The Monachus Guardian

monachus / schauinslandi / tropicalis

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Cover Story: Freedom at last for KP2

In Focus I: Artemis diary

In Focus II: Ailing 'Desertinha' dies in rehab

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Guest Editorial

Vol. 12 (1): June 2009

Monk seal: metaphor for the Mediterranean ecosystem

by Ali Cemal Gücü

I wish I could write of the unforgettable moment of my first encounter with a Mediterranean monk seal; however, I don't remember it, just as I don't remember the moment I saw a dog or a cat for the first time in my life. Probably it was during one of the fishing trip days my dad used to take me on four decades ago, when the term "endangered" had no meaning for the marine life in Turkey. This was probably the main reason why I don't remember my first seal; they were not so rare during my childhood.

The other reason was, I was more for the dolphins. In my child's eye, the sea was a marvellous kingdom, as described in the tales of my grandmother. Each inhabitant was given a role. The dolphins were the swift cavalries of the kingdom, and the seals were the watchdogs of the king. Who goes for a sluggish watchdog when the whole kingdom was under the flippers of a playful cavalry?

The first thing I remember about them was a story told to my grandfather during his childhood. This was about a "womanizer" seal. During the time of the Ottoman Empire, ladies were accustomed to swimming in private, guarded enclosures on the coast called "deniz hamamı [sea bath]", which were strictly forbidden to men. In the story, one day someone with a bushy moustache sneaks into a sea bath and starts swimming among the ladies. Discovering him, the women run out, yelling in panic, since being seen half-naked by a stranger was considered a dreadful sin. Then the guards run in to catch and punish the "womanizer" – only to discover that the one with a bushy moustache is not a man at all, but a monk seal. The adjective my grandfather used for the seal was "rascal". This was the term people used to give to the seals; the rascals of the sea. Even for the fishermen they were playful rascals, sharing their destiny in the sea.

Later, I encountered monk seals in the books of Turkish novelist, Fisherman of Halicarnassus (Cevat Sakir Karaagaçlı), that I am great fan of. In his books, they are respectful inhabitants of the sea; sometimes rescuing fisherman in danger, sometimes disguised as mermaids, marrying the fisherman who falls in love with them.

During my education at university, an ecosystem was described as an integral entity in which each element is closely linked to the other. Within this context, each species is given an equal importance, unless they happened to be a keystone species, which has a disproportionate effect on its environment relative to its abundance. The Mediterranean monk seals were few in number; however, they were not, in any sense, keystone species in the Mediterranean ecosystem. Therefore, for a freshman marine ecologist, efforts to protect one single species seemed a waste of time. How could activities like subsidizing fishermen for their damaged nets save the species? How could the protection of one or two caves, essentially a single spot within a seal's entire home range, help protect the seal, when the entire ecosystem was in danger? How could such actions help them raise their pups, when an uncontrolled fishery was depleting their main food source? Or how, as an apex predator, would they survive the toxic blooms triggered by the ever-increasing eutrophication problem on the coast. In short, at university the monk seal and monk seal conservation were not for me at all.

But then in 1993-94 I happened to meet people from a WWF-International led monk seal conservation project in Foça, who asked me to undertake a survey on the status of the seals on the Mersin coast. Although I had no confidence in single species conservation, working on the monk seal sounded like fun, involving tough and exciting work at sea. Hence, I accepted the offer, and began the survey in '94. The first three months were a challenge. With my team, we worked hard to discover the caves where the seals hide, but then began realizing how bad the situation was along even the most intact coasts. The 'rascals' of the elders had turned into pests to be eradicated for the new generation. The seals no longer figured in village folktales. For children, a seal was a marine mammal living in the polar seas, brutally killed by hunters. They did not even know that a seal species existed in the Mediterranean.

These first three months taught me that ecology is not only the equations that I was taught at the university, and that what is happening out in nature is far beyond the ecosystem models I designed. During the following years, I attempted to interpret the meaning of "indicator species" with the monk seal, and to understand how they indicate the health of the ecosystem. The problems facing the seals were essentially the same problems threatening the entire Mediterranean ecosystem. With them, I have clearly understood the concept of "umbrella species". I have learnt how the name "monk seal" signifies conservation of the entire ecosystem. I was very much surprised when the Turkish Ministry of Agriculture and Rural Affairs accepted my proposal to establish a ban on trawling at a site inhabited by the seals. Without mentioning the monk seal, the same proposal had been refused for 11 years because the ministry was afraid of being put under pressure by the fishermen. Under the monk seal's umbrella, the concern was not for the industrial fishermen anymore, but international agreements, conventions, understandings…

As a consequence of all this, the species I once ignored has become one of the most important things in my life. On the one hand, I am hopeful for their future, because I have seen how they reacted positively to conservation measures enforced along the Cilician coats; how they returned to the caves they had once abandoned; how the growing colony is beginning to spill over into neighbouring regions. But on the other hand, I have learnt that it is human greed that the monk seal ultimately has to withstand – a force that ambushes conservation efforts whenever there is a conflict between protection and exploitation.

Ali Cemal Gücü, May 2009.

Ali Cemal Gücü is a professor of marine biology at Middle East Technical University, Institute of Marine Sciences, Turkey.

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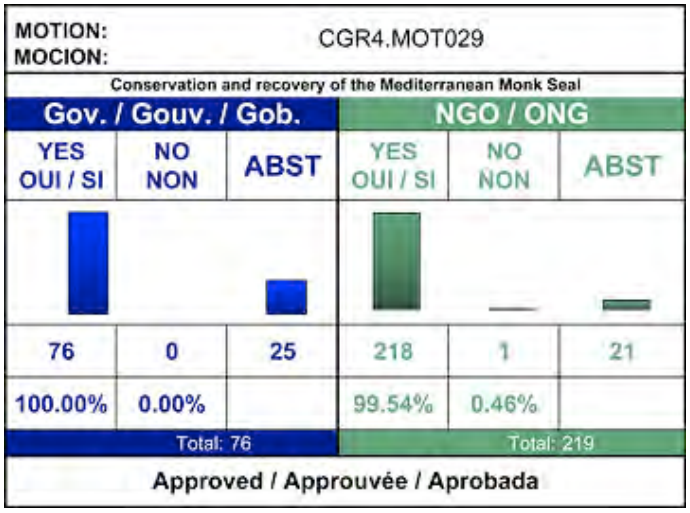
International News

Vol. 12 (1): June 2009

IUCN World Congress votes overwhelmingly for monk seal action – but will its own specialist group pay any heed?

Recently released voting results from the IUCN World Conservation Congress, held in Barcelona, Spain, on 5-14 October 2008, indicate virtually unanimous support among government and NGO members for a motion calling for urgent conservation action to save the Mediterranean monk seal.

According to the official record, 100% of government delegates voted for the motion and 99.54% of NGOs.



MOTION: / MOCION:	CGR4.MOT029				
Conservation and recovery of the Mediterranean Monk Seal					
Gov. / Gouv. / Gob.			NGO / ONG		
YES OUI / SI	NO NON	ABST	YES OUI / SI	NO NON	ABST
76	0	25	218	1	21
100.00%	0.00%		99.54%	0.46%	
Total: 76			Total: 219		
Approved / Approuvée / Aprobada					

IUCN has also published the final, official text of the resolution [4.023 Conservation and Recovery of the Mediterranean Monk Seal *Monachus monachus,* PDF 20KB], which calls upon all Mediterranean countries to "maintain and increase their efforts to aid the recovery" of the species.

As noted in our November 2008 issue [IUCN resolution calls for monk seal action, TMG 11(2): 2008] the resolution recommends the following specific measures:

- Extending the network of marine protected areas and improving their management, in accordance with the Protocol on Specially Protected Areas and Biodiversity in the Mediterranean of the Barcelona Convention.
- Regional strategies that would enable existing or recently extinct populations to recover, so that "genetic flow between the Atlantic and Aegean populations can be re-established".

The resolution also calls upon the IUCN Director General to:

- "Stimulate and facilitate collaborative Monk Seal conservation projects among IUCN's Mediterranean members with the assistance of the Pinniped Specialist Group of the Species Survival Commission."

Despite encouraging comments by the Pinniped Specialist Group Chair, Kit Kovacs, carried in our last issue, to the effect that the "PSG will be helpful in 'progressing' conservation action with this species", it remains uncertain at best how such progress might be realised.

Through its monk seal specialist Alex Aguilar, the PSG has since voiced irritation that it was never consulted on the drafting of the motion for a resolution, as well as a reluctance to actively pursue its implementation.

Somewhat ironically given its lament over perceived lack of consultation, the PSG did not respond to several written requests by The Monachus Guardian to provide specifics on how it might advance the monk seal cause, either through the resolution or outside of it.

The Barcelona Congress, according to IUCN, attracted some "8,000 of the world's leading decision makers in sustainable development: from governments, NGOs, business, the UN and academia; together in one place for 10 days: to debate, share, network, learn, commit, vote and decide. The objective: ideas, action and solutions for a diverse and sustainable world."

Indeed.

Further information

IUCN. 2009. 4.023 Conservation and recovery of the Mediterranean monk seal *Monachus monachus*. Resolution, 4th IUCN World Conservation Congress, Barcelona, 5-14 October 2008: 1-2. [PDF 20KB]
IUCN SSC. IUCN Species Survival Commission Specialist Groups.

Who are our seals?

Thirty-eight participants from 12 countries attended the Mediterranean monk seal workshop in Istanbul on 28 February 2009, including field researchers from the core population centres of the species. Held as an adjunct to the 23rd Annual Conference of the European Cetacean Society, the Workshop's focus was a narrow if complex one: can a standardised approach, using photo identification techniques, be established internationally to provide a reliable estimation of population trends and abundance?

Dr. Giulia Mo, co-organiser of the workshop, during the presentation of the results at the ECS congress.

Dr. Manel Gazo of Submon, Spain, describing photo identification techniques previously applied in Mauritania.

At present, no standardised or even compatible methodologies for estimating population numbers are applied by the various groups involved in Mediterranean monk seal research and conservation. While there may be broad agreement on the theoretical benefits of devising such an approach, perceived practical difficulties have often stymied such efforts. These range from differences in habitat occupied by monk seals (that might favour photographic data collection in one area, such as the concentrated population at the Coast of Seals, Mauritania/Western Sahara, while proving far more complex and expensive in areas where the monk seal population is more fragmented, such as in Greece); to concerns that a scheme of this kind would prove so time and resource consuming as to divert attention away from more urgent priorities.

The Workshop [Who are our seals? Moving towards a standardized population estimate approach for *Monachus monachus*], organised by Prof. Ali Gücü of Middle East Technical University, Institute of Marine Sciences and Dr. Giulia Mo of ISPRA, Italy, was conceived as a means to kick-start international discussion on such methods, while providing participants an opportunity to share their field experience in photo ID methodology and related technical issues.

"We believe this is an important issue," says Ali Gücü, "because although it is commonly agreed that the Mediterranean monk seal is endangered and approaching the verge of extinction, the estimates available in the scientific literature are still not comprehensive enough to give a meaningful picture throughout the distribution range of the species. The presence of colonies and reproductive activities may be known for some regions, and at a very local level there is also evidence of stable or apparently increasing pupping rates. Elsewhere, however, there are recent sightings of seals at sites where the species was considered extinct, but little can be concluded on these individuals' site fidelity, habitat use and displacement capacity. How do we know that the monk seal population in the Med is not actually decreasing? We think that without answering these questions we will have difficulty in sustaining any further conservation action, for example in establishing protected areas, fisheries regulation, socio-economic initiatives etc."

