

**Earthwatch Institute and work on bottlenose dolphins and sea otters
in Monterey Bay, California**

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The southern sea otter is listed as “threatened” under the US Endangered Species Act (ESA). Dr. Maldini studies these animals along the coastline of the Monterey Bay National Marine Sanctuary and in Elkhorn Slough, a National Estuarine Research Reserve. The study has the overall goal of understanding how shifts in the prey base of the southern sea otter relate to shifts in sea otter population distribution and abundance, and how these shifts may ultimately affect the overall sea otter population in Monterey Bay. In addition, Dr. Maldini seeks to understand the role of male areas in the long-term health and recovery of the southern sea otter population and the threats to the Elkhorn Slough male area posed by human influence both direct and indirect.

Since 1989, Dr. Maldini has also been working on the Pacific coastal bottlenose dolphin stock inhabiting California inshore waters between San Diego and San Francisco. Monterey Bay is one of many areas along the California coast where the same dolphins spend prolonged periods of time. Over 100 individual dolphins were documented to have spent time in Monterey Bay. Twelve of the animals were residents of this area for five consecutive years. Coastal bottlenose dolphins spend their lives within one mile of shore and can be seen easily from the beach.

Through collaborative studies it was determined that the total population of coastal bottlenose dolphins between San Diego and San Francisco may consist of only 200-450 individuals. If the estimated population size is accurate, there is cause for concern and studies need to be continued to determine if the population is decreasing, increasing, or remaining stable. Since these dolphins live so close to shore, they are likely to be severely impacted by human activities, such as by-catch in fisheries, prey depletion, recreational boating, coastal pollution, and loss or degradation of habitat due to coastal development. In particular, analysis of the tissues of stranded animals has found alarmingly high concentrations of polychlorinated biphenyls (PCBs) in the blubber, which could have devastating effects on dolphin reproduction and immune systems.