



Promote the protection
of Mediterranean monk seal (*Monachus monachus*)
in Albanian coastal regions

Himara Meeting 25/02/2017

Project Leader: Assoc. Prof. Rigers Bakiu

Background to the Rufford Foundation and Small Grants



- The Rufford Foundation is a UK registered charity which funds nature conservation projects across the developing world. To date the Foundation has awarded grants to over 3000 projects in **155 countries**.

The Rufford Foundation

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Fethi Bengil

The Forgotten Species: Marine Mammals in the Turkish Aegean Sea

This conservation-oriented project will provide information on the ecology of several marine mammal species in the Aegean Sea, Turkey. Such information is vital for the effective conservation of these species. Izmir Bay and its adjacent waters are chosen as a pilot study area. Several species of marine mammals are known to occur in the area, including the bottlenose dolphin (*Tursiops truncatus*), short-beaked common dolphin (*Delphinus delphis*) and the critically endangered monk seal (*Monachus monachus*) that uses the area for breeding.

However, the information on the status of these species is lacking. This area is subject to anthropogenic activities such as intense fishing, tourism and ship traffic, all being potential threats to marine mammals.

The specific aims of the project are: 1) to document marine mammal species regularly occurring in the area; 2) to provide abundance estimates for these species; 3) to identify key areas used by different species and 4) to identify potential threats.

This information is fundamental for appropriate assessment of the conservation status of marine mammals in this region and will constitute the scientific baseline for effective conservation, including future protective legislation.

For further information contact:
Email: oceanographerist@gmail.com

Project Update: July 2013
Read about the latest progress of this project in the report below.

File Download	Size
July 2013	182 KB

Final Report
Read more about the activities undertaken and findings of this project in the final report below.

File Download	Size
Final Report	84.5 KB
Poster	418.1 KB

2nd RSG Grant Awarded
Congratulations to Fethi for being awarded a 2nd RSG. To read about this project visit http://www.rufford.org/projects/fethi_bengil

Town/Region	Izmir
Country	Turkey
Continent	Asia
Categories	Mammals, Marine
Date	26 Oct 2012

Nibani Houssine

Environmental Education and Research in the Coastal Areas of Al-Hoceima Province, Morocco

Although it is one of the poorest provinces of the northern Morocco, the province of Al Hoceima hosts one of the most astonishing coastal biodiversity clusters of all the Mediterranean. The almost forty kilometres of steep rocky cliffs dropping into the sea are home to hundreds of pairs of endangered bird species, and create an unbelievable submarine landscape hosting hundreds of species from the smallest invertebrates to the rare Monk Seal.

The area is almost untouched by humans from the land because of the steepness of the cliffs, but there is a large fleet of commercial fishing vessels which ply this coast. This coastal core area is currently covered by a weak provincial protection status and together with other relevant marine zones of the province, act as a 'lung' for the commercial fish stocks targeted, and several important nursery areas have been identified. Due to the weak protection status and the lack of proper monitoring, the access of damaging bottom trawlers and the use of explosives for fishing is not prevented. Siting of garbage dumps on cliff tops along the coast is also causing problems through pollution, run-off etc.

The project will seek to address this complex set of problems with a large environmental education program, developed through an existing non-governmental organisation, Association Socio-Culturelle du Bassin Méditerranéen Section Al Hoceima. Contact the team at asocmed@yahoo.fr

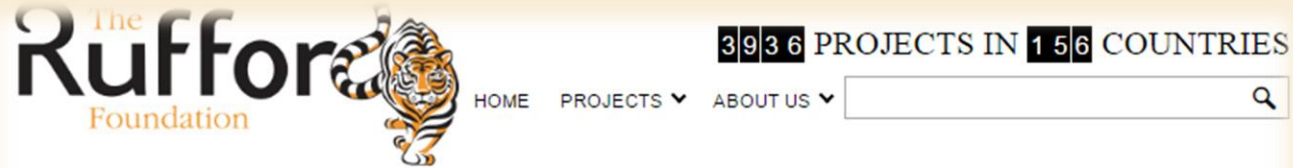
In 2005 Houssine won the Hassan II Prize for environment.

