DESCRIPTION OF THE LARVAL STAGES OF FIVE NORTHERN CALIFORNIA SPECIES OF ROCKFISHES (FAMILY SCORPAENIDAE) FROM REARING STUDIES

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Guillermo Moreno

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ABSTRACT

There are about 72 species of *Sebastes* (Family Scorpaenidae) along the eastern Pacific coast of North America, some of which are heavily exploited by both commercial and sport fisheries. Larval identifications are needed for management-related studies of these fishes. However, due to the large number of species and recent evolutionary divergence in this genus, the identification of early life stages has progressed slowly. In this study, four species of rockfish (*Sebastes mystinus*, *S. carnatus*, *S. atrovirens*, and *S. rastrelliger*) were reared and described, and larvae of another (*S. melanops*) reared elsewhere were described. The larvae were fed a mix of rotifers, brine shrimp (*Artemia*) nauplii, and daily-caught plankton. Of the descriptions of eastern Pacific *Sebastes* larvae to date, only nine have been based on reared larvae, due to the difficulty in rearing them past the yolk absorption stage.

Two general pigmentation patterns were discerned: (1) a short row of ventral midline melanophores on the trunk, and no or very little posterio-dorsal pigmentation (*S. mystinus* and *S. melanops*); and (2) complete ventral midline pigmentation on the trunk, and anterior and posterio-dorsal melanophores (*S. carnatus*, *S. atrovirens*, and *S. rastrelliger*). With the exception of very early stages of *S. carnatus* and *S. atrovirens*, these five species can be distinguished from each other based

on pigmentation characteristics. The morphometric proportions did not demonstrate major differences among species.

Although difficult, identification of the larval stages of *Sebastes* spp. is possible for most of the species described to date. Culture and descriptive techniques need to be applied to other species of *Sebastes* to help reduce the number of factors that confuse the taxonomy of this complex group.

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