While photo identification has long proven successful in Mauritania/Western Sahara, allowing researchers to gain an understanding of the mobility of individual seals, as well as to draw hard data on population levels, researchers in other areas believe that such data, even if it were possible to collect, might not necessarily end up aiding the conservation of the species.

Dr. Alexandros Karamanlidis, a researcher representing Greek NGO MOm, an organisation with almost twenty years' experience in this field, expressed concerns over the feasibility of implementing reliable mark-recapture studies on the species in the eastern Mediterranean.

Evaluating the long-term efforts of the society in monitoring the monk seal, many of which have included the deployment of remote monitoring systems, he suggested that priority should instead be given to assessing the birth rate of pups in such areas.

Sharing a similar view, the Turkish monk seal organisation SAD-AFAG has stated that it does not regard photo-identification to be a conservation priority at the present time.

Despite such differing views, the Workshop generated some signs of progress in having the methodology adopted elsewhere.

With the financial assistance of RAC/SPA (the UN body responsible for implementing the Mediterranean Monk Seal Action Plan of the Barcelona Convention), Cyprus and Libya are to deploy camera traps this summer, according to information received by TMG. The programme will draw on the technical experience established by METU-IMS over the past two years along the Mediterranean coast of Turkey and northern Cyprus, where 20 traps have been installed in identified seal caves. The camera traps set for Libya will be installed in a joint collaboration effort between EGA Libya and ISPRA, Italy.

Ali Gücü, installing an automatic camera in a seal cave.

An additional 10 cameras will be provided to METU-IMS by RAC/SPA to expand its programme. Photo-identification, says Ali Gücü, will allow the preparation of a seal catalogue for the area, while applying mark-recapture methods will begin the process of assessing actual population size.

RAC/SPA will provide the necessary equipment on loan through national focal points, with the possibility of the camera trap programme being expanded to other Mediterranean countries at a later stage.

Nine presentations were made at the Workshop; we hope to make summaries of these available in our next issue:

- RAC/SPA support to monk seal population assessments in the Mediterranean: estimates versus census. Where is the balance needed for conservation purposes? (Daniel Cebrian, UNEP/ MAP - RAC/SPA, Tunisia).
- Species monitoring foreseen by the European Community Habitats Directive 92/43. Implications for EC Member States and countries who will accede to the EC treaty in the near future. (Giulia Mo, Leonardo Tunesi, Sabrina Agnesi, ISPRA, Italy).
- Monitoring Mediterranean monk seals, a population widely dispersed at low densities? (Lex Hiby, Conservation Research Ltd., UK).
- The Atlantic Sahara Case study, period 1995-2000 (Manel Gazo, Submon, Spain).
- The Atlantic Sahara Case study, period 2000-present (Pablo Fernández de Larrinoa, CBD-Habitat Foundation, Spain).
- Monk seal photo-identification in Madeira (Rosa Pires, Parque Natural da Madeira Service, Portugal).
- The Ionian Greek experience (Aliki Panou, Archipelagos, Greece).
- 20 years of monitoring populations of Mediterranean monk seals in Greece (Alexandros Karamanlidis, MOm, Greece).
- Lessons learnt; photo-trapping experience on the south coast of Turkey (Ali Cemal Gücü METU-IMS, Turkey).

Conclusions of the Workshop, as well a summary of participants' viewpoints can be found in the PDF listed below.

Further information

Gücü, A.C. and G. Mo. 2009. Who are our seals? Moving towards a standardised population estimate approach for *Monachus monachus*. Workshop conducted within the framework of the European Cetacean Society Annual Conference [an event sponsored by RAC/SPA (Tunis) and Pelagos-Monaco (Principality of Monaco)], Istanbul, Turkey, 28 February, 2009: 1-5. [PDF 162KB]

Espai Submon. International workshop on monk seal within the Annual Congress of the European Cetacean Society, 5 March 2009.

Monachus Guardian in Spanish

Thanks to the support of the Government of the Balearic Islands, the June 2008 issue of The Monachus Guardian was published in Spanish in early February.

If you have Spanish-language friends or colleagues who you think might be interested in the publication, please let them know.

The Spanish translation can be accessed at www.monachus-guardian.org/spanish or through our "home" page www.monachus-guardian.org.

Monachus Guardian news blog

The Monachus Guardian is now publishing a Wordpress news blog, specifically designed to deliver breaking news updates between the summer and winter issues of the journal. Those using news reader software may also subscribe to the blog's RSS feed. If you have monk seal-related news, images or video you would like to submit for publication, please contact the .

Monachus Guardian on Facebook

The Monachus Guardian has also established its own Web 2.0 presence on Facebook.

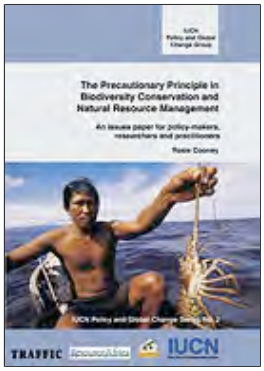
Like the news blog, the TMG Facebook page provides a convenient platform for delivering rapid news updates between issues of the journal, and visitors will note that in recent weeks we have uploaded news, photos and video of 'Artemis', the orphaned monk seal pup that underwent rehabilitation at the MOm Centre on Alonissos prior to her release in April; monk seals congregating on open beaches in Mauritania/Western Sahara; recent sightings in Croatia; and various linked news reports from Hawaii.

You do not need to be a member of Facebook to access the page — although you will to comment on news stories, or to contribute to any future online discussions.

Becoming a 'Fan' of the page will also help spread the conservation message further and wider through Facebook and beyond — please consider it if you are already a FB member.

Those using RSS news reader software may also subscribe to The Monachus Guardian Notes blog.

Publications Watch



We take the opportunity of alerting our readers to the following publications on marine biodiversity, protected areas and broader conservation issues.

IUCN. 2004. The precautionary principle in biodiversity conservation and natural resource management: an issues paper for policy-makers, researchers and practitioners, by Rosie Cooney. IUCN Policy and Global Change Series No. 2: 1-65. [PDF 433KB]

For those pondering ex situ conservation measures with scant attention to consequences or philosophical issues, this is an excellent companion to the publications recommended in our June 2008 issue, on applying precautionary principle guidelines, and on captive breeding.

IUCN, WWF and MedPAN. 2008. Status of marine protected areas in the Mediterranean Sea, by Ameer Abdulla, Marina Gomei, Elodie Maison and Catherine Piante: 1-152. [PDF 3.15MB]

More recently, IUCN, WWF and MedPAN have collaborated to publish a status report on MPAs in the Mediterranean. The MedPAN website, meanwhile, now features an updated inventory and searchable database of MPAs within the Mediterranean.

News Watch

Barcelona revisited

"They used to live near Barcelona, and of course the conservation groups moving this [IUCN World Congress] motion are smart enough to mention it – as though we can gaze over the harbour at the Mediterranean blue and imagine the seals' heads bobbing above the wavelets.

What can be done? Coastal development of many types seems to compromise the seal.

And as coastal development along Europe's favourite holiday coastlines is hardly likely to stop, more marine protected areas are the favoured outcome.

IUCN motions don't make governments do things. But the organisation talks regularly and directly to governments, and carries more weight in governments than NGOs.

If these motions go through, it will put a little more momentum into schemes to keep these species in existence."

Richard Black, Congress Diary, BBC News, 15 October 2008.

Peace With Seals

The Czech film-maker Miloslav Novak has been on a very different journey: to find a creature we are killing. The Mediterranean monk seal is Europe's most endangered species. After 14 million years dappling in our seas, there are fewer than 500 left in

the wild, and none in captivity. These odd, wriggling, blubber creatures, with arms like men and snouts like pigs, are about to pass from history. In most wildlife films, the camera is a god, swirling anywhere the wildlife swirls. Not here. In Peace With Seals, Novak has made a wildlife film about his inability to find any wildlife. He trawls Europe trying to find the seals. He tries to lure them with large plastic replicas of female seals, the amphibian equivalent to sex dolls. He interviews elderly seal hunters. But he only ever gets fleeting glimpses of the creatures themselves – and then the seals are gone.

The film becomes a meditation on the great ecological die-off we are living through – and causing. The seals are a seal on our fate, too, he believes. He quotes one of my favourite novels, Karel Capek's The War With the Newts, where humans and amphibians go to war.

If this is a war, we have won. Wildlife has lost. And we will pay for our victory. The film ends with a hellish image. In the 1950s, a seal was captured in Sardinia and brought to Rome, where it was made to live in a fountain. Novak imagines the animal flapping in concrete while photographers burst flashes in its face and a crowd of tourists roared its approval. This is what the world looks like now, on a grand scale.

Sheffield's documentary festival: Reflections in a dark mirror. Reviews, Films, The Independent, 11 November 2008.

Note: Miloslav Novak's film, Peace With Seals, a 12 Opic and Panda Film production, has received several nominations and awards at recent international film festivals. While its quirky, avant-garde style represents a stark contrast to traditional wildlife documentaries, the film features fascinating archive footage – including the capture of the famous Sardinian pup that ended up in the Piazza di Trevi fountain in Rome – as well as interviews with former seal hunters.

EndQuote

Et tu, Monachus?

Both seals learned to highly accurately identify a lodestar out of a pseudo-randomly oriented, realistic projection of the northern hemisphere night sky. Providing the first evidence for star orientation capability in a marine mammal, our seals' outstanding directional precision would allow them to steer by following lodestars of learned star courses, a celestial orientation mechanism that has been known to be used by Polynesian navigators but has not been considered for animals yet.

Source: Harbour seals (*Phoca vitulina*) can steer by the stars, Animal Cognition, 11 (4) October 2008.

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Hawaiian News

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Ecosystem healthy; monk seals plunging

NOAA's Office of National Marine Sanctuaries released a 54-page report in March, concluding that marine life and habitats at the Papahānaumokuākea Marine National Monument remain in good-to-fair overall condition, but face both existing and emerging threats.

Encompassing 139,792 square miles of the Pacific Ocean – an area larger than all the country's national parks combined, the North Western Hawaiian Islands have been called a "significant contributor" to marine biological diversity. Thanks to their isolation, as well as past management efforts, the reefs of the NWHI, the reports states, can be considered as being in near-pristine condition. However, past impacts, the report states, such as military activities resulting in contamination of many atolls, have led to permanent alteration and some degradation of habitats.

Significant and ongoing threats to wildlife, including Hawaiian monk seals and sea birds, include derelict fishing gear and marine debris. Coral bleaching is also cited as a problem, tying in with recent rises in sea temperatures.

Emerging threats cited in the report include global climate change, rising sea levels, and ocean acidification.

"Much of the current beach habitats that are monk seal resting places and sea turtle nesting habitat," the report finds, "may be greatly diminished or lost altogether with sea level rise."

While most wild "living resource" populations in the monument appear to be in healthy condition, the report cautions, "monk seals are significantly decreasing."

Continuing uncertainty over the precise or inter-relating causes of the monk seal's increasingly alarming decline has spawned an intense research effort, as management interventions, such as the removal of sharks targeting pups, and relocation in an effort to improve survivorship, continue.

