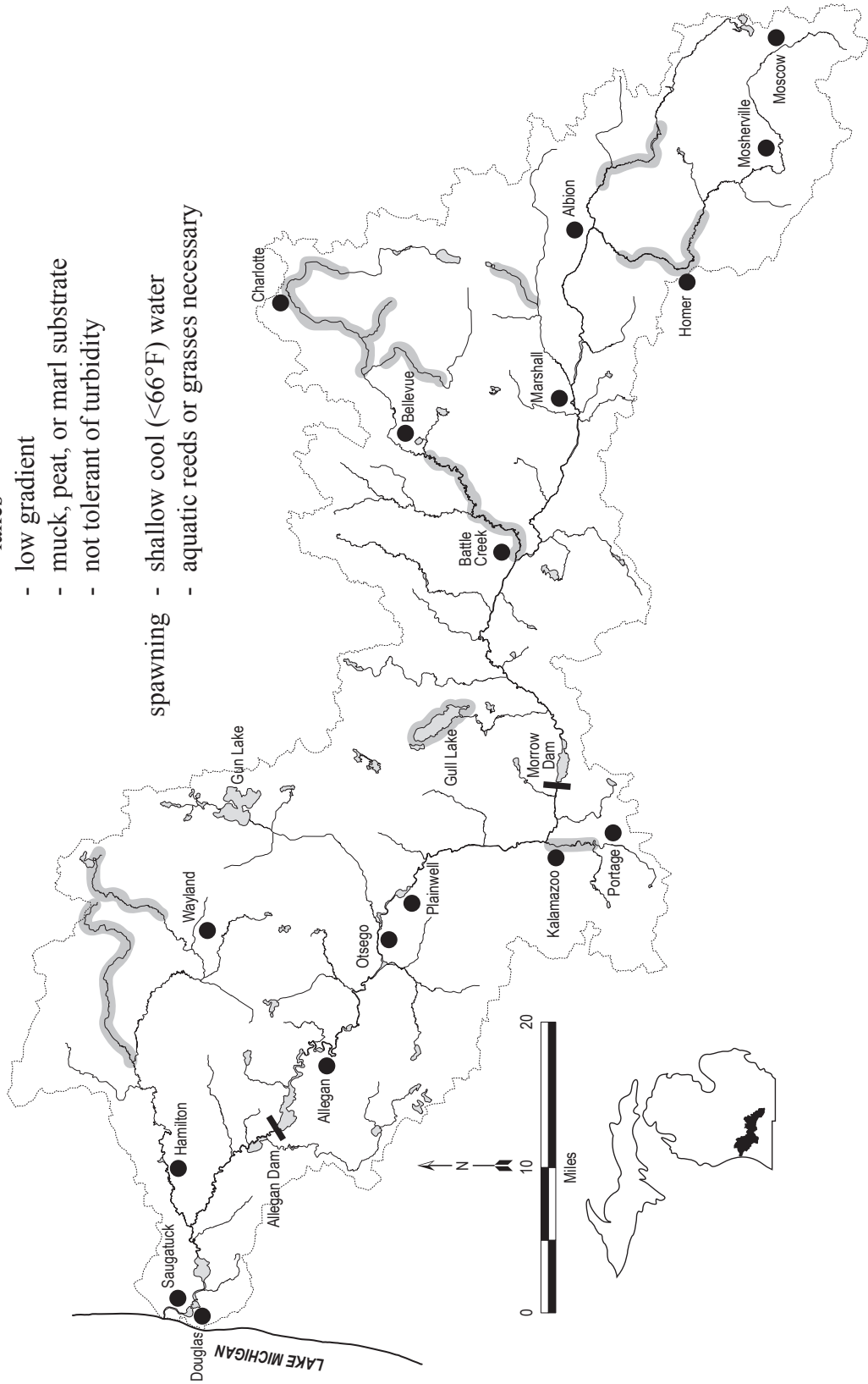


Brook stickleback (*Culaea inconstans*)

Habitat:

- feeding - clear, cold, densely vegetated streams, and swampy margins of lakes
- low gradient
- muck, peat, or marl substrate
- not tolerant of turbidity

