

Appendix 2

Known past and present fish distributions in the Thunder Bay River system. Distribution of fishes were compiled from Bailey et al. (2003) and from records located at the Michigan Department of Natural Resources Gaylord Operations Service Center, the Michigan Department of Natural Resources, Hunt Creek Fisheries Research Station, and from the Michigan Department of Natural Resources Fish Collection System. For species that are listed under Michigan's Endangered Species Act (Part 365, Endangered Species Protection, of the Natural Resource and Environmental Protection Act, Act 451 of the Public Acts of 1994), their status follows their scientific name. Categories are declining, rare, special concern, threatened, extinct, and locally extinct.

Habitat descriptions were compiled from the Fishes of Ohio (Trautman 1981), Freshwater Fishes of Canada (Scott and Crossman 1973), Fishes of Wisconsin (Becker 1983, Fishes of Missouri (Pflieger 1975), and Fishes of the Great Lakes Region (Hubbs and Lagler 1947).

APPENDIX 2 INDEX

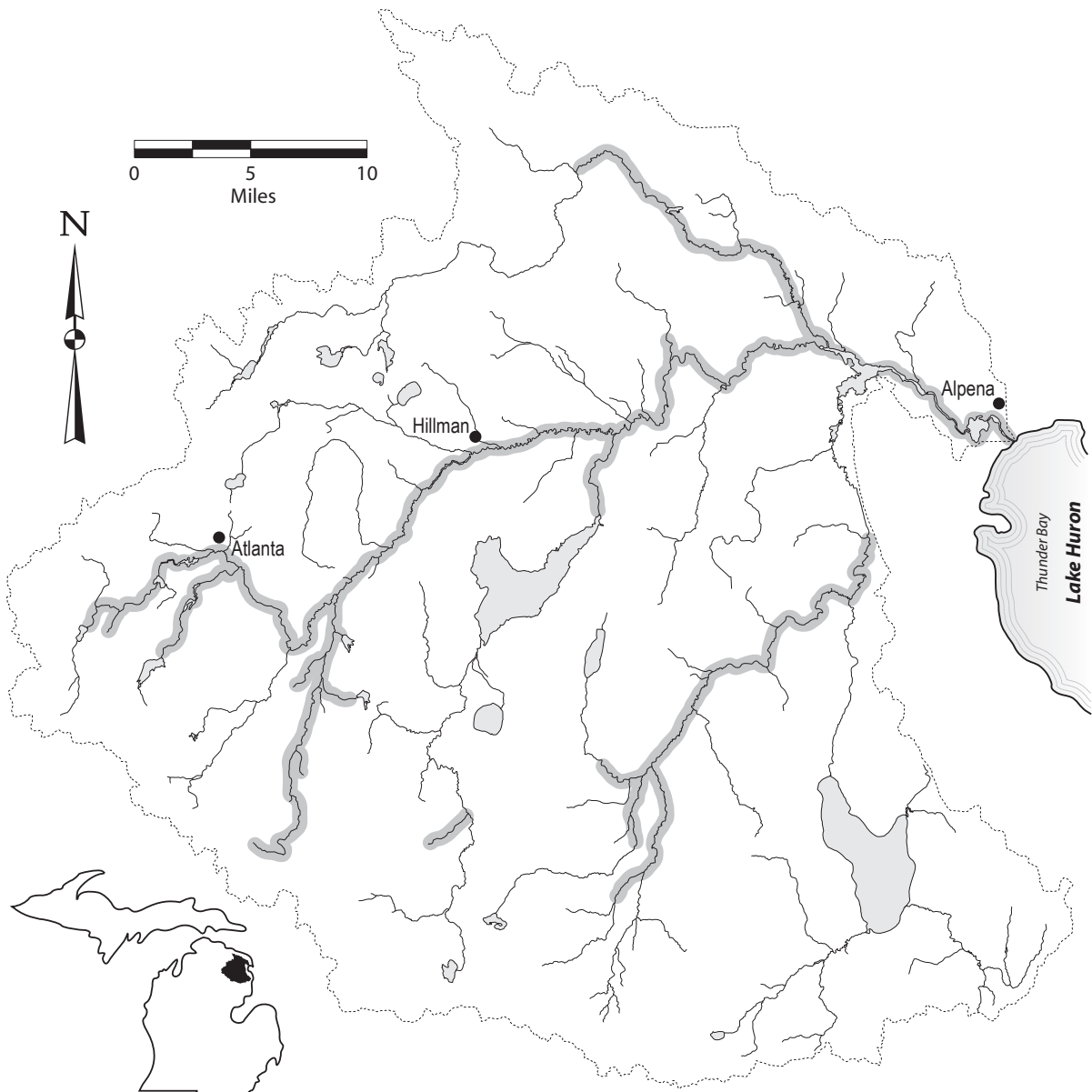
Alewife	56	Logperch	127
American brook lamprey	51	Longnose dace	78
Atlantic salmon	103	Longnose gar	54
Blackchin shiner	68	Longnose sucker	81
Blacknose shiner	69	Mimic shiner	73
Blackside darter	128	Mottled sculpin	111
Black bullhead	85	Muskellunge	92
Black crappie	120	Northern brook lamprey	49
Bluegill	116	Northern longear sunfish	117
Bluntnose minnow	76	Northern pearl dace	62
Bowfin	55	Northern pike	91
Brassy minnow	60	Northern redbelly dace	74
Brook stickleback	110	Pink salmon	98
Brook trout	105	Pugnose shiner	66
Brown bullhead	87	Pumpkinseed sunfish	115
Brown trout	104	Rainbow darter	121
Burbot	108	Rainbow smelt	95
Central mudminnow	94	Rainbow trout	100
Channel catfish	88	River chub	64
Chinook salmon	101	Rock bass	113
Cisco {lake herring}	96	Rosyface shiner	71
Coho salmon	99	Round goby	131
Common carp	59	Round whitefish	102
Common shiner	61	Ruffe	125
Creek chub	80	Sand shiner	72
Emerald shiner	67	Sea lamprey	52
Fathead minnow	77	Silver lamprey	50
Finescale dace	75	Silver redhorse	83
Freshwater drum	130	Slimy sculpin	112
Gizzard shad	57	Smallmouth bass	118
Golden shiner	65	Splake.....	107
Grass pickerel	90	Spotfin shiner	58
Greater redhorse	84	Spottail shiner	70
Green sunfish	114	Tadpole madtom	89
Hornyhead chub	63	Tiger muskellunge	93
Iowa darter	122	Walleye	129
Johnny darter	124	Western banded killifish	109
Lake sturgeon.....	53	Western blacknose dace	79
Lake trout	106	White sucker	82
Lake whitefish	97	Yellow bullhead	86
Largemouth bass	119	Yellow perch	126
Least darter	123		