A closer reading of the report indicates just what dire straits the Hawaiian monk seal currently finds itself, as well as the implications posed by the lack of clear scientific knowledge surrounding the species' precipitous decline. Among other observations, the report declares that:

- Reproductive success has declined, with a total of mean non-pup beach counts at the main reproductive Northwestern Hawaiian Islands subpopulations in 2003 approximately 60 percent lower than in 1958.

- Until recently, populations at Kure, Midway, and Pearl and Hermes reef exhibited substantial growth. The subpopulation at Kure Atoll grew at an average rate of five percent per year from 1983 to 2000, due largely to decreased human disturbance and introduced females. Since 2000, counts at Kure have declined coinciding with very low survival of the 2000-2002 cohorts from weaning to age 1 year (15 percent to 22 percent). The subpopulation at Pearl and Hermes Reef increased after the mid-1970s, however, growth of this subpopulation has slowed recently and early survival has declined. Recovery of the small subpopulation at Midway Atoll appears to have slowed or stopped, also accompanied by relatively poor juvenile survival. These declines may be related to reduced food sources or increasing competition for prey items with apex predators, fewer pupping sites and increased predation of pups by sharks.

The report goes on to express the hope that National Marine Fisheries Service *Recovery Plan for the Hawaiian Monk Seal* will reverse such declines [see NOAA signs new Hawaiian Monk Seal Recovery Plan, TMG 10 (2): November 2007].

Further information

Office of National Marine Sanctuaries. 2009. Papahañaumokuaĸea Marine National Monument Condition Report 2009. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Silver Spring, MD: 1-54. [PDF 2.1 MB]

NOAA. 2007. Recovery Plan for the Hawaiian monk seal (*Monachus schauinslandi*). Revised. National Marine Fisheries Service, National Oceanic and Atmospheric Administration: 1-165. [PDF 1.2MB]

Report to Congress details species in crisis

The Marine Mammal Commission's Annual Report to Congress for 2007 was published in autumn last year. For those interested in Hawaiian monk seal population trends, human and natural threats to the species, as well as efforts underway to stem the species' continuing decline, the MMC report remains the indispensable guide.

Among the new report's findings:

- Hawaiian monk seals are declining at a rapid and steady rate following two decades of poor juvenile survival due to shark predation, entanglement in marine debris, and ecological factors that have yet to be clarified.

- In contrast to the trend in the NWHI, monk seals have increased steadily on the main Hawaiian Islands over the past 15 years. A developing catalogue of known individuals indicates that at least 83 seals now live on the main Hawaiian Islands.

- On 22 August 2007 the Service [NMFS, National Marine Fisheries Service] announced that it had adopted a revised Hawaiian monk seal recovery plan [...] and listed principal threats to the species as (1) low survival of juvenile and sub-adult seals due to starvation and prey limitation; (2) entanglement in marine debris; (3) predation by Galápagos sharks; (4) human interactions and exposure to disease in the main Hawaiian Islands; (5) erosion of pupping beaches in the NWHI; and (6) disease outbreaks within individual breeding colonies. Estimated costs were modified for a number of tasks and costs for tasks with wider benefits were not attributed to the monk seal recovery program. Based on the revised estimates, annual costs for 14 different categories of tasks were projected to range over the next five years from $7.55 million in the first year to $6.99 million in the fifth year.

While stressing that the Hawaiian monk seal is in serious crisis, it is the failure of some past management efforts in captive care that provide eye-opening reading in the 2007 assessment. According to the report:

- Post-release results of the 2006–2007 captive care efforts were poor. At the end of 2007 all but two of the seven seals [taken] had died or disappeared. The yearling never learned to feed on its own in captivity and, although force fed, it lost weight and exhibited signs of acute stress before dying in captivity late in 2006. The other six seals were released in good condition with telemetry tags and adopted diving and foraging patterns similar to wild seals within a few months of release. Three appeared to be in good condition but disappeared abruptly at sea, possibly due to shark predation. A fourth seal disappeared after being seen in emaciated condition. The two survivors at the end of 2007 were the twins; one moved to Kure Atoll where it was last seen in 2007 in good condition, while the other remained at Midway but was last seen in an emaciated state suggesting its survival prospects in 2008 were poor [see Captive care lends seals a headstart, TMG 10(1): June 2007].

Despite previous captive care incidents (for example, in 1995, when ten monk seals were blinded by an unknown illness while in captivity; and all twelve captured could never be released because of fears of contaminating the wild population), discussions are underway to establish a centralized captive care facility on the Main Hawaiian islands that could to handle initially 50 and, with expansion, even a 100 animals.

In the meantime, equipped with a significantly increased budget, as well as an approved management plan at the Papahaʻnaumokuaʻkea Marine National Monument, strenuous efforts are being made to achieve a successful implementation of the 2007 recovery plan for species.

Further information

Marine Mammal Commission. 2008. Annual Report to Congress 2007. Marine Mammal Commission, Bethesda, Maryland: 1-207. [PDF 6.4MB]

Papahaʻnaumokuaʻkea Marine National Monument. Management Plan. 2008.

Keep in touch

For those interested in marine mammal rescue, monitoring, monk seal pupping around the Main Hawaiian Islands, as well as efforts to limit human-seal interactions, NOAA Fisheries produces a periodic Activity Update on work carried out by the Pacific Islands Region Marine Mammal Response Network.

The most recent issue (May-August 2008) carries news of the 2008 pupping season on the Main Hawaiian Islands (the highest number of births on record), and efforts to deal with the problem monk seal RO42, which became habituated to humans and actively sought out their company. Evidence suggests that such behaviour, including feeding by speargun fishermen and interacting with swimmers, was progressively reinforced, despite the Response Network's best efforts to mitigate it.

As conveyed in subsequent news reports (see News Watch, below), RO42 was later evacuated to the North Western Hawaiian Islands, where human interaction is likely to pose something of a problem, given its isolation.

For a full report on orphaned monk seal KP2, taken into care after being abandoned by his mother, please turn to this issue's In Focus article by David Schofield.

Further information

NOAA. Marine Mammal Response, Pacific Islands Regional Office, NOAA Fisheries.
NOAA. 2008. Pacific Islands Region Marine Mammal Response Network Activity Update, May-August 2008: [PDF 1.5 MB]

News Watch

Suspicious death investigated

A dead monk seal was removed from an undisclosed beach on Kaua'i on Sunday, according to David Schofield of the National Oceanic and Atmospheric Administration.

"The 4-year-old young male seal was identified as I-19," Schofield said. "There is an ongoing biological necropsy as well as a law enforcement investigation into the cause of the seal's death."

The fact that an enforcement investigation is underway could indicate that the circumstances surrounding the seal's death are suspicious. Schofield said the seal was alive Saturday when he was seen as part of a seal count, and on Sunday, I-19 was removed from the beach — dead.

"We know how important the Hawaiian monk seal is to the people of Kaua'i," NOAA spokesperson Wende Goo said, "and we are asking for people with information on the death of the seal to call the NOAA Office of Law Enforcement hotline at 1-800-853-1964."

The NOAA Office of Law Enforcement is available 24 hours a day, seven days a week, Goo said. […]

NOAA: Dead seal found on Kaua'i, The Garden Island, 25 April 2009.

$5.7 million boost for Hawaiian monk seals

Congress has allocated $5.7 million – the largest single-year sum to date – for Hawaiian monk seal recovery efforts.

Next to corporate bailouts and economic stimulus plans, the amount pales. But conservation managers say it will make a great difference for the critically endangered animals, whose numbers have dropped below 1,200 in the wild.

"My reaction initially was jubilation," said Charles Littnan, lead scientist for the National Oceanic and Atmospheric Administration Fisheries' monk seal research program. "Then immediately comes the weight of responsibility – making sure that we spend the money efficiently, properly and to maximize impact on the seals." […]

The budget boost, up from $2 million in 2008, will allow the NOAA Fisheries to fully staff seal monitoring in the Northwestern Hawaiian Islands this summer, hire a scientist to coordinate the monk seal recovery program and to expand efforts to help the seals in the main Hawaiian Islands, said Mike Tosatto, NOAA Fisheries deputy regional director. […]

Congress allocates $5.7 million to help save Hawaiian monk seals, by Diana Leone, Honolulu Advertiser, 7 April 2009.

Seal 'too friendly'

Scientists are blaming spectators for making a Hawaiian monk seal into a 300-pound friendly public nuisance and hope to protect her by moving her hundreds of miles away.

The juvenile seal, RO42, has become so friendly that she wraps her flippers around people's waists, holds them underwater and nibbles on their heads – all normal behavior between seals.

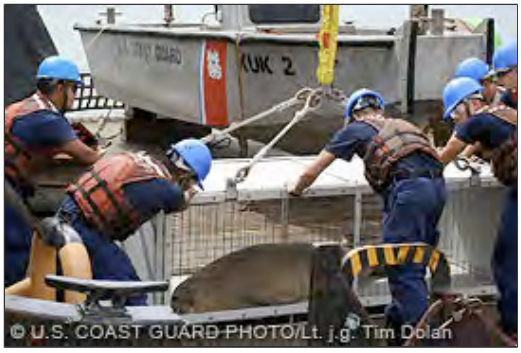
But at 300 pounds, the seal's behavior is being interpreted as aggressive and intimidating. She is expected to reach 600 pounds as an adult.

The seal broke someone's skin at least once, said David Schofield, marine mammal response coordinator for the National Oceanic and Atmospheric Administration.

For her and the public's safety, RO42 is being moved about 290 miles to the Northwestern Hawaiian Islands – where there are more seals and no people.

Scientists hope moving the seal away from civilization will help it live as a seal instead of as a pet. The seal can still feed on its own, and scientists are confident it will survive the move.

RO42 was born on the Big Island about 2.5 years ago and has increasingly become a problem, Schofield said.



RO42 is loaded on the U.S. Coast Guard cutter Kukui at Nawiliwili Harbor on Kauai for the journey Papahaānaumokuakea Marine National Monument, 25 February 2009.

This is the fourth time she has had to be moved because she befriended the community. Each time, she swims back to populated areas, Schofield said. This time, scientists hope she will not be able to swim back.

"She's become a problem for one specific reason, and that is because people have acted irresponsibly around this individual," he said. "Don't feed the seals. They grow up to be nuisance animals."

He said spear fishermen fed her and locals and tourists petted her. [...]

Seal too friendly for its own good, by Rob Shikina, Honolulu Star Bulletin, 26 February 2009.

UNESCO World Heritage status for Papahaānaumokuakea?

In the inaugural build-up, George W. Bush's parting gift to Hawaii and the Pacific environment was overlooked. On Jan. 6, the outgoing president announced the formal nomination of Papahaānaumokuakea Marine National Monument – the largest such marine reserve in the world – to become a UNESCO World Heritage Site. The monument includes the historic atolls of Midway and the lesser-known Northwestern Hawaiian Islands, extending some 1,500 miles from the main Hawaiian isles. [...]

Whether or not UNESCO recognizes these treasures is another matter; it will conduct an 18-month study before releasing the results in 2010.

Bush's Parting Gift: Hawaiian World Heritage Site? Hawaii Insider, 22 January 2009.

KP2 thriving

A 7-month-old Hawaiian monk seal nursed back to health by scientists appeared to be thriving during its first week back in the wild in what officials say was a "pioneering achievement."

KP2, wondering what all the fuss is about.

