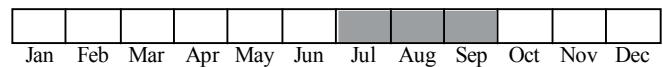


Best Survey Period



Status: State Special Concern

Global and state rank: G5/S2S3

Family: Cyprinidae (minnows)

Synonyms:

Total range: The silver chub is found in the Lake Erie drainage of Ontario, New York, Pennsylvania, Ohio, and Michigan; the Assiniboine River of Manitoba; the Red River drainage of Manitoba and south to Minnesota; the Mississippi River basin, NY, PA, WV west to MN, NE, KS, OK and south to Gulf coast; gulf coast drainages, LA; isolated populations in Brazos River drainage, TX. Common but seldom in large populations (Page and Burr 1991).

State distribution: Within the last 20 years, the silver chub has been found in Lake St. Clair and the Detroit River. Currently, we have no information on their historic distribution.

Recognition: The silver chub is a whitish or silvery minnow with terminal barbel on either side of its mouth (Smith 1979, Smith 1985). This species has a complete lateral line with 37-41 scales and only a faint lateral band if present (Scott and Crossman 1973, Smith 1979).

Its mouth is rather small and its snout overhangs well beyond the upper lip (Smith 1985, Trautman 1981). Its dorsal fin is closer to the head than the tail and has 8 rays (Scott and Crossman 1973, Smith 1985). The caudal fin is forked and has a whitish lower margin (Smith 1979, Trautman 1981). The peritoneum is silvery (Scott and Crossman 1973). This species can reach 200 mm in length (Trautman 1981, Smith 1985).

Best survey time/phenology: Like many fish, the best survey time is likely during late summer when water levels are lower.

Habitat: This species is typically found in deep waters of low-gradient streams and rivers and is also found in lakes. In lakes this species is typically found at depths less than 10m (Parker et al. 1987). Smith (1985) and Trautman (1981) suggest that this species prefers pools with clean sand and fine gravel substrates and but will avoid silty areas and move into riffles if necessary. However, Smith (1979) and Scott and Crossman (1973) suggest that this species is found in silty areas.

Biology: Little is known about the silver chub. It is suggested that the silver chub spawns in open water in June and possibly May when water temperatures reach around 20°C in Michigan (Scott and Crossman 1973, Smith 1985). Scott and Crossman (1973) suggest that



spawning mortality may not be uncommon. This chub is thought to live to 3 years, with few reaching 4 years. Young silver chubs feed on cladocerans, copepods, and chironomid (midge) larvae (Scott and Crossman 1973, Smith 1985). While the adults feed on *Hexagenia* mayflies, chironomid larvae, and *Gammarus* (amphipod) (Scott and Crossman 1973, Smith 1985). Other minor components of their diet are mollusks, *Daphnia*, and small fish (Parker et al. 1987). Burbot, sauger, and walleye are reported to prey on silver chubs (Kinney 1954).

Movements: Movements, like much of the life history of the silver chub, are unknown.

Conservation and management: Trautman (1981) suggests that silver chub are intolerant to turbidity and silt, yet other authors suggest silver chub are found in silty rivers (Scott and Crossman 1973, Smith 1979, Parker et al. 1987). This detail needs to be resolved to effectively determine the silver chubs needs and threats. Kinney (1954) suggests that temporary hypoxic water conditions could be detrimental to silver chubs.

Research needs: Little is known about the silver chub's life history, especially their tolerance level to siltation and turbidity, hence more study is needed. Movement studies are also needed to determine the amount of habitat they require.

Selected references:

Kinney, E.M.S. 1954. A life history of the silver chub, *Hybopsis storeriana* (Kirtland), in western Lake Erie with notes on associated species. Ph.D. Thesis, Ohio State University, Columbus, Ohio.

Page, L.M. and B.M. Burr. 1991. A field guide to freshwater fishes: North America north of Mexico. Houghton Mifflin Company, Boston, Massachusetts. 432 pp.

Parker, B., P. McKee, and R.R. Campbell. 1987. Status of the silver chub, *Hybopsis storeriana*, in Canada. Canadian Field-Naturalist 101(2): 190-194.

Scott, W.B. and E.J. Crossman. 1973. Freshwater fishes of Canada. Bulletin 184, Fisheries Research Board of Canada, Ottawa, 966 pp.

Smith, C.L. 1985. The inland fishes of New York State. New York State Department of Environmental Conservation, Albany, NY. 522 pp.

Smith, P.W. 1979. The fishes of Illinois. University of Illinois Press, Urbana. 314 pp.

Trautman, M.B. 1981. The fishes of Ohio. Ohio State University Press. 782 pp.

Abstract citation:

Derosier, A.L. 2004. Special Animal Abstract for *Macrhybopsis storeriana* (silver chub). Michigan Natural Features Inventory. Lansing, MI. 2 pp.

Funding provided by the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center via the Great Lakes Commission.

Copyright 2004 Michigan State University Board of Trustees.

Michigan State University Extension is an affirmative-action, equal-opportunity organization.