Northern brook lamprey (*Ichthyomyzon fossor*)

Habitat:

- feeding - young: low gradient, substrate with bars and beds of mixed sand and organic debris
- moderately warm water

- spawning - clear, high gradient streams (<15 feet wide)
- riffles with sand or gravel substrate



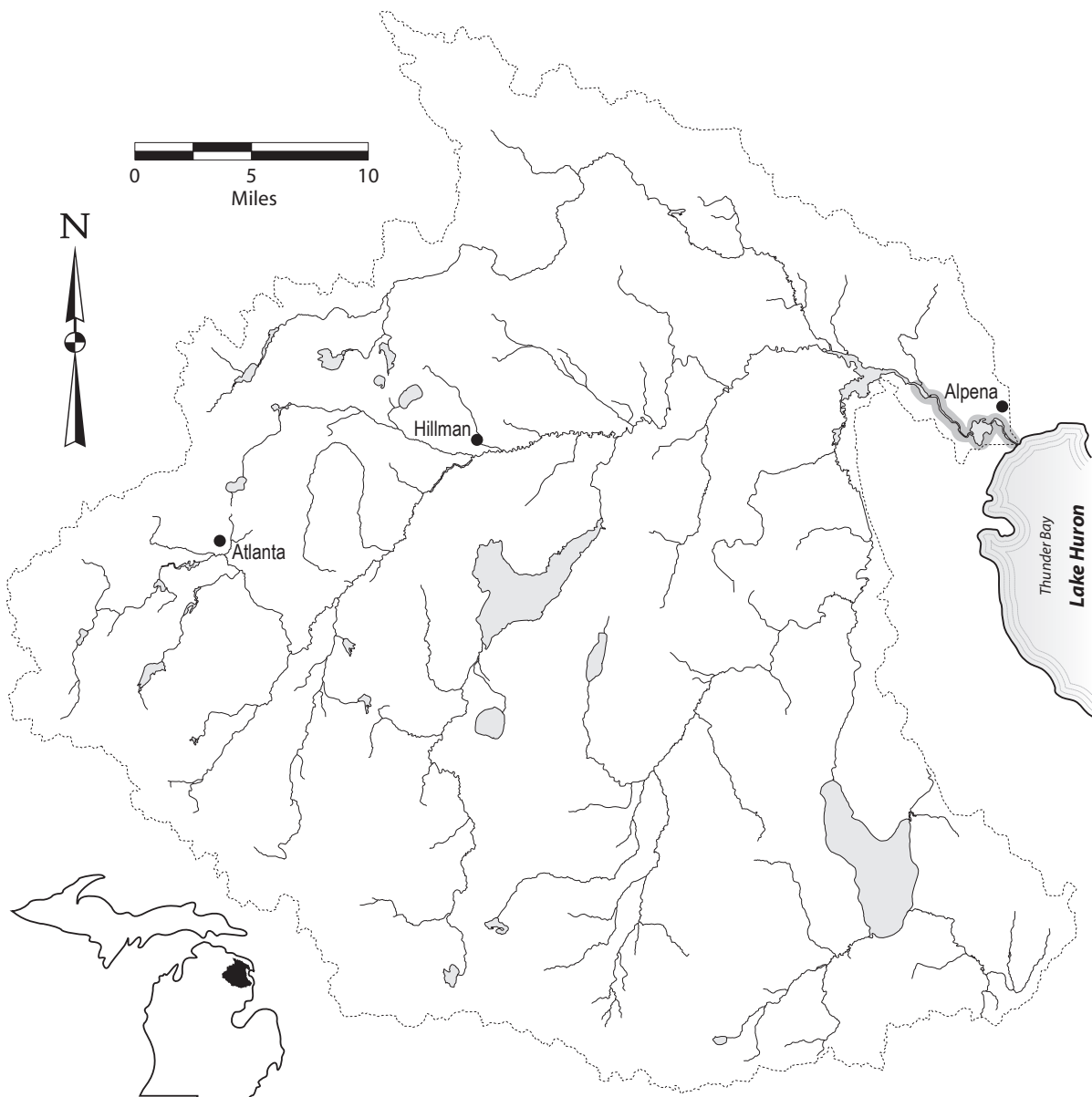
Silver lamprey (*Ichthyomyzon unicuspis*)