- spawning - shallow cool (<66°F) water
- aquatic reeds or grasses necessary

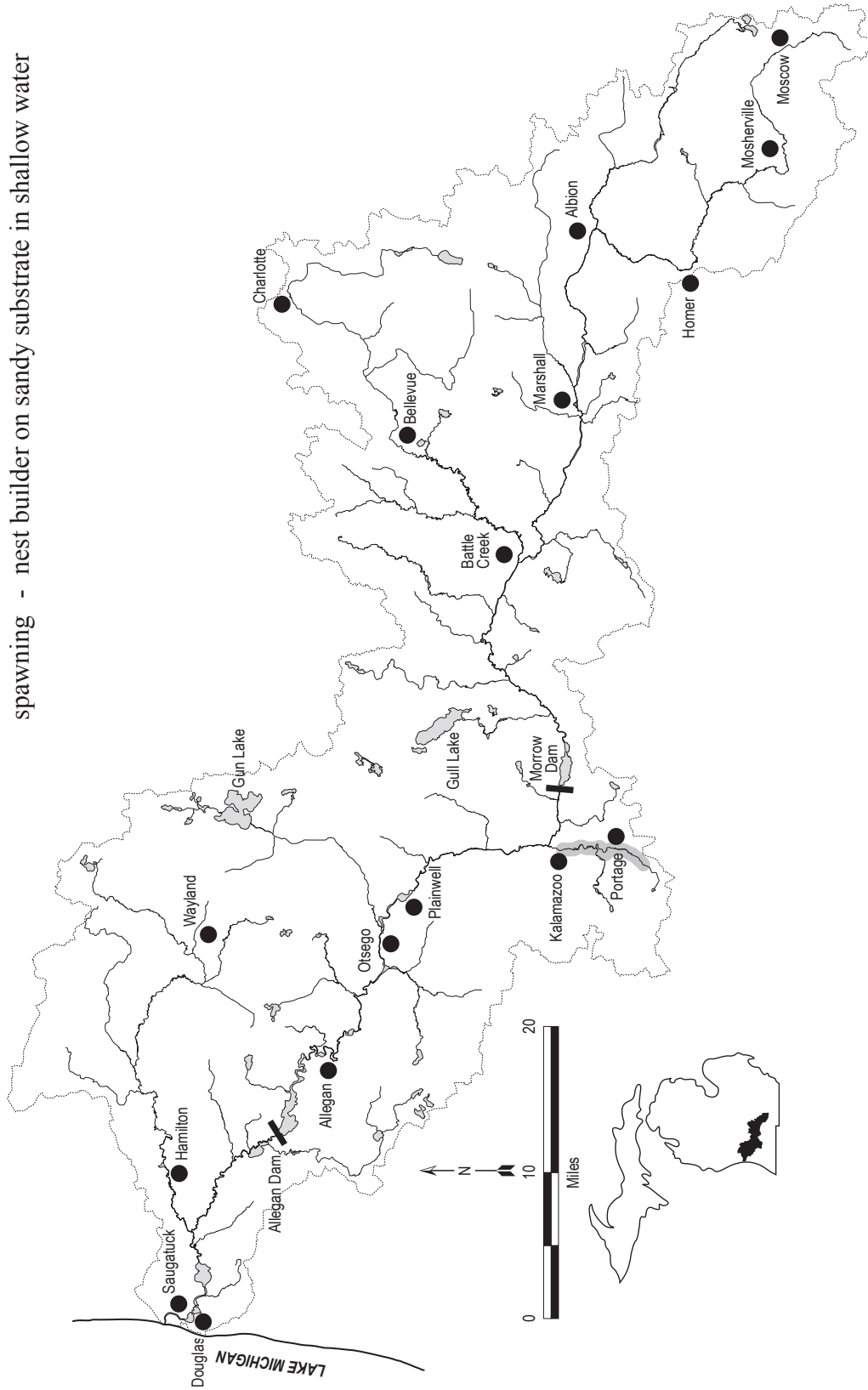


Threespine stickleback (*Gasterosteus aculeatus*)

Habitat:

feeding - shallow water

spawning - nest builder on sandy substrate in shallow water

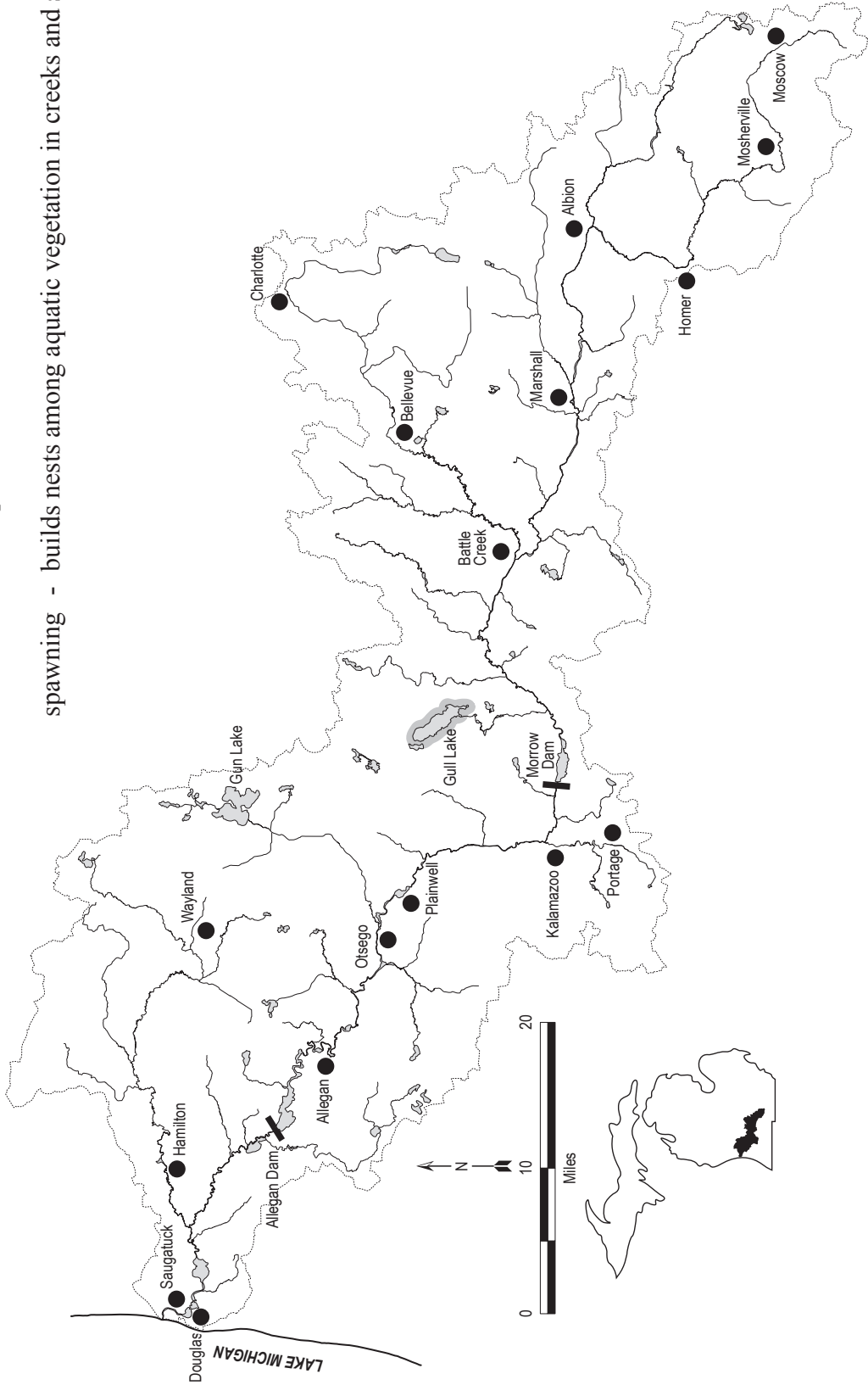


Ninespine stickleback (*Pungitius pungitius*)

Habitat:

