

AUG 16 1978

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8. A Localized Die-Off of Sea Urchins Off Santa Cruz, California, and Its Consequences on Kelp Production. JOHN S. PEARSE and A.H. HINES, University of California, Santa Cruz, CA.

Quantitative assessment of the major large brown algae and invertebrates within and outside a kelp forest off Santa Cruz Point have been made since 1973. Before 1976, the seaward side of the kelp forest contained large numbers of red sea urchins and sea stars, and brown algae were scarce. During the winter and spring of 1976, most of the sea urchins (but not sea stars) were killed, apparently from a disease. Similar localized die-offs of sea urchins were noted in the summer of 1976 off Ano Nuevo Island, as well as in the spring and summer of 1970 off Point Loma, San Diego. The consequence of the die-off of sea urchins off Santa Cruz Point on algal production was immediate and dramatic. In June, 1976, juvenile brown algae, including *Laminaria*, *Pterogophora*, *Macrocystis* and *Nereocystis*, grew in dense stands throughout the study area seaward of the kelp forest. By September 1976, a solid kelp canopy encompassing more than 3 hectares was present on the surface where it had not occurred for at least the previous 5 years.

From, Abstracts, 57th Annual Meeting of the Western Society of Naturalists, California State University, Fullerton, California. 1976

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