



Salvadeo, C.J., A. Gómez-Gallardo, **D. Lluch Belda** & J. Urbán R. (2009). The odontocete community and its environment in the southwestern Gulf of California. *Latin American Journal of Aquatic Mammals*, 17(1-2): 23-32.

The odontocete community and its environment in the southwestern Gulf of California

Christian J. Salvadeo, Alejandro Gómez-Gallardo, Daniel Lluch Belda & Jorge Urbán R.

Community structure is a function of the number of species, their relative abundance and the characteristics of the dominant, common and rare species that are part of it. It also can be described by changes in its physical and biological environment. The aim of the present work is to describe the odontocete community, its temporal changes and the relationship with environmental variability and food availability in the southwestern Gulf of California (GC). Information was obtained from 21 sampling trips from September 2003 to March 2006 between La Paz Bay and Loreto, with a sampling effort of 8769.1km. We recorded the presence, location and other biological parameters of odontocete sightings. Data on environmental variability was obtained from satellite images of sea surface temperature and chlorophyll concentration, and food availability from published reports. A total of 30201 odontocete cetaceans were recorded from 353 sightings, belonging to 10 different species. We observed a temporal lag between the peaks in productivity and an increased presence of odontocete species. The community structure showed a seasonal change in the abundance of the dominant (*Tursiops truncatus* and *Delphinus* sp.) and common species (*Globicephala macrorhynchus* and *Kogia* sp.), as well as by the absence or presence of scarce (*Physeter macrocephalus* and *Orcinus orca*) and rare species (*Pseudorca crassidens* and *Lagenorhynchus obliquidens*). This seasonal community change is in agreement with the known seasonal movements of its main prey inside the GC, which, in turn, is related to seasonal environmental variation. We observed that the community structure was dominated by fish-eating species during the temperate season and responded to the increased presence and aggregation of sardines (*Sardinops sagax caerulea*) in the southern GC, whereas the warm season was dominated by squid-eating species and related to the increased presence and aggregation of the jumbo squid (*Dosidicus gigas*) in the GC's west coast.

Palabras clave: Body growth, cetacean ecology, prey availability, seasonal environmental changes

Para obtener copia del documento contacta con el autor (dlluch@ipn.mx) o con el personal de la biblioteca (bibliocicimar@ipn.mx).