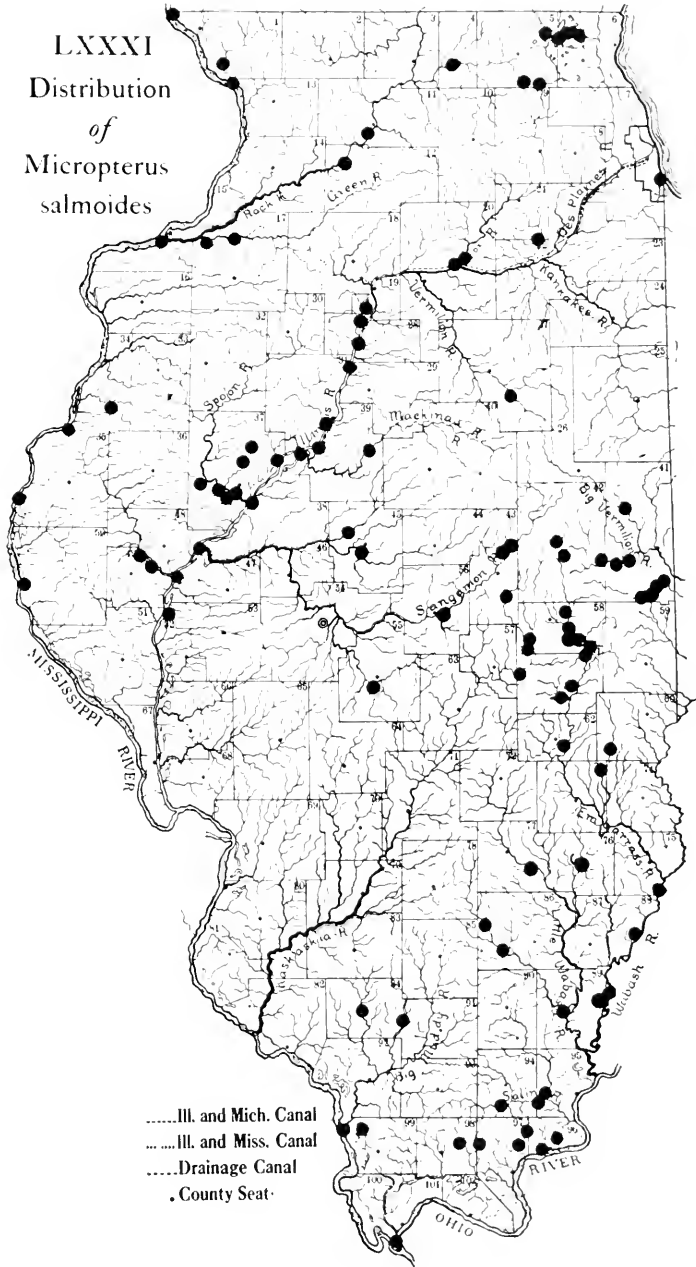


LXXX  
 Distribution  
 of  
*Micropterus  
 dolomieu*





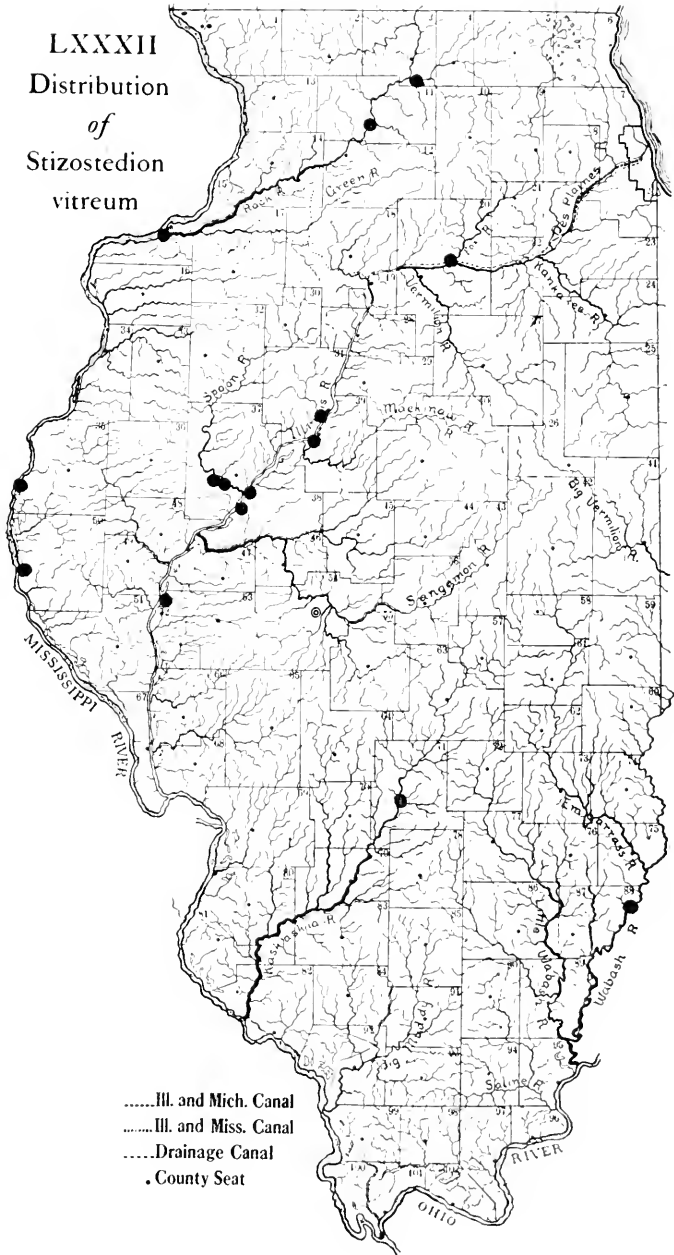
LXXXI  
 Distribution  
 of  
*Micropterus  
 salmoides*





