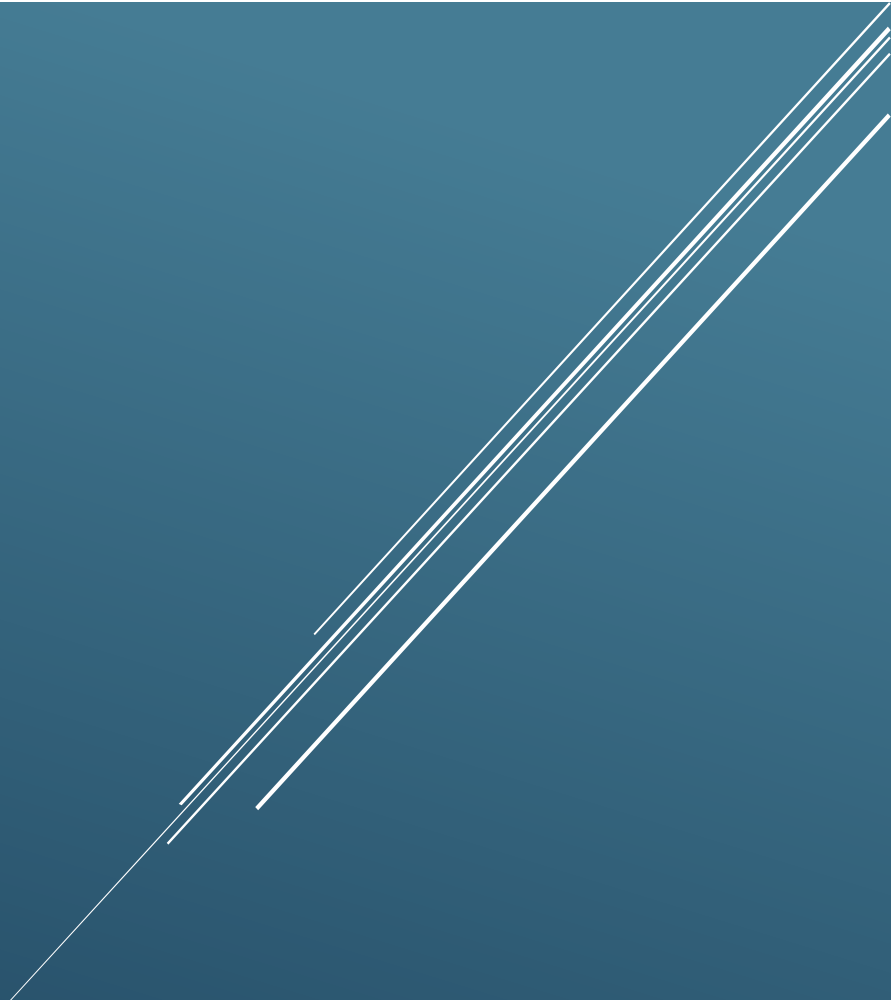




WHY SEEK A SANCTUARY SITE FOR ORCA IN EUROPE?

Brief report prepared for the French Government
Workshop on Cetacean Sanctuaries.
March 2025. Paris, France.

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1. The two orca (*Orcinus orca*) currently held in Marineland Antibes, France, were both born in captivity at Marineland Antibes. One is a female, Wikie, born 1 June 2001 and the other is her son, born 20 November 2013. (Note that the father of Keijo was Wikie's half brother Valentin who is now deceased).
2. Both orca have Icelandic genetic heritage but have spent their entire lives in Marineland Antibes and are acclimated to the climate of the region.
3. Marineland Antibes, situated on the Southern French coast of the Mediterranean Sea, is outdoors and has no shade for the animals (i.e., they are accustomed to the year-round ambient air temperature and the sun).
4. The water in the orca tanks at Marineland Antibes is pumped from the Mediterranean Sea and is kept at ambient water temperature, averaging between 10.5°C and 21°C and naturally fluctuating based on the local sea temperature¹ (i.e., it is not cooled, as is done for many other facilities holding orca captive).
5. The water temperatures that the orca at Marineland Antibes have been living in frequently falls outside the European Association of Aquatic Mammals recommendations for captive orca tank temperatures of between 12°C - 16°C.
6. In the wild, orca are known to frequent waters that are similar in temperature, or much warmer, than those found in the Mediterranean Sea. To illustrate this, just a few examples are given here from tropical/ sub-tropical waters; the Caribbean Sea (Bolaños-Jiménez *et al.* 2014), Fiji (Visser *et al.*, 2024), Hawai'i (Baird *et al.* 2006), the Sea of Cortez (Visser & Fletcher, 2023) and Papua New Guinea (Visser, & Bonoccorso. 2003) with the last two in close proximity to the equator.
7. Water temperatures in Hawaii do not drop below 23 °C and are 26°C or above for up to eight months of the year, Appendix 1, Figure 1.