Habitat:

- feeding - young: sand, muck, or organic debris substrate
- adults: clear river water with prey species

- spawning - gravel and sand substrate
- moderate gradient
- moderate size stream
- cannot tolerate silt
- no dams

- winter refuge - ammocetes burrow for 4 to 7 years in mud and silt at river margins



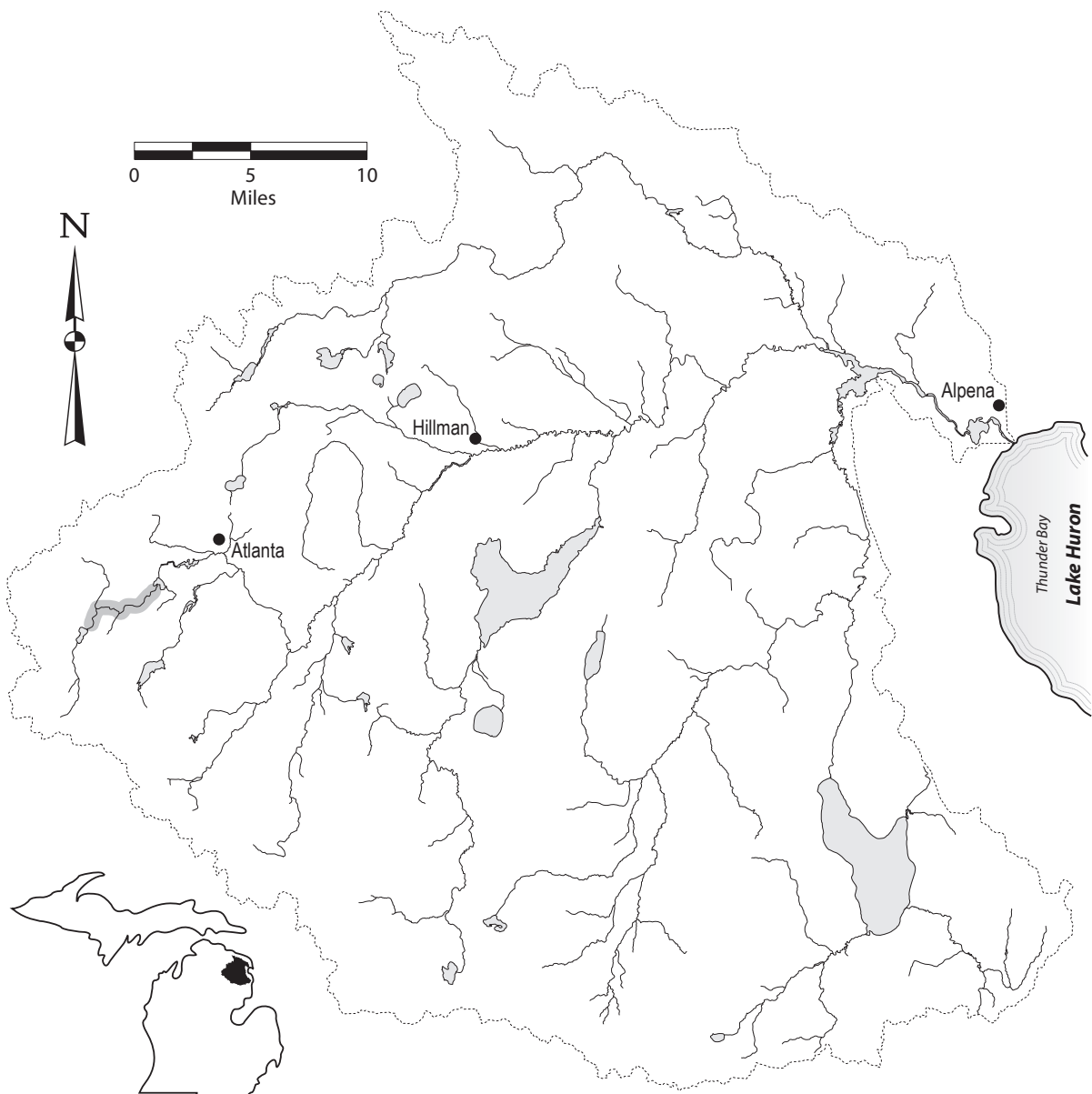
American brook lamprey (*Lampetra appendix*)