For further information contact:
Website: <http://membres.lycos.fr/nibani66>

Website Campaign
Nibani Houssine's new website campaign to protect the AL Hoceima National Park Ospreys through the environment education program activities <http://balbuzards.cfsites.org>

Town/Region	Al Hoceima
Country	Morocco
Continent	Africa
Categories	Birds, Fishes, Marine, Turtles
Date	1 Mar 2002

Background to the Rufford Foundation and Small Grants



Rigers Bakiu

*Promote the Protection of Mediterranean Monk Seal (*Monachus monachus*) in Albanian Coastal Regions*

The Center of Wildlife Ecology and Diseases Investigation as the unique centre of reference in Albania and part of Agricultural University of Tirana is going to implement the project proposal under the supervision of Associate Professor Rigers Bakiu with a great support from Ministry of Environment. The geographical area of the project will be all Ionian coast, from Cape of Stillo till Karaburun Peninsula and Sazan Island, which were declared by the government as Marine Protected Area (MPA) in 2010. Mediterranean Monk Seal is one of the charismatic species of the Management Plan of MPA, elaborated and funded by UNDP. No project have been implemented regarding this endangered species population in the past in Albania, while in Greece, at least two project have been implemented by sensitizing the community for their protection and developing the ecotourism. Furthermore, the use of camera traps for gathering accurately the information about their presence will also boost the tourism in the nearby regions and improve the fish recovery and biodiversity protection from the minimization of dynamite use. This is because a lot of people continue to use dynamite as a practice of illegal fishing even in the MPA of Karaburuni-Sazani and it is supposed that the camera will register even the presence of this terrorist action in the regions, where the camera will be installed. Fishermen who are performing sustainable fisheries practice will support my staff activities regarding the project.

Considering the fact that there has never been a study or a project made on this species, the assessment of both possible habitats is rather important to forerun the illegal hunting and damage of the habitats and the rocky caves where it proliferates. Together with the directory of protected areas in Vlore, we have realized advanced meetings and we have been initiated by them to ask for funds for the beginning of monitoring and protection projects on this species with high biological, touristic and cultural values.

For further information contact:

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Website: <http://profesor.ubt.rash.al/rigersbakiu/>

Town/Region	Karaburuni Peninsula, Sazan Island, Stillo
Country	Albania
Continent	Europe
Categories	Mammals, Marine
Date	27 Jun 2016



Background to the Rufford Foundation and Small Grants



- The Rufford Foundation seeks to fund people whose work makes a pragmatic, substantial and longlasting contribution to nature conservation.
- Such work often includes other elements such as sustainable development, public education and environmental campaigning.
- Rufford Small Grants are designed to provide accessible and flexible funding for those who want to bring about **change**.
- Conservationists from any country working anywhere in the **developing world** are welcome to apply.
- Applicants are not restricted to qualified scientists, but must be able to compile a written report to describe and quantify the success of their work with appropriate references.
- Undergraduate and school level expeditions are not eligible.
- More information about the Rufford Foundation and previous Award and Grant recipients may be found on the Foundation's website at www.rufford.org

Conservation Importance

- Mediterranean monk seal (*Monachus monachus*) is the most endangered species worldwide and is currently on the brink of extinction. Using the IUCN guidelines it is considered as Endangered species.



Conservation Importance

- Although formerly found all over the Mediterranean Sea, Black Sea and northwest African coast, the species' numbers have now been reduced to perhaps less than 600-700 (an estimated 350-450 of these are mature individuals).
- The population has also been fragmented into 3–4 subpopulations:

The largest subpopulation is located in the eastern Mediterranean Sea and numbers 350-450 individuals (including mature and immature individuals). It is estimated that **300–400** live in Greece (MOM 2007, 2008, 2009) and about **100** in Turkey (Güçlüsoy et al. 2004).

Based on data from the closest extant relative of the Mediterranean Monk Seal (i.e., the Hawaiian Monk Seal) the number of mature individuals in the eastern Mediterranean is likely fewer than **250**.

Conservation Importance



- **Native:**

Croatia; **Cyprus**; **Greece**; Mauritania; Portugal (Azores - Regionally Extinct, Madeira); **Turkey**; Western Sahara

- **Possibly extinct:**

Albania; Egypt; France (Corsica, France (mainland) - Regionally Extinct); Israel; Italy (Italy (mainland), Sardegna, Sicilia); Lebanon; Libya; Spain (Balears, Canary Is. - Regionally Extinct, Spain (mainland) - Regionally Extinct); Syrian Arab Republic; Tunisia

- **Regionally extinct:**

Bosnia and Herzegovina; Bulgaria; Montenegro; Romania; Slovenia

Conservation Importance

- It has been seen in the peninsula of Karaburun and in the island of Sazan in the south of Albania, as well as in the Ionian Sea between the town of Sarande and Corfu Island of Greece.