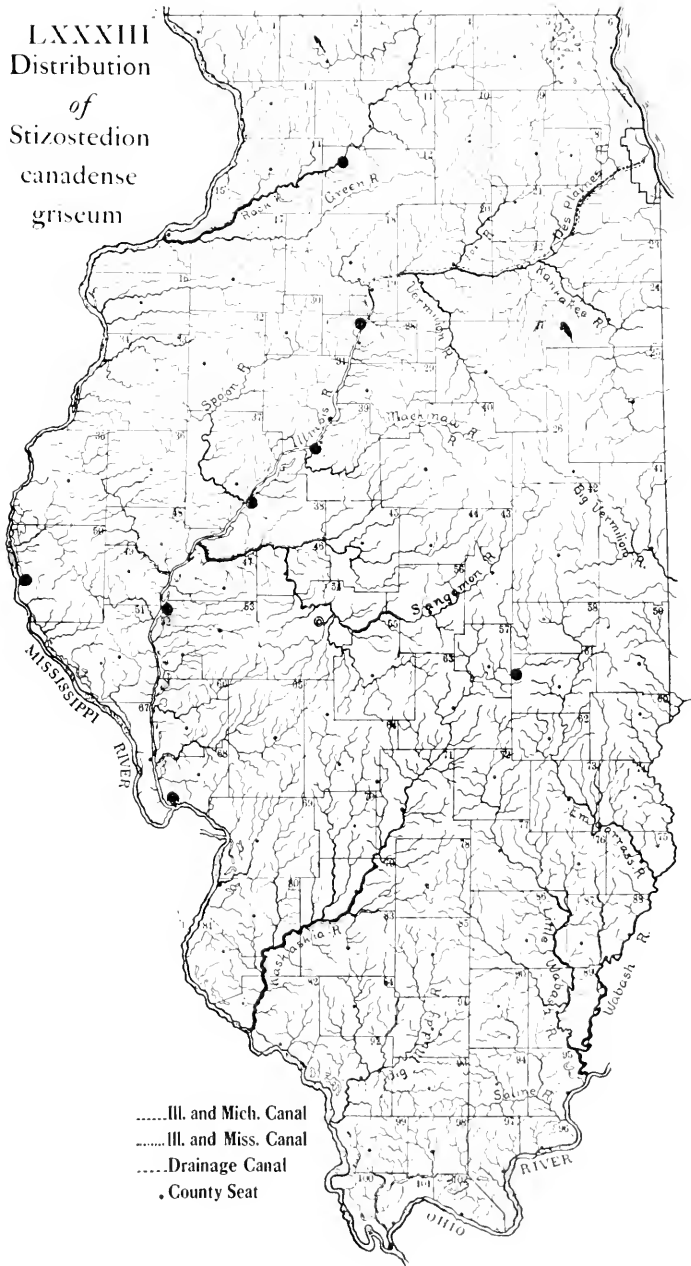


LXXXII  
 Distribution  
 of  
*Stizostedion*  
*vitreum*



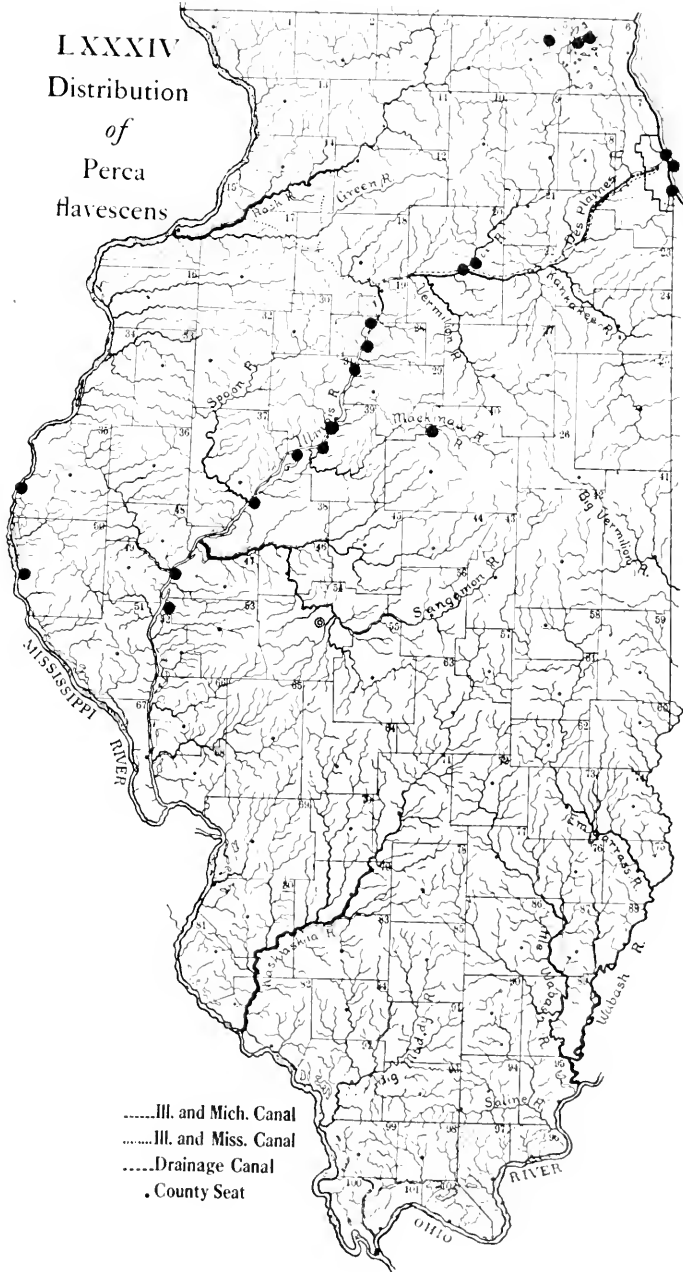


LXXXIII  
 Distribution  
 of  
*Stizostedion*  
*canadense*  
*griseum*



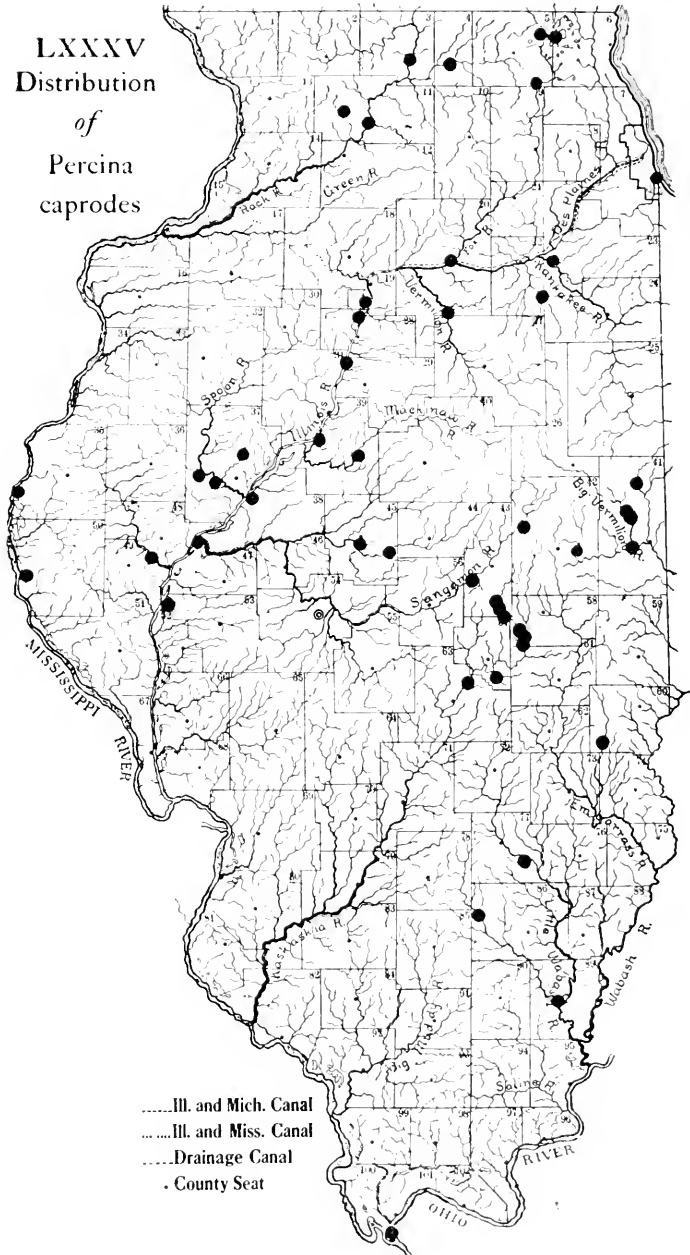


LXXXIV  
 Distribution  
 of  
*Perca  
 flavescens*





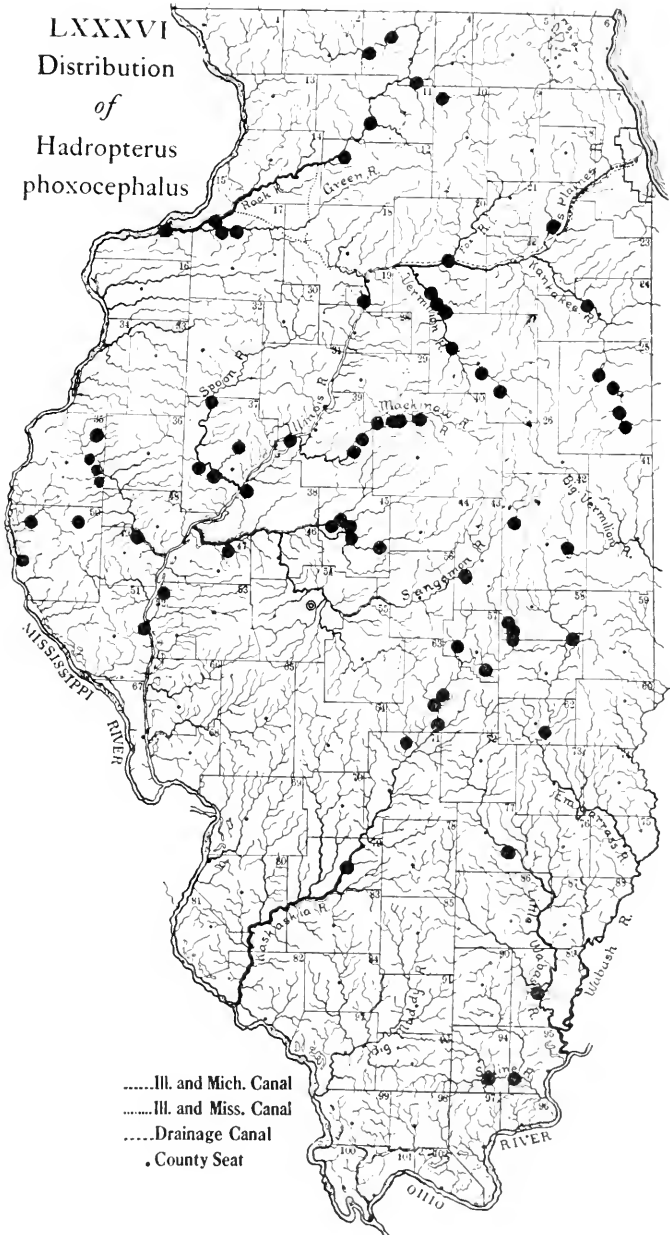
LXXXV  
 Distribution  
 of  
*Percina*  
*caprodes*