Habitat:

- feeding - young: low gradient, substrate with bars and beds of mixed sand and organic debris
- clear cool stream water, sensitive to turbidity

- spawning - clear, high gradient streams (>15 feet wide)
- cold water
- gravel substrate

- winter refuge - sand or silt substrate for ammocetes

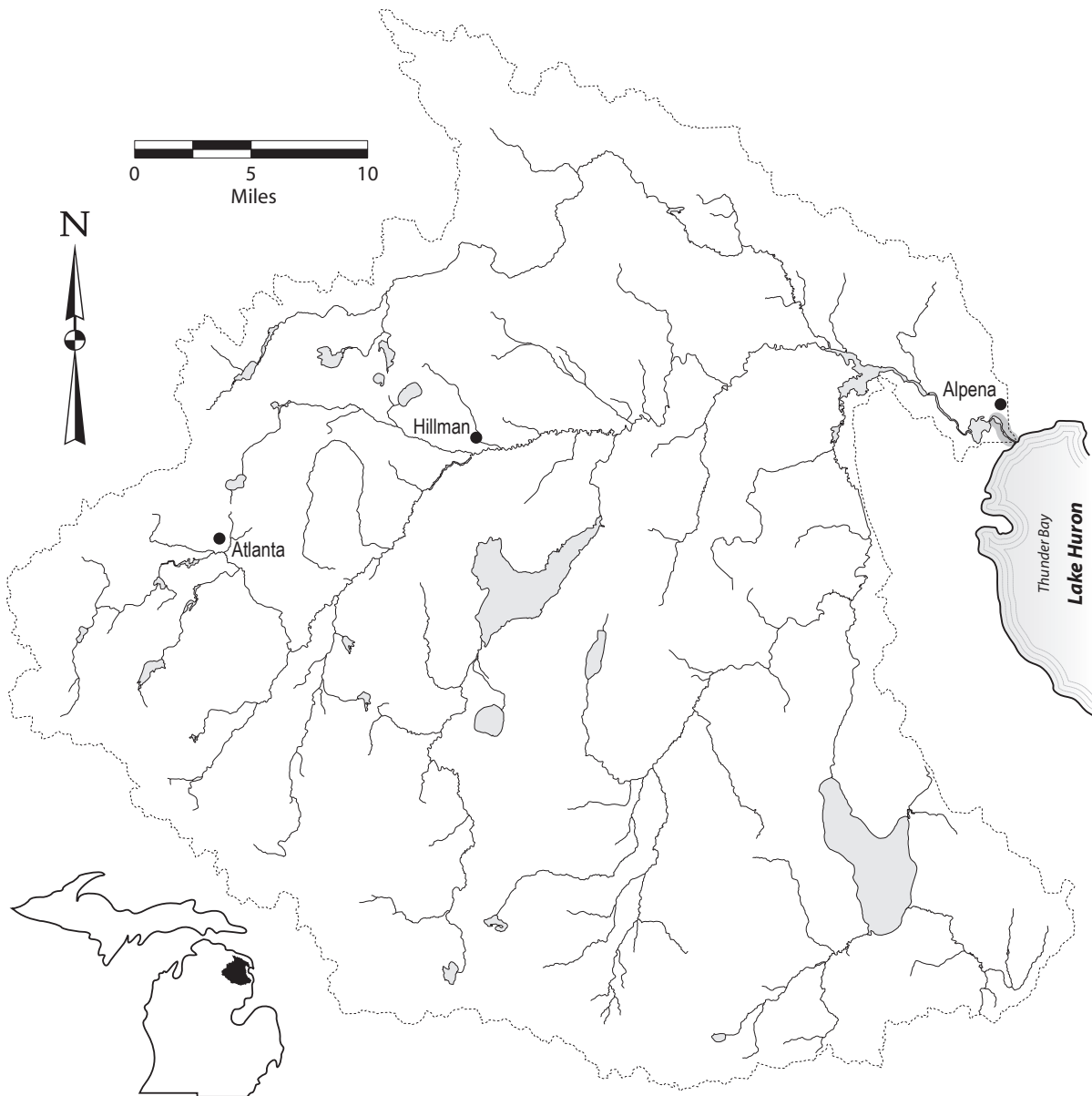