Conservation Importance

Habitat and Ecology

- Mediterranean Monk Seals are medium-sized phocids that reach 2.3-2.8 m in length (Gilmartin and Forcada 2002).
- In the eastern Mediterranean, newborn pups averaged 102.6 cm in length (i.e., total length from the snout to the end of the hind flippers; $N = 8$, $SD = 10.74$) and 15.5 kg in weight (Dendrinis 2011).
- Adults weigh from 240-300 kg, and newborns 15-26 kg (Boulva 1979, Gilmartin and Forcada 2002), with records of a male reaching 400 kg and a pregnant female reaching 302 kg (Sergeant et al. 1978).



Conservation Importance

Habitat and Ecology

- Adult females **moult** an average of 134 days after parturition, and sometimes begin the moult prior weaning their pup (Pastor and Aguilar 2003). In males, the process of developing the mature pelage pattern is gradual; it involves at least two annual moults and can be completed by the age of 4 years (Badosa et al. 2006).
- In the eastern Mediterranean in contrast the first molt occurred 19-57 days postpartum.



Conservation Importance

Habitat and Ecology



- Mediterranean Monk Seals once hauled out on open beaches (Johnson and Lavigne 1999b, Johnson 2004) but today they use marine caves with sea entrances for hauling out, resting and pupping throughout their range.
- Most marine caves used by Mediterranean Monk Seals for resting and pupping possess a set of common geophysical characteristics, that include an entrance above or below water level, an entrance corridor, and a dry surface/area, where the seals haul out (Dendrinis et al. 2007b). Seal preferences regarding the use of a cave as a resting or pupping site are influenced by these parameters (Karamanlidis et al. 2004).
- In a study that covered 250 km of coastline inhabited by Monk Seals in the Cilician Basin region of southern Turkey, 282 caves were searched. Of these, 39 showed evidence of Monk Seals, including three that were used for pupping and 16 that were actively being used at the time of the survey (Gücü et al. 2004).
- Similarly, in Greece more than 500 caves have been found to be occupied by the species and more than 100 to be used for pupping (MOM 2007, 2008, 2009). Monk Seal activity in the marine caves in the eastern Mediterranean is highest in autumn and winter and coincides with the pupping season of the species (Gücü et al. 2004, Dendrinis 2011).

Conservation Importance

Habitat and Ecology



- In Turkey and Greece, most pups have been recorded in the months **October and November** (Dendrinios et al. 1994, 1999; Dendrinios 2011).
- Pups begin to catch fish toward the end of their lactation period (Pastor and Aguilar 2003). Pups are weaned when they are about **four months** old, with up to five months reported (Pastor and Aguilar 2003, Aguilar et al. 2007).
- Pups enter the water and begin **diving during their first week** and from that point onwards spend **55-74% of their time at sea** (Dendrinios 2011); they spent more time at sea and diving at **night than during the day**; most dives were to the bottom for relatively long periods, probably indicating foraging. T
- The mean depth of dive was **11.6 m** and its mean length was 149 seconds (Gazo et al. 2006). In the Northern Sporades Islands in Greece, two rehabilitated weaned pups dived on average to greater depths and even managed to dive to a depth of **200 m** (Dendrinios et al. 2006, 2007a).

