

Oryx

New breeding sites discovered for the world's most threatened seal species

By Damla Beton & Robin Snape, 2nd March 2021

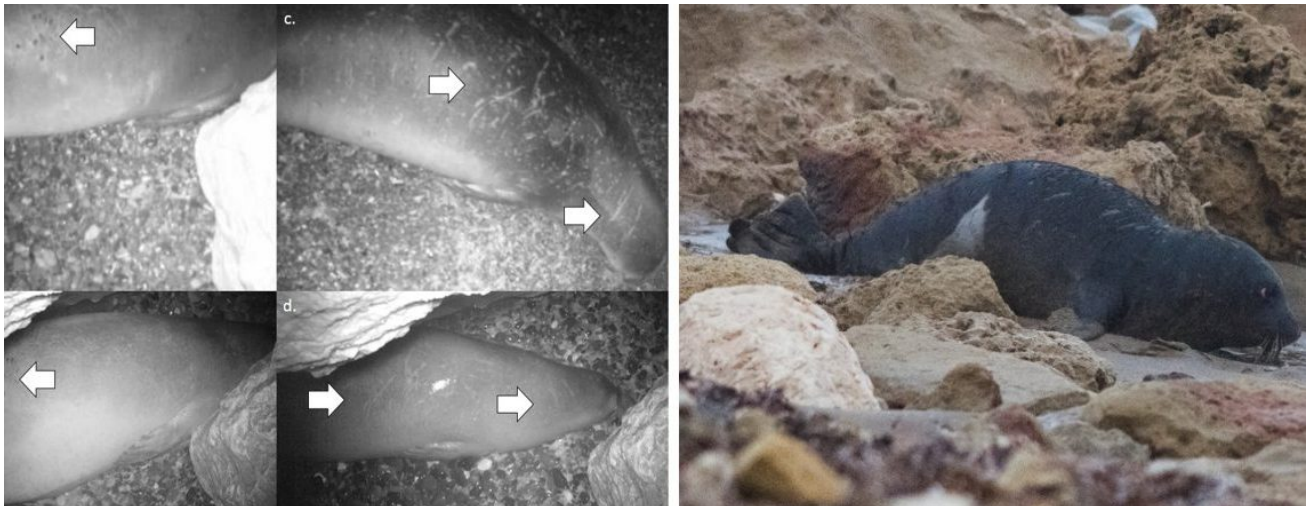
In December 2013, we received a call from beach bar owner, Gökmen Güneş, in Alagadi, a Specially Protected Area on the north coast of Cyprus, where a monk seal had been spotted. We asked a local wildlife photographer to take a look and were excited to find a young pup.



Male Mediterranean monk seal observed in 2013. Photo: Hüseyin Yorgancı

The Mediterranean monk seal is the world's rarest seal species, with two small populations, in the Atlantic and Eastern Mediterranean. As a study species, they are particularly enigmatic because of their use of coastal caves. Without causing great disturbance, it is only possible to monitor their breeding using cameras placed on the walls of sea caves, conditions that are challenging for even the most rugged camera traps! Distributed sparsely across the long and convoluted coasts of Turkey and Greece, the Eastern Mediterranean population has proven difficult to study. Some of

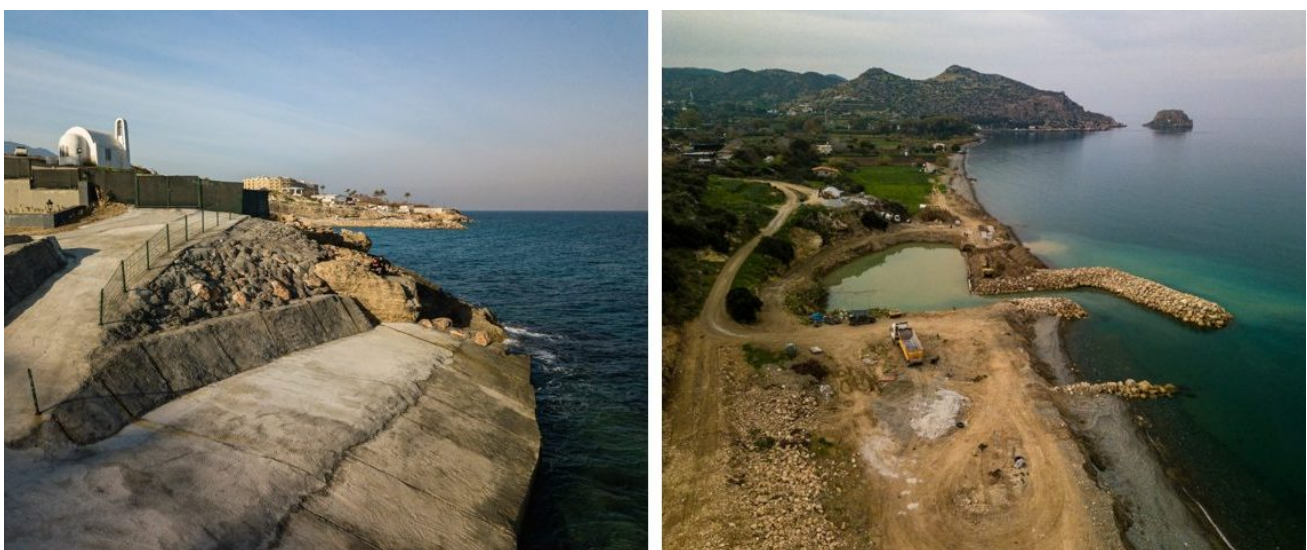
the caves even have underwater entrances and so can only be accessed through scuba diving.



