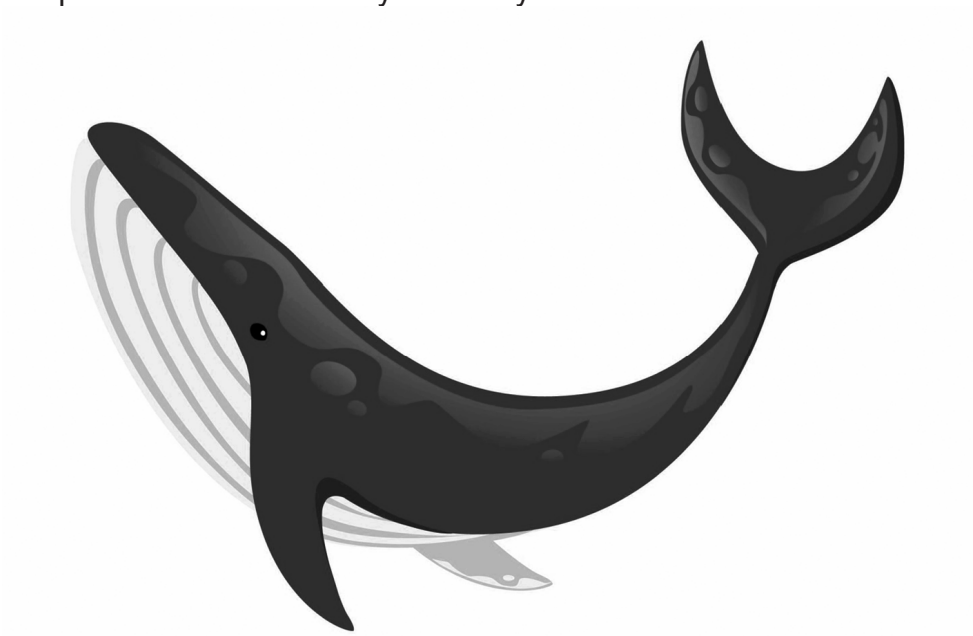
Tekst 9

Blue whales' changing song has deeper meaning

adapted from an article by Ben Hoyle



1 Blue whales are not only the largest animals on Earth, they are also some of the loudest creatures in its oceans. Only the males sing but their droning hum is about as loud as a large ship and it generates a sound that can travel more than 600 miles underwater.

2 It is still unclear whether this extraordinary communication, which exists on the furthest reaches of human hearing, is intended to repel rivals, attract a mate or achieve something else. What is known is that in oceans thousands of miles apart these atonal sounds have been evolving for decades.

3 A 2009 study found that since at least the 1960s the average pitch of blue whales' cries has dropped the equivalent of three white keys on a piano keyboard. Last year a new report confirmed that other whales around the world have exhibited the same mysterious drop in pitch.

4 Previously it had been thought that the phenomenon could be a response to noise pollution caused by increased human marine traffic, but the new study ruled that out because it used data collected from the southern Indian Ocean which has grown quieter in recent years and does not have extensive shipping traffic. **30** the researchers think that the change was a response to a recovering whale population or to changes in the ocean due to climate change. The louder a whale tries to make its calls, the higher the pitch gets. Therefore the drop in pitch would mean that whales are not straining so hard to be heard.

5 This could be a positive consequence of conservation efforts. Since 1966 Antarctic blue whales have been protected from commercial hunting and there are now more than 2,000 individuals. Overall blue whale numbers are up from a few thousand in the early 1970s to an estimated 10,000 to 25,000 today. More whales may mean that they are closer together, so that individuals do not need to communicate over such long distances.

6 An alternative possibility is that carbon dioxide in the atmosphere has made the oceans more acidic and enabled sound waves to travel further underwater. The temperature, pressure and chemistry of the ocean affect the speed and distance that sound travels.

7 The research team observed a seasonal variation in calls of Antarctic blue whales. In the southern Indian Ocean, Antarctic blue whale calls increase in pitch during the summer. This may be because they have to be louder over the noise of breaking sea ice.

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