feeding - open water of lakes; also Lake Michigan
 - cool quiet waters

spawning - builds nests among aquatic vegetation in creeks and streams

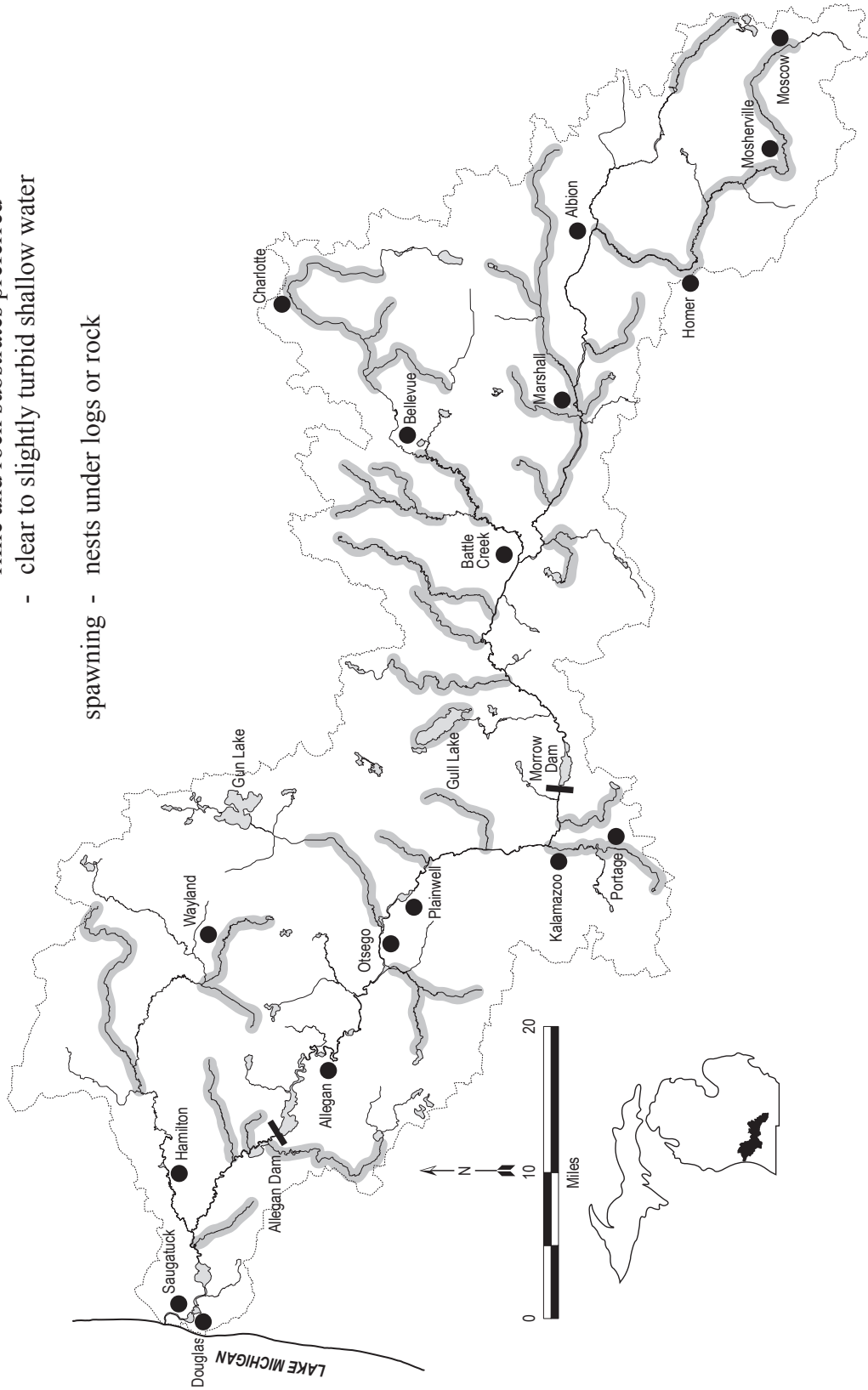


Mottled sculpin (*Cottus bairdii*)

Habitat:

- feeding - cool to cold streams
- riffle and rock substrates preferred
- clear to slightly turbid shallow water

- spawning - nests under logs or rock



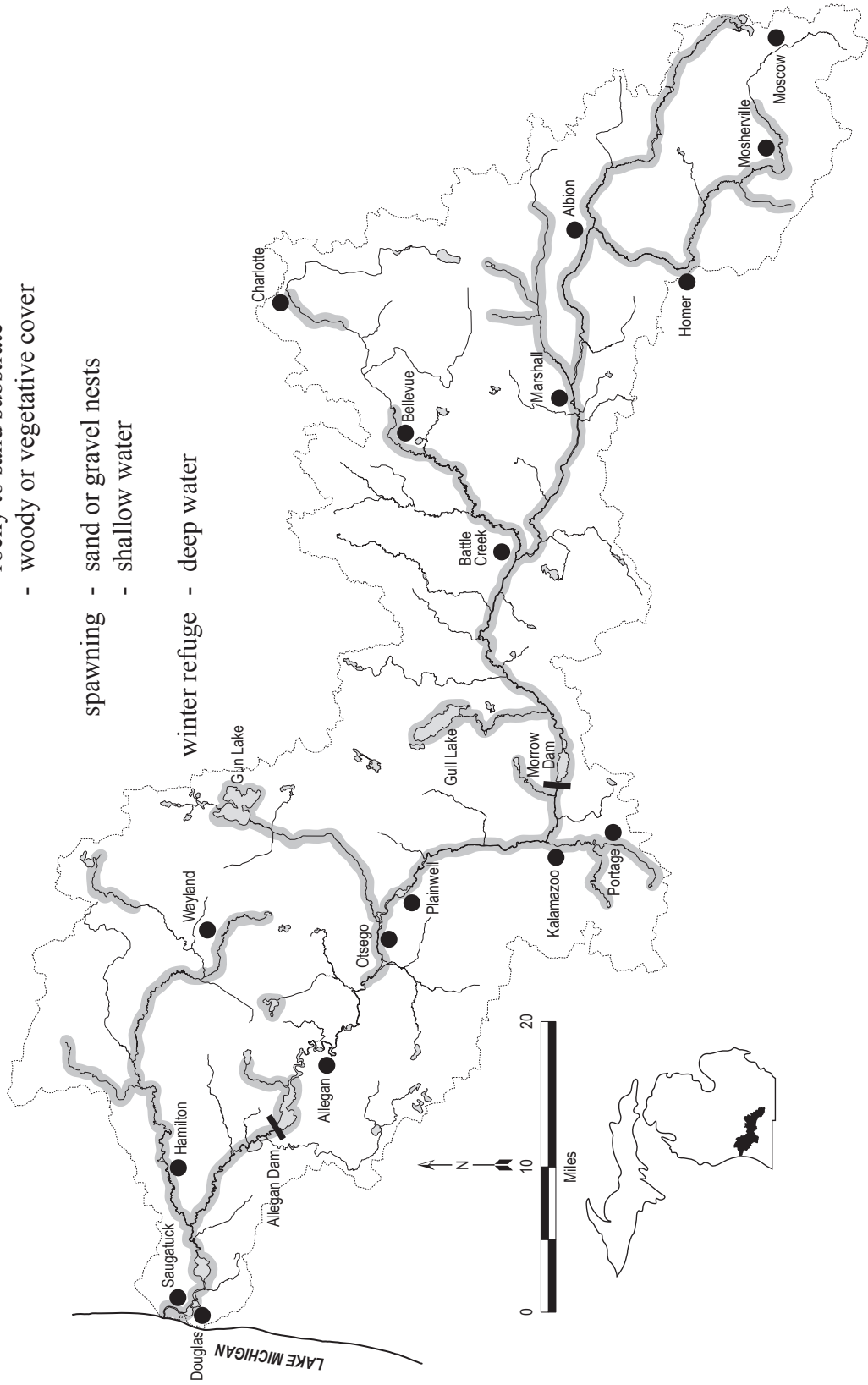
Rock bass (*Ambloplites rupestris*)

