

# Blue Whale Migratory Patterns and Average Sea Surface Temperatures from April-May of 2001 and 2007

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## **Abstract**

We visualized and compared blue whale migratory patterns with rise in sea surface temperature (SST) from April-May of 2001 and 2007 during their feeding migrations. The data was collected from a Movebank publication on blue whale movements in the Northeast Pacific and a combination of AVHRR and MODIS from the NASA Earth Observatory for average SST. A buffer of 100 kilometers was created for each year's migratory pattern, and the average SST was found. A final map comparing the 2001 buffer layer with the average SST map of 2007, and the mean SST of the buffer was calculated using zonal averaging. The buffer layers revealed a shift in blue whale movement to colder waters. There was a 3.47 °C decrease in the SST between the blue whale 2001 and 2007 buffers. Blue whales are shifting their feeding migratory patterns to colder waters as a response to increasing SSTs.