

# First documented monk seal (*Monachus monachus*, Hermann, 1779) sightings in Montenegro in 21<sup>st</sup> century

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## ABSTRACT

The most endangered mammal of the Mediterranean – the monk seal (*Monachus monachus*, Hermann 1779) has not been documented in Montenegro for more than 50 years, although there were several credible cases of eyewitnesses who claimed to have seen it, but without material evidence. Working on various projects related to this species, video recordings made by members of the Mediterranean Center for Environmental Monitoring (MedCEM) in 2023 and 2024 clearly indicate that nowadays we can consider the monk seal to be present in Montenegro – at least occasionally. It is extremely important to continue all kinds of education on habitat protection, data collection and monitoring of this species so that the most endangered mammal of the Mediterranean could get a second chance to recolonize the area that was once its natural habitat.

**Keywords:** monk seal, marine caves, citizen science, Montenegro, Adriatic Sea

## INTRODUCTION

The Mediterranean monk seal (*Monachus monachus* (Hermann, 1779)) is one of the rarest marine mammals in the world and one of only a few pinniped species living in tropical and subtropical waters. Currently, only 600 to 700 individuals have remained. Major threats to the Mediterranean monk seal include displacement and habitat deterioration, deliberate killing by humans, fisheries bycatch and entanglement. The Mediterranean monk seal is found in the Mediterranean Sea and the eastern Atlantic Ocean along the coast of Northwest Africa. The Mediterranean monk seal is listed as endangered species under

Marine Mammal Protection Act (NOAA Fisheries, 2024).

Three different common names for the monk seal on the eastern coast of the Adriatic Sea (“morska medvjedica”, “foka” and “tuljan”) testify about its long presence in the area. Although the previous studies on this species in the Montenegro are rare and numerous observations from the previous decades had not been documented, there are some photographic and video material confirming its presence in the area.

Unfortunately, the presence of the monk seal in the coast of Montenegro has not been

documented for more than 50 years (last documented record was by film camera in Igalo, Boka Kotorska Bay in 1968).

The first systematic approach aiming to provide evidence of the presence of the Mediterranean seal in Montenegro was initiated by the Greek NGO Archipelagos and the Mediterranean Center for Ecological Monitoring in 2013, when together with the Institute of Marine Biology, University of Montenegro (and the financial support of Jugopetrol AD Kotor) systematic research of semi-submersed marine caves along the Montenegrin coast started (Mačić *et al.*, 2013). The research continued in two subsequent phases during 2014 and 2015 towards Southern part of the coast, when the NGO Biospeleological Society of Montenegro joined the team in the process of mapping the most suitable caves for potential monk seal habitat (Mačić *et al.*, 2014, 2015). During the research, more than 120 semi-submerged caves were registered, out of which 116 were described in detail, while it was estimated that as many as 36 of them could be a suitable habitat for the species (Mačić *et al.*, 2018).

Setting up a photo-traps for monitoring of the monk seal in two marine caves (Budva and Bar municipality) was done for the first time in Montenegro by NGO MedCEM during the project “Support local community's involvement in protection and promotion of the potential marine protected area – Katič” (2018-2021), but unfortunately without any records of the monk seal.

## MATERIALS AND METHODS

As part of the project activities, but also after the ending of the projects, MedCEM collected data from eyewitness encounters that testified occasional presence of the monk seal in Montenegro.

Furthermore, from May 2024, as part of the MSA/Euronatur project (with the consent of the Environmental Protection Agency of Montenegro) four new photo-traps were installed: two in the Ulcinj municipality and one camera each in the territory of Bar and Budva municipalities. For the maintenance reasons and control, cameras have been visited every three months.

## RESULTS AND DISCUSSION

Despite the three-year systematic exploration of the marine semi-submersed caves in 2013–2015, as well as the setting of the photo traps in 2020, 2021 and 2024, no material evidence was found that would disprove the generally accepted opinion that the monk seal has disappeared from the Montenegrin waters.

However, information about the presence of the monk seal in June 2023 came from a fisherman who was surprised by a large seal sunbathing on the rocks below the Hotel Albatros in Ulcinj during the early morning hours. The animal was frightened by the appearance of the fisherman and she slipped into the water leaving no time for better observation. In July of the same year, information about the presence of the monk seal in the water nearby Small Beach of Ulcinj arrives from another fisherman. Furthermore, we received information from the president of the Ulcinj Sports Fishing Society “Bojana” that their experienced member Nagip Kurti on August 7<sup>th</sup>, had a close encounter with a seal diving into the cave.

Having in mind that area of Pinješ (Ulcinj) is full of interesting semi-submersed caves and slits we (underwater videographer Đorđe Kovjanić and the author) came to Ulcinj on August 9<sup>th</sup> 2023 with the aim to determine the exact location of that “monk seal” cave and to

evaluate if that location might also become the subject of the future monitoring by photo-traps.