Conservation Importance

Habitat and Ecology

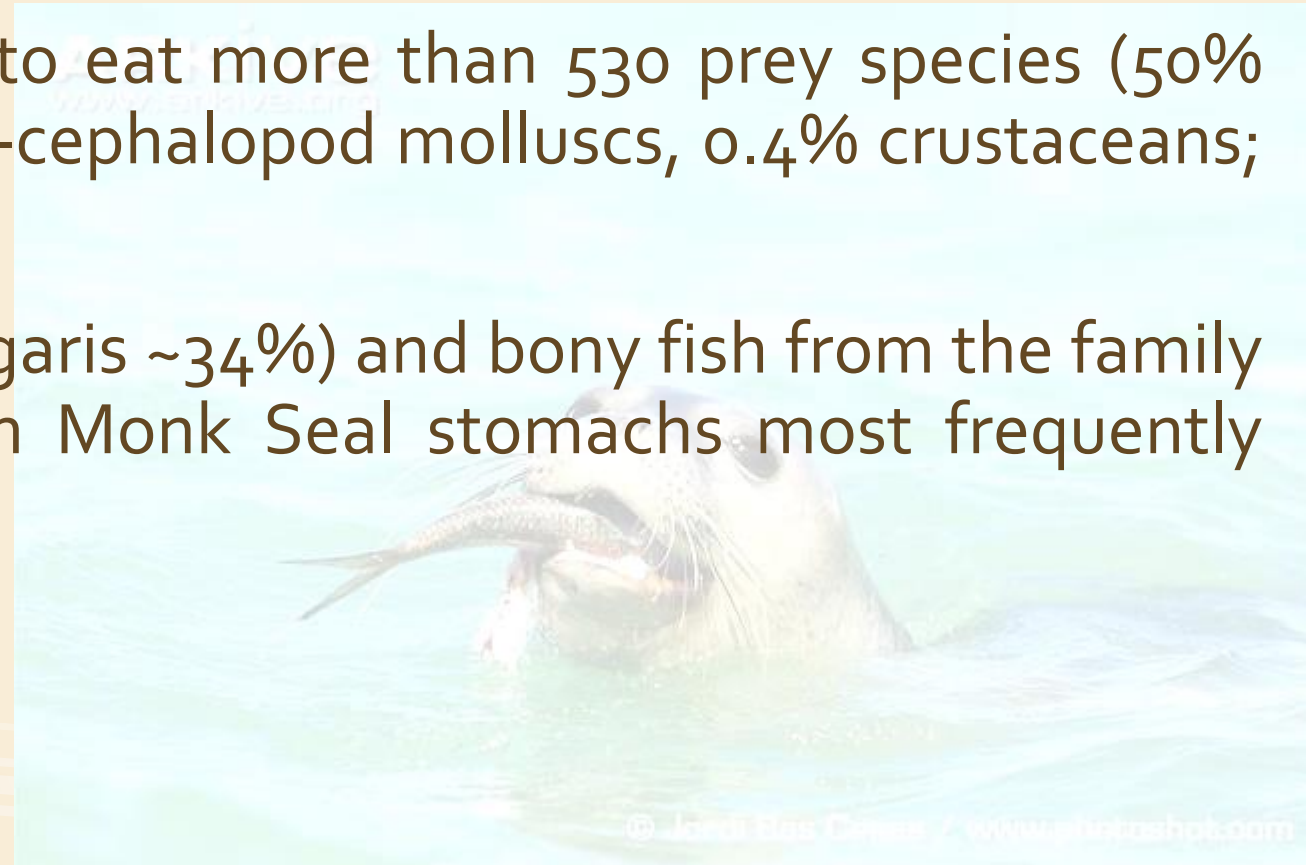


- Generation length for this species is **11.2 years** (Pacifici et al. 2013). Female Mediterranean Monk Seals probably become sexually mature at **3-4 years** of age.
- Transit feeding dives lasted 5-7 minutes, during which the seal moved continuously along a shoreline apparently foraging. A similar behaviour has been observed in Turkey, where adult Monk Seals dove for approximately 6.5 minutes and rested at the surface for approximately one minute (Kıraç et al. 2002).
- Monk seals in the eastern Mediterranean have been recorded to travel long distances, for example **~288 km** in three months with a maximum straight distance travelled of **~78 km** (Adamantopoulou et al. 2011).

Conservation Importance

Habitat and Ecology

- Stomach content analysis of dead Monk Seals has revealed that they have a heterogeneous diet consisting of bony fishes, cephalopods, and crustaceans.
- In Greece, Monk Seals are known to eat more than 530 prey species (50% cephalopods, 48% fishes, 1.5% non-cephalopod molluscs, 0.4% crustaceans; Pierce et al. 2011).
- The common octopus (*Octopus vulgaris* ~34%) and bony fish from the family Sparidae (~28%) were identified in Monk Seal stomachs most frequently (Pierce et al. 2011).