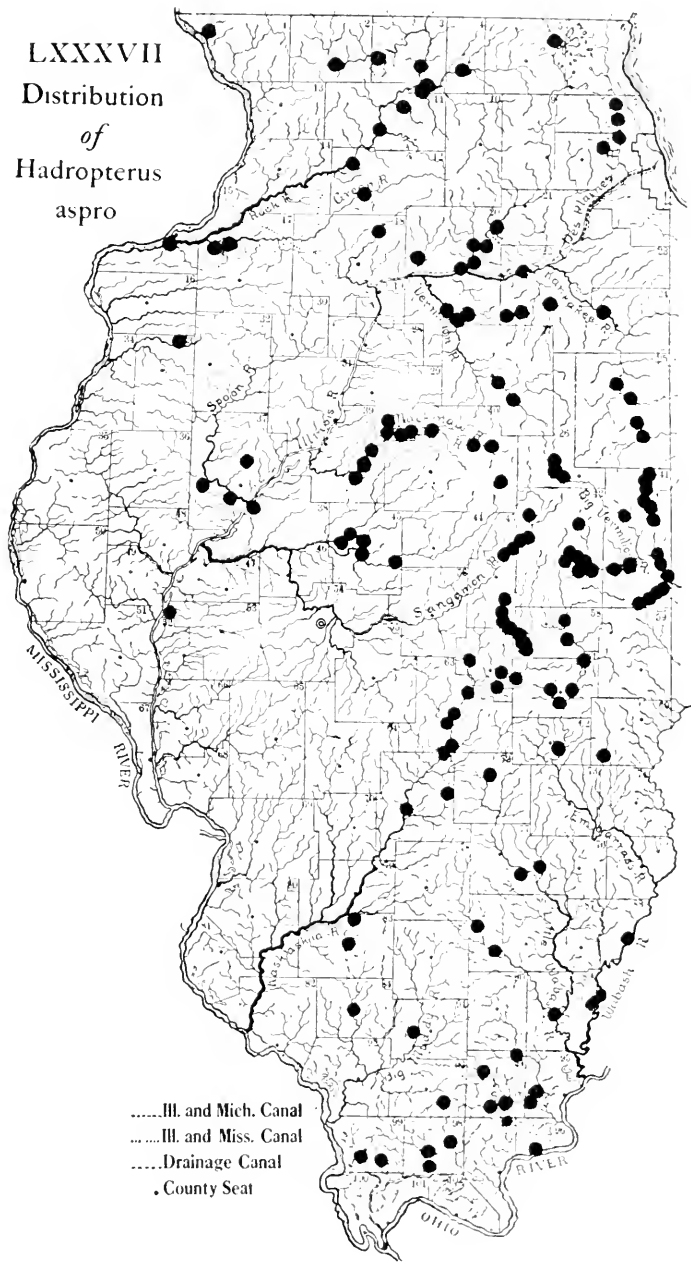


LXXXVI  
 Distribution  
 of  
*Hadropterus*  
*phoxocephalus*



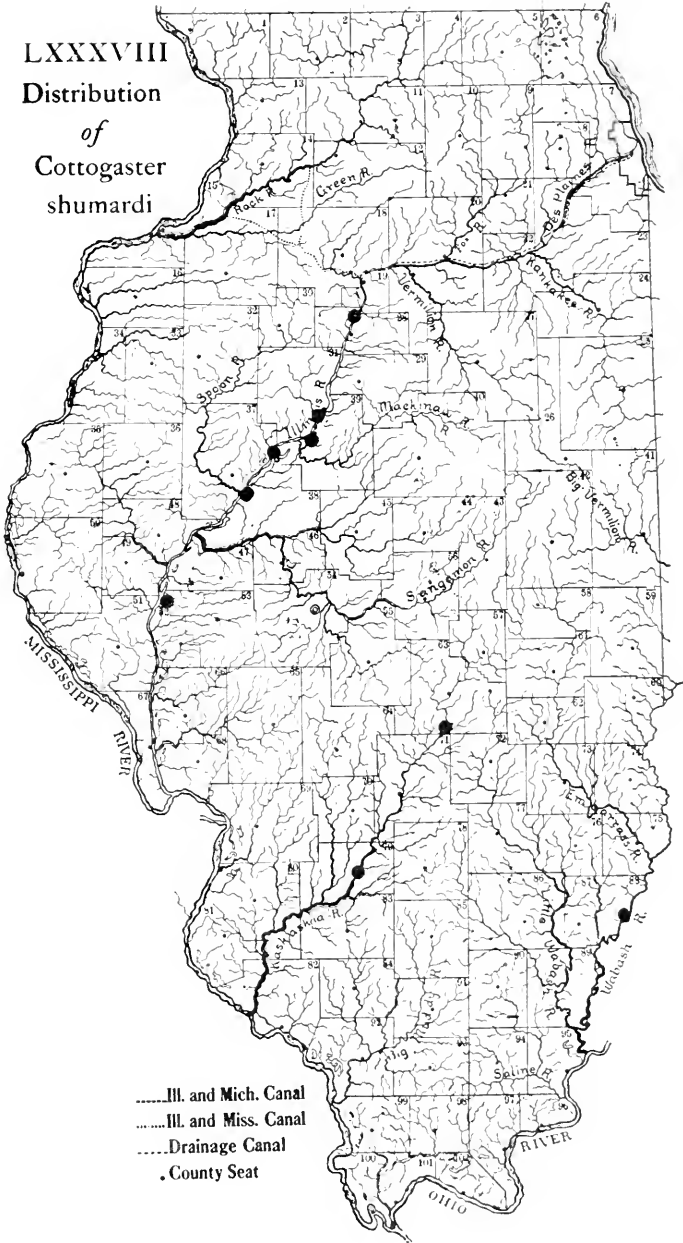


LXXXVII  
 Distribution  
 of  
*Hadropterus*  
*aspro*



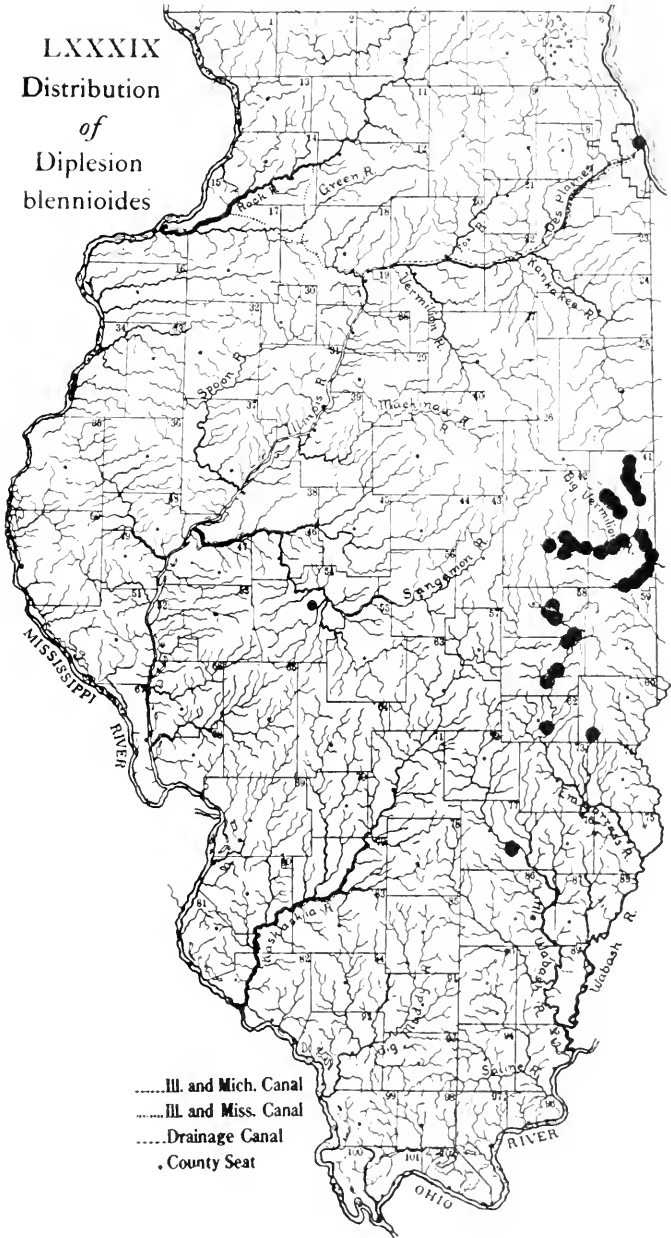


LXXXVIII  
 Distribution  
 of  
*Cottogaster*  
