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Camera Surveys of Effluent-Affected Sediment on the Continental Margin near Los Angeles, California (abstract from poster): EOS Transactions AGU, 76(3), Ocean Sciences Meeting Supplement OS1, 1996.

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A sea-floor camera-sled survey using one black-and-white silicon-intensified target (SIT) video camera, two Hi-8 mm color video camcorders, and a 35 mm film camera was conducted to image the surficial character of effluent-affected sediment deposited on the Palos Verdes continental margin. The survey consisted of seven camera-sled deployments imaging about 40 trackline--kilometers of sea-floor. The lines crossed the middle and outer shelf as well as part of the slope and adjacent San Pedro Basin floor. Surveys were limited to water depths greater than about 40 meters.

The images show evidence of pervasive biogenic reworking of the bed throughout the study area. The observation of nektobenthic fish, motile epifauna, epifaunal tracks and trails, open burrows (evidence of infaunal activity) and steep-sided depressions or pits (evidence of large organisms interacting with the bottom) attest to biological mixing of the sediment. Most burrows are small and some large burrows are surrounded by a halo of lighter colored sediment. These open burrows, combined with recovery of burrowing shrimp during box coring operations, indicate the potential for vertical transport of sediment. Rippled sediment, to water depths of 51 meters, is direct evidence of wave and/or current reworking of the bed. Most ripples are degraded by burrowing activity that increases with increasing water depth. At shelf depths greater than about 50 meters, the sea-floor was characterized by abundant depressions formed by vestiges of ripple troughs, discrete burrow depressions, and/or steep-sided depressions possibly produced by feeding activities of skates (an elasmobranch). The slope typically is a more tranquil and smoothly sedimented regime showing abundant traces of epifaunal activity. The occurrence of occasional large blocks of broken sediment attest to modification of the slope by mass wasting processes.

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