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Environmental Aspects of Fin Erosion and Tumors in Southern California Dover Sole

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ABSTRACT

Between 1969 and 1972, a number of Dover sole (*Microstomas pacificus* Lockington) with eroded fins and skin tumors were collected in a series of trawls off the coast of southern California. Field and laboratory observations suggest that the two diseases were distinct syndromes operating at different growth stages in the life cycle of the Dover sole.

Specimens with fin erosion were concentrated in the vicinity of the major municipal wastewater discharge site in the southern California area. Histological observations showed the disease to be external in nature: The distribution of the diseased fish and the patterns of erosion of the various fins suggest that the disease was brought on by contact with sediments around the wastewater outfall.

Tumor-bearing specimens were more evenly distributed throughout the southern California coastal waters, and the presence of the anomaly appeared to be a function of fish size (usually occurring in specimens of less than 150 mm standard length). The spatial and temporal distributions of tumor-bearing Dover sole suggest that initiation of the disease was not related to wastewater discharges.