*shumardi*





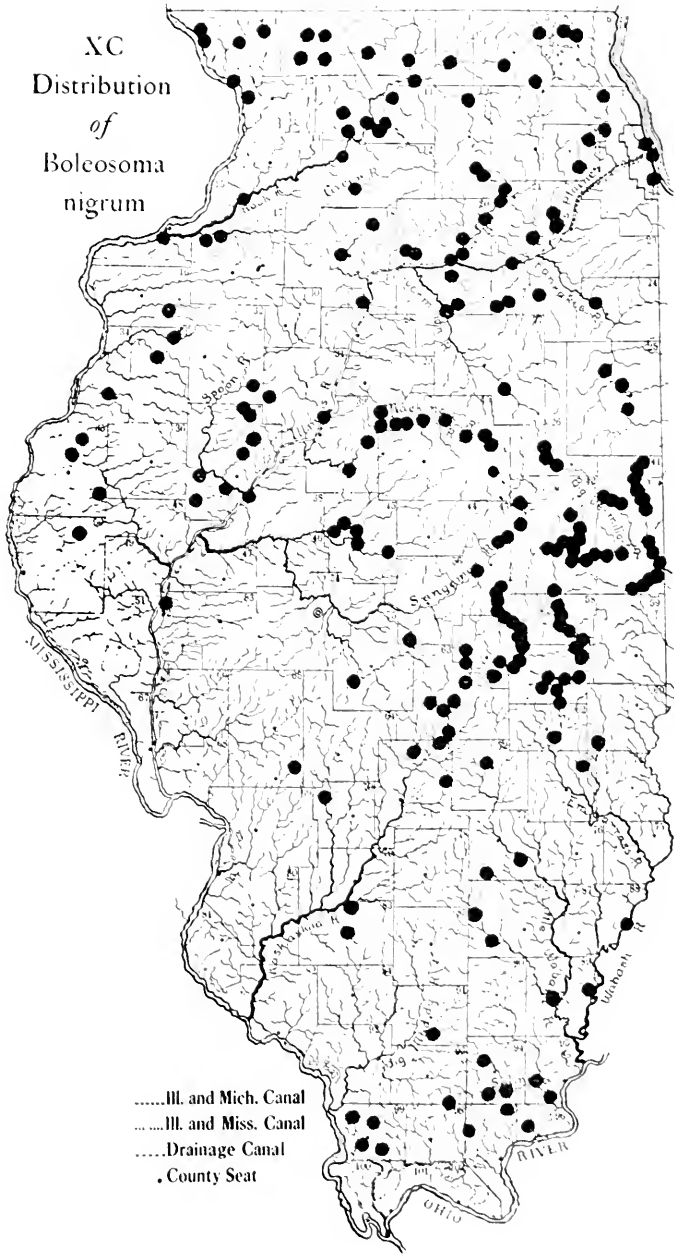
LXXXIX  
 Distribution  
 of  
*Diplesion  
 blennioides*







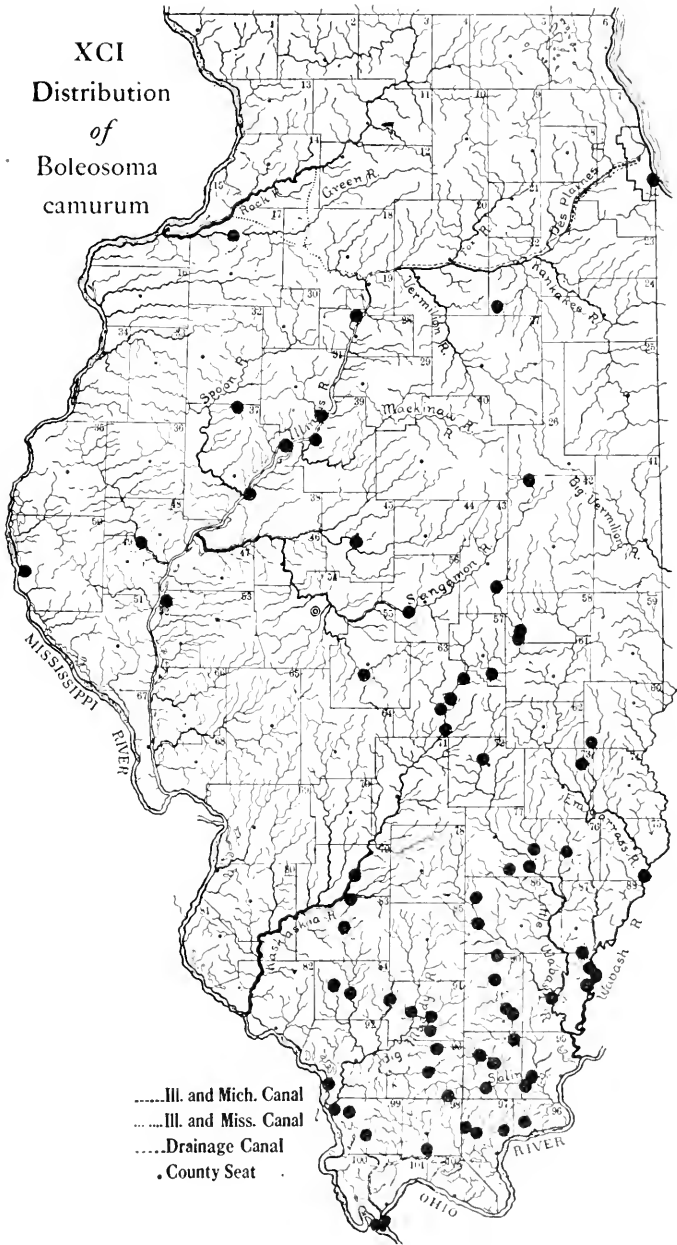
XC  
 Distribution  
 of  
*Boleosoma*  
*nigrum*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 .... Drainage Canal  
 . County Seat