The male pup, named KP2, was the youngest Hawaiian monk seal ever to be raised by scientists of the National Oceanic and Atmospheric Administration and later released successfully into the wild.

"This has never been done before. ... He still has a lot to learn and a long way to go. Even though it's only a week out, we consider this a groundbreaking success," said David Schofield, marine mammal response coordinator for the National Marine Fisheries Service, part of NOAA. [...]

Will to survive, Honolulu Star Bulletin, 24 December 2008.

KP2 released

A Coast Guard helicopter today airlifted an abandoned Hawaiian monk seal pup from Kane'ohe Bay to an undisclosed location for release into the wild.

The seal pup, named KP2, was found abandoned by its mother when it was a day old on a Kaua'i beach in May. [...]

Abandoned monk seal pup released into wild, Honolulu Advertiser, 15 December 2008.

Volunteers bid teary farewell to seal

For the first time, scientists released a hand-raised Hawaiian monk seal back into the wild on Monday.

Volunteers who helped care for the seal got teary eyed. They are still worried about its future. [...]

For volunteer Barbara Billand, the seal's release back into the wild is bittersweet.

"It's really emotional for me because we took care of him, and it was so worth it every minute of it," Billand said.

The volunteers said scientists told them not to get emotionally attached to the seal pup, but with its cute face and big brown eyes, they said it's hard not to fall in love.

"He's like my grandson, just like a grandson. We don't have grandkids so," Billand said.

The monk seal is called KP2 for Kauai Pup 2 because scientists do not want to humanize the wild animal. However, some volunteers gave it nicknames anyway like "Tako" after the octopus he likes to eat. [...]

Teams release abandoned monk seal, KITV, Honolulu, 15 December 2008.

EndQuote

Musings: Screw Nature

I'm not sure if comment sections in newspapers or blogs are representative of wider public opinion, but I certainly hope not given the sort of responses posted to an Advertiser article on Congress appropriating $5.7 million for Hawaiian monk seal recovery.

Aside from the fact that many readers seem to be ignorant of the difference between state and federal funds, among other things, there was a discouraging "screw nature" attitude running through the comments. Guess when money gets tight, although not, curiously, for military expenditures, the first thing some folks want to cut is money for environmental programs.

Source: Musings: Screw Nature, KauaiEclectic , 8 April 2009.

A Hawaiian monk seal that got too friendly with humans was shipped off to the Northwestern Hawaiian Islands. That's what happens when you don't keep your flippers to yourself.

Source: All take, no give among lawmakers, by David Shapiro, Honolulu Advertiser, 7 March 2009.

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Croatia

Comeback sightings

Continued sightings along the Croatian coast may indicate that the Mediterranean monk seal is staging a comeback in an area where it had previously been considered extinct [see New sightings in north and central Adriatic, TMG 11 (1): June 2008].

The first of the most recent sightings occurred on 14.02.2009, between 17.00 and 18.00, near Cape Kamenjak – Verudela, Pula, and was photographed by Mr. Darko Grbac. The monk seal was observed swimming about 3 to 5 meters from the coast, reports Jasna Antalovic of the Croatian NGO Mediterranean Monk Seal Group (Grupa Sredozemna Medvjedica). It was two meters long and apparently well-nourished. Several observers watched from the shore. In turn, the monk seal also watched them between bouts of diving. This game, added Antalovic, lasted for an hour.

The 14.02.2009 sighting near Cape Kamenjak – Verudela, Pula. Courtesy GSM.

The 8.03.2009 sighting at Kamenjak-Premantura. Courtesy GSM.

A second sighting occurred on 08.03.2009 at Kamenjak-Premantura and was photographed by Moris Civitico of Pula. The encounter, reports Antalovic, lasted several minutes, and was also witnessed by diving members of the GSM from Trieste, Marta Piccoli and Gianni Pecchiar. Piccoli reported afterwards that the seal "was very quiet, did not show fear and watched her with curiosity."

Video

Sighting 14.02.2009 at Cape Kamenjak – Verudela, Pula, Croatia, filmed by Silvano Sergo. Courtesy GSM.
Sighting 08.03.2009 at Cape Kamenjak – Premantura, Pula, Croatia, filmed by Moris Civitico. Courtesy GSM.

Greece

Artemis goes wild

Under bright but overcast skies, Mediterranean monk seal pup 'Artemis' was released into the protected waters of the National Marine Park of Alonissos, Northern Sporades on 11 April. After a brief ceremony attended by local well-wishers, visiting dignitaries and supporters of MOm – the NGO spearheading monk seal conservation in Greece – Artemis was placed in a transport cage and put aboard the research vessel IFAW-Odyssia, for the 2.5 hour journey to Piperi, an island in the core zone of the 2200 sq km Marine Park. The IFAW-Odyssia was escorted by the patrol boat of the Marine Park's management authority.

Jeny Androukaki, Head of the Monk Seal Rehabilitation Centre at Steni Vala, Alonissos, later reported that Artemis quickly became acclimatized to her new surroundings. After briefly exploring the small beach where she was released from the transport cage, the seal was quickly drawn to the water and the small waves breaking on the shingle. She then began swimming and diving, displaying, said Androukaki, several darting movements suggesting that she was chasing fish.

Artemis.

Courtesy of the UK's Sea Mammal Research Unit, Artemis was equipped with a mobile phone-based tracking device which is hoped will provide various data on the seal's position and dive depths. A similar device, placed on monk seal pup Viktoria last year did not, however, function, and was deemed to have been faulty by the SMRU.

Following some initial anxiety among the researchers, Artemis' tracking device began to function as intended, providing basic information via SMS messaging on the seal's whereabouts, first at Piperi, the release site, and later on at various locations within and outside the boundaries of the Park. MOm and SMRU researchers are said to be pleased with the satellite-tracking and time-depth recording data yielded so far via data link. In one instance, Artemis was recorded diving to a depth of 117 m.

The release ceremony at Steni Vala was attended by Sophia Staikou, President of Piraeus Bank Group Cultural Foundation and Head of Corporate Social Responsibility. Piraeus Bank has been a long-time supporter of MOm's monk seal conservation efforts in Greece through its CSR programme.

For in-depth coverage of Artemis' rescue, rehabilitation and release, please turn to our Cover Story, Artemis Diary.

Video

Artemis' release at Piperi, 11.04.2009. Courtesy MOm.

Monk seal pup 'Artemis' in rehabilitation (I), 11 January 2009; MOm Rescue Centre, Alonissos, Northern Sporades Marine Park. Courtesy MOm.

Monk seal pup 'Artemis' in rehabilitation (II), 11 January 2009; MOm Rescue Centre, Alonissos, Northern Sporades Marine Park. Courtesy MOm.

STOP PRESS | Artemis found dead on Skiathos

Tragically, orphaned monk seal pup 'Artemis' has been found dead on Skiathos in the Northern Sporades.

The body was discovered on 14 May 2009, floating in Skiathos harbour. It was transferred the same day to Athens for necropsy, conducted by Prof. Dr. Thijs Kuiken, a veterinary pathologist specialising in marine mammals from Erasmus University, Rotterdam.

The necropsy established that Artemis was in excellent nutritional condition and overall health, with a body weight normal for her age, MOm subsequently reported. There was clear evidence that the seal had died as a result of drowning – most probably the result of becoming entangled in fishing gear.

Further information on Artemis' state of health prior to her sudden death could be gleaned from data retrieved from her satellite tag, which showed her progressively achieving greater confidence both in mobility and diving. Though at first she remained close to her release site at Piperi in the core zone of the National Marine Park of Alonissos, Northern Sporades, she eventually travelled more than a 100 nautical miles, straying beyond the borders of the Park; her dives exceeded 150 m.

Veterinary pathologist Prof. Dr. Thijs Kuiken (r) and Alexandros Karamanlidis (l), a MOm biologist, preparing to conduct the necropsy at the University of Athens.

"Although the young seal quickly adjusted to its natural environment," says Vangelis Paravas, Conservation and Policy Coordinator of MOm, "the harsh but unavoidable fact is that Artemis ultimately also had to face the reality of surviving in the wild, just as the rest of the remaining monk seals in the Mediterranean Sea."

Data gathered by MOm through its EU-funded project on seal-fishery interactions indicates that lethal entanglement in fishing gear is the most serious cause of death among immature monk seals. The organisation is developing proposals aimed at lessening monk seal mortality stemming from such interactions, whilst promoting sustainable coastal fisheries.

Further information can be obtained from the MOm press release:
A sad last message from Artemis [PDF 120 KB]

International collaboration for birdlife

"Concrete conservation actions for Mediterranean Shag and Audouin's Gull in Greece including the inventory of relevant Marine IBAs" is the title of a new EU LIFE project launched in January this year. This 4-year project aims to achieve a significant improvement of the Mediterranean Shag's (*Phalacrocorax aristotelis desmarestii*) and Audouin's Gull (*Larus audouinii*) conservation status in Greece, by implementing concrete conservation actions in 17 Greek SPA sites, according to the guidelines and priorities identified by the International Action Plans for the two species. An overall improvement of their conservation status will be further enhanced by the

identification of marine Important Bird Areas (IBAs), through a well organised campaign following the relevant guidelines of the European Commission and instructions of BirdLife.

The project partnership brings together NGOs and research institutes with significant experience and expertise in conducting nature conservation projects, and in implementing concrete conservation actions and related surveys. Hellenic Ornithological Society (HOS), the Greek Birdlife partner, in collaboration with SPEA (the Portuguese BirdLife partner), the Hellenic Society for the Protection of the Monk Seal (MOm), the Hellenic Centre for Marine Research (HCMR), and the Ionian Technological Institute (TEI) are collaborating to promote the two species' conservation in 17 Greek SPA sites, designated specifically for them. In this effort, the experience and expertise of the BirdLife partnership, especially of the RSPB, will play a significant role, thus providing a harmonised approach to the planning and implementation of the project actions.

MOm's research vessel, IFAW-Odysseia.

MOm is responsible for the field research and awareness campaign activities in the northern Aegean and its research vessel "IFAW-Odysseia" will be used as the base for the fieldwork. During the project data on other seabird species, cetaceans and on the monk seals will be collected in order to achieve (through compilation with data on the distribution of pelagic fish populations, oceanographic and sea productivity parameters etc.) a more comprehensive knowledge on the marine ecosystem in Greece. Some of the key expected results of this project are:

- Preparation of a well justified inventory of the Marine IBA sites for the 2 species in Greece, to be submitted to Greek and EU authorities.
- Modifications in the fishing gear and/or fisheries regulations to decrease the accidental trapping problem in fishing gear in Greece.
- An overall improvement in awareness among the general public and in various focus groups, for the conservation of the two species in Greece.
- Establishment and operation of an effective network of Birdlife partners dealing with marine IBAs and seabird protection in Europe.

Overall, the project's activities are expected to constitute a significant step towards the conservation of marine and coastal environments in Greece. – Panos Dendrinos, MOm.

Learn about – participate in

Web visitors from around the world are now able to learn more about the Mediterranean monk seal and MOm's conservation actions in Greece, through the English version of www.mom.gr, and also through MOm's page and group on Facebook.

In an effort to raise the necessary funds for these conservation actions, MOm has also launched a Monk Seal Adoption programme; further information is available on the website. – Danae Protopapa, MOm.

