## Sei whale songs point to Falkland Islands as mating site

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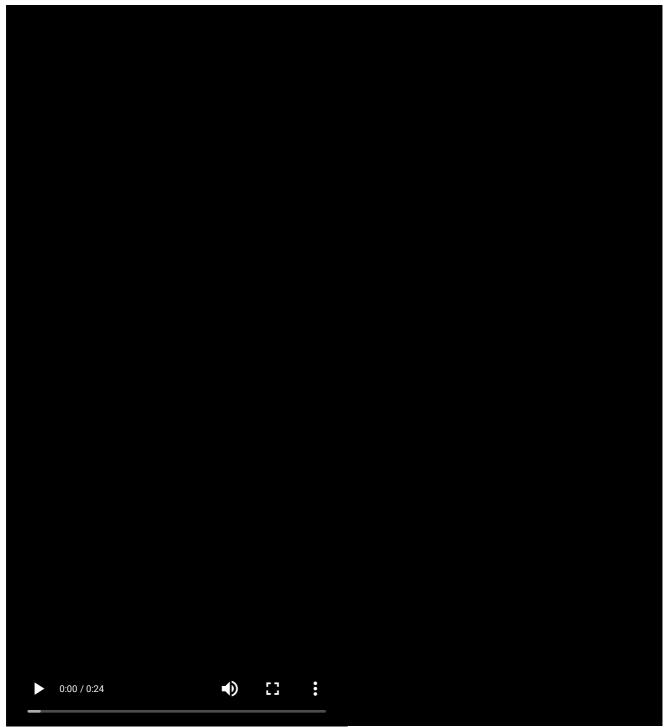




During the southern summer months, sei whales like to spend time around the Falkland Islands. There they find food and, according to the latest results, probably also mating partners for later. Image: Dr. Caroline Weir, Falkland Conservation

Fortunately, the days when whales were hunted with harpoons in the South Atlantic and Antarctic waters are long gone. But the numbers of some species that were heavily hunted at the time are still only slowly increasing. This includes the sei whale, the third largest of the whale species. A year ago, researchers were able to show that the Falkland Islands, once a traditional whaling site, are now once again a hotspot for the remaining sei whales in the South Atlantic. In a newly published study, two researchers find clues to a possible explanation for the archipelago's popularity with sei whales.

Food and females willing to mate could be the reasons why the Falkland Islands are popular with the still highly endangered sei whales, making the archipelago the only known hotspot for the species in the world to date. That's one possible interpretation of a study by Dr. Salvatore Cerchio, head of the cetacean division at the Africa Aqautic Conservation Fund, and Dr. Caroline Weir of Falklands Conservation, the study's two authors. This is indicated by recorded songs of male sei whales, interpreted by experts as mating songs and recorded for the first time ever. "The species has been studied elsewhere, but songs have never been reported before, which really highlights how special the Falklands are for this species," explains Dr. Cerchio. The two experts published their findings in the journal Royal Society Open Science.



The whales' songs were recorded by buoys in one of the largest bays on the West Falklands. The previously unknown songs were classified as mating calls by comparison with known sei whale sounds and other species based on their recurring complex structures. Video: Falkland Conservation

The two researchers obtained the recordings of the songs thanks to three buoys deployed in Berkeley Bay, a deep inlet of West Falkland Island north of the capital city of Port Stanley, and which provided data over two years. The goal of the study was actually to detect calls from sei whales to learn more about why the archipelago is so important to the species. Dr. Weir and Dr. Cerchio defined call as those sounds that were heard as "consistent, rhythmically repetitive patterns."

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Dr. Salvatore Cerchio, African Aquatic Conservation Fund

In the process, Salvatore Cerchio, the study's lead author, discovered an enormous variety of different calls, more than 2,000 in all. Some of them were already known, but a closer analysis revealed something surprising: certain calls turned out to be songs of Seiwal bulls. However, these are not the melodic calls like humpback whales, but almost extraterrestrial sound patterns. "The sei whale songs are simply the most bizarre and unusual sounds I have ever heard from a whale," Dr. Cerchio said. And Dr. Weir recalls, "I received an excited call from Sal, who joked that the noises might be aliens and that I should prepare to be beamed up!"



Sei whales occur throughout much of the South Atlantic, from the tropics to sub-Antarctic waters. This makes it difficult to collect data, which in turn makes it difficult to protect them. Image: Dr. Caroline Weir, Falklands Conservation

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Dr. Caroline Weir, Falklands Conservation

By comparing the frequencies and patterns of known sei whale sounds and with other related whale species such as blue and fin whales, Cerchio and Weir are certain that these are songs of sei whale bulls calling potential mates between February and late April. "The characteristics of the songs and their seasonal timing – in the autumn, as migrations begin towards warmer breeding areas – makes it very likely that these songs are a male breeding display," Dr. Cerchio says. For Dr. Weir, it's now clear: "Wee now also have evidence that Falklands' waters are one of few areas documented worldwide for sei whale breeding behaviours." And that would mean the Falkland Islands need to be built into conservation considerations and measures even more, Dr. Weir adds. This is because one of the problems affecting sei whales, as well as other species, is the increasing noise pollution from shipping and resource extraction, both of which are strongly present around the archipelago. "Studies should be undertaken to assess the potential risks and impacts of commonly introduced noise and make subsequent recommendations for managing anthropogenic noise to limit disturbance to local whale populations," the two authors urge in their paper. This is the only way to ensure that this species of whale continues to sing in the waters of the archipelago in the future.

## Dr Michael Wenger, PolarJournal

Contributed photo: (C) Dr. Caroline Weir, Falklands Conservation

 $\label{link to the study: Cerchio S. and Weir C. (2022) R. Soc. open sci. 9 (220738) \underline{Mid-frequency song and low-frequency calls of sei whales in the Falkland Islands; \underline{doi.org/10.1098/rsos.220738}$ 

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