Habitat:

- feeding - clear, cool streams, rivers, and lakes
- rocky to sand substrate
- woody or vegetative cover

- spawning - sand or gravel nests
- shallow water

- winter refuge - deep water

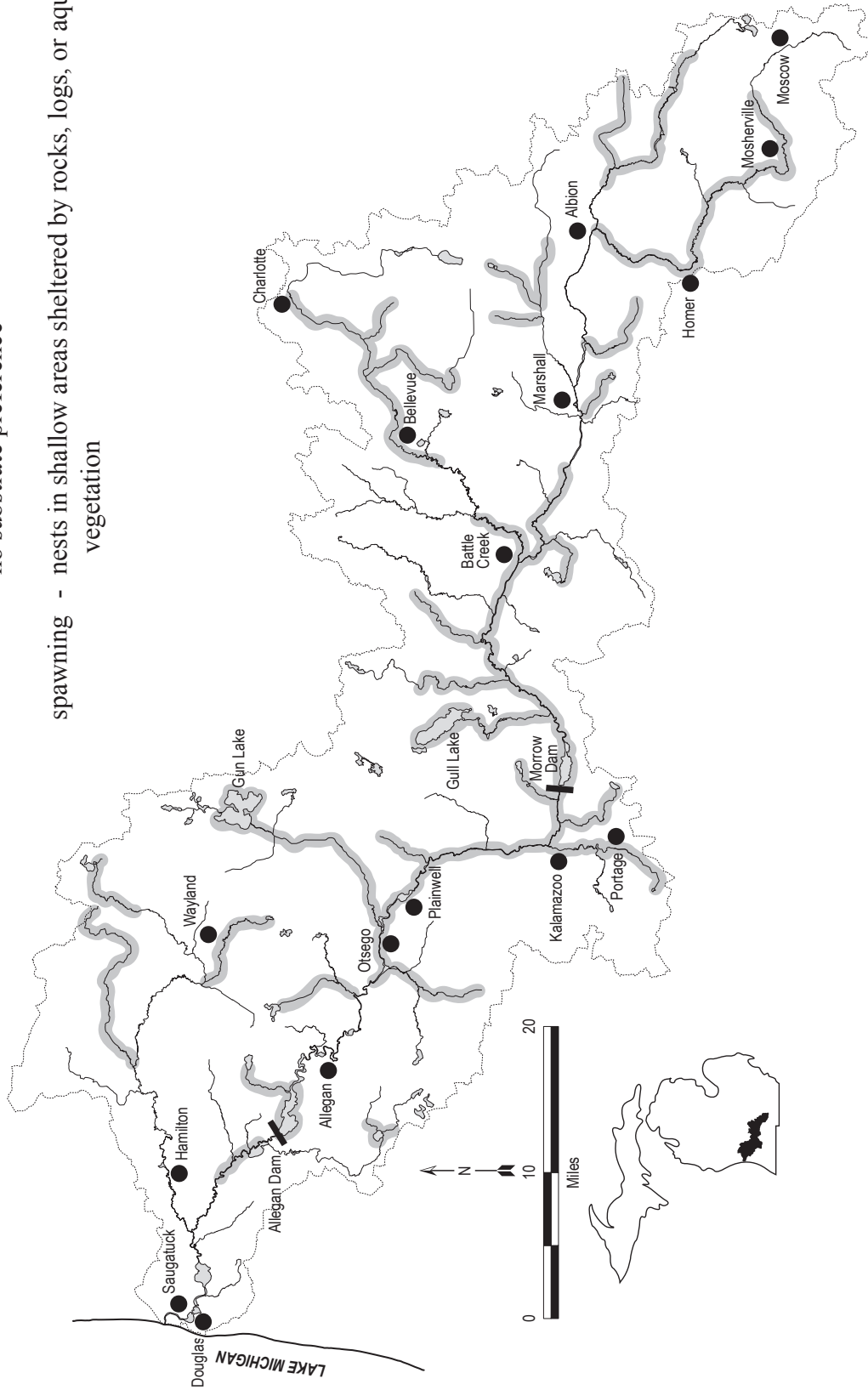


Green sunfish (*Lepomis cyanellus*)

