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Fin whale (*Balaenoptera physalus*) movements along the Spanish mediterranean coast

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The Ligurian-Corsican-Provençal Basin is a fin whale summer feeding ground, but little is known about the seasonal movement patterns of this population. We acoustically monitored two regions off Spain (eastern and southern) during summer-fall-winter 2006 using seafloor autonomous recording units. Long patterned sequences of 20 Hz pulses and back-beats from Mediterranean fin whales were identified in both study regions using acoustic features as indicators of population identity. Eastern area: fin whale sounds were detected at very high rates (122 pulses/hour) and between 40-80 % of time/day. The detection pattern can be explained by whales moving gradually through the acoustic recorder's detection area, suggesting that the area is probably used as a passage between summer and winter grounds. Southern area: detections from the same population were less abundant (21 pulses/hour) and between 10-35 % of time/day. The detection pattern shows a highly variable distribution with no clear trend, suggesting that Mediterranean fin whales continuously remained in and moved out of the detection area of the recorder from November to January. These results show that this southern area is potentially used as a winter ground. This work documents a new dispersion path towards the Alboran sea, a new potential winter ground.