

In Focus

NEW DISCOVERIES IN CILICIA

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After the loss of almost two thirds of the last surviving sizeable population of Mediterranean monk seals on the Mauritanian coast in 1997, small individual groups scattered in remote locations, which have been overlooked and even ignored so far, are now gaining more importance.



The monk seals inhabiting the Cilician Basin in the Eastern Mediterranean, corresponding largely to the Turkish province of Mersin, are among these neglected individuals. Until recently, the seals of this region were unknown to science, although large herds were once known to the locals, who find it unbelievable to hear that the species is now faced with extinction. Only two decades ago the region was untouched, dominated by long, sandy, seemingly endless beaches. Fishing was a profitable way of life, and although elderly fishermen were even then complaining about a decline in their catches, fish stocks were sufficient to meet the needs of both fishermen and seals. Today, however, the beaches and other wildlife habitats have been replaced by ugly, tall buildings. The fishing industry now comprises hundreds of trawlers where there once used to be only a few small boats. Fish stocks have shrunk so drastically that neither fishermen nor seals are catching enough fish to meet their basic needs. Once there were hundreds of seals, but today only a handful survive. Now, the only hope remains in the western part of the basin, mountainous Cilicia, its steep, cliff bound coast still largely undisturbed. Here there can still be found suitable habitats for the Mediterranean monk seal, but positive action to save the seals is needed.

One such endeavour is *The Mediterranean Monk Seal Conservation Project*, launched in 1995 by the Middle East Technical University's Institute of Marine Sciences, and supported by WWF International, the Royal Netherlands Embassy of Turkey, and the PADI Foundation - USA. The project was launched after local fishermen began killing seals in considerable numbers in 1994. Interviewing these men revealed that the seals were threatening their livelihoods by damaging

their nets while trying to ‘steal’ fish, thereby decreasing catches and necessitating costly repairs. These problems were exacerbated by a drop in profits also caused by a general decrease in fish stocks.



In contrast, an examination of fisheries in the region reveals a long, profitable history, since fish – including uncommon species that are particularly appreciated for their flavour – sustain high market prices due to demand. Even so, the Eastern Mediterranean is considered ‘unproductive’ in terms of fish because of its geography, climate and current systems. Fish stocks are at a level that can only sustain a small-scale artisanal fishery. However, human greed has led to industrial-scale boats fishing within this sensitive ecosystem, equipped with huge, unselective trawl nets and purse seines. Today, a substantial reduction in total catch is apparent due to depletion of the fish stocks.

Existing fishery regulations prohibit trawling within a 3-mile zone extending from the coastline – an increase from 2 miles as a result of pressure from the project – but because of the marine topography, trawling is only possible within the coastal strip, which is, by law, reserved for the small-scale fishery. Coastal areas serve as nursery grounds for larvae, juvenile and immature fishes, which are crucially important for the health of fish stocks. As a direct consequence of illegal trawling, fish stocks are unable to rejuvenate and small-scale coastal fishermen and sea mammals are adversely affected. The monk seals then resort to stealing and the fishermen to killing.

To reverse this trend and prevent further deaths, the project opened an office in an area of high animosity towards the seals. The staff, in successfully forging friendships with local fishermen, have been able to explain the value of the seals within these waters. From the fishermen's point of view, the survival of the seals could now hold the key to banning trawling completely in the area, thus allowing the recovery of fish stocks. They have already seen progress towards these aims, with an extension of the trawling exclusion zone. As a result of action by the project, six protected areas (one of which is an island) have been established, where all construction, natural landscape modifications and destruction of flora and fauna has now been banned (See [Regional News](#)).

In addition, 1998 has seen the merging of the project with the *Underwater Research Society* (SAD) and the launch of an 'Adopt-a-Monk Seal' programme to raise vital funds. These are needed to provide another patrol boat for the region which, with the involvement of local fishing boats, will be more effective in halting illegal fishing activities (See [Patrol Boat Appeal](#)).

Another aspect of the project is concerned with monk seal research. A systematic search of the entire area, which is more than 250 km in length, was carried out in order to prepare a distribution map of the Cilician monk seals. Thirty-nine caves were discovered, in which either a seal or its remnants, such as faeces, fur and tracks, were observed.

Caves are a crucial factor in the survival of the Mediterranean monk seal. Beaches, which are their natural habitat, are no longer available to them due to ever-expanding tourism. Therefore, the number of seals which can live in the region is limited by the availability of caves, away from human interference, in which to rest and rear their young. Realistically, such caves should be large enough to accommodate a family of monk seals, which can grow up to three meters in length.

Study of these precious animals is difficult, because those few that survive are not gregarious and are dispersed over a wide area. Counting the seals has been one objective of the project, and observations are carried out at locations and at times when the seals are sighted most frequently. So as not to count the same seal twice, each animal's distinguishing features are noted – such as the presence of a scar, distinctive colouring or markings, size, or the shape of the head. Once these features have been recorded, each animal is given its own name. So far, we have recorded thirteen individual seals in this region.

To observe seals within their caves without disturbing them, 'Trailmaster' infrared monitors were installed in the most actively used shelters. The times at which seals leave and enter these caves are now recorded and photographs taken. The data gathered in this way has produced valuable insights into the habits and behaviour of monk seals.

Conservation work undertaken by the project focuses on educational activities and raising awareness among local people. Information panels are set up on the beaches during the holiday season, explaining how people may inadvertently harm seals. Ministries and other institutions are informed of the crisis affecting the region's fishing grounds, and of proposed solutions developed in consultation with fishermen. Visits are made to local primary schools, where the main objective is to explain that the problems the seals face now may soon affect people living in the region, and that the disappearance of the seal today will be followed by birds and other wildlife

tomorrow. Through its work the project is therefore addressing very broad environmental issues. Yet its central goal remains saving the Mediterranean seal from extinction, so that future generations may enjoy this fascinating marine mammal.