Conservation Importance

Major Threats



- Habitat deterioration, destruction, and fragmentation have played a significant role in the plight of the Mediterranean Monk Seal.
 - Once an open beach dweller, the species has been persecuted by humans for centuries and forced to occupy increasingly marginal habitat. The gradual process from occupying open beaches to being displaced and forced into increasingly marginal habitat (i.e., **smaller and more unsuitable marine caves**) has been thoroughly documented (Johnson and Lavigne 1999a). This threat is still in place today, particularly in the eastern Mediterranean (MOM 2007, Notarbartolo di Sciara et al. 2009, Kiraç et al. 2013).

Conservation Importance

Major Threats



- Interactions with fisheries are of great conservation concern, throughout the species range (Güçlüsoy and Savas 2003, Güçlüsoy 2008, Karamanlidis et al. 2008, Hale et al. 2011, González and Fernandez de Larrinoa 2013).
- Deliberate killing of Monk Seals mainly by fishermen was responsible for one-third of all mortalities of 79 stranded animals in Greece (1991-1995) and is considered the single most important source of mortality for this species in the eastern Mediterranean (Androukaki et al. 1999).
- Deliberate killing, hunting, and capturing live animals for exhibition purposes were the main cause for the population reduction of the species in Turkey until 1980 (Kıraç et al. 2013).

Conservation Importance

Major Threats



- Mediterranean Monk Seals have been entangled in a wide variety of fishing gear including set-nets, trawl nets, and long-lines (Johnson and Karamanlidis 2000) and entanglement remains a major source of mortality in the eastern Mediterranean Sea, especially for sub-adult animals (Karamanlidis et al. 2008, Kiraç et al. 2013).
- Currently, illegal industrial and artisanal fishing is one of the main threats to the survival of the colony, mainly for sub-adult seals (González and Fernandez de Larrinoa 2013).

Conservation Importance

Major Threats



- In southern Turkey an important monk seal colony almost disappeared in the 1990s, when industrial-scale fishing in the area reduced the available fish sources and negative interactions of artisanal fishermen with monk seals (i.e., deliberate killings) increased.
- However, a series of regulations enforced to protect fish sources alleviated the problems and helped the local monk seal population to resume pupping in the area (Gücü et al. 2004).

Objectives of the project



- The present situation constitutes an emergency the sensitizing, monitoring and protection of this species, which is in a critical condition of extinction.
- Considering the fact that there has never been a study or a project made on this species, **the assessment of both possible habitats** is rather important to forerun the **illegal hunting and damage of the habitats** and the **rocky caves where it proliferates**.
- Together with the directory of protected areas in Vlore, we have realized advanced meetings and we have been initiated by them to ask for funds for the beginning of monitoring and protection projects on this species with high biological, touristic and cultural values.

Objectives of the project



1. Increasing public awareness of monk seal conservation in Ionian Coastal Areas
2. Sensitizing the fishermen and their organizations for the significance and the values of this endangered species.
3. Establish a monitoring system of monk seals, by activating students and young fishermen to photograph and record in cases of the exposure of this species.

Sensitizing workshop with the fishermen in Vlore and Himare

- Make the fishermen and their organizations aware about the significance of species.
 - Workshops will be organized with the fishermen from Vlore and Himare.
 - Round table meetings will be held in order to get their opinion and suggestions.



Monitoring the Coastal areas

- Monitoring cameras installation and check around key points of Albanian coasts.
- Practical training the groups of young people for using and monitoring monk seal.
 - The training the trainers approach will be used during
 - Training of the young student from University of Vlore and Agricultural University of Tirana, involved fishermen.



Create an Agreement of Alliance for the Protection of Mediterranean monk seal

- Realize several meetings with the local organizations of Vlore and the prefecture for
 - Raising the awareness and
 - Creation of an alliance entitled "Protect the Mediterranean monk seal (*Monachus monachus*)".





