

## **Influence of the mesoscale structure off Baja California on the diversity and abundance of the larval fish assemblages**

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The influence of cyclonic and anti-cyclonic eddies on the distribution of larval fish assemblages during winter and summer 2000 was analyzed. Statistical analyses showed that the general distribution patterns can be explained by the latitudinal temperature gradient and the ocean-coast gradient of the mixed layer depth. We estimate the geostrophic flow from CTD casts and compared the distribution and abundance of the ichthyoplankton assemblages by development stage (including eggs and preflexion, flexion and postflexion larvae). Although on a larger scale (the whole study area) the distribution and abundance of the fish larvae is conditioned by the biogeographic (temperate, subtropical and tropical) as well as the adult habitat affinities (coastal and ocean), on a smaller scale eddies explain how the fish larval assemblages are maintained or modified through their planktonic life. The fish larvae composition showed the presence of: a northern region composed by temperate species (*Merluccius productus*, *Diogenichthys atlanticus* and *Nannobranchium ritteri*); a southern region composed by tropical and subtropical species (*Synodus lucioceps*, *Hygophum atratum*, *Nannobranchium idostigma* and *Cyclothone acclinidens*); and a transition region characterized by a species combination of both assemblages. This regionalization corresponds to the presence of two eddies in the central region of the study area. The ichthyoplankton distribution patterns showed that cyclonic and anticyclonic eddies represented dispersion mechanisms for eggs and larvae of some species such as *M. productus* and *Leuroglossus stilbius*, while for some others such as *S. lucioceps* and *H. atratum* they represented barriers that limited their distribution towards the north.

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