

Baleen plates provide new insight on life history of blue and fin whales

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Researchers have recently released a [study](#) in *Ecology and Evolution* outlining their in-depth analysis of historic baleen plates, the comb structures that are used by some species of whales to filter food, from

Southern Hemisphere blue and fin whales. The research was conducted using samples collected in the late 1940s that were recently rediscovered in the Smithsonian National Museum of Natural History.

Researchers have long struggled to understand these whale species. Not only are there few [baleen whales](#), but there is also limited ecological data to help scientists understand the species' life history and foraging behaviors. By examining [stable isotopes](#) within the baleen plates, the team uncovered valuable insights into these species, providing a unique window into their behaviors over 80 years ago.

The analysis revealed approximately six years of life history data for [blue whales](#) and four years for fin whales, shedding light on their movements and feeding habits during a time when their populations were more abundant and before significant human-driven climatic changes occurred in the Southern Ocean.

The findings suggest intriguing differences between the two species. While both blue and [fin whales](#) likely fed at similar trophic levels in the Southern Ocean, they displayed niche differentiation, indicating distinct ecological strategies. Fin whales exhibited more regular annual migrations, potentially extending to ecologically distinct sub-Antarctic waters, while some blue whales may have opted to remain within the Southern Ocean year-round.

This study highlights the significance of historic baleen samples in unraveling the mysteries of whale life history and ecological interactions. By leveraging these resources, scientists can reconstruct past behaviors and environments, providing crucial context for understanding current population dynamics and informing conservation efforts.

More information: Malia E. K. Smith et al, Historical baleen plates indicate that once abundant Antarctic blue and fin whales demonstrated

distinct migratory and foraging strategies, *Ecology and Evolution* (2024).
[DOI: 10.1002/ece3.11376](https://doi.org/10.1002/ece3.11376)

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