This marine slit is deep and narrow but at a depth of 1–3 meters there is a wide horizontal submersed part that has a visible exit in the form of a tunnel on the opposite side of the rock, through which beam of sunlight reach the cave. We entered the slit snorkeling and there in the dark, at a distance of 2–3 meters from us, our underwater lamps illuminated a clearly recognizable animal, the monk seal that approached us and then swam away from us all the way to the exit on the other side, and returned again interested to examine us (Fig. 1). We estimated that it was long not more than a meter and a half, and that weighed approximately 30–40 kilos. This corresponds to an individual that is not older than a year and a half.



Figure 1. Monk seal in Ulcinj area 2023.

Although all the images were counter-light and we were aware that only the silhouette was clearly visible in the images, we didn't want to disturb the animal by surrounding it from the other exit to get better shots, so we just came out of the cave (Video is available at: [https://www.youtube.com/watch?v=L4wrPpXG0\\_I](https://www.youtube.com/watch?v=L4wrPpXG0_I)).

The first doubt after the first encounter in 2023 was – is that individual all alone? The size of the animal we recorded indicated a very young individual (not older than a year and a half), most likely a pup that still spends time

with its mother.

After this record in Ulcinj, in the following two months, a monk seal was seen in the bay of Jaz and Boka Kotorska bay. Four fishermen claimed that they had also seen two heads at the same time in Risan (Boka Kotorska bay), supporting the hypothesis that the cub we recorded might have been accompanied by its mother.

As a part of MSA/Euronatur project during August 27<sup>th</sup>, 2024, Đorđe Kovjanić entered the semi-submersed cave in the Bar area to check photo-traps camera previously installed in the air pocket at the end of the cave. In the dark, he spotted a movement in front of him and turned on the camera and small helmet lights. A monk seal (Fig. 2), slightly larger than the one we recorded a year ago, approached him from the darkness, “smelled” his camera (which is in recording mode) and went towards the exit (Video is available at: <https://www.youtube.com/shorts/ftV8X72fuz8>). The trap camera installed at the end of the cave unfortunately did not register the animal. This second monk seal recorded in 21<sup>st</sup> century, judging by its size, could be a year older than the one from 2023, but there is not enough evidence for such a claim.



Figure 2. Monk seal in Bar area

## CONCLUSIONS

The Montenegrin coast has always been considered the habitat of the monk seal, and the recordings we made in 2023 and 2024 prove that this species is present, at least occasionally, in Montenegro. The collected eyewitness statements from the previous decades often coincided with occasional occurrences of the animal in Croatia, from which it could be concluded that almost all individuals that were registered along the Croatian coast in previous periods had to pass from the direction of Greece along the Albanian and Montenegrin coasts before reaching Croatia (Bundone *et al.*, 2013; Panou *et al.*, 2017). The fact that in 2023 we recorded the animal for the first time three days after it was seen for the first time in the same place, indicates that it is possible that the animal stays in certain places in the territorial waters of Montenegro much longer than we initially thought. This is confirmed by other numerous sightings that continued to report encounters with seals in 2023 and 2024.

The slight recovery of the population of this species that has been registered in recent years (Karamanlidis, 2024) will probably lead to the fact that in the following years we can expect an increased fluctuation of individuals that will reach Montenegro from Greece via Albania along the Adriatic coast. Therefore, it is extremely important to continue all kinds of education, habitat protection, data collection and monitoring of this species so that the most endangered mammal of the Mediterranean could get a second chance to recolonize the area that was once its natural habitat.

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Alliance & Eutonatur Project AMSP (2024-2027) continuation of monk seals monitoring in Montenegro started to deliver positive results.

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## **Prva dokumentovana viđanja morske medvjedice (*Monachus monachus*) u Crnoj Gori u 21. vijeku**

Dušan VARDA

### **SAŽETAK**

Najugroženiji sisar Sredozemlja - morska medvjedica (*Monachus monachus* (Hermann, 1779)) u periodu dužem od 50 godina nije bila dokumentovana u Crnoj Gori, iako je postojalo više verodostojnih slučajeva očevidaca koji su tvrdili da su je videli, ali bez materijalnih dokaza. Radom na raznim projektima vezanim za ovu vrstu, video snimci koje su napravili članovi Mediteranskog centra za ekološki monitoring (MedCEM) 2013. i 2014. godine nedvosmisleno ukazuju na to da se danas može smatrati da je morska medvjedica prisutna makar povremeno u Crnoj Gori. Od izuzetne je važnosti nastaviti sve vrste edukacije, zaštite staništa, prikupljanja podataka i monitoringa ove vrste kako bi najugroženiji sisar Mediterana dobio drugu šansu za rekolonizaciju područja koje je nekada bilo njegovo prirodno stanište.

**Keywords:** morska medvjedica, morske pećine, građanska nauka, Crna Gora, Jadransko more