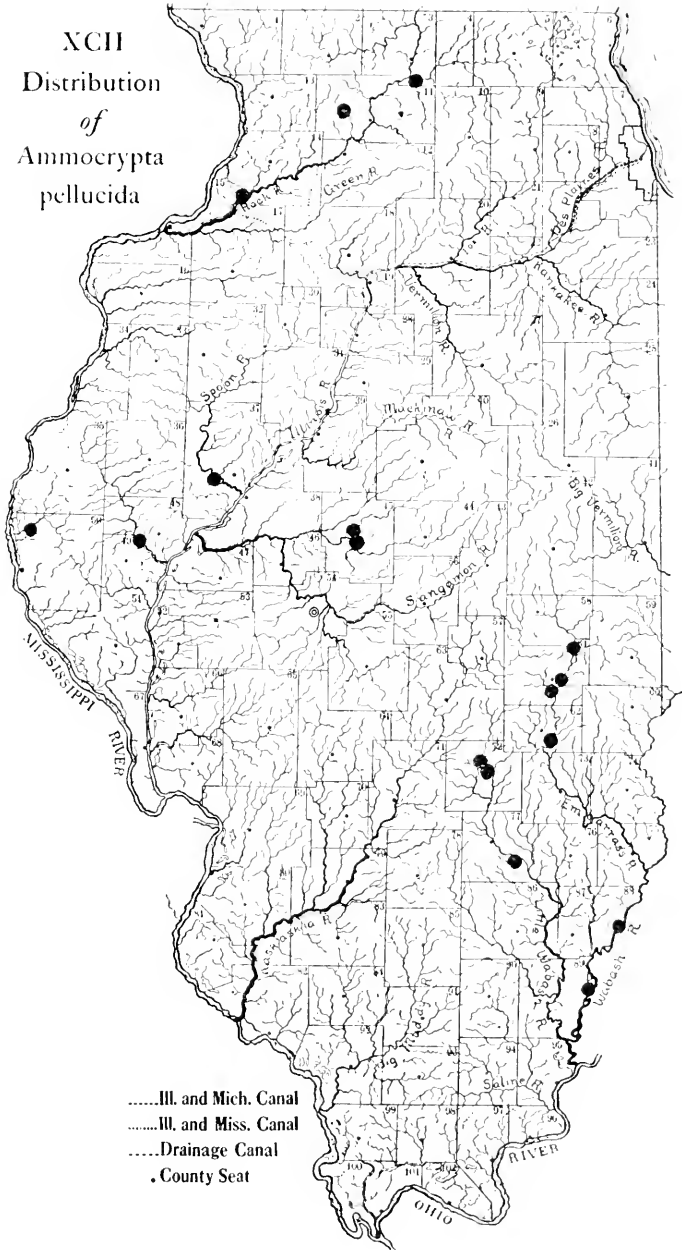


XCI  
 Distribution  
 of  
*Boleosoma*  
*camurum*



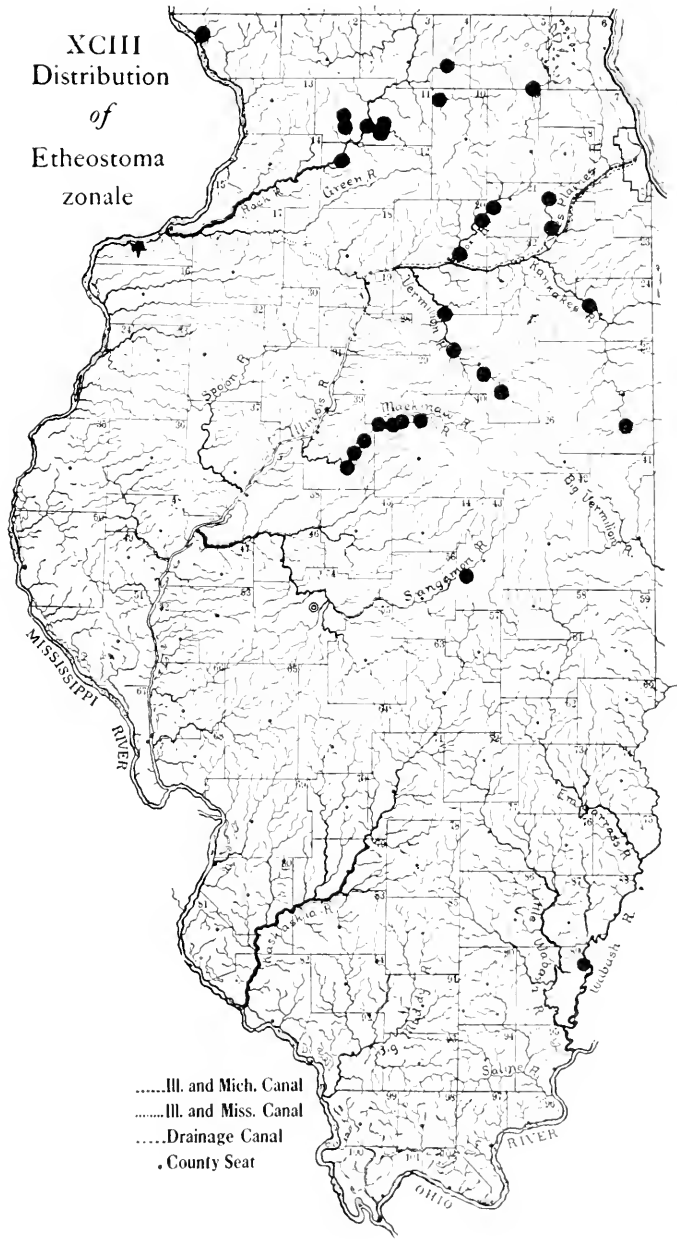


XCH  
 Distribution  
 of  
*Ammocrypta  
 pellucida*





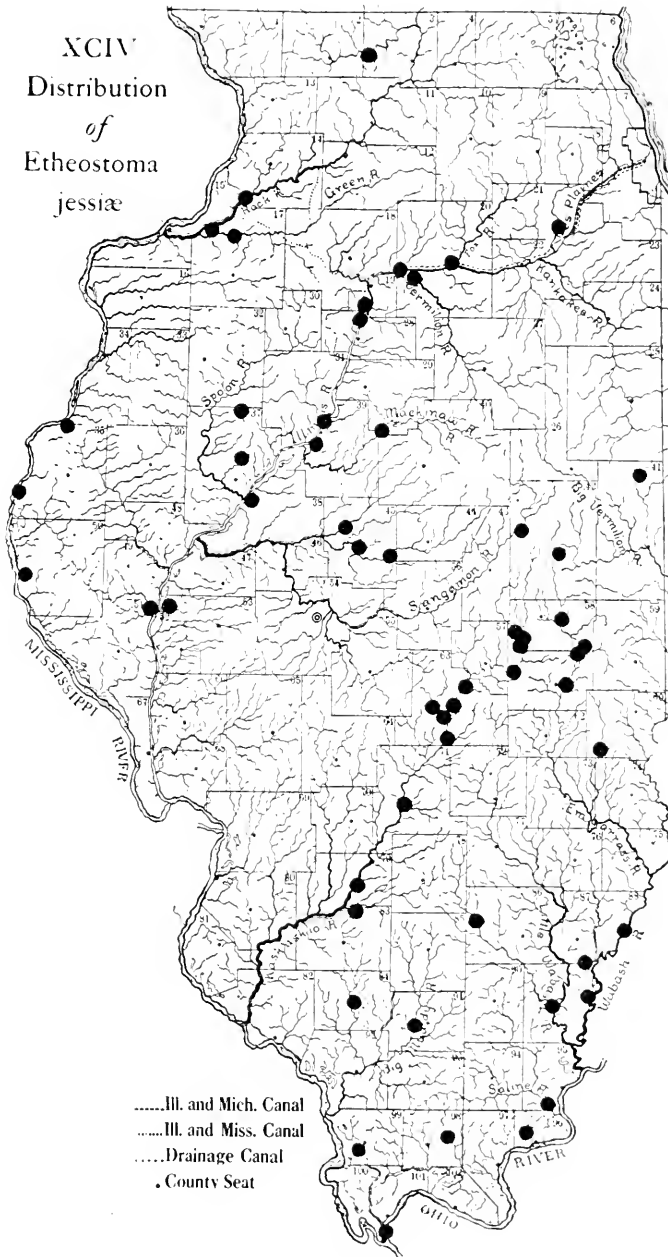
XCIII  
 Distribution  
 of  
*Etheostoma*  
 zonale