North Karpathos and Saria: a new protected area for Mediterranean monk seal conservation in Greece

On 4 March 2009 the Greek Ministry of Environment and Public Works signed a joint ministerial decision, which advances the formal establishment of the northern part of Karpathos and Saria islands in the eastern Dodecanese, as a protected area under the Greek law. The area is designated as the "Eco-development area of Olympos, Karpathos", and includes various restrictions and regulations based on specific zones on the terrestrial and marine environment. The size of the protected area is over 150 sq km, of which 52 cover the surrounding sea.

The northern tip of Karpathos, and beyond, Saria.

The traditional way of life is still practiced in some areas.

Northern Karpathos and the surrounding islets provide shelter for one of the most numerous breeding colonies of *Monachus monachus* in the Mediterranean Sea. Many endemic and protected flora and fauna species are also distributed in the area, contributing to its diverse and rich natural environment. Additionally, the cultural heritage and the traditional architecture of the island are unique within Greece.

MOm has been conducting research and conservation actions in Karpathos since 1995. In 1996 North Karpathos and Saria islands became part of the EU Natura 2000 network. During 2000 MOm conducted a Special Environmental Study, proposing the establishment of the area as protected, which was strongly supported by the local community of the island. In 2003 the Management Body was established, and since then it has been the responsible institution for the management and conservation of the area. However, the formal establishment of legal measures in the area, the designation of its boundaries and regulations are still pending, since the joint ministerial decision has not been signed as yet by the other involved ministries. – Vangelis Paravas and Stella Adamantopoulou, MOm.

MOFI updates

Mediterranean (Monk Seal) Diet (part I)

As part of the LIFE-NATURE project "MOFI"/ Monk Seal & Fisheries: Mitigating the Conflict in Greek Seas, the feeding habits of the Mediterranean monk seal were examined through stomach content analysis, the first study of its kind. The research began in January 2006 and was completed in March 2009, in collaboration with the Zoology Department of the University of Aberdeen. A total of 24 stomachs, which were collected during necropsies conducted by MOm's biologists from dead animals found stranded in different areas of coastal Greece during the past 15 years, were sent to Scotland for analysis. The results of the three and a half year research indicate

that the Mediterranean monk seal is an opportunistic predator with wide dietary preferences, which include benthic, demersal and benthopelagic fish species along with cephalopods – especially octopus, which is an important component of its diet. Details of the analysis will be presented in the Final Research Report of the project in July 2009.

Mediterranean (Monk Seal) Diet (part II)

Additional data on monk seal feeding preferences will be obtained by the application of stable isotope analysis in collaboration with the Okanagan Regional Chemical Analysis Centre of the University of British Columbia in Canada. The aim of the analysis is to trace the entire range of trophic levels on which monk seals feed, while at the same time distinguishing between different sources of possible prey species. This technique is based on Carbon and Nitrogen stable isotopes found in the tissues of species preyed upon by monk seals, compared to the same stable isotopes found in monk seal tissues. Thus, 45 different samples collected by Mom's biologists during necropsies, along with 35 samples of different marine species, including fish, crustaceans, cephalopods and algae, were sent to Canada to undergo analysis. The results are due in the coming months. – Vangelis Paravas and Stella Adamantopoulou, MOm.

Conservation strategy renewed

Also as part of the MOFI project, a revised Strategy for the Conservation of the Mediterranean Monk Seal in Greece, and an Action Plan for its implementation, has been formulated, building on the foundations laid by the former official Greek Strategy, which had been a joint effort by MOm and Archipelagos. The document includes a full review of the former Strategy, capitalising on its achievements and learning from its weaknesses and failures.

The long-term goal of the strategy is: "to assure the recovery and long-term viability of Mediterranean monk seals in Hellenic waters". This goal is defined by the following 4 objectives: 1. Monk seal conservation established as a national objective, 2. Knowledge of monk seal ecology and biology important for the conservation of the species is secured, 3. Areas containing critical monk seal breeding habitat in Greece are identified, legally protected and organised into a functional network of protected areas in which monk seal numbers are stable or increasing and 4. Monk seal conservation measures are legally adopted and effectively implemented throughout national waters, so that threats are diminished and monk seal populations and habitat nationwide are not lost.

The Strategy also identifies the recommended actions to meet the 4 objectives. All necessary and urgent actions to be taken are described within the Action Plan and listed in tabular form in the implementation schedule, where indicators of progress are also recommended.

The revised Strategy will be presented to the relevant stakeholders and authorities in an open meeting in June. The final document will be submitted to relevant Greek

Ministries and the European Commission for formal adoption. It is hoped that its implementation might begin as early as this year, and that it will remain in place until its planned revision in 2015. – Vangelis Paravas and Stella Adamantopoulou, MOm.

MOFI's research activities completed

The collection of data on monk seal-fisheries interaction, in collaboration with fishermen throughout the country, has been completed, with analysis also yielding concrete results, which are now being used and integrated into the Action Plan being formulated for the mitigation of such interactions. The Action Plan is expected to be presented by MOm in June in an open public meeting; this following a workshop with all relevant stakeholders. – Vangelis Paravas and Stella Adamantopoulou, MOm.

EndQuote

Sea Serpents Likely to be Discovered

Michael A. Woodley, Darren Naish and Hugh P. Shanahan have had published on Tuesday, March 24, 2009, in the new number of Historical Biology (2009), their groundbreaking paper, "How many extant pinniped species remain to be described?"

Here is their press release on the contribution:

'Three new large marine mammals, so-called sea-serpents, are extremely likely to be discovered according to researchers.

In a paper published today, a team of scientists conclude that three new unusual species might await discovery, all of which may belong to the group of marine mammals known as pinnipeds. The best known pinnipeds are seals, sea lions and walruses. [...]

"While the low number of three possible new pinniped species matched our statistical expectations, there is a need for scepticism as all known pinnipeds are noisy animals with close ties to land", said Mr Woodley.

"These pinnipeds would have to possess some exceptional characteristics, if they exist."

Source: Sea Serpents Likely to be Discovered, Signs of the Times News, 24 March 2009.

The Monachus Guardian
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Italy

A monk seal monument in Marettimo

Marettimo is the most distant of the three Italian Egadi islands (near the western cost of Sicily, the other islands being Favignana and Levanzo): here a marine protected area, the largest in the southern Mediterranean, was established since 1991, though weak in management. All the islands were once home to monk seal colonies which, like elsewhere in our seas, were exterminated mainly by the local fishermen.

Recently, Marco Di Salvo, a young man frequenting Marettimo with his family for many years, with a fondness for marine conservation and monk seals, had the idea of recalling their memory through a monument, to be erected at the small island harbour. It would serve as a remembrance for local inhabitants and tourists of the seals' former presence in Marettimo waters and caves, and evoke the promise of a possible return.

Marco, however, died tragically less than a year ago. His father Franco and his mother Karmen did not want Marco's dream to vanish, and so with support of our association, Gruppo Foca Monaca (GFM), and of Emanuele Coppola in particular, we persuaded the sculptor Giulio Cosimi Bagnada, to help realise Marco's dream by carving a statue depicting a mother and pup.

The statue was carved from a typical stone of the region north of Rome, the "basaltina" (from basalt). Once completed, it was brought to the island and erected at the harbour, with a special ceremony on the morning of 19 April involving the whole community of Marettimo, including the fishermen, and the local Egadi islands' political and religious authorities. Preceded, the evening before, by the screening of a Panda Film movie on Mediterranean monk seals and by a public debate, the event was supported by different local associations, and even – thanks to Mr. De Salvo's relations – by prominent figures like M. Nicolas Sarkozy and Claudia Cardinale, as well as scientists and researchers (such as Giuseppe Notarbartolo di Sciara, Teresa Pastor, Aliki Panou and Ali Gücü), who sent messages of support either in writing, or in audio or video-conference form, aired during the inauguration.

Recalling the presence of this shy and vulnerable marine mammal, the sculpture intends to represent an appeal for environmental respect and protection, a conscience for the weak and helpless among us, and a symbol of peace among people living around the shores of the Mediterranean. A smaller copy of the statue has also been made and will soon be sent in a twinning with the Marine Sanctuary of Monterey (California, USA), where a sizeable community of people from the islands once settled, having emigrated from Marettimo.

But Franco Di Salvo wants to go even further in realising his son's dream: his idea, shared by the local authorities and inhabitants, is to prepare additional scaled-down copies of the statue to be donated to other important seal landmarks in the Mediterranean, creating new trans-boundary friendship ties.

Furthermore, with the help of GFM, Franco would like to create in Marettimo a centre where monk seal conservationists could meet and create the foundations for improved seal conservation activities in the Mediterranean. A first meeting, on the attitudes of humans versus monk seals and their environment, could already be convened before the end of this year.

More information will be provided through the GFM web site or can be requested by writing to grupfoca@tin.it. – Luigi Guarrera, GFM.

GFM 2009 Turkey expedition

Following the success of its earlier guided tours, GFM is again organising an expedition to the Mediterranean coast of Turkey and the Levant Nature Conservation Society's monk seal project this summer (19-28 June) and autumn (23 October - 1 November).

The trips are organised by GFM through Panda Avventure, the WWF Italy group organizing nature holidays. The travel programme, costs and related details are available for download. [Cilician Programme 2009 120 KB]

Mauritania & Western Sahara

Open beach observations on the rise in Cabo Blanco

Observations of monk seals using open beaches has increased dramatically since the creation of the 'Coast of the Seals' marine-terrestrial reserve in 2001 in Mauritania – a possible turning point in the recovery of the species in the Atlantic.

Apart from groups and individuals staging a return to such open beaches, a pup nursing from its mother was also filmed by CBD-Habitat technicians in October 2008 [see report and video, Lactation on an open beach in Cabo Blanco, TMG 11 (2): November 2008] – the first observation of its kind in 60 years.

Recent observations indicate another surge in numbers of seals occupying the area's open beaches. "Until last year," explains Pablo Fernández de Larrinoa of CBD-Habitat, "they were individuals or small groups of 3-4 animals. This year we have been observing groups of up to 9 animals!"

Herds of monk seals hauling out at Cabo Blanco

The CBD-Habitat team working at Cabo Blanco has been observing, almost every day, large groups of monk seals hauling out in the breeding caves during low tide. Thanks to the remote-control video cameras installed in the caves, we have been witness to spectacular images of these animals, which we can now share with the public. – Mercedes Muñoz, Moulaye O. Haye and Hamdi M'Barek, CBD-Habitat Foundation.

Large groups of monk seals hauling out at the breeding caves in Cabo Blanco, Mauritania, October 2008. Courtesy CBD-Habitat.

Productivity 2008

The total number of detected pups born during the 2008 reproductive season was 45, reaching almost the same number as in 2007 (46 pups) [See Cabo Blanco annual pup production, 11 (2): November 2008].

In addition to the stabilization in the number of pups born, the breeding season has spread from May to November, with a maximum number of births occurring in August (11 pups) and September (13).

The discovery this year of another breeding cave leads us to believe that 2008 productivity could be underestimated, as a certain number of pups might not have

been detected due to difficulties in the monitoring the cave.

22 females and 21 males were born in 2008. The sex ratio at birth was therefore even for this year. There were only two pups born that did not have their sex determined; these animals disappeared from the breeding caves, and their carcasses were not found.

