ABSTRACT

Elkhorn Slough, California has been important for sea otters, particularly since 1995. It hosts approximately 4% of the entire California sea otter population. Although a few males are defending territories within the slough, this has been primarily a non-territorial area currently located in the Moss Landing North Harbor. Here, mainly non-territorial male sea otters were observed for a 24-hr cycle, twice a month, during 25 surveys between August 2007 and July 2008. In addition, 52 daytime surveys were conducted between August 2006 and October 2007 at various times between dawn and dusk (1080 instantaneous samples). The diurnal distribution of behavioral categories deviated significantly from expected (Chi-Square=31.49; P<0.001) and consisted of 54% resting, 23% grooming, 11% interacting, 10% moving in and out of the area, and 2% foraging. While resting was consistently prevalent throughout the day, grooming and interactions increased in the early morning and before dusk. Daily 24-hr cycles were similar for each of the 25 surveys with a maximum number of sea otters (between 72-149 animals) observed during the night, a subsequent drop in numbers between dawn and noon, and an increase in the afternoon and through dusk. These cycles were more strongly related to time of day than tide. During the day, sea otter numbers averaged between 40-50 animals, but the California sea otter population in California.

Nonetheless, the presence of males in an accessible location close to the other and by noting the activity status of each otter instantaneously as the sweeping occurred. While one observer counted, another kept the tally on a data sheet. Sampling Methods

Sea otters were counted every half-hour for a 24-hr cycle twice a month in Moss Landing North Harbor. Sea otters were categorized as active, inactive and hauled-out. This categorization of behaviors was chosen to be able to apply it consistently throughout the 24-hr period (i.e., both in darkness and in light).

Otters were inactive when they were not showing any detectable movement. They were active when they were moving (i.e., grooming, active swimming and/or interaction), and they were hauled out when they were on land. Observations were conducted using a high powered image stabilized binocular during daylight hours, and with a night scope in the darkness. Otters were counted by sweeping with the binocular from one end of the study site to the other and by noting the activity status of each otter instantaneously as the sweeping occurred. While one observer counted, another kept the tally on a data sheet.

Before each count started, ambient temperature, wind speed and direction were recorded from a portable weather station. Tidal information, water temperature and more detailed weather information was collected at the key factor determining resting patterns, although tidally related fluctuations are being investigated. We would like to thank Earthwatch Institute and the Barrett Foundation for providing much needed support for our work. We also thank all the volunteers and staff that helped with data collection and entry over the years.