¹ Quotes from Potier (2023) "*The basins are supplied with seawater by pumping from the Mediterranean Sea. The pumping site is located 500m from the coast and 60m deep.*" and from page "*The automatic readings carried out by the service company in the pool suction manifold indicate an average pool water temperature of 16.1°C with values varying between 10.5°C and 21°C in summer.*" And "*Manual readings taken in the middle of the water column of the P4 basin show a good correlation with automatic readings but are generally higher. This difference can be explained by the use of a different measuring instrument and also by the fact that the P4 basin is the shallowest basin. We can therefore expect the average temperature of P4 to be higher than the average temperature of the basins.*"

8. Water temperatures in Fiji do not drop below 24. °C and are 30°C or above for up to four months of the year, Appendix 1, Figure 2
9. Water temperatures in Papua New Guinea do not drop below 27.5. °C and are 30°C or above for up to nine months of the year Appendix 1, Figure 3.
10. As such it is apparent that a sanctuary in the Mediterranean Sea can meet the meet the biological requirements of the species.
11. Orca have been known to frequent the Mediterranean Sea for centuries (for example, one of the earliest records comes from Pliny, circa 77 CE). Although Reeves & Notarbartolo di Sciara (2006) list fewer than 30 records in the region prior to 1991, they note that there are other records that they don't include such as the Pliny record. Additionally, there have been subsequent sightings of the species in the Mediterranean Sea since that publication, such as off Lebanon and Italy. (e.g., Samarra & Esteban, 2021, Mrusczok *et al* 2022).
12. Furthermore, historical records indicate that orca may have had a wider spatial and temporal presence than these more recent records indicate (Rodrigues *et al* 2016) and regional names (e.g., *Dorque*, from the Languedoc region in South of France, Rondelet, 1558), are indicative that the species visited frequently.
13. In a number of the orca records from the Mediterranean Sea, the animals were killed (e.g., see Reeves & Notarbartolo di Sciara (2006). Removal of even a small number of individuals from a population of orca can have long-term detrimental impacts on the viability of the population (Williams & Lusseau, 2006). Therefore, it can't be ruled out that there may have been orca living, or regularly visiting, the Mediterranean Sea, but that population is now extinct.
14. The French Government has expressed an interest in a Sanctuary for orca in Europe in order for the animals to remain under EU legislation.

How to Cite

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Appendix 1. Sea Surface Temperatures (SST) in warm water locations where wild orca populations are known to reside.

All data sourced from <https://www.seatemperature.org/> which notes that the range of monthly SST water temperatures they have graphed are all derived from many years of historical SST data.

Figure 1. Monthly Sea Surface Temperatures, Hawaii.

<https://www.seatemperature.org/north-america/united-states/honolulu.htm>

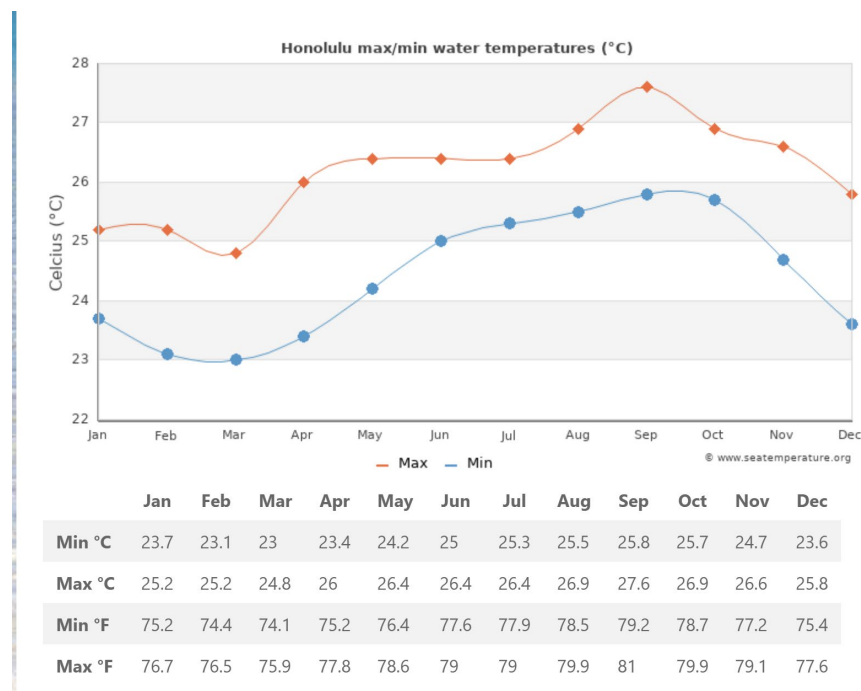


Figure 2. Monthly Sea Surface Temperatures, Fiji.

