

CHANGES IN THE PREVALENCE OF FIN EROSION OFF LOS ANGELES AND ORANGE COUNTIES

The prevalence of fin erosion in bottom fishes near a major discharge site on the Palos Verdes shelf has been relatively high and persistent. In the past year, we have continued to participate in monitoring programs off Los Angeles and Orange Counties to determine if there have been any long-term changes in the occurrence of diseased individuals.

We have examined data collected semiannually since May 1972 on the percentage of diseased specimens at a standard set of nine stations on the Palos Verdes shelf. Linear regression analysis of data from 11 surveys taken since that time suggests a long-term decrease ($p < 0.05$) in the overall prevalence of fin erosion in Dover sole (*Microstomus pacificus*), (Figure 1). A similar decrease is suggested in the overall prevalence of fin erosion in rex sole (*Glyptocephalus zachirus*), ($p < 0.05$); (Figure 1.) In the most recent surveys, overall prevalences of fin erosion in Dover sole were 23 percent (December 1976) and 25 percent (May 1977). These levels were approximately one-half those recorded in 1975-76. Percentages of affected rex sole were 9.1 in December 1976 and 0.0 in May 1977.

Although overall prevalence of fin erosion seems to be decreasing in the Palos Verdes Dover sole population, the disease is still evident in recently settled individuals. There has been no long-term decrease (at the 95 percent level of significance) in the prevalence of the disease in Dover sole less than 120 mm, standard length (SL; Figure 2). The survey in December 1976 produced the largest catch of juvenile Dover sole in this size range recorded to date; of 527 individuals, 17 percent were affected with the disease. In May 1977, 26 percent of 117 were affected.

We have examined data collected quarterly since mid-1972 on the prevalence of fin erosion in Dover sole from southern San Pedro Bay. Prevalences greater than 5 percent have been recorded in August 1972, September 1974, February 1975, and October 1975. Few individuals with eroded fins were collected in this area in 1976 and 1977 (Figure 3).

As noted elsewhere in this report, fin erosion was documented in flatfish from Santa Monica submarine canyon ("Bottom Fish Population Below 200 Meters") but not in flatfish from coastal areas of Santa Barbara and Ventura and San Diego counties ("Better Control Stations: The 60-Meter Survey").
SUMMARY Although overall prevalences of fin erosion in Dover sole and rex sole at nine stations on the Palos Verdes shelf appear to be decreasing, the

disease is still found in recently settled Dover sole. These data suggest that diseased Dover sole will continue to be found in monitoring surveys in the coming year.

Field data on diseased fishes collected between 1970 and 1976 were summarized and presented at a conference sponsored by the New York Academy of Sciences on Effects of Aquatic Pollutants with Emphasis on Neoplasia, 27-29 September 1976.

