

ABSOLUTE ABUNDANCE OF BOTTLENOSE DOLPHINS IN THE STRAIT OF GIBRALTAR

Pérez, S., De Stephanis, R., Verborgh, P. and Sánchez, A.

CIRCE Spain, Cabeza de Manzaneda 3, Pelayo 11390, Algeciras, Spain

The Strait of Gibraltar is the only natural connection between the Mediterranean Sea and the Atlantic Ocean. Seven species of cetaceans can be seen in this area, and the bottlenose dolphin is one of the most common. The aim of this study was to estimate the absolute abundance of bottlenose dolphins (*Tursiops truncatus*) in the strait of Gibraltar, based on mark-recapture analysis. Surveys were carried out during summers of 2004 and 2005, where photo-identification effort focused in an area of approximately 900 km². During this time, dolphins were encountered on 30 occasions. We have identified 220 individual dolphins. Of these, 126 were seen in 2004 and 177 in 2005. We applied closed population models using the program CAPTURE, which produced an estimate of 231 dolphins (95% CI= 187-321 CV= 0.014) for 2004 with the model Chao (Mt) and 258 dolphins (95% CI= 226-316 CV= 0.08) for 2005 with the model Chao (Mth). We took into account the proportion of marked individuals, which was estimated to be 85% in both years. Here, we present the first estimations of total abundance on this area using photographic data. These estimations will be useful to monitor the population of bottlenose dolphins over the years. It is especially important to monitor these dolphins over several seasons because an increase in the maritime traffic in this area is expected during the next years. This increase will be due to the construction of a new harbour in Tangier, which will open new lines of ferry and fast ferry between Africa and Europe. The plans to increase human activity call for long term monitoring of the bottlenose dolphins and other species that inhabit the Strait of Gibraltar.