Sea lamprey (*Petromyzon marinus*)

Habitat:

- feeding - young: substrate with beds of sand mixed with organic debris
- cannot tolerate silt
- adults: clear cool water of Lake Huron

- spawning - no dams
- riffles with sand and gravel substrates

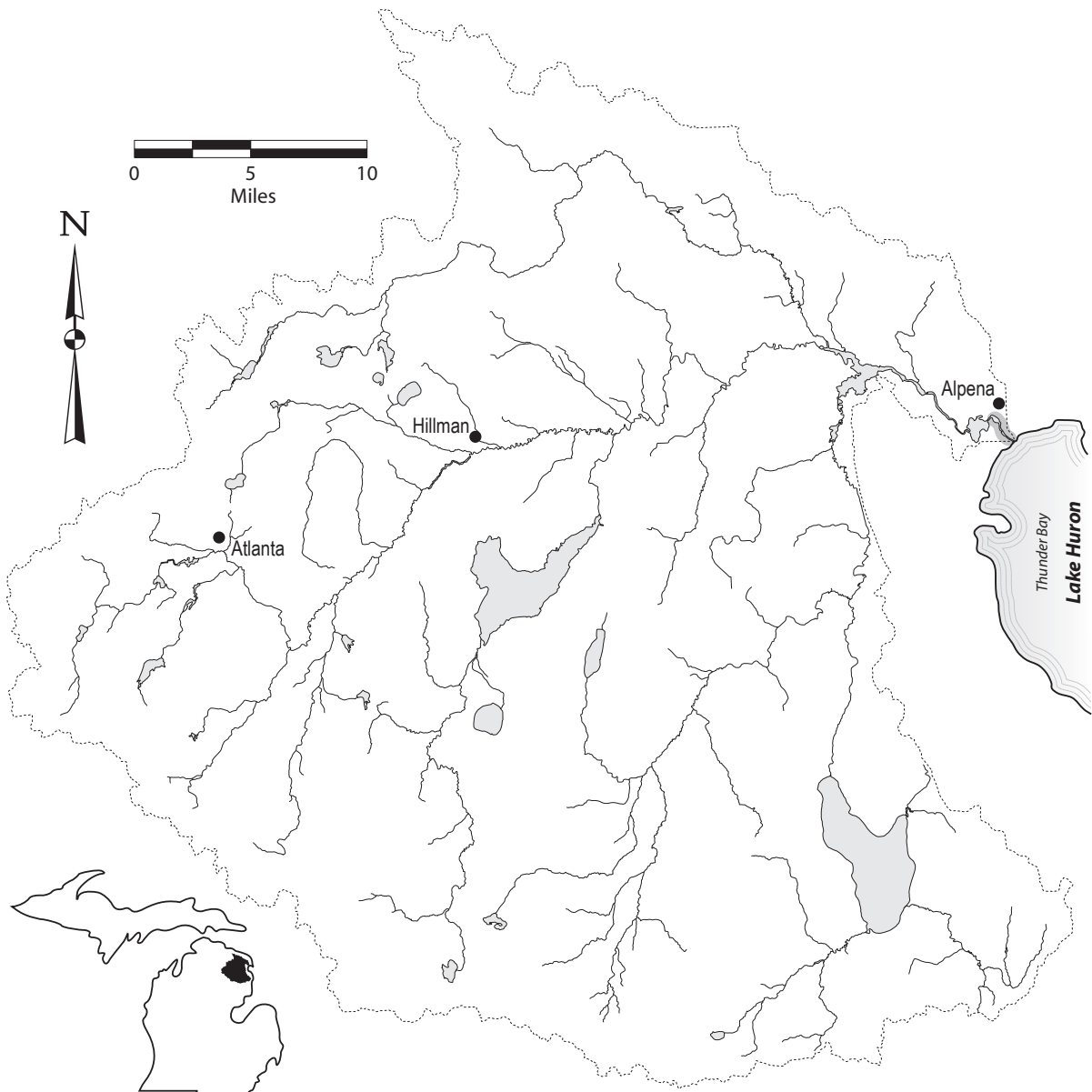


Lake sturgeon (*Acipenser fulvescens*) – threatened

Habitat:

- feeding
 - shoal areas of large rivers, lakes, and impoundments
 - gravel, sand, rock substrates

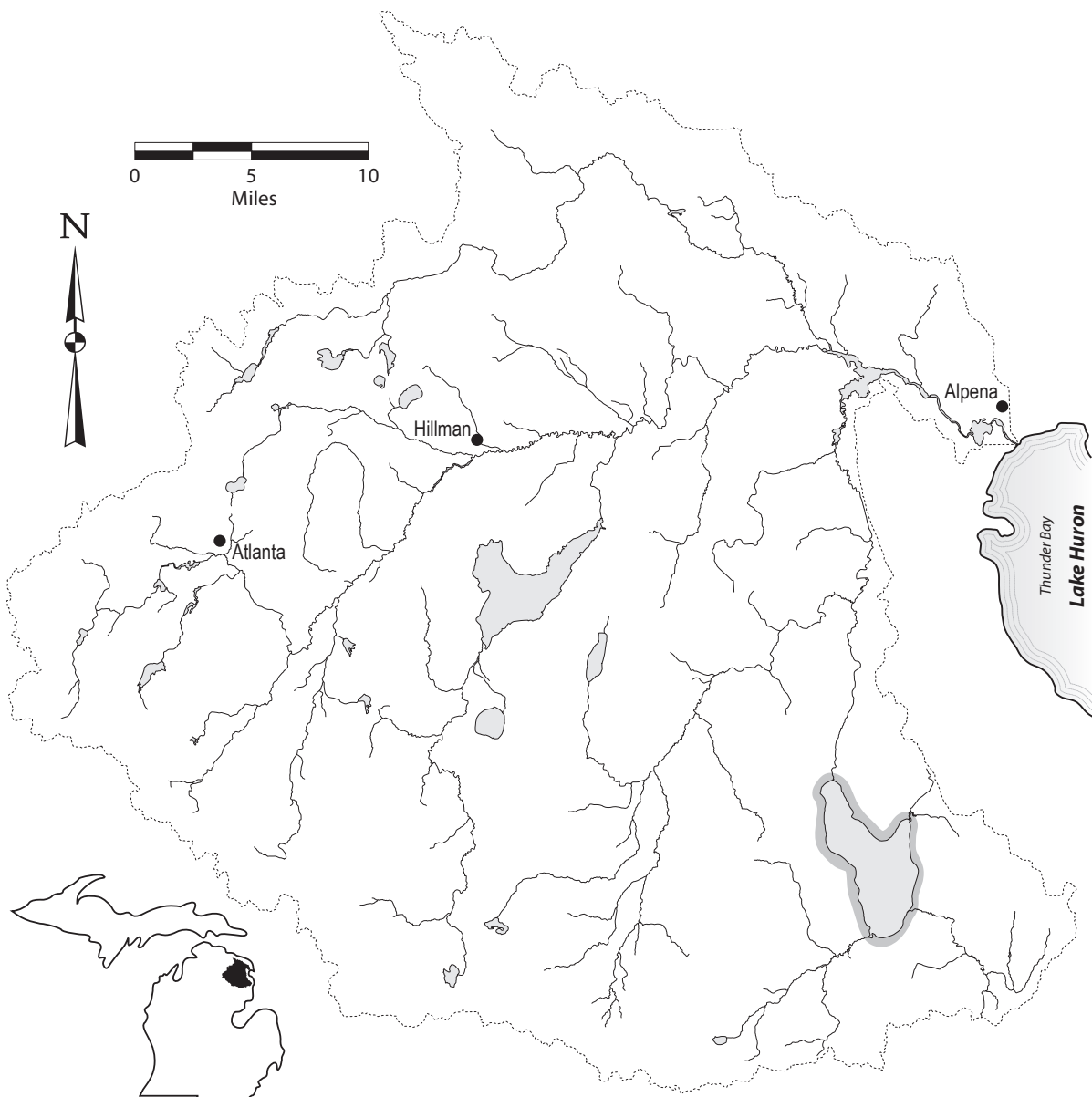
- spawning
 - in or before rapids, at the base of dams in rivers
 - in 2-15 feet of water
 - swift current
 - rocky ledges or around rocky islands in Great Lakes



Longnose gar (*Lepisosteus osseus*)

Habitat:

- feeding - adults: in deeper water
 - young: in shallows
 - clear water, low-gradient streams, lakes, and impoundments
 - will feed in moderate current
 - aquatic vegetation preferred, but not necessary
 - open water fish
- spawning - warm shallow water of lakes or streams over vegetation



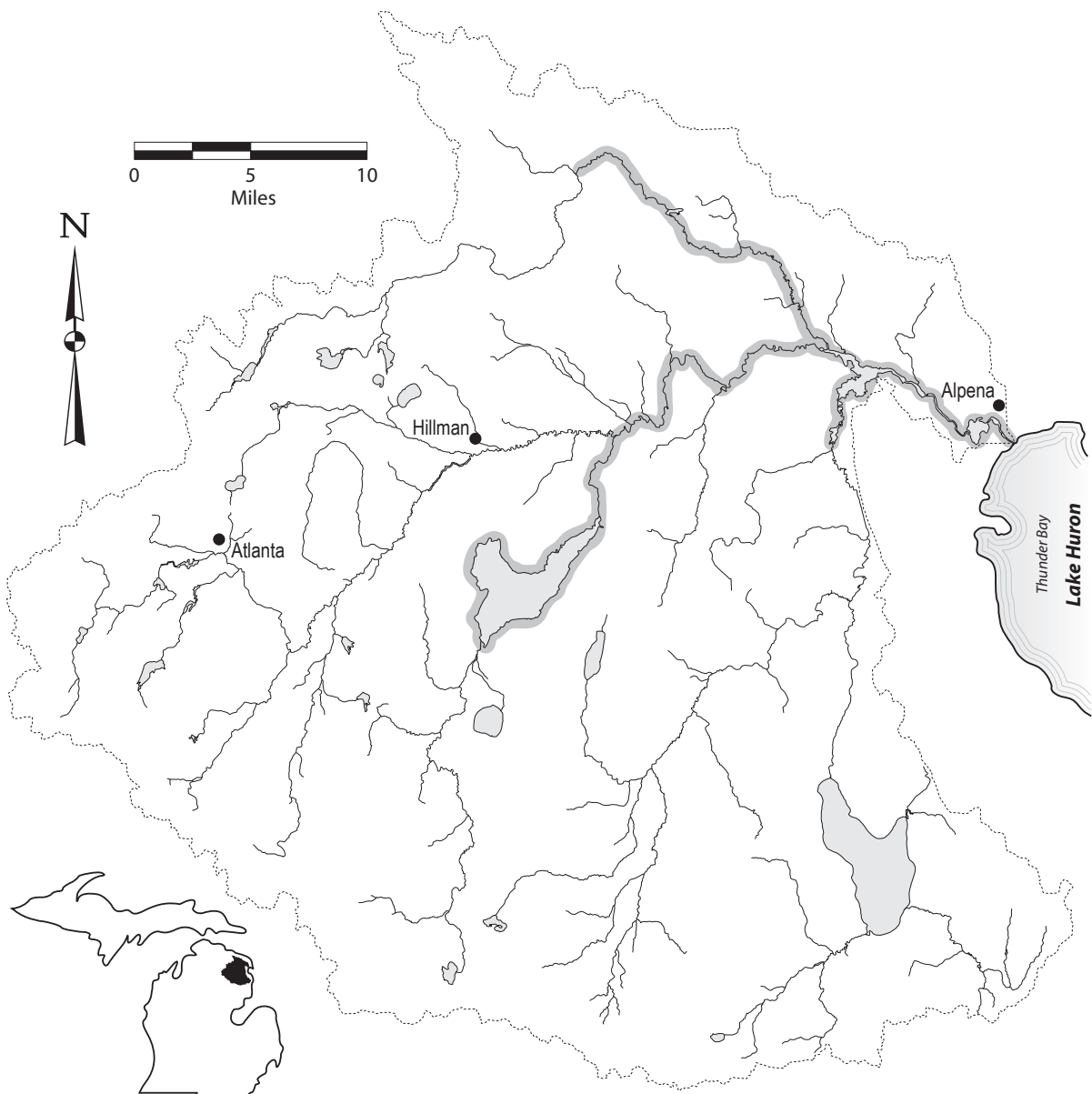
Bowfin (*Amia calva*)

Habitat:

- feeding - clear water
- abundant rooted aquatic vegetation
- low gradient streams, lakes, and impoundments
- tolerate only small amount of silt

- spawning - need vegetated water, 1 to 2 feet deep
- can spawn under logs, stumps, or bushes

- winter refuge - gravelly pockets among aquatic vegetation



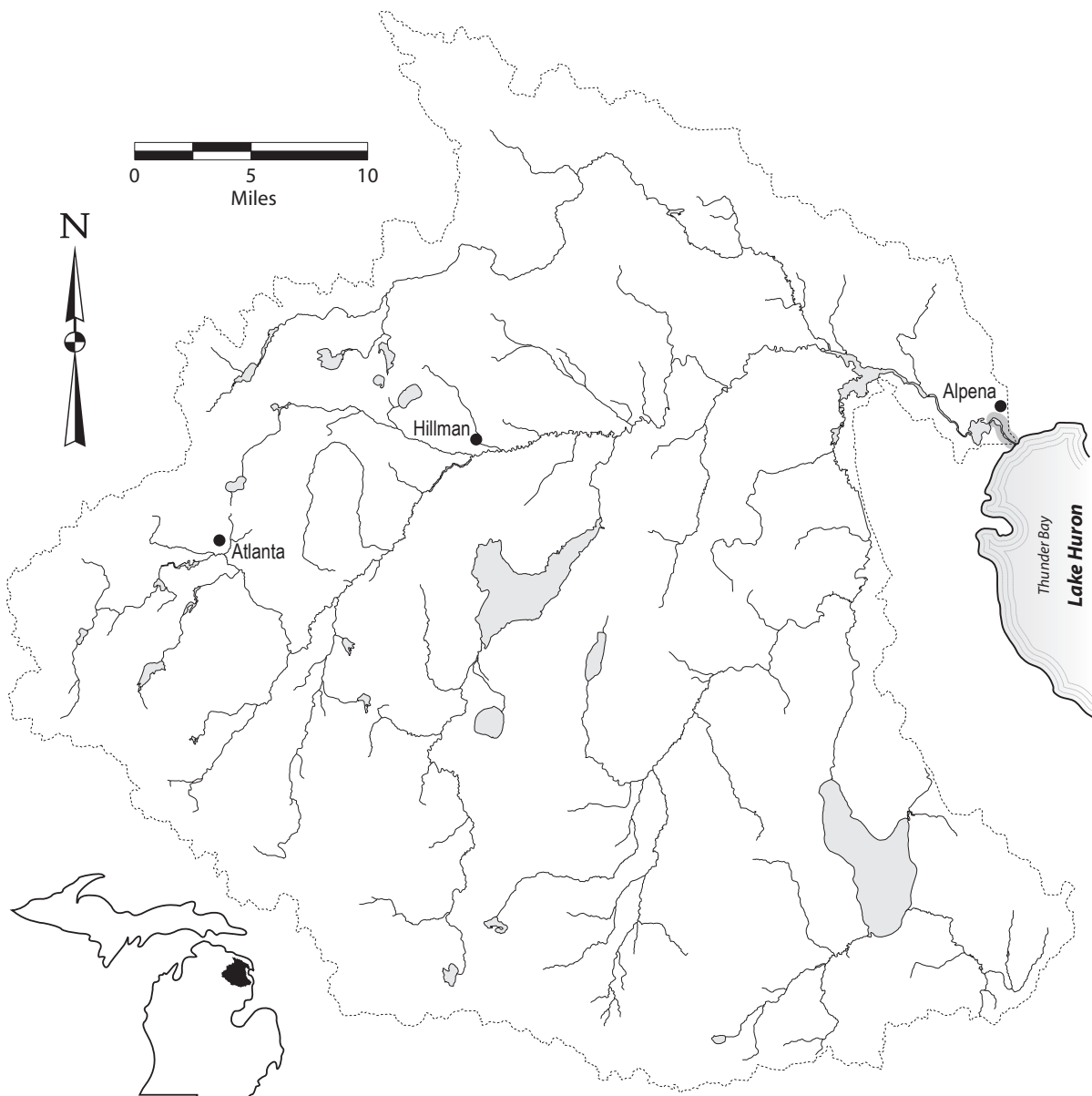
Alewife (*Alosa pseudoharengus*)

Habitat:

- feeding - adults: deep water of Lake Huron
- young: shallow water of Lake Huron
- prefers warmer waters

- spawning - streams or shallow beaches of lake
- sand or gravelly substrate

- winter refuge - deep water



Gizzard shad (*Dorosoma cepedianum*)

Habitat:

- feeding - large streams with low gradient, impoundments, and Lake Huron
- tolerant of clear and turbid water

- spawning - shallow areas of ponds, lakes, and large rivers
- low gradient