The neonatal mortality rate (NMR – pups dead or disappeared / total pups) was 0.24, the minimum detected in the colony since monitoring began. This means that 24% of all pups died before reaching the age of the first moult (two months old). The mortality rate was similar for both males and females during 2008. – Miguel Angel Cedenilla, Hamdi M'Barek and Moulaye Haye, CBD-Habitat Foundation.

Nouadhibou teachers: training on environmental education

Three hundred and twenty teachers from the primary and secondary schools of Nouadhibou (Mauritania) participated in both theory and practical training on environmental education, organized by CBD-Habitat during February 2009. The objective was capacity-building, helping the teachers to develop, in an effective way, environmental educational programmes, and to implement them in Nouadhibou's schools. With this objective, an environmental information handbook was also published in French and Arabic and distributed among school teachers during the training period [available for download in French, see below]. Also, a practical nature guide was published in order to assist teachers taking visiting school groups through the Cap Blanc Satellite Reserve and its environmental information facilities [available for download in French and Arabic, see below].

During the course, both theoretical and practical skills were emphasised, with practical educational techniques focusing on learning games for students.

This educational programme formed part of the project "Qualification of different sectors of the Mauritanian population in environmental education and sustainable use of natural resources", financed by the Spanish Cooperation Agency for Development, and the Spanish National Parks' Network, and executed by CBD-Habitat.

It was the first course of its kind held in Mauritania. – Ana Maroto, Moulaye O.Haye and Hamdi M'Barekm, CBD-Habitat Foundation.

Further information

CBD-Habitat. La Réserve Satellite du Cap Blanc [Guide to the Satellite Reserve of Cap Blanc, in French and Arabic]: 1-12. [PDF 880KB]

CBD-Habitat. Manuel d'éducation environnementale destiné aux professeurs de l'enseignement primaire et secondaire de Mauritanie: 1-70. [PDF 8.5MB]

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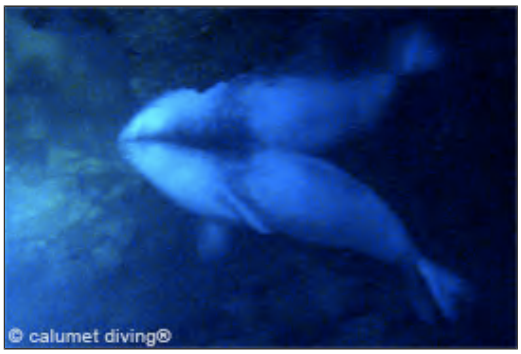
Spain

Automatic cameras to be installed in Mallorcan caves

Coastal survey research funded by the Balearic Islands government has located 35 caves in the area where a solitary monk seal was seen last summer, according to press reports and other sources in Mallorca. The species made its surprise reappearance after a fifty-year absence, following the killing of the last remaining individual in the late 1950s. The government is now set to install automatic cameras in identified caves to monitor presence by seals. A test installation has already been completed.



The Isla del Toro sighting, June 2008.

Further info

Medio Ambiente instalará cámaras submarinas para controlar al ´vell marí´, Diario de Mallorca, 7 January 2009.

Detectan 35 cuevas que podrían ser refugio del 'vell marí'. terra.es, 2 January 2009.

Seal returns after 50-year absence, TMG 11 (2): November 2008.

Our thanks to Toni Vecina of Mallorca for help in compiling this publications list.

Turkey

Multiple seal sightings along Turkish coasts

Multiple monk seal sightings were reported to SAD-AFAG in the 2008-2009 winter/spring period, backed by photographic or video evidence obtained by locals, including fishermen, dive guides and journalists. On the northern coasts of the Datça Peninsula, four seals were observed and filmed along the rocky shores near a sea cave, including an adult female, a subadult and a juvenile.

Two monk seals were observed and photographed near Bodrum, just 100 meters from the harbour. Elsewhere, two adult monk seals were photographed and filmed underwater near Akkuyu, Mersin, by divers. The images from Mersin also revealed that one of the seals had become entangled at the hind-flippers by "ghost" net fragments, hindering its movement. These various data were stored in the SAD-AFAG database and will hopefully assist the Turkish authorities in making better management and conservation decisions on the species and its habitat in the country. – Cem O. Kıraç and Harun Güçlüsoy, SAD-AFAG.

Monk seals on the northern coast of the Datça Peninsula.

Monk seal deaths along Turkish coasts

SAD-AFAG has received several recent reports of monk seal deaths through its AFBIKA Project, a national monk seal strandings network launched in 2003. Firstly, a juvenile monk seal was found dead near Behramkale, Çanakkale, in February 2009 by free-diving speargun fishermen who also happen to be AFAG supporters. An external examination did not reveal any clear evidence of gunshot wounds.

Juvenile monk seal found dead near Behramkale, Çanakkale.

On 7 April 2009, the discovery of a dead monk seal was reported to SAD-AFAG's Ankara head office from the island of Çatalada, off Turgutreis. The assistance of the Coast Guard, which cooperates with SAD-AFAG in the AFBIKA Project, was requested and quickly granted, with the local command providing transport to the island by inflatable.

Following initial examination of the carcass on site, resident vet Fulya Massozzi, a SAD-AFAG volunteer, conducted the necropsy in Yalikavak.

Adult monk seal found dead on Çatalada.

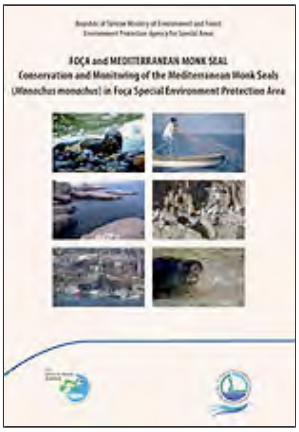
On site investigation by SAD-AFAG, Turkish Coast Guard and local fishermen.

The cause of death could not be clearly identified. However, as a result of the necropsy, it was observed that the monk seal was an adult male; that it had died at least 15-20 days earlier; that the corpse was heavily decomposed; that approximately

30 very small (2mm diameter) shots were found in its fatty tissues; and that two of the left ribs were broken. The possibility that the seal might have been killed – or had died – in the area where it was found was taken into consideration; as was the possibility that it had died elsewhere and had drifted in to Çatalada on the current.

All the findings and information were entered into the FokData database of SAD-AFAG. – Cem O. Kıraç and Harun Güçlüsoy, SAD-AFAG.

New publication on "Foça and Mediterranean Monk Seal"



A new publication on Foça and the monk seal has been prepared by SAD-AFAG, and published by EPASA, the Environment Protection Agency for Special Areas.

This publication underlines the importance of Mediterranean monk seals as one of the rarest animals in the world, and as symbolising a need for protection of the marine and coastal ecosystems as a whole. The book presents a comprehensive assessment on the species, as well as its habitats and the threats it faces within the Foça area. It also compares the past and current status of monk seals and habitats in the Foça SEPA (Special Environment Protection Area), and presents an analysis of problems and further measures to be taken for the protection of the species and its habitat in the area. – Elif Tertemiz, SAD-AFAG.

Further information

Kırac, C. O. and H. Güçlüsoy. 2008. Foça and Mediterranean Monk Seal; Conservation and Monitoring of the Mediterranean Monk Seals (*Monachus monachus*) in Foca Special Environment Protection Area. EPASA Publications. December 2008, Ankara: 1-48 [PDF 2.1MB].

Gökova project commences

"Boncuk Bay" in Gökova Bay, one of the very rare breeding grounds of sand-bar sharks in the Mediterranean, where the species migrates to breed.

Gökova Bay, formed by the Bodrum and Datça Peninsulas, represents an important monk seal habitat in Turkey. In the beginning of January work commenced on the Integrated Coastal and Marine Management Planning Project, whose activities are designed to directly or indirectly benefit the species in the area.

Data on artisanal and industrial fisheries, fishery socio-economics, sand-bar sharks, marine and wetland avifauna are being collected. A study of new legislation in line with the EU Common Fisheries Policy has also begun, aimed at better management of Gökova SEPA. While these elements of the project were on-going, a survey on the monk seal and coastal habitat was being planned for July and October 2009. By the end of the project, an integrated coastal and marine management (ICMM) planning proposal will be produced through GIS work in cooperation with SAD-AFAG, Stichting Rubicon, EPASA, the Ministry of

Agriculture and several local stakeholders. In order to cover protection of endangered species in the area, including the monk seal, the ICMM incorporates a holistic approach in its activities. – N. Ozan Veryeri, SAD-AFAG.

Vessel carrying capacity studied in Foça SEPA

New regulations are expected to limit the impact of boat traffic within the Foça SEPA.

In May 2008, the Environment Protection Agency for Special Areas (EPASA) nominated SAD-AFAG to carry out two research and analysis projects in the Foça Special Environment Protection Area (SEPA): *Marine Vessel Carrying Capacity of Foça SEPA* and *Monitoring of the Mediterranean Monk Seal and its Habitat in Foça SEPA.*

This project was finalised in December 2008, and provided significant data for the management plan of the Foça SEPA. The most important outcome of the project was the finding that boat harbouring carrying capacity in the area had reached maximum capacity. The future management plan will regulate pollution originating from these vessels as well as disturbance created to monk seals and other biota; proposed rules and implementation procedures will also be incorporated. EPASA expects to finalise the management planning of Foça SEPA in cooperation with SAD-AFAG and local stakeholders by the end of this year. – Elif Tertemiz and Gökhan Kaboglu, SAD-AFAG.

Badem undergoes veterinary treatment

An infected eye giving cause for concern, monk seal 'Badem' underwent a veterinary examination and in situ treatment on the Datça Peninsula, Turkey, on 5 January. Antibiotic drops were applied, and although the treatment was repeated two days later when Badem was discovered sleeping in a boat, the full course could not be completed as the seal strayed from the area and could not be located for the following three weeks, despite efforts by SAD-AFAG and attending veterinarians to do so.

Antibiotic administered to Badem at Gökova Bay, 1 February, 2009.

Despite the infection, Badem was judged to be in good overall health.

The injury was apparently sustained following her reported raid on fish farms in Bozburun, though both SAD-AFAG and its consulting veterinarians found suggestions unlikely that the seal might have been deliberately harmed.

On 30 January, following another fruitless search of the Mesudiye-Datça area by AFAG's Ozan Veryeri and SAD-AFAG representative Sezer Çete, Badem was finally found in Hisarönü near Bozburun.

Following an onsite examination by veterinarians Avni Gök and Fulya Massizzo, which indicated that the eye remained infected, it was decided to bring Badem again into semi-captivity, and to the specially-designed pen in Gökova Bay, where she had previously been held during the tourist season, because of her boisterous interactions with swimmers and beach-goers.

The specially designed sea pool measures 50m x 50m, and is 22m in depth, with a total surface area of 2500m2.

There, the seal was put under the care of veterinarians Avni Gök and Fulya Massizzo, who determined that the eye injury was not acute, and that Badem would soon be re-released.

Quoted in the Turkish daily Hurriyet, Fulya Massizzo emphasised that the injury had most likely been sustained at sea, possibly while Badem was foraging for food. A sharp object, it was suggested, natural or manmade, may have pierced the eye.

The Seal Rehabilitation and Research Centre (SRRC) Lenie 't Hart of Pieterburen, the Netherlands, meanwhile, had recommended a veterinary treatment previously applied to a monk seal pup in the Northern Sporades Marine Park in Greece [see The *in situ* treatment of a Mediterranean monk seal pup at Piperi Island, 11 (2): November 2008]. The pup had sustained a similar eye injury and was treated with a long-acting antibiotic administered subcutaneously.