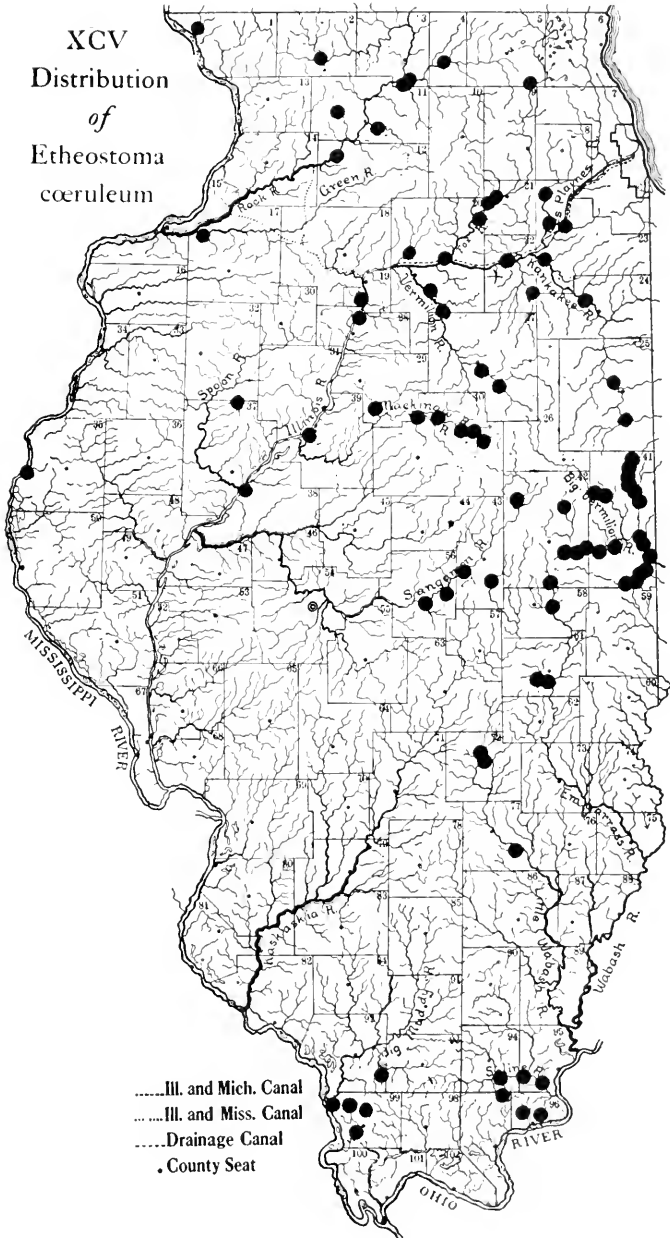


XCIV  
 Distribution  
 of  
*Etheostoma  
 jessiae*





XCV  
 Distribution  
 of  
*Etheostoma  
 coeruleum*



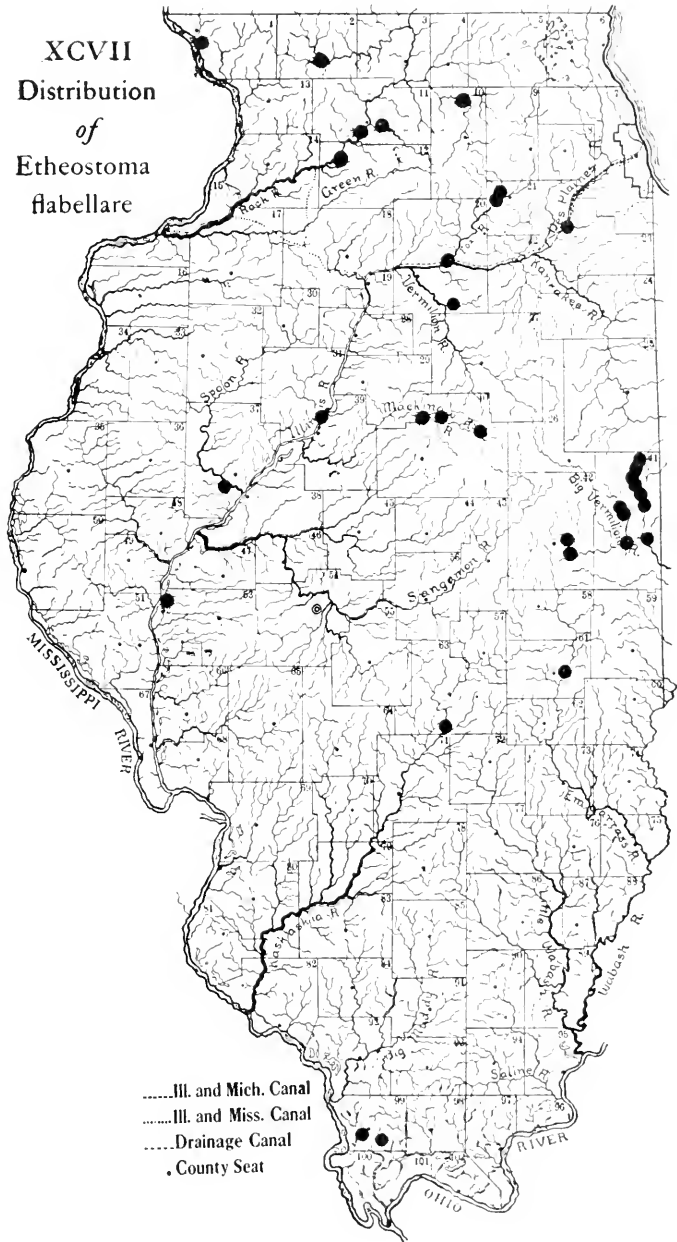


XCVI  
 Distribution  
 of  
*Etheostoma squamiceps*





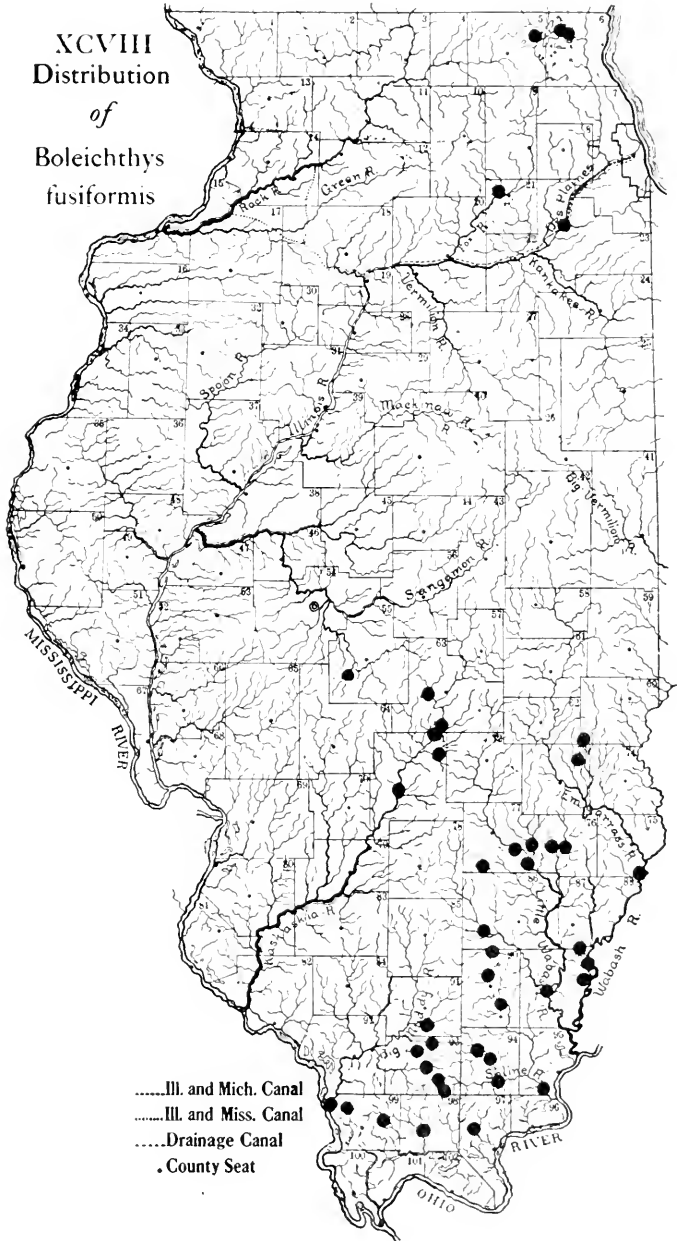
XCVII  
 Distribution  
 of  
*Etheostoma*  
*flabellare*







XCVIII  
 Distribution  
 of  
*Boleichthys*  
*fusiformis*



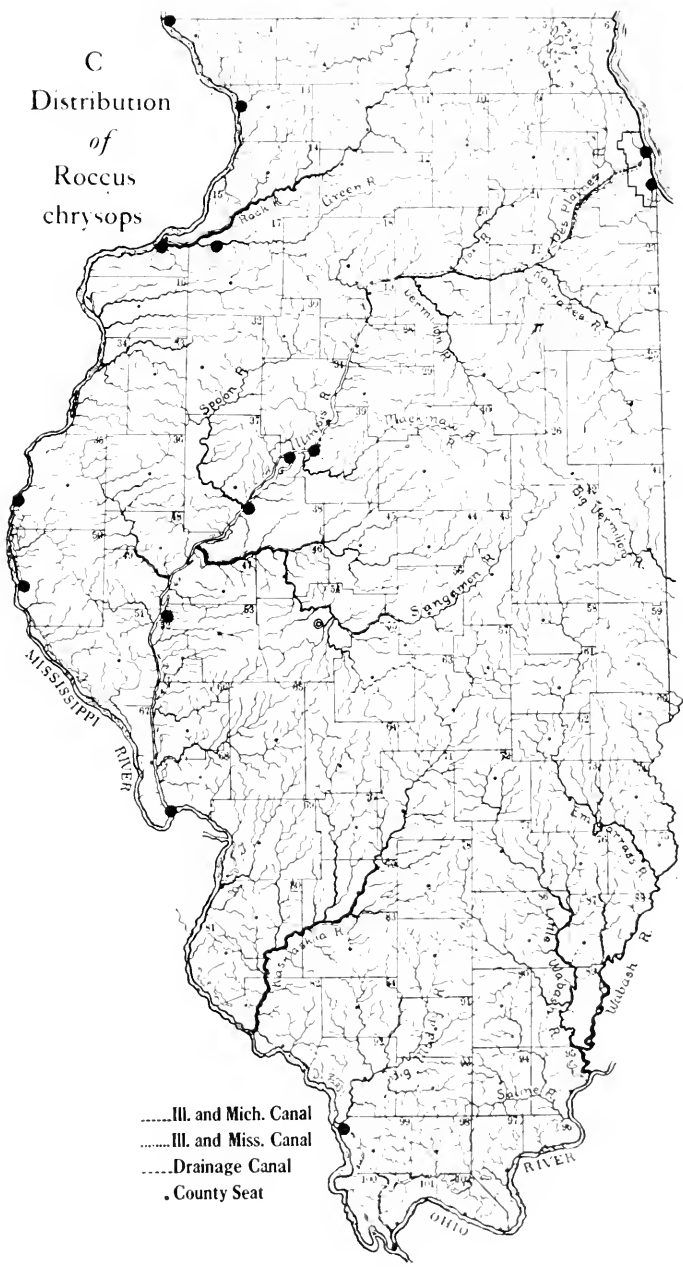


XCIX  
 Distribution  
 of  
*Microperca*  
*punctulata*





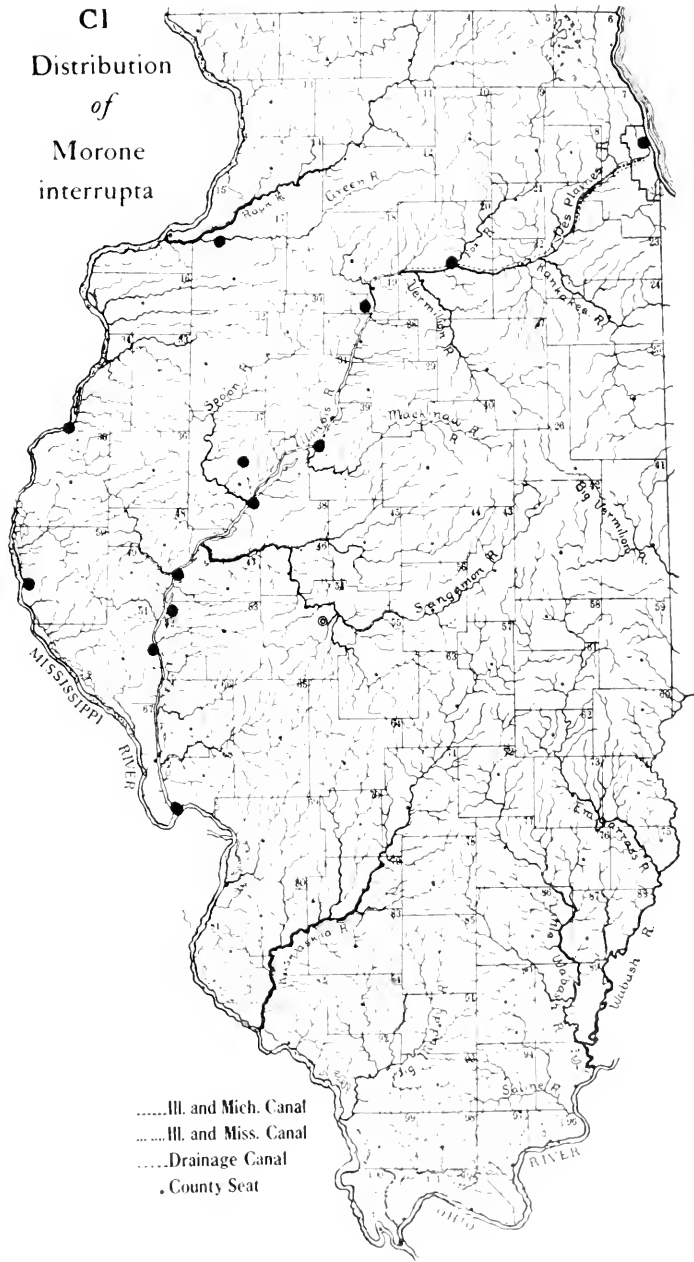
C  
 Distribution  
 of  
*Roccus*  
*chrysops*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



C1  
 Distribution  
 of  
*Morone*  
*interrupta*





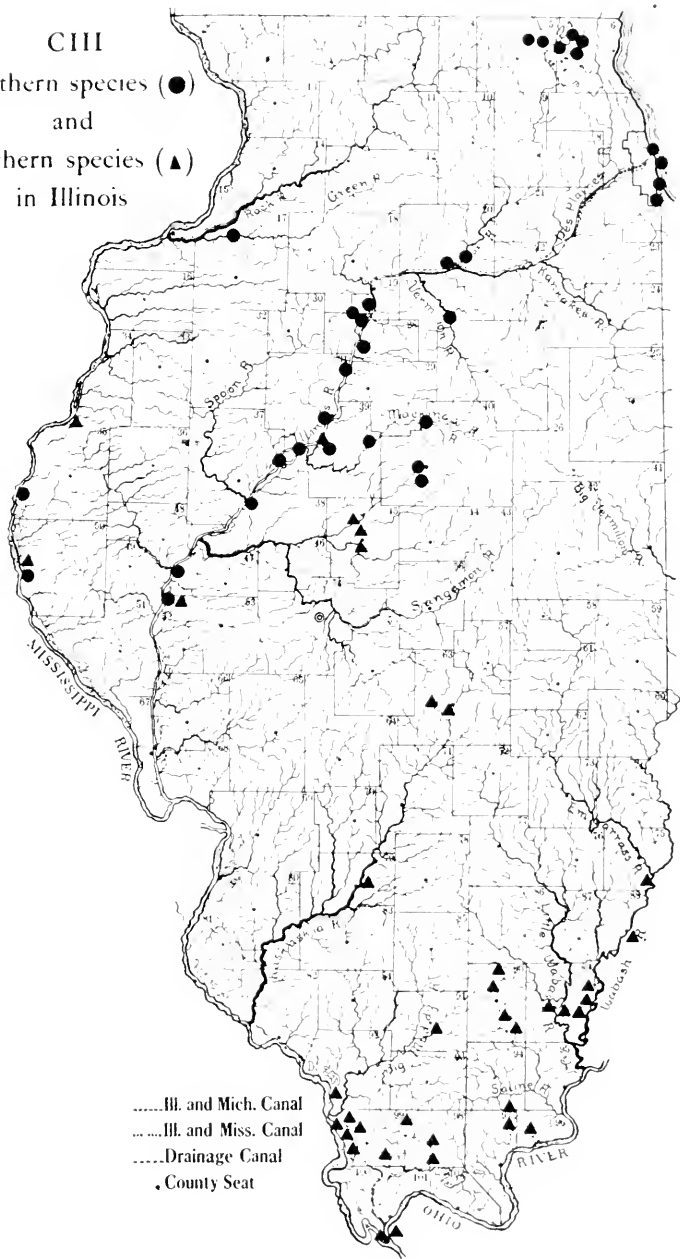


CII  
 Distribution  
 of  
*Aplodinotus  
 grunniens*

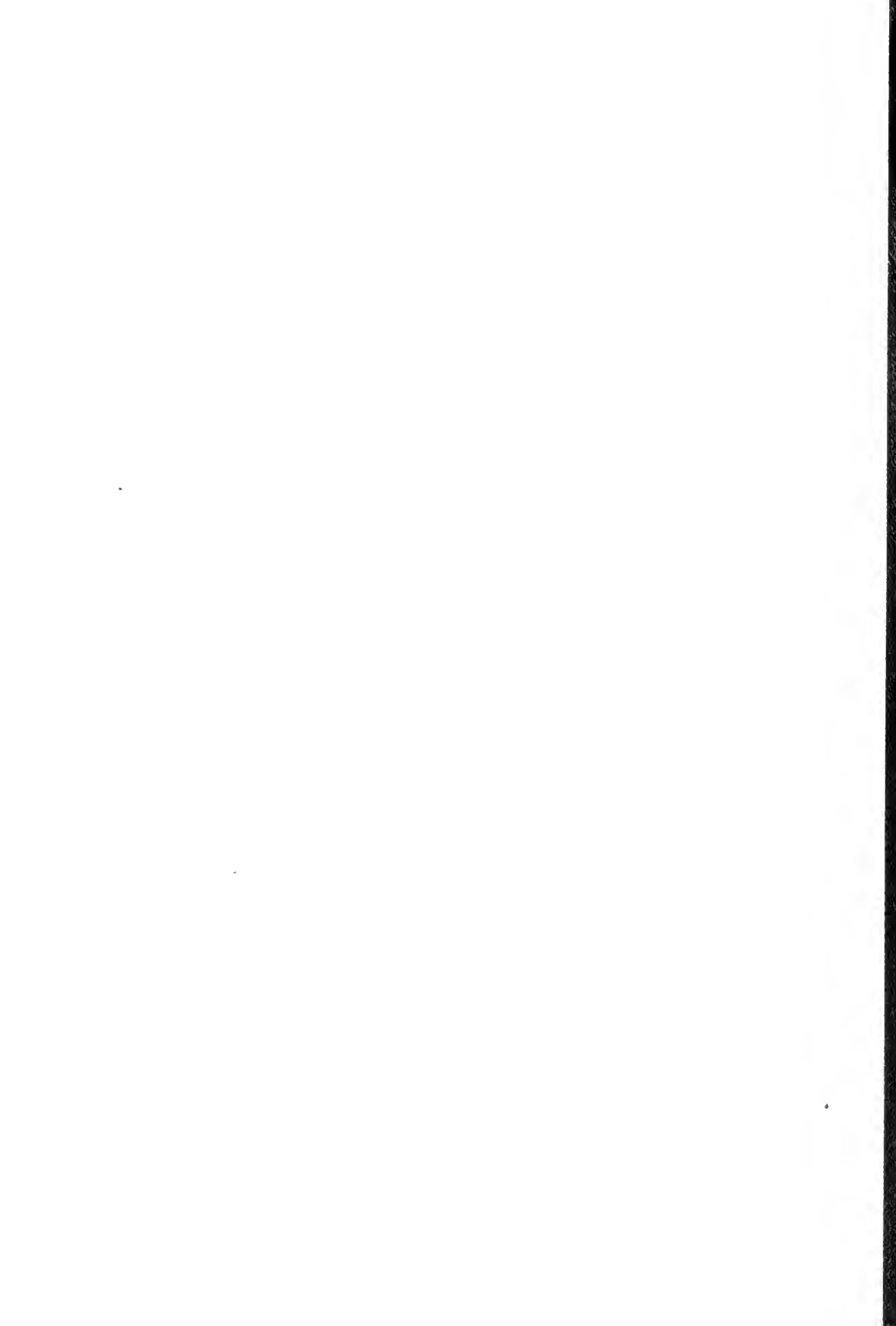




CIII  
 Northern species (●)  
 and  
 Southern species (▲)  
 in Illinois





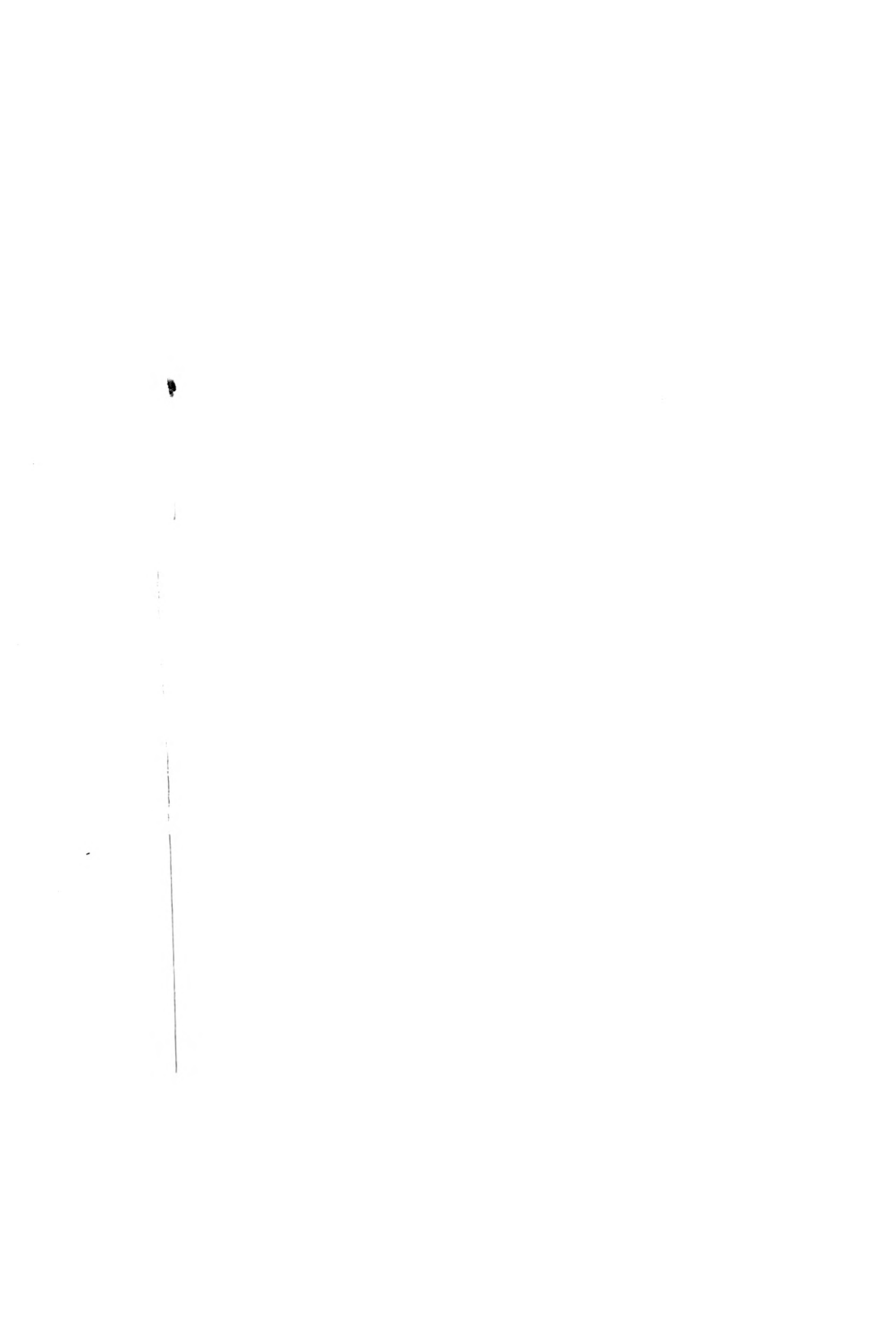


Return this book on or before the  
**Latest Date** stamped below.

~~UNIVERSITY OF ILLINOIS LIBRARY~~

University of Illinois Library

|                   |                   |  |
|-------------------|-------------------|--|
| <p>MAY 7 1958</p> | <p>MAY 7 1958</p> |  |
|-------------------|-------------------|--|



UNIVERSITY OF ILLINOIS-URBANA

597 09773F746M1919

C001

MAPS SHOWING DISTRIBUTION OF ILLINOIS FI



3 0112 025312064