Whales of northern Peru

Universidad Científica del Sur (UCSUR) - Pacificum

Migration

The humpback whales seen off Peru's northern coast during the winter months and in spring migrate from their feeding grounds in the Gulf of Corcovado (south of the large island of Chiloé), the fjords of southern Patagonia, and the seas around the Antarctic Peninsula. These cetaceans arrive off the coast of northern Peru having covered distances of between 6000 and 8000 kilometers. The humpback whale population of the southeast Pacific holds the record for the longest mammalian migration made between feeding and breeding grounds, confirmed through observation of an individual recorded and photographed at Gorgona Island, off the coast of Colombia, and subsequently spotted and identified in the Antarctic Peninsula. The minimum distance between these two points has been calculated at 8334 kilometers.

This record highlights the tendency of the humpback whale population on this side of the Pacific to cross the equator, a behavioral characteristic not seen in the populations of other seas at similar latitudes. Given the evidence we have of this activity, we must inevitably ask ourselves why humpback whales cover such enormous distances during migration. While we do not yet have an entirely satisfactory answer to this question, the information we do possess offers some important clues.

Clearly, this migration is undertaken within the context of the reproductive cycle of the species. Humpback whales migrate every year to tropical and subtropical zones in order to mate and give birth to their calves. A specific aspect of this behavior can be observed in northern Peru, where male, or bull, humpback whales leap out of the water, engaging in intense aerial displays. Individuals form groups that compete with each other for the opportunity to mate with a receptive female.

While a crucial aspect of migration is the search for warmer seas better suited to calving, in the post-natal period females also need calm waters, where they can easily feed their calves and begin to teach them the social skills they will require. These waters must be both calm and warm, because whale calves are born with a very thin layer of blubber. The energy expenditure involved in somatic growth would be much greater in cold waters than in a tropical zone. The search for a more suitable climate is therefore essential to the wellbeing of newborn whales, which need to grow rapidly and augment the layer of blubber that will enable them to withstand the return trip to their temperate and polar feeding grounds.

Sea temperature is a major factor in migration. Scientists have determined that the optimum temperature range in breeding grounds is between 21°C and 28°C. While the waters off Peru's northern coast can offer surface temperatures approaching these values, whales also encounter somewhat colder conditions generated by the Humboldt Current. It has been speculated that the southeast Pacific

migration is so long because humpbacks deliberately avoid the cold Humboldt system off the Chilean and Peruvian coasts and continue as far as the warmer waters off Peru's far northern coast and beyond, where the influence of the equatorial system dominates.

Little is known about the exact migration path taken by the southeast Pacific humpback whale population, and nor do we know how many individuals migrate. Globally, some populations of this species do not undertake the journey between polar and tropical zones. Such is the case of those whales which inhabit the Arabian Sea off the coasts of Oman, Pakistan and northwest India. These whales remain in tropical latitudes all year round. Scientists have yet to determine whether the origins of migration lie in an adaptive response to other types of interaction, such as the pressure from predators in higher latitudes, or a characteristic inherited from a migratory ancestor.