<https://www.seatemperature.org/australia-pacific/fiji/nadi.htm>

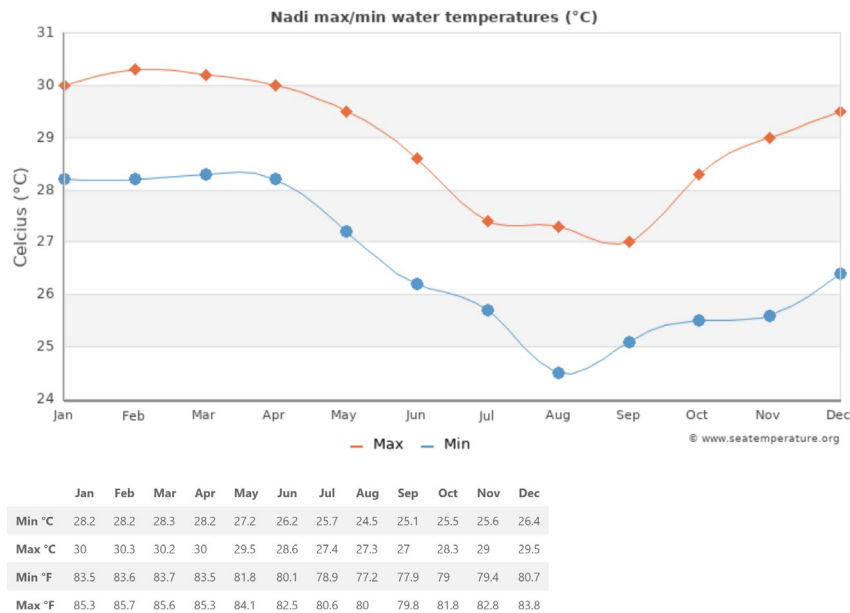
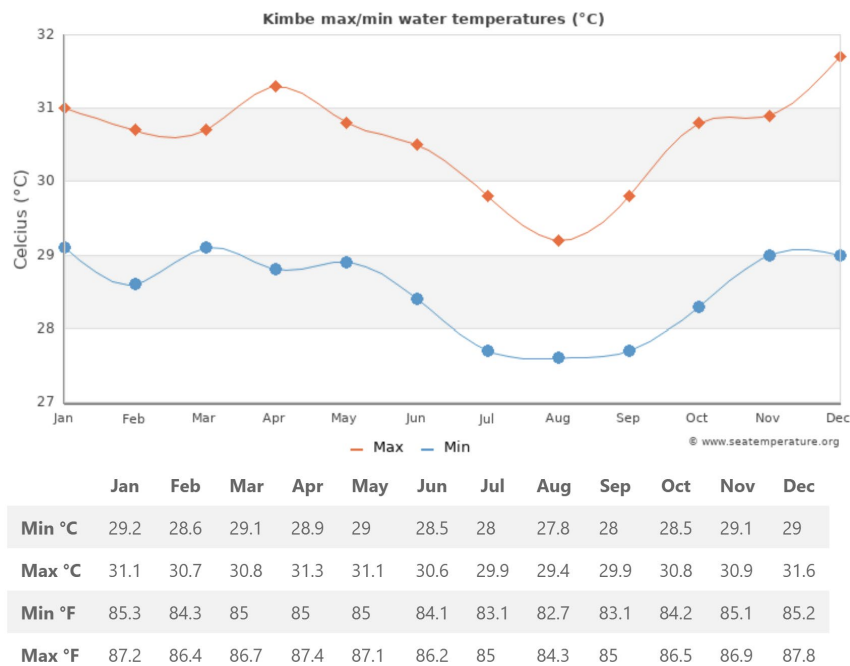


Figure 3. Monthly Sea Surface Temperatures, Papua New Guinea.

<https://www.seatemperature.org/australia-pacific/papua-new-guinea/kimbe.htm>



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