Habitat:

feeding - impoundments and lakes, and low-current streams and rivers
 - no substrate preference

spawning - nests in shallow areas sheltered by rocks, logs, or aquatic
 vegetation

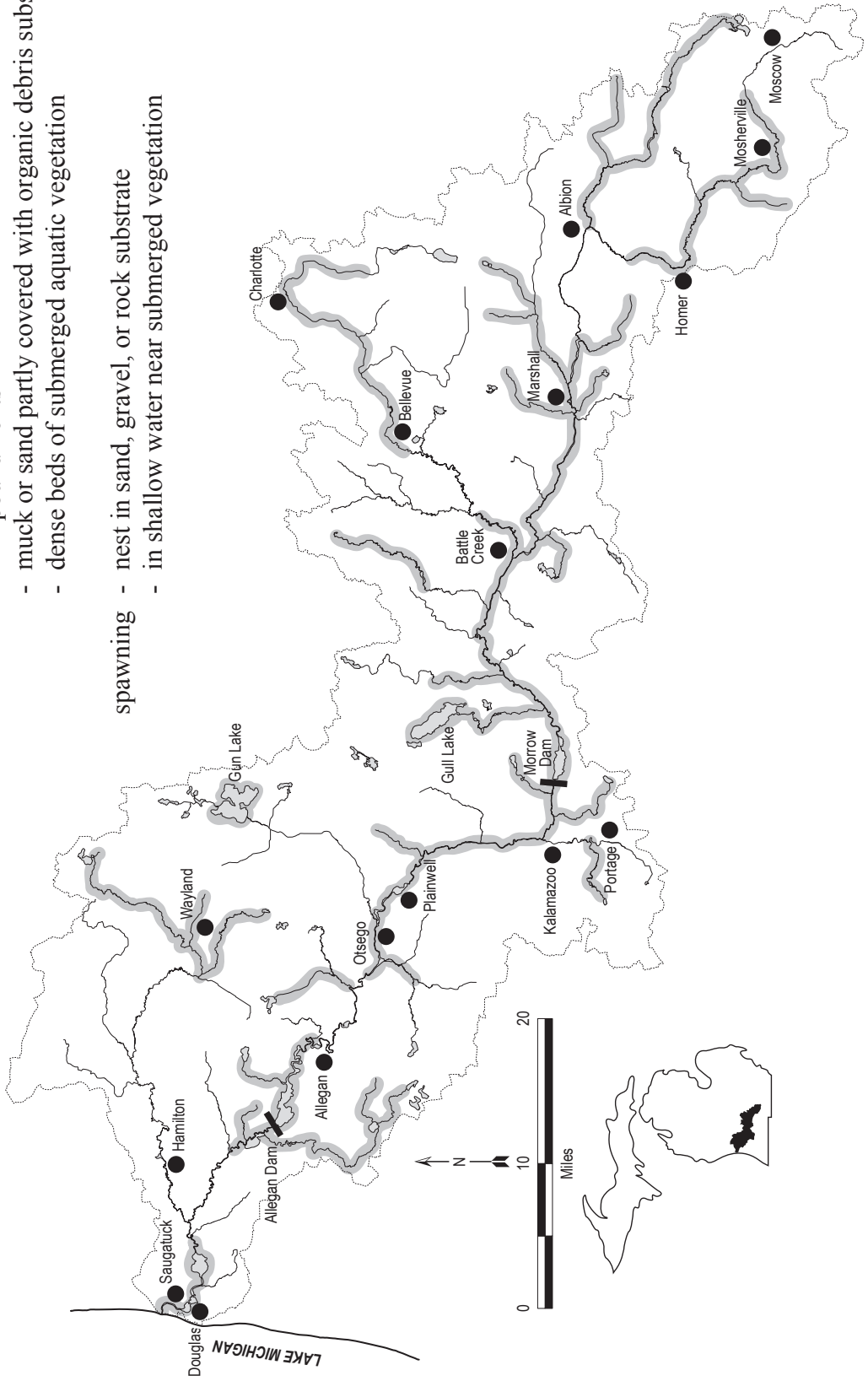


Pumpkinseed sunfish (*Lepomis gibbosus*)

