A PRACTICAL APPROACH TO THE DESCRIPTION AND IDENTIFICATION OF *SEBASTES* LARVAE

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ABSTRACT

The eastern North Pacific rockfishes (*Sebastes*, subfamily Sebastinae, family Scorpaenidae) are a speciose group of economically, recreationally, and ecologically important fishes. Approximately 100 species of rockfishes occur worldwide, with the majority of species concentrating in temperate waters between 34° and 38°N latitude (Barsukov, 1982; Seeb, 1986).

Rockfish larvae <7 mm standard length numerically dominate the ichthyoplankton collected within the California Cooperative Oceanic Fisheries Investigations California Current sampling area (Ahlstrom et al., 1978; Kendall, 1991). However, recent evolutionary divergence of the genus, large numbers of sister species (Barsukov, 1982; Seeb, 1986; Seeb and Kendall, 1991) and similarities in morphology and pigment patterns have made larval species identifications problematic.

Prior to this study, there were no published descriptions of the larval stages of the black and yellow rockfish, *S. chrysomelas*, and only intraovarian descriptions of blue rockfish, *S. mystinus* larvae (Wales, 1952; Efremenko and Lisovenko, 1970). During the 1987-88 reproductive season, full-term larvae from field-collected females of these common, nearshore species were cultured at the Monterey

Bay Aquarium in Monterey, California, as source specimens for descriptive analyses.

Subsamples of the cultured larvae were used to develop criteria for *S. mystinus* and *S. chrysomelas* larvae based on pigmentation patterns. The pigment patterns of cultured larvae were compared to those of Monterey Bay *Sebastes* larvae from ichthyoplankton collections (Wallace, 1988) and to previously described larvae of species that occur in the Monterey Bay area (Moser et al., 1977; Stahl-Johnson, 1985; Kendall and Lenarz, 1986; Moser and Butler, 1987; Kendall, 1989; Matarese et al., 1989; Moreno, 1990). Cluster analysis dendograms were generated from the comparisons and are discussed in terms of allelic relationships shown in adult, juvenile and larval *Sebastes* (Seeb, 1986; Seeb and Kendall, 1991).

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