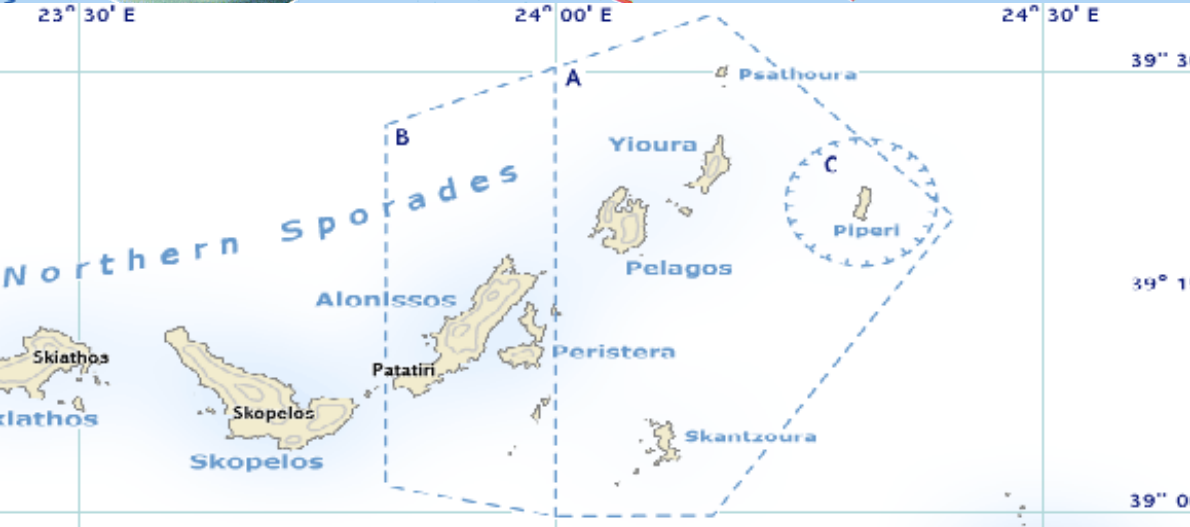
National Marine Park of Alonissos Northern Sporades

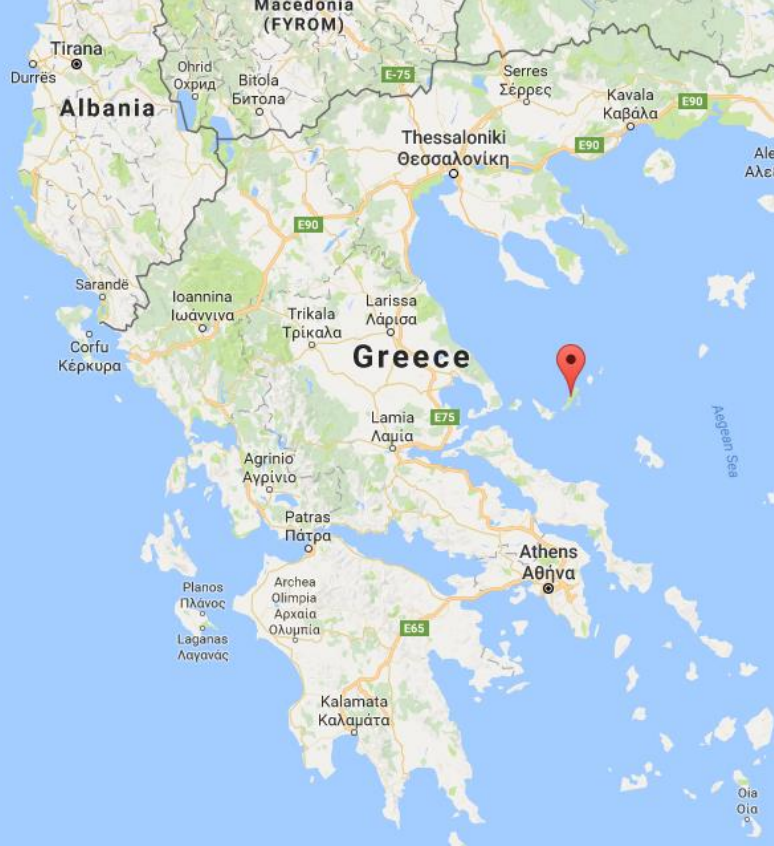


The **National Marine Park of Alonissos Northern Sporades (NMPANS)** is the first protected area for the conservation of the Mediterranean monk seal.

It includes the island of Alonissos and numerous uninhabited islands. One of the five main islands of this zone, Piperi, is **the core refuge for monk seals in the archipelago** and boats may not venture closer than 3 miles from its coastline. In addition, industrial-scale fishing is strictly regulated throughout the 2,200 Km² of the Marine Park area.

The **increasing number of monk seal pup births** that have been recorded during ten consecutive years in the Sporades is an encouraging sign for the conservation of this species.





