

Status of Michigan's Endangered, Threatened, Special-Concern, and Other Fishes, 1993–2001

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Abstract.—From 1993 through 2001, 636 collections were made to determine the status of those Michigan fishes declining in occurrence. Eight species are currently recognized as endangered, seven as threatened, nine as extirpated from Michigan (or extinct), and eleven as special-concern. I collected five of the endangered, two of the threatened, and five of the special-concern species. I consider the bigeye chub, the ironcolor shiner, and the weed shiner to be extirpated in Michigan because none were taken with extensive sampling effort (last seen in 1941, 1942, and 1952, respectively). For the 37 species occurring less frequently, I discuss distribution, collection history, and status, and make recommendations for classification and actions for recovery. In total, 119 species of the 147 currently existing in the state were collected. Collections were made in all 83 Michigan counties, but primarily in the Lower Peninsula. Frequency-of-occurrence percentage and distribution maps are provided for all species collected. The five most frequently collected species (found at one-third or more of the sites) were: johnny darter, white sucker, creek chub, bluntnose minnow, and common shiner. Thirty-four species were found at less than 1.0% of the sites.

Introduction

Michigan's Endangered Species Act of 1974 (Act 203) requires the listing of endangered and threatened fishes every 2 years. The current list, recognized in 1999, contains eight endangered, seven threatened, and nine extirpated or extinct species (Table 1). In addition, there is a list of 11 species labeled "special-concern" which have no legal status but are considered likely candidates for the threatened list. A committee of six experts from the state of Michigan recommends species for these lists. The lists of fishes are dynamic because of environmental perturbations and variability, and the difficulties in measuring the distribution and abundance of fishes in a large geographical area such as the State of Michigan. As more information accumulates, the classification of fishes changes.

Protection of fishes that are declining in number is beneficial to man. Endangered fishes in Michigan, usually populations on the fringe of their ranges, are likely to be genetically unique (White 1988; Scudder 1989; Lesica and Allendorf 1995; Novinger 1995; Smith et al. 1995). Scudder (1989) declared, "Marginal populations have a high adaptive significance to the species as a whole and marginal habitat conservation, preservation and management is one of the 'best' ways to conserve the genetic diversity and resources of the species." Likewise, Lesica and Allendorf (1995) wrote, "Available empirical evidence suggests that peripheral populations are often genetically and morphologically divergent from central populations." White (1988) showed a genetic difference in peripheral populations of the roside dace (*Clinostomus funduloides*) in