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## **Abundance, composition, and recruitment of nearshore fish assemblages on the southern California Mainland shelf**

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### **ABSTRACT**

Data on coastal fishes taken during a 8-year time-series of trawl surveys of northern Orange County (southern San Pedro Bay), California. Were examined to determine how variable catches have been and whether or not they have changed in accordance with variations in such basic oceanographic conditions as temperature and transparency. Nearly 120,000 specimens of more than 112 species of fishes, sharks, and rays, and an equally large number of shrimp, crabs, echinoderms, and other invertebrates were collected during the quarterly trawl surveys at depths between 18 and 200 m. During this period (1969-77), fish abundance in the survey area varied about 4-fold. The variation was largely due to episodic recruitment of mixed assemblages of juvenile fishes. Most episodes of recruitment to the coastal shelf occurred during the onset of increasing turbidity and just following the coldest periods of the year. Alternating years of strong and weak year classes of rockfish and other species were observed and appeared to be directedly influenced by oceanographic conditions.

It is suggested that further analysis of these and other coastal trawl survey records might help in understanding dynamics of mixed species populations and offer insight into approaches for assessment of multispecies management problems.

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