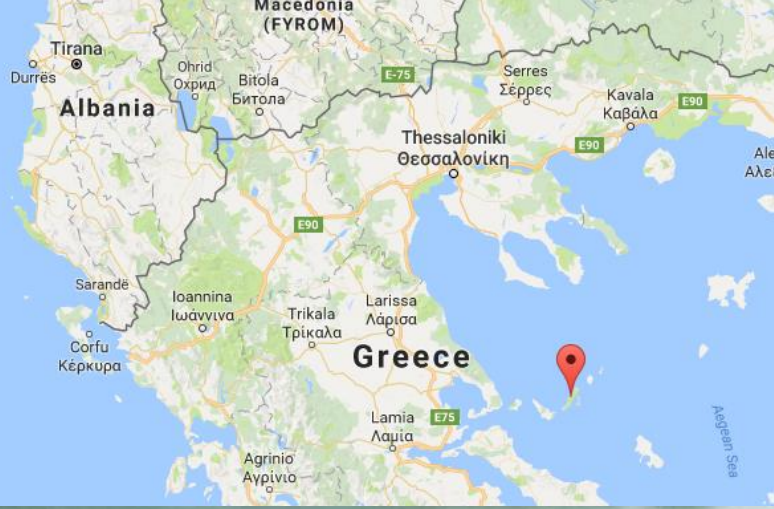
National Marine Park of Alonnissos Northern Sporades



Gioura

Heading northeast, Gioura is the next uninhabited isle to come across within the Marine Park. Gioura is a rocky and precipitous island giving shelter to many indigenous wildlife species. More specifically, a rare goat species - largely considered as indigenous - lives on this island. A popular destination on the island is the Cyclops's cave with beautiful stalagmite and stalactite structures. Gioura and its caves provide a living place to the Mediterranean monk seal and therefore, the island has been declared a nature reserve.





National Marine Park of Alonnissos Northern Sporades



Piperi

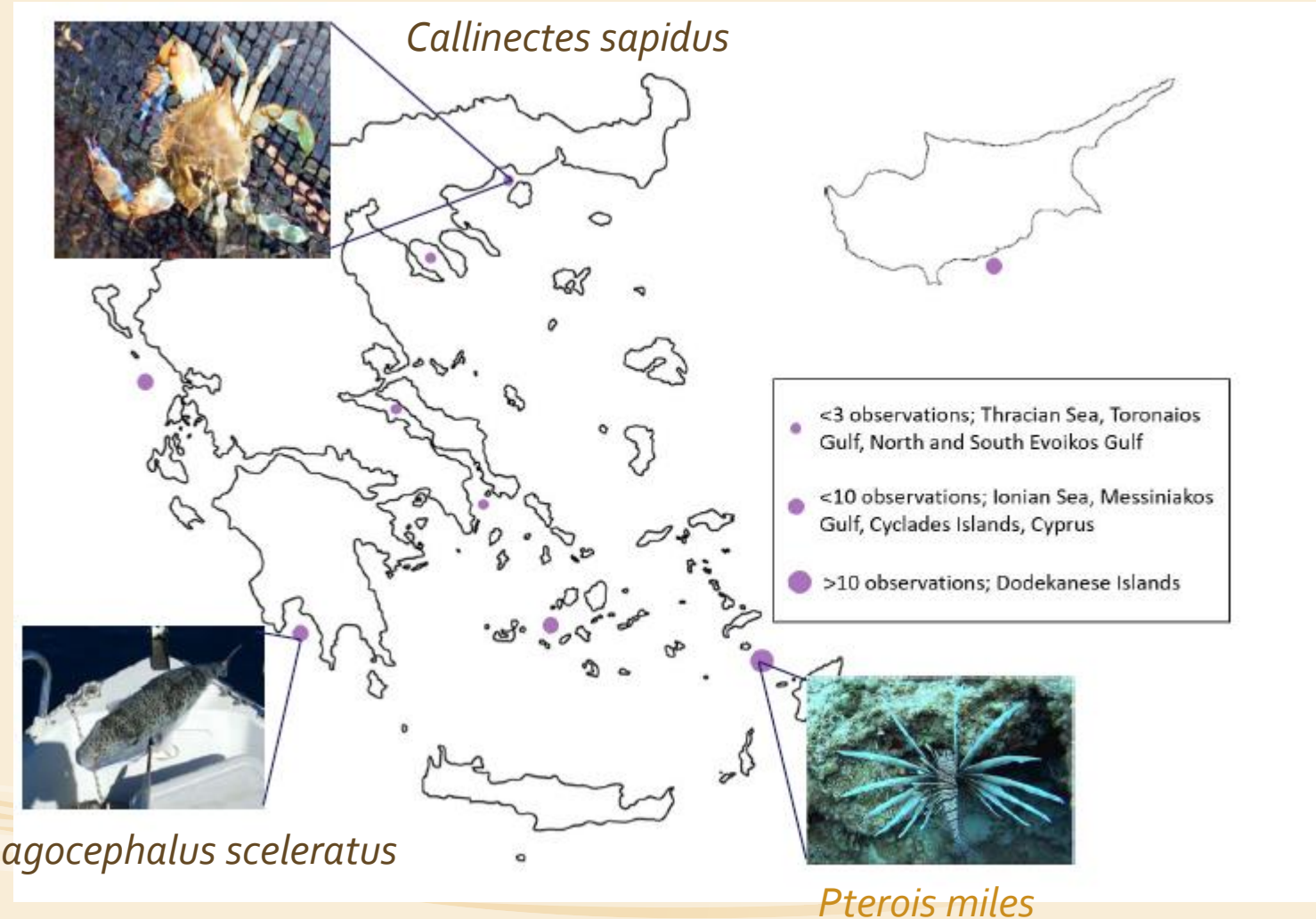
Piperi Island is the heart of the Marine Park and therefore, a strictly protected area. It is the most important nature reserve of the Mediterranean monk seal and many raptors that live and reproduce on its steep cliffs. Rare plant species, pine forests, kermes oaks, phrygana, pistacias and plants growing on cliffs are common here. There are up to 33 bird species and approximately 350 to 400 pairs of Eleonora's falcons