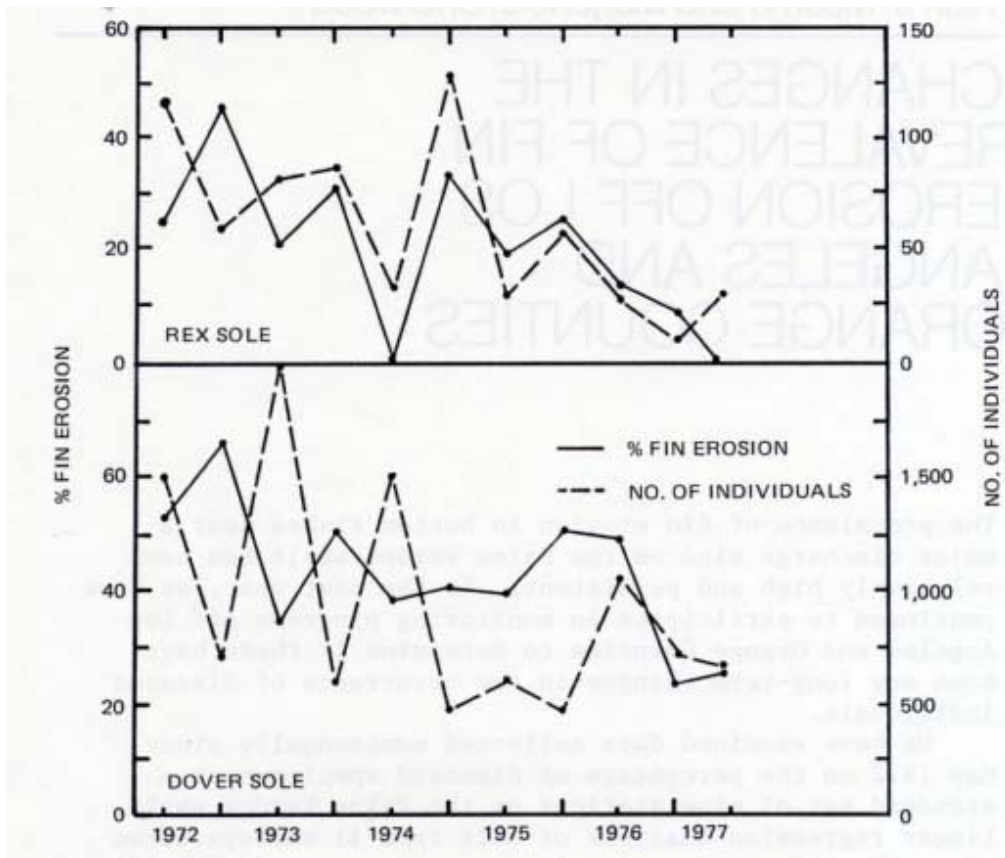


Figure 1. Prevalence of fin erosion in Dover sole and rex sole from nine stations on the Palos Verdes shelf, 1972-77.

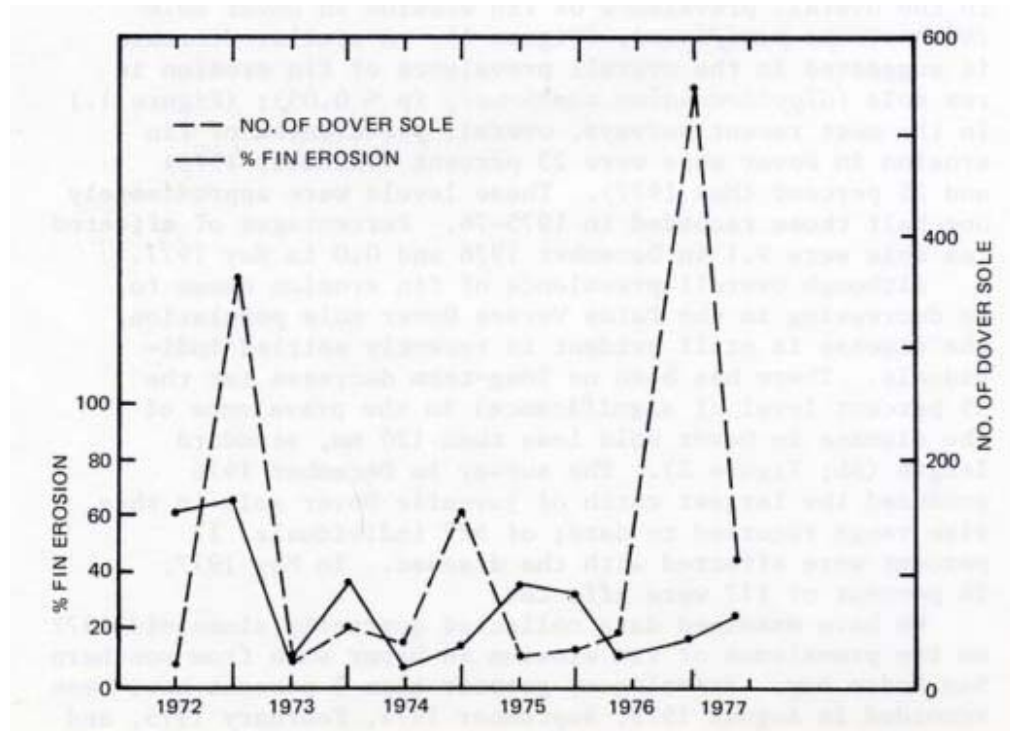


Figure 2. Prevalence of fin erosion in Dover sole less than 120 mm, SL, collected at nine stations on the Palos Verdes shelf, 1972-77.

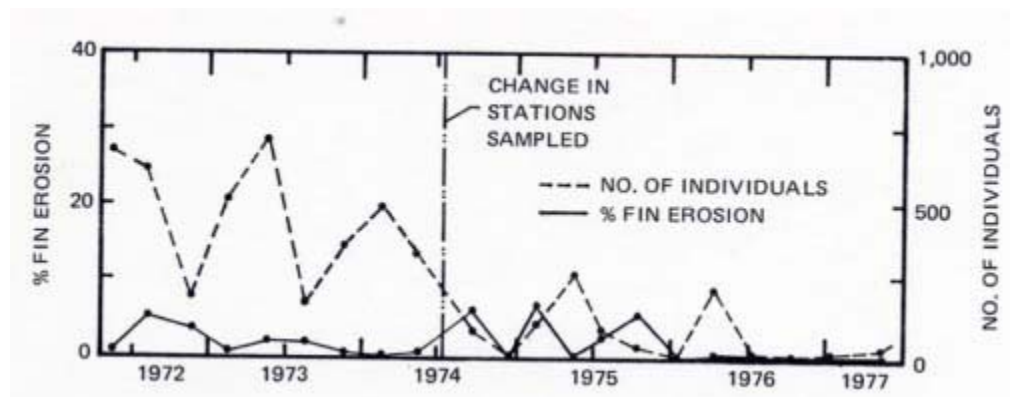


Figure 3. Prevalence of fin erosion in Dover sole collected during monitoring surveys in San Pedro Bay, 1972-77.