

Description of the larval stages of the Shield Darter, *Percina peltata* (Pisces: Percidae), in New York

ROBERT E. SCHMIDT¹ & ROBERT A. DANIELS²

¹Simon's Rock College, 84 Alford Rd., Great Barrington, MA, 01230 USA. (schmidt@simons-rock.edu)

²New York State Museum, CEC 3140, Albany, NY, 12230 USA. (rdaniels@mail.nysed.gov)

Abstract

A series of larvae of *Percina peltata* (Pisces: Percidae) was collected from the Neversink River, a Delaware River tributary, in spring of 2001 and 2002. We provide descriptions and illustrations of yolk sac larvae and post yolk sac larvae through the end of larval development. The larval morphology of *P. peltata* is plesiomorphic for the clade of the Etheostomatinae which we correlate with the plesiomorphic position afforded *P. peltata* in other studies. We do not consider the larval morphology of this species to be an adaptation to its environment.

Key words: early life history, post yolk sac larvae, taxonomy, yolk sac larvae

Introduction

The shield darter, *Percina peltata* (Stauffer 1864), is a small freshwater percid distributed on the Atlantic coastal plain and Piedmont from the Hudson, Delaware, and Susquehanna Rivers in New York, south to the Neuse River in North Carolina (Page 1983, Smith 1985). Three subspecies have been recognized (Page 1983). The nominal form ranges from the James River, Virginia, northward (Page 1983, Jenkins & Burkhead 1994). *P. nevisense*, from rivers in Virginia and North Carolina, has been elevated to species (Goodin *et al.* 1998) and the third form from the upper Roanoke remains undescribed (Jenkins & Burkhead 1994).

Percid larvae are well known and readily distinguishable in North America (e.g. Auer 1982, Wallis *et al.* 1990). Descriptions of larvae of *Perca*, *Sander*, and several species of *Etheostoma* have been published (Auer 1982, Hardy 1978, Paine 1984). Descriptions of larvae of the genera *Percina* and *Ammocrypta* are scarce and poorly illustrated, except for