Other informations

Is it Alien to you.... Share it!!!

- The idea is that people take a photograph (either underwater or a fished specimen) of an alien species, or of any other species they can not identify, and share it with **Marko** and/or me, accompanied with geographical location information and data on the depth, weight and number of specimens, when and if possible.



Other informations *CIGESMED for divers*



- Enhancing motivation of participants Active participation to CIGESMED for divers, as most citizen science initiatives, inherently rewards users with the notion of contribution to the exploration and the conservation of biodiversity, producing useful information out of a recreational activity, while at the same time increasing their knowledge of the marine environment.
- As the number of observations is directly linked to diver's experience and knowledge of the marine realm, 5 levels were assigned to male (Theoi Halioi) and female (Oceanids and Nereides) ancient Greek sea deities (Atsma 2011), linking Mediterranean natural and cultural heritage:
 - 3 to 5 observations → Proteus/Nereid
 - 6 to 9 observations → Glaucus/Naiad
 - 10 to 14 observations → Nereus/Doris
 - 15 to 29 observations → Oceanus/Tethys
 - 30 observations and more → Poseidon/Amphitrite

The screenshot shows the 'Observations' page of the CIGESMED FOR DIVERS website. At the top, there is a navigation menu with links for HOME, ABOUT, MEMBERS, GALLERY, OBSERVATIONS, USEFUL LINKS, SCIENTIFIC TEAM, REWARDING SYSTEM, COLLABORATORS, and CONTACT. Below the navigation is a search bar for 'Observations' with filters for 'Location', 'Current', 'Habitat continuity', and 'Visibility', each with a dropdown menu set to '- Any -' and an 'Apply' button. The main content area features a map of the Mediterranean region with several red location pins. Below the map is a table of observations with the following columns: Observation, Location, Post date, User Name, Visibility, Water Temperature, Geographic Reference, and Orientation.

Observation	Location	Post date	User Name	Visibility	Water Temperature	Geographic Reference	Orientation
27.01.2016 - 16:25 Giulia G. Large Nolon	Large Nolon	27.01.2016 - 16:25	Giulia G.	turbid water	14°C	POINT (5.2601962551549 43.337640099818)	SE
15.01.2016 - 15:56 Yiannis Altare, AMP Portofino	Altare, AMP Portofino	15.01.2016 - 15:56	Yiannis	turbid water		POINT (9.2025178606733 44.303281179627)	

<http://cs.cigesmed.eu/en>