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## Hydroacoustical survey of the near surface distribution, abundance and biomass of small pelagic fish in the Gulf of California

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Near-surface distribution (10 – 40 m depth), abundance, and biomass of small pelagic fish were estimated with an echo sounder (EY-60, 120 kHz) during January 2007 in central and northern areas of the Gulf of California. Small pelagic fish distribution was spatially correlated with simultaneous, continuous, high-resolution measurements of 4 m depth temperature, salinity, turbidity, chlorophyll *a*, and dissolved oxygen to characterize water and habitat conditions. Small pelagic fish shoals were concentrated in five areas of northern and central parts of the gulf, along the coast of Sonora, and south of Isla Tiburón. About 62% of small pelagic fish abundance and 57% of the biomass was echo-detected during the night, when small pelagic fish tend to assemble near the surface. Fish abundance in these areas (11,210 km<sup>2</sup>) was estimated at 6.16 °— 109 individuals. Echo-integrated median biomass was 2.6 °— 105 t. Projecting this biomass to the surveyed area (80,102 km<sup>2</sup>), median biomass of multispecific small pelagic fish shoals could be up to 1.92 °— 106 t. Fish shoals were significantly associated with areas at 15.0°C – 17.5°C, >2 nephelometric turbidity units, and dissolved oxygen concentrations >5 mg O<sub>2</sub> liter

Palabras clave: Body growth, biomass, Hydroacoustic, small pelagic fish

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