Left: Seal 1 in 2016 (a-c) and 2017 (b-d). White arrows indicate identifying marks. Seal 1 gave birth to at least two pups during the study. We named this seal Ada which means Island. Right: Pup at Alagadi SPA, 11 December 2013. Photo: Olkan Ergüler.

In 2006 and 2007, Cemal Ali Gücü led a team from the Middle Eastern Technical University in Turkey to survey the coast. Among the seals observed, one had still not moulted its ventral birth mark, indicating a resident breeding colony on the island. In addition, an adult male was observed that had also been recorded on the Turkish coast, demonstrating a link between these two populations.

Through questionnaires and conversations with the Turkish Cypriot fishers in 2010, we found that seals were still occasionally encountered and even caught in small numbers. Having heard that surveys by researchers in the south of the island had recently confirmed breeding, we decided to investigate further.



Left: A cave identified by Gucu et al (2009) has now been covered over with concrete for a hotel. Right: Port under construction close to a breeding cave in 2020. Photos: Inanç Tekgüç.

Colleagues at METU provided us with camera traps and training. In 2016, based on the indications

of fishers, we focused on one cave on the west coast, and expanded monitoring to eight caves across all coasts by 2018. The camera-trap monitoring confirmed that at least four seals used three of the caves. Three unique individual seals used the cave on the west coast, of which one gave birth to two pups in successive years. Two caves in the Karpaz peninsula were also used by seals, one of which was confirmed as a fourth unique individual.

Although many of the caves are potential breeding sites, our study found that severe weather conditions impacted breeding success in some years. Increased storminess driven by climate change may be exacerbating this problem. Some caves were also heavily littered with marine debris.



Left: The north coast of Cyprus lies in a marine litter hotspot. Right: Some caves may be inhospitable to pups during winter, as their aspect exposes them to winter storms. Photos: Inanç Tekgüç.

A network of Specially Protected Areas provides some protection to two caves in Karpaz that were used by seals in our study. However, as there were previously so few surveys, important sites were missed in conservation plans. Unfortunately, a rise in coastal development has since impacted four of the caves, including the recently confirmed breeding site. In the Kyrenia area, hotel developments entirely destroyed two caves and a new marina was built close to the mouth of another in the Karpaz region. In 2020, development of a port for recreational fishers was approved, next to the main breeding cave identified in our work.

But there is optimism that with appropriate conservation action, we will continue to see monk seals breeding around our shores. A lack of public awareness is contributing to an alarming rate of habitat loss, and so there are plans to launch a communications campaign for monk seals. Bycatch in small-scale fisheries is also a concern and will be addressed through the MAVA-funded Cyprus Bycatch Project. The team are currently publishing an updated inventory of caves, their conditions, suitability and status to share with the authorities. Meanwhile long-term monitoring is established, continuing and improving.

We thank the MAVA foundation and the North Cyprus authorities for supporting these surveys.

Banner title photo: In July 2013, this cave was engulfed by crude oil when 100 tonnes leaked during transfer to a nearby power station. The area has since recovered, but a layer of tar remains on the

walls. Photo: Inanç Tekgüç

The article [New monitoring confirms regular breeding of the Mediterranean monk seal in Northern Cyprus](#) is available in *Oryx—The International Journal of Conservation*.



[Damla Beton & Robin Snape](#)

Damla completed her PhD in macroecology at Middle Eastern Technical University in Turkey. In 2010, she moved back to Cyprus and has since been working in and directing conservation and environmental research projects at the Society for Protection of Birds and Nature (KUŞKOR) and Society for Protection of Turtles (SPOT).

Robin has worked and volunteered in SPOT since 2003. His PhD focused on understanding and managing conflicts between marine megavertebrates and Mediterranean artisanal fisheries. He has also completed two field contracts working with sea birds and seals for the British Antarctic survey. He is now a Research Fellow at a University of Exeter, where he manages conservation and research projects in Cyprus with local partner SPOT.