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4. Ecological Benchmarks in the Santa Cruz County Kelp Forests Before the Re-establishment of Sea Otters. CATHERINE AGEKIAN, M. YELLIN and J.S. PEARSE, University of California, Santa Cruz, CA.

Surveys of the subtidal kelp forest communities were conducted between Santa Cruz Point and Ano Nuevo Island. Relative abundances of major macro-invertebrates and algae, as well as depth, and profile were recorded. The *Macrocystis* forests along protected regions of this coast are composed of very large plants with few juveniles. Sea urchins, occur in high densities ( $\sim 50/10 \text{ m}^2$ ) bordering the outer edges of these forests and extending seaward. Inside the kelp forest, densities of urchins approach zero. Crabs are common, but abalones are rarely found. The *Nereocystis* forests along unprotected parts of the coast consist of many adult and juvenile plants. Urchin densities inside the forest are high ( $\sim 40/10 \text{ m}^2$ ) and decrease ( $15/10 \text{ m}^2$ ) seaward of the kelp forest. The highest densities of abalones are found in this area at depths less than 20 feet. Sites for long term study were selected in kelp forests where potential interactions between sea otters and the kelp forest communities might be followed. A *Nereocystis* and a *Macrocystis* forest were each sampled quantitatively at sites inside and adjacent to the seaward edges of the kelp forests. The densities of the major macroinvertebrates and algae were counted at each site.

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