The same treatment was subsequently administered to Badem, the veterinarians reporting that the seal was in good health and displaying no abnormal behaviour. Her reaction to the antibiotic would be closely monitored.

At the same time, AFAG representatives have suggested that Badem may at last be regaining some of her wild nature, but again cautioned that members of the public should help the seal along in that transition by not interacting with her.

AFAG states that the apparent change in Badem's behaviour was first noted after December 2008, and that she has now started to shy away from human contact. While Badem would previously gravitate towards beaches, says AFAG, since December she has tended to rest in moored inflatable boats, keeping her distance from the coast.

Rescued in December 2006 as an orphaned pup, Badem underwent rehabilitation in Foça, with AFAG drawing on expertise and nursing skills provided by the Zeehondencrèche Lenie 't Hart of the Netherlands. Regrettably, the seal became imprinted on her human carers during the 5-month process, a condition later exacerbated by swimmers' and beachgoers' demands for contact with her. She was released in April 2007.

Reports on the rescue, rehabilitation and post-release procedures applied in Badem's case, are expected to be finalized by the end of this year, according to Harun Güçlüsoy. – Compiled from information provided by Cem O. Kıraç and Harun Güçlüsoy of SAD-AFAG, and other sources.

Further information

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TMG. Ambassador with attitude, TMG 11(1): June 2008.
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Other sources and photographs

Hürriyet. Badem Photo Gallery.
Hurriyet. 'Badem'e özel havuzunda tedavi, 5 February 2009.
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NTV/MSNBC. Fok Badem koruma altında, 7 July 2008.
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Hürriyet. Fok Badem'in keyfi yerinde, 18 July 2008.

Mavi Boncuk

Further information has emerged on the death of 'Mavi Boncuk', a juvenile monk seal found stranded on a beach near the IMS-METU campus on Turkey's Mersin coast by a local fisherman on 26 December 2007 [see Question mark over monk seal pup at IMS-METU in Cilicia, Turkey? TMG 11 (1): June 2008].

The female seal, reported Dr. Ali Gücü of IMS-METU, was extremely weak and unable to move; it was transferred to a cottage located at the harbour of the Institute. While awaiting the arrival of Huseyin Cihan DVM from the Veterinary Faculty of Uludag, initial input was sought from a local veterinary clinic.

Subsequent treatment included tube feeding and other, as yet unspecified, interventions. The seal, however, failed to respond positively, and died several days after her arrival.

Asked about the necropsy, Ali Gücü informed us that the results indicated "symptoms of infection in the lung. Blood tests point to an infection too. All other organs were said to be in good shape except she was very skinny. The Faculty couldn't make the morbillivirus test, so they sent the blood samples to Italy. The cargo carrying the parcel had an accident on the way, so the samples arrived late. The examiner says the test is negative but noted that the samples were not in excellent condition when they arrived, so the results are not reliable."

Further details are being sought from the attending veterinarian, Huseyin Cihan of the Veterinary Faculty of Uludag, in the hope that a fuller report on the seal can be compiled and entered into the public record.

New rehab centre planned for Mersin?

In January 2009, we received information from Dr. Ali Fuat Canbolat of Hacettepe University in Mersin to the effect that a rehabilitation centre for marine animals – especially sea turtles and monk seals – is to be established in Mersin on Turkey's Mediterranean coast. The envisaged construction, we were told, would be 100m from the sea, and rely on sea water for its various pools. In attempting to achieve optimum water quality standards for the installation, the designers had reviewed relevant literature on such issues as salinity, pH, temperature, chlorine and coliform bacteria, but were experiencing some difficulty in obtaining relevant information on heavy metals and petroleum waste standards.

TMG duly provided various information leads to the University, and in the interests of transparency and information exchange, requested further details on the envisaged monk seal rehabilitation element of the programme.

Further light on the project was provided by Ali Gücü, of the IMS-METU, who was one of the original architects of the rehabilitation project. The rehabilitation centre, he told us, was originally planned for the IMS-METU campus itself, until the University – for sound legal reasons, according to Gücü – decided it could not proceed. Hacettepe University of Mersin then took over the reins but, unlike the IMS-METU campus, which is in a far less developed coastal area with good sea water quality, the newly identified site for the centre lies close to a petroleum refinery and to a fishing port, which typically suffers significant pollution.

Despite several additional requests, no further information has been received from Hacettepe University itself on its monk seal rehabilitation plans.

EndQuote

Man o' War invasion

Anyone planning to take a Mediterranean holiday in defiance of the plunging pound may be stung by something more painful than the exchange rate: the killer Portuguese Man o' War, one of the world's most poisonous jellyfish. The graceful glutinous creature, whose trailing tentacles carry a potentially lethal poison, was spotted this week off Spain's favourite beaches for the first time in 10 years. [...]

"Climate change is changing the migration patterns of many creatures. If they establish themselves it would be very worrying because they really are very dangerous," says Xavier Pastor, the European director of the Oceana ecological campaigning group.

Source: Portuguese Men o'War invade Med for first time in a decade, Elizabeth Nash, The Independent, 1 May 2009.

The Monachus Guardian
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Cover Story

Vol. 12 (1): June 2009

Freedom at last for KP2

The first successfully released hand-reared Hawaiian monk seal

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KP2 case overview

A male Hawaiian monk seal temporarily identified as "KP2" was first observed on May 1, 2008 on a Kauai beach after apparently being abandoned by a young female seal. This particular young female seal had abandoned her pup the previous year soon after pupping, and that pup died. On May 2, attempts were made to reunite the pup with his mother. The attempts were unsuccessful, so the decision was made to collect the pup with the goal of captive rearing it. The United States Coast Guard airlifted the seal aboard a C-130 to the National Marine Fisheries Service (NMFS), Kewalo Research Facility, Honolulu, Hawaii under National Oceanic Atmospheric Administration/National Marine Fisheries Service (NOAA/NMFS) Marine Mammal Health and Stranding Response permit # 932-1489-09. This was a joint effort between the NOAA/NMFS Pacific Islands Fisheries Science Center (PIFSC) and Regional Office (PIRO).

KP2 is rejected by his mother.

The infant seal is rescued by NOAA staff.

The pup, approximately 24 hours old at capture, weighed 15.7 kg and appeared dehydrated upon admittance into rehabilitation. His umbilical wound appeared inflamed and was cleaned with a dilute iodine solution. Broad-spectrum antibiotics were given orally for 10 days to minimize risk of infection via the umbilicus (a common cause of mortality for hand-reared neonatal harbor seals). Subcutaneous and oral fluids were administered for rehydration.

The Marine Mammal Center (TMMC) of the Marin Headlands of Sausalito, California was contacted immediately to take on the immense task of hand rearing this neonate. Since 1975, over 12,000 animals, such as elephant seals, sea lions, sea otters, harbor seals, fur seals, dolphins, harbor porpoises and the like, have been rescued and treated at the hospital facilities of TMMC. TMMC recognizes human interdependence with marine mammals and their importance as sentinels of the ocean environment, the health of which is essential for all life. TMMC recently partnered with NMFS because of their desire to provide expertise in Hawaiian monk seal recovery through science based projects. As a result, under the direction of pinniped veterinarian Dr. Frances Gulland, TMMC provided veterinary consultation and sent shifts of experienced volunteers and staff to Honolulu to direct the daily feeding, care and husbandry for the 227 days that KP2 spent in rehabilitation. Oahu based volunteer monk seal responders also assisted in the latter part of KP2's care with nighttime observations.

The US Coast Guard airlifts the seal aboard a C-130 to Honolulu.

KP2 being nourished on formula at Kewalo.

KP2 gained about 52kgs over his 7.5 months under human care. "Initially, the biggest challenge was finding the right nutrition for the seal when it was being fed formula [a mother's milk substitute developed for pre-weaned seals and other marine mammals in captive care, including fish, salmon oil, and fatty milk products]. Later, the challenge was to get KP2 to learn to eat on his own," stated Dr. Gregg Levine, NMFS contract veterinarian in charge of the medical oversight of KP2. Levine and teams of TMMC and NMFS volunteers used previously established techniques for elephant and harbor seals to help KP2 transition to eat live moi, a local bait fish that Hawaiian monk seals are known to consume.

Medical concerns shifted from nutrition to a swollen muzzle that appeared on July 9, 2008. The swelling was thought to be related to an insect sting. KP2 was placed back on oral antibiotics and the condition appeared to resolve quickly.

By late July 2008 discussions regarding release were initiated. However, on August 4, 2008 mild diffuse bilateral corneal edema was noted. Discussions on release were halted and a thorough diagnostic evaluation was done to determine the cause of the ocular disease. Empirical drug therapy for common causes of corneal edema were attempted in logical order, with effects of treatment carefully monitored. The corneal edema rapidly progressed in severity and by the end of August both eyes had moderate to severe corneal edema.

The thorough diagnostic work up evaluated eye swabs and blood serum for infectious diseases. All tests for pathogens were negative. It was hypothesized that the corneal edema could be due to a combination of environmental factors in KP2's enclosure (i.e. bright reflected sunlight and water quality issues). The decision was made to attempt to mitigate the potential environmental factors and move KP2 to ocean water in a

shoreline pen on a protected beach on the island of Oahu to see if the eyes would improve in this new environment.

On September 8, 2008, KP2 was moved from the Kewalo Basin Research Facility to a shoreline pen at Marine Corps Base Hawaii in Kaneohe Bay. Seawater in his shoreline pen ranged from 1 to 3.5 feet in depth depending on tides. KP2 acclimated quickly to his new environment. Over the next two months his ocular condition improved and he was observed tracking, catching and consuming live fish and crabs that entered his pen in addition to his daily ration of dead herring. KP2 was observed pushing rocks into one corner of the beach pen that was usually under water. During the day, he would spend a lot of time hunting and foraging near this "artificial reef" for small fish and sea cucumbers that came there for refuge in the rock pile. A local Marine Corps enforcement officer would routinely collect live tako (Hawaiian for octopus) weighing 1.0 to 4.0 kg for KP2. In addition to the hours of "pre-release" exposure to a prey item often consumed by Hawaiian monk seals, the tako provided environmental enrichment and supplemental nutrition.

Release determination

Live octopus was provided during the latter stages of rehabiliation.

KP2 ready for release, equipped with a satellite linked time-depth recorder and a VHF tag.

As KP2's eye condition improved it became evident that he was ready for reintroduction to the wild. Due to the critical condition of the Hawaiian monk seal population, NMFS wanted to ensure that this seal posed no threat to the wild population and adhered to the criteria all marine mammal releases must comply with in the NOAA/NMFS Marine Mammal Health and Stranding Response Marine Mammal Release Guidelines. To ensure his eye condition was not related to an infectious process, additional tests including ocular ultrasound were undertaken and the results were examined by many agencies and external experts. KP2 was cleared for release by the NMFS Office of Protected Resources. Again with the help of the United States Coast Guard, KP2 was transported on December 16, 2008 aboard a HH65 helicopter to a remote area on the island of Molokai. The release site was selected primarily because it is used regularly by other seals and would provide the opportunity for KP2 to socialize. An additional consideration was that there are few people in the area, which would reduce the likelihood of KP2 interacting with humans after his habituation and subsequent conditioning to human care givers. Prior to release KP2 was instrumented with a small satellite linked time-depth recorder and a VHF tag. Both tags were affixed to his pelage with epoxy.

