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(5) Abstract title:	ESTIMATING THE CONSEQUENCES OF A MORBILLIVIRUS EPIZOOTIC ON LONG-FINNED PILOT WHALES
(6) Abstract:	<p>Since 1996 abundance, trend, survival rate, spatial distribution, diet and conservation issues have been studied on the resident long-finned pilot whales (<i>Globicephala melas</i>) in the Strait of Gibraltar. Therefore, it was a unique situation where a population status had been known before possible variations could occur. In winter 2006-07 a <i>Morbillivirus</i> outbreak has been detected with an increase in stranding animals in the region with 10 stranded animals in 5 months while the average was 0.9/year in 1998-2006. Histopathological studies performed by the University of Las Palmas de Gran Canarias (Spain) confirmed the <i>Morbillivirus</i> presence in the stranded animals. This study investigated the consequences of the epizootic on the population of long-finned pilot whale in the Strait of Gibraltar. First, multistate robust design capture-recapture models in MARK were used to estimate the basic life parameters of the pilot whale population living in the area before the epizootic. Survival rates per age class were found to be 0.677 for calves, 0.861 for juveniles and 0.985 for adults in 1999-06 with a total abundance of 345 (95% CI: 309-445) animals in summer 2006. Secondly, robust design models in MARK estimated that the <i>Morbillivirus</i> epizootic induced a 21.2% reduction in the survival rate in 2006-07 and caused 51-52 additional deaths, for a total of 77-78 deaths (including natural mortality), between summer 2006 and summer 2007. This study provides the first estimation of the survival rates for calves and juveniles long-finned pilot whales. Furthermore, it assesses for the first time the consequences of a <i>Morbillivirus</i> epizootic on live pilot whales in their natural environment.</p>
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