Habitat:

- feeding - non-flowing clear water in streams and rivers; also lakes and impoundments
- muck or sand partly covered with organic debris substrate
- dense beds of submerged aquatic vegetation

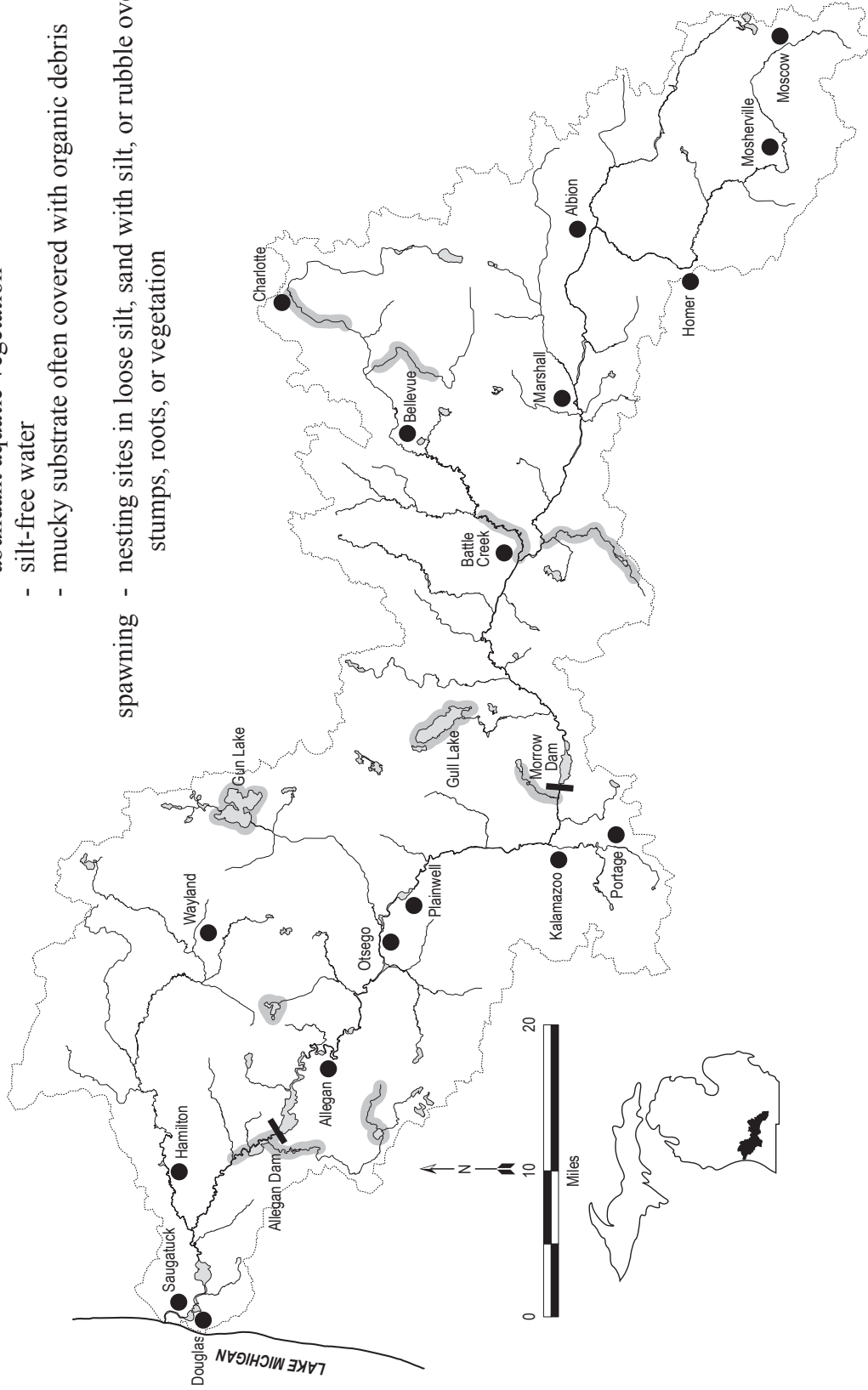
- spawning - nest in sand, gravel, or rock substrate
- in shallow water near submerged vegetation



Warmouth (*Lepomis gulosus*)

Habitat:

- feeding - clear lakes and impoundments and very low-gradient streams
 - abundant aquatic vegetation
 - silt-free water
 - mucky substrate often covered with organic debris
- spawning - nesting sites in loose silt, sand with silt, or rubble over silt near stumps, roots, or vegetation



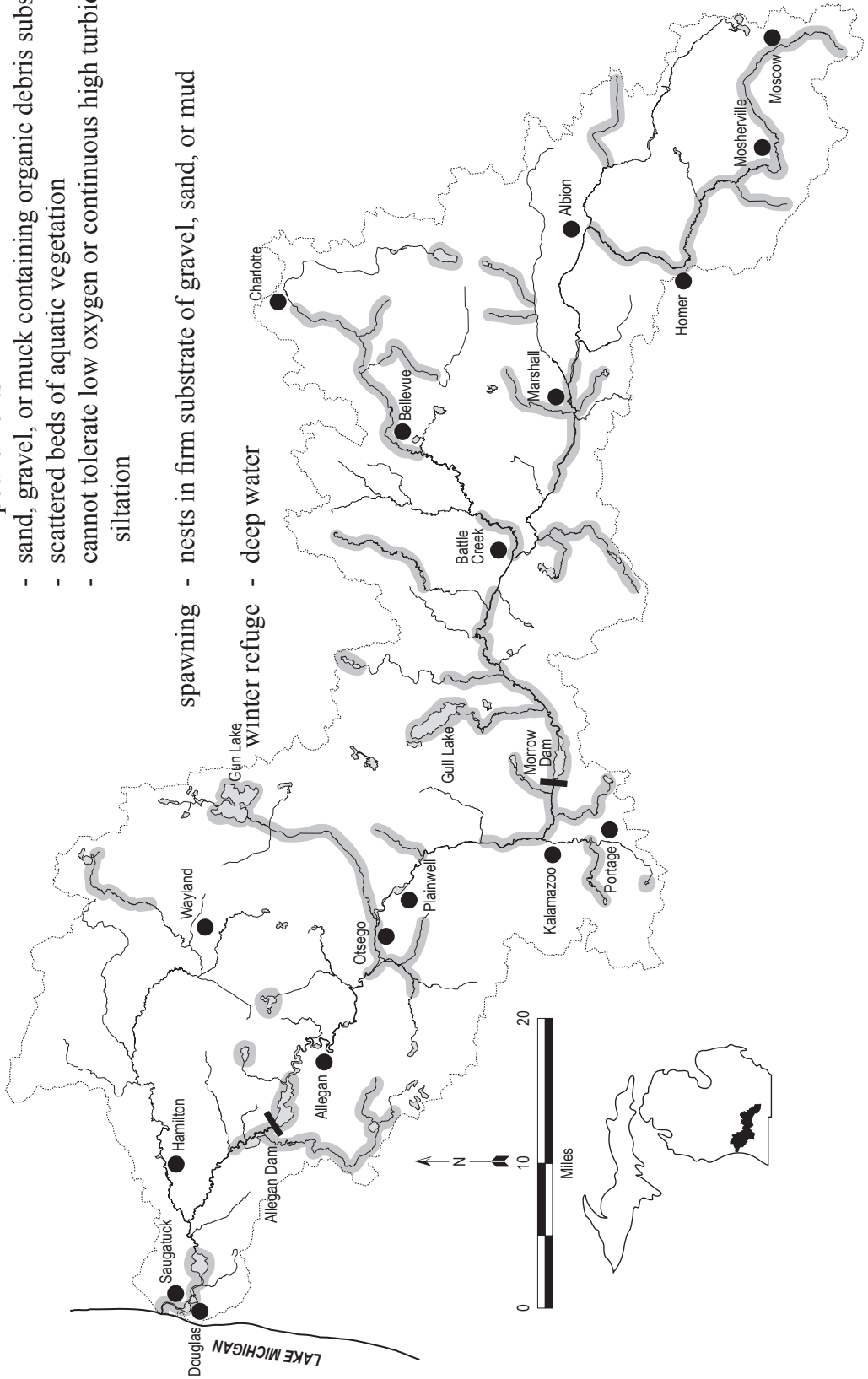
Bluegill (*Lepomis macrochirus*)

Habitat:

- feeding - non-flowing clear streams and rivers; also lakes and impoundments
- sand, gravel, or muck containing organic debris substrate
- scattered beds of aquatic vegetation
- cannot tolerate low oxygen or continuous high turbidity and siltation

spawning - nests in firm substrate of gravel, sand, or mud

winter refuge - deep water



Redear sunfish (*Lepomis microlophus*)

Habitat:

feeding - non-flowing clear waters of streams and lakes
 - some aquatic vegetation

spawning - nest in silt or gravel substrate