Post-release monitoring

At the time of this writing KP2 is doing well. One concern was whether or not a naïve seal would be able to adapt and develop normal dive behavior upon release. “So far KP2 has been behaving like other young seals we have studied,” said Dr. Charles Littnan, PIFSC Monk Seal Research Program Leader. “He has slowly been venturing further from the release site and diving deeper as he gains experience.” He has been in the wild since 16 December and has been observed feeding and interacting with another young male monk seal. In January he traveled over 65 km from his release site and successfully found his way back on Molokai. In addition, he traveled one day to Lanai. All signs currently point to a successful reintroduction to the wild. However, if he shows signs of failing to thrive plans are in place to recapture KP2 and put him permanently into a facility for captive research and public display. Should the seal continue to do well, he will be captured in 3 month intervals over the next year for medical examinations, both to ensure he is healthy and to gather baseline information for future cases.

Hawaiian Monk Seal Recovery and Adaptive Management

The capacity to rescue pre-weaned pups, care for them in captivity and release them back to the wild population is a high priority and will contribute to the recovery of the Hawaiian monk seal. The *Recovery Plan for the Hawaiian Monk Seal*, the Hawaiian Monk Seal Recovery Team, TMMC and NOAA/NMFS share the view that every seal should be considered vital to the population and to the recovery potential of this species. During this experience we have learned invaluable lessons about caring for pre-weaned pups that will contribute to the adaptive management approach integral to future monk seal recovery efforts.

Over the past four years management actions and research in the MHI have provided valuable insights on how to deal with pups born on popular beaches, our ability to relocate seals within the main Hawaiian Islands and evaluate the threats of exotic diseases etc. Future rescues will likely involve cases where interactions with people or domestic animals have caused the abandonment of a pup. In the future NOAA/NMFS and its partners will continue to focus on critical recovery actions, with the ultimate goal of salvaging reproductive potential and recovering the Hawaiian monk seal.

Acknowledgements

NMFS Pacific Islands Region would like to thank the following people and organizations for their contributions of expertise, resources, and associated expenses that resulted in the success of this project.

The Marine Mammal Center for medical advice, daily feeding and husbandry of KP2:
Staff: Dr. Frances Gulland, Tenaya Norris, Deb Wickham.
Volunteers: Emily Andrews, Stephanie Behasa, Kat Rudd, Michelle and Keith Blascow, Misuzu Toyama, Sarah Codde, Marie DeStefanis, Stan Jensen, Rebecca Ryan, Suzanne Canja and Aubrey St.Marie.

The Hawaiian Monk Seal Response Team Oahu:
Volunteers: Donna Festa, Karen Bryan, Barbara and Robert Billand, Brenda Sparks, DB Dunlap Jim and Kathy Brown, Jessica Ashettino, Karen Rhoter, Kelly Blanchard, Chris Blanchard, John and Lisa Johnson, Dana Jones, Sharon Cosma, Jennifer and Rafe Maldonado, Darin Padula, Liv Wheeler, Barbara and Ralph Allen.

Agency support for transports and seal holding: United States Coast Guard, Air Station Barbers Point and the United States Marine Corps Base Hawaii.

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In Focus

Vol. 12 (1): June 2009

Artemis Diary

Eugenia Androukaki

Monk Seal Rescue and Rehabilitation Division, MOm

STOP PRESS | 15.05.2009 | Artemis found dead on Skiathos
Tragically, orphaned monk seal pup 'Artemis' was found dead on Skiathos in the Northern Sporades on 14 May 2009, evidence suggesting that the pup had drowned, most probably as a result of becoming entangled in fishing gear. Further information…

10 December 2008

An orphaned monk seal pup has been discovered on the Aegean island of Leros, fighting for its life after being swept away in a strong winter storm.

Dehydrated and exhausted, and with wounds to the head and flippers, the female newborn pup was found on Blefoutis beach by the deputy-mayor of the island, who immediately contacted the Port Police authorities.

They, in turn, alerted MOm H/Q in Athens. Following established procedures in such emergencies, our Rescue and Rehabilitation Division is now providing initial instructions by telephone. Our first advice is to watch and wait, in case the mother reappears and finds the pup of her own accord.

When, after several hours, there is still no sign of her, we advise gently moving the pup to a safer, less exposed, area of the beach.

11 December 2008

Artemis is evacuated by helicopter, avoiding a long trip by boat in rough seas.

First treatment at the Monk Seal Rehabilitation Centre in Steni Vala, Alonnisos.

MOm's rescue team arrives on the island to find the 10-day old pup in a poor state of health. Emergency first aid is administered, including oral rehydration therapy, and basic treatment of wounds.

Following examination, it's decided that the pup will have to be admitted to the Monk Seal Rehabilitation Centre on Alonissos, Northern Sporades, for intensive care and rehabilitation.

A helicopter evacuation is quickly arranged, provided by our long-term sponsors, Piraeus Bank.

Mindful for their important contribution towards saving the small seal, we make a point of thanking the Port Police of Leros and local supporters for their efforts.

23 December 2008

At the suggestion of those who helped in the rescue, the pup has been named 'Artemis' — the ancient goddess of wild animals, who was worshipped and highly honoured on the island of Leros.

The pup is responding well to treatment, having overcome initial problems posed by dehydration. Her superficial external wounds and skin infections have been treated with antibiotics and vitamins.

Artemis is also gradually becoming accustomed to her new diet, fish porridge (minced, filleted fish). Her weight has increased, reaching approximately 17 kilos today.

Recovering her strength, she can comfortably swim in the pool of the rehabilitation unit, and also lift herself out onto the platform, without human assistance.

22 January 2009

After 40 days of hospitalization at the Centre, Artemis continues to respond well to treatment and medication. She has also adapted well to the daily care plan designed to prepare her for her return to the wild.

The pup is now 2 months old, weighs 28 kg and has a length of 1.20 cm.

She eats 5 times a day, the rehabilitation team gradually replacing fish porridge with solid food, including tuna fillets. Live fish are also being introduced to the pool in order to stimulate the hunting instincts that will enable Artemis to survive in the wild.

Moulting: 11 January 2009.

Having moulted most of her laguno, Artemis has now acquired the short fur of a young seal. She obviously takes much pleasure in swimming in the unit's pool many hours of the day.

She vocalizes loudly, the MOm team all agreeing that she is the most lively seal ever to undergo rehabilitation at the Centre.

Both the rescue effort and the rehabilitation are being funded by MOm's long-time supporter, Piraeus Bank, through their Corporate Social Responsibility programme. The Bank has been consistently supporting the conservation of Europe's most endangered marine mammal for the last 15 years.

Volunteer staff at the Centre have, as usual, provided an indispensable contribution to the rehabilitation programme, and to the success of young Artemis' treatment.

Both the rescue and treatment of the female pup follows established treatment protocols and is carried out by specially trained biologists within the framework of the EU-funded "MOFI" project, that seeks to mitigate the negative interaction between monk seals and fisheries in Greece.

17 February 2009

After 2 months at the Monk Seal Rehabilitation Centre at Steni Vala, Artemis has now reached 35 kilos.

Though fed 4 kilos of filleted mackerel a day, she spends half the day in the unit pool, learning to hunt live fish and octopus. On a few days, she has even started to sleep in the water.

She continues to be very active and lively whilst awake, her condition and progress in rehab suggesting that she may be ready for release into the wild in about two months' time.

Volunteer staff continue to provide a great service to the running of the Centre. Although their stay at Steni Vala might be limited because of personal obligations, there has been no shortage of volunteer applications during Artemis's rehab this winter.

15 March 2009

Gaining weight: 23 March 2009.

Artemis is now 40 kg., she is strong and has begun taking fish from the pool on a regular basis. She sleeps in the water during the day, and indeed now spends most of her life here in the pool. The responsible veterinarian of the Centre, Dr. Natassa Komnenou, is called in for the final veterinary tests. These verify what seems obvious enough from her appearance and behaviour: the seal is healthy, and should be prepared for release. The feedings are diminished to 3 per day; gradually she's also introduced to unfilleted fish, so as to prepare her digestive system to take whole fish in the wild. The rehabilitation team also diminishes their presence in the Centre, and visitors are cautioned by MOm's volunteers not to interact with the seal.

10 April 2009

Artemis is now 60 kg, her added weight gained by eating spontaneously in the pool. She is equipped with a satellite transmitter – donated by Twycross Zoo, and implemented with the cooperation of the Sea Mammal Research Centre (SMRU) – to monitor her adaptation and behaviour following release. She is also injected with a

microtransponder that may help in monitoring her long-term survival. People are gathering in Steni Vala from many places on Earth to attend the release of the seal tomorrow.

11 April 2009

After a brief ceremony attended by many local well-wishers and visitors from Athens and abroad, Artemis is transferred to MOm's research boat "IFAW-ODYSSIA", the transport cage carried by those who, in one way or another, assisted so crucially in her rescue and rehabilitation; including Sophia Staikou, President of Piraeus Bank Group Cultural Foundation, and a representative of the Port Police.

Safely on board, the seal is escorted by members of the MOm rehabilitation team, SMRU, and Natassa Komnenou of Thessaloniki University's School of Veterinary Medicine.

Saying goodbye to her human carers…

…and hello to the wild.

Two hours later, we arrive at the island of Piperi, in the core zone of the National Marine Park of Alonissos, Northern Sporades.

At a secluded pre-selected beach, with a shallow open cave, we open the cage to release her, and Artemis emerges almost immediately. For the next four hours, we observe her from a distance exploring her new environment, first the beach itself and then its shallow waters. She is not discouraged by the small waves breaking on the shore but plays with them. Once in the water, she quickly exhibits hunting behaviour. At sunset, we say a last goodbye — though by 23:00 on that same evening the first signal has already come through to us from her transmitter!

26 April 2009

The second signal is received from Artemis. Still around Piperi, she's swimming north-west.

9 May 2009

A number of SMS messages from Artemis have been received. She has been quite active. Following a south-westerly course, she passed the island of Skantzoura, moving out of the Park and towards the mainland. She has travelled for more than 100 km, and is diving regularly and deep, suggesting that she is acclimatizing well to her new environment.

The Monachus Guardian
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In Focus

Vol. 12 (1): June 2009

Our monk seal ambassador, 'Desertinha', dies in Madeira

Rosa Pires

Parque Natural da Madeira Service

'Desertinha', the monk seal that became an ambassador for her species on Madeira two years ago [see Seal finds stardom, TMG 9 (2): November 2006], died on 1 December 2008 at the rehabilitation unit on the Desertas Islands.

Ever since 2006, when as an adult female she first became a resident of Madeira Island, Desertinha had been frequently sighted by local people. The last sighting on Madeira was in the harbour of Funchal on 27 November 2008, where she was found resting, but her behaviour was abnormal and we could confirm by her breathing and frequent vomiting that she was ill. With the support of the veterinarian of the Regional Directorate of Fisheries, that assists the Parque Natural da Madeira Service in such situations, we decided to take her to the Rehabilitation Unit at the Desertas Islands. According to the first veterinary diagnosis she was suffering from gastroenteritis and medical treatment began accordingly.

Desertinha at Funchal Harbour.

Coaxing Desertinha towards the transport box.

The capture and transport of this seal – weighing about 300 kg – to the Desertas Islands was only possