Tracy Research Technical Report Abstract

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  Reyes, René C. 2008. Embryogenesis and Ammocoete Morphological Development of the Pacific Lamprey (Entosphenus tridentatus Gairdner, 1836) from the American River, California. Tracy Fish Collection Facility Studies. Tracy Technical Bulletin 2008-3. U.S. Bureau of Reclamation, Mid-Pacific Region and Denver Technical Service Center. 34 pp.

Early life stages of Pacific lamprey (Entosphenus tridentatus) from the American River in northern California are described. Pacific lamprey eggs hatched between 18 to 23 days at 12 °C (± 1 °C). First feeding was observed as early as the gill stage when they were approximately 8 millimeters (mm) (0.314 inches [in]) total length (TL). Ammocoetes burrowed into the substrate 12 to 14 days after hatching when they were approximately 9 mm (0.354 in)TL. Functional digestive tract, apparent when the gut tissue became transparent and remaining yolk mass excreted, was observed when ammocoetes were greater than 20 mm (0.787 in) or about 30 days after hatching. Early stage development of the Pacific lamprey was similar to the well-studied sea lamprey (Petromyzon marinus) and other lamprey species. Egg and larval development of the Pacific lamprey in California are not well-documented. This paper briefly describes the egg development and larval morphological development of Pacific lamprey from the American River and contains images and enumeration of stages corresponding to Piavis’ (1961) sea lamprey embryological and ammocoete study. (Updated January 29, 2013)