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ATLAS

To Accompany a Report on the
Fishes of Illinois

S. A. FORBES

R. E. RICHARDSON

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NATURAL HISTORY SURVEY OF ILLINOIS
STATE LABORATORY OF NATURAL HISTORY
S, A. FORBES, DIRECTOR

Maps

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

BY

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^{IN}
AND
ROBERT EARL RICHARDSON, A.M.

1908
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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.

- V. *Lepisosteus osseus*
 VI. *L. platostomus*
 VII. *Amia calva*
 VIII. *Dorosoma cepedianum*
 IX. *Ictiobus cyprinella*
 X. *I. urus*
 XI. *I. bubalus*
 XII. *Carpiodes carpio*
 XIII. *C. difformis*
 XIV. *C. velifer*
 XV. *C. thompsoni*
 XVI. *Erimyzon sucetta oblongus*
 XVII. *Minytrema melanops*
 XVIII. *Catostomus commersonii*
 XIX. *C. nigriscans*
 XX. *Moxostoma anisurum*
 XXI. *M. aureolum*
 XXII. *M. breviceps*
 XXIII. *Campostoma anomalum*
 XXIV. *Chrosomus erythrogaster*
 XXV. *Hybognathus nuchalis*
 XXVI. *H. nubila*
 XXVII. *Pimephales promelas*
 XXVIII. *P. notatus*
 XXIX. *Semotilus atromaculatus*
 XXX. *Opsopæodus emiliæ*
 XXXI. *Abramis crysoleucas*
 XXXII. *Cliola vigilax*
 XXXIII. *Notropis cayuga*
 XXXIV. *N. heterodon*
 XXXV. *N. blennius*
 XXXVI. *N. gilberti*
 XXXVII. *N. illecebrosus*
 XXXVIII. *N. hudsonius*
 XXXIX. *N. lutrensis*
 XL. *N. whipplii*
 XLI. *N. cornutus*
 XLII. *N. jejunos*
 XLIII. *N. atherinoides*
 XLIV. *N. rubrifrons*
 XLV. *N. umbratilis atripes*
 XLVI. *Ericymba buccata*
 XLVII. *Phenacobius mirabilis*
 XLVIII. *Hybopsis dissimilis*
 XLIX. *H. amblops*
 L. *H. storerianus*
 LI. *H. kentuckiensis*
 LII. *Ictalurus punctatus*
 LIII. *Ameiurus natalis*
 LIV. *A. nebulosus*
 LV. *A. melas*
 LVI. *Leptops olivaris*
 LVII. *Noturus flavus*
 LVIII. *Schilbeodes gyrinus*
 LIX. *S. miurus*
 LX. *Umbra limi*
 LXI. *Esox vermiculatus*
 LXII. *E. lucius*
 LXIII. *Fundulus diaphanus menona*
 LXIV. *F. dispar*
 LXV. *F. notatus*
 LXVI. *Gambusia affinis*
 LXVII. *Percopsis guttatus*
 LXVIII. *Labidesthes sicculus*
 LXIX. *Aphredoderus sayanus*
 LXX. *Pomoxis annularis*
 LXXI. *P. sparoides*
 LXXII. *Centrarchus macropterus*
 LXXIII. *Ambloplites rupestris*
 LXXIV. *Chænobryttus gulosus*
 LXXV. *Lepomis miniatus*
 LXXVI. *L. megalotis*
 LXXVII. *L. humilis*
 LXXVIII. *L. pallidus*
 LXXIX. *Eupomotis gibbosus*
 LXXX. *Micropterus dolomieu*
 LXXXI. *M. salmoides*
 LXXXII. *Stizostedion vitreum*
 LXXXIII. *S. canadense griseum*
 LXXXIV. *Perca flavescens*
 LXXXV. *Percina caprodes*
 LXXXVI. *Hadropterus phoxocephalus*
 LXXXVII. *H. aspro*
 LXXXVIII. *Cottogaster shumardi*
 LXXXIX. *Diplesion blennioides*
 XC. *Boleosoma nigrum*
 XCI. *B. camurum*
 XCII. *Ammocrypta pellucida*
 XCIII. *Etheostoma zonale*
 XCIV. *E. jessiae*
 XCV. *E. coeruleum*
 XCVI. *E. squamiceps*
 XCVII. *E. flabellare*
 XCVIII. *Boleichthys fusiformis*
 XCIX. *Microperca punctulata*
 C. *Roccus chrysops*
 CI. *Morone interrupta*
 CII. *Aplodinotus grunniens*

I & II
Stream systems
and
Sections of
Illinois

III
Map of the
Glacial Geology
of Illinois

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
Carpiodes
carpio

XIII
Distribution
of
Carpodacus
difformis

XIV
Distribution
of
Carpodacus
velifer

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

XIV
Distribution
of
Carpodacus velifer

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

XV
Distribution
of
Carpoides
thompsoni

XVI
Distribution
of
Erimyzon
sucetta
oblongus

XVII
Distribution
of
Minytrema
melanops

XVIII
Distribution
of
Catostomus
commersonii

XIX
Distribution
of
Catostomus
nigricans

XX
Distribution
of
Moxostoma
anisurum

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
Opsopæodus
emiliæ

XXXI
Distribution
of
Abramis
crysoleucas

XXXII
Distribution
of
Cliola
vigilax

XXXIII
Distribution
of
*Notropis
cayuga*

XXXIV
Distribution
of
*Notropis
heterodon*

XXXV
Distribution
of
*Notropis
blennius*

XXXVI
Distribution
of
Notropis
gilberti

XXXVII
Distribution
of
Notropis
illecebrosus

XXXVIII
Distribution
of
Notropis
hudsonius

XXXIX
Distribution
of
Notropis
lutrensis

XI.
Distribution
of
*Notropis
whippplii*

XLI
Distribution
of
*Notropis
cornutus*

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

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

XLII
Distribution
of
*Notropis
jejūnus*

XLIII
Distribution
of
Notropis
atherinoides

XLIV
Distribution
of
Notropis
rubrifrons

XLV
Distribution
of
Notropis
umbratilis
atripes

XLVI
Distribution
of
Ericymba
buccata

XLVII
Distribution
of
Phenacobius
mirabilis

XLVIII
Distribution
of
Hybopsis
dissimilis

XLIX
Distribution
of
Hybopsis
amblops

L
Distribution
of
Hybopsis
storerianus

LI
Distribution
of
Hybopsis
kentuckiensis

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

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

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*

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

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

LXVIII
Distribution
of
Labidesthes
sicculus

LXIX
Distribution
of
Aphredoderus
sayanus

LXX
Distribution
of
Pomoxis
annularis

LXXI
Distribution
of
*Pomoxis
sparoides*

LXXII
Distribution
of
Centrarchus
macropterus

LXXIII
Distribution
of
Ambloplites
rupestris

LXXIV
Distribution
of
Chænobryttus
gulosus

LXXV
Distribution
of
*Lepomis
miniatus*

LXXVI
Distribution
of
*Lepomis
megalotis*

LXXVII
Distribution
of
Lepomis
humilis

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

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

CI
Distribution
of
Morone
interrupta

CII
Distribution
of
Aplodinotus
grunniens

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

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Maps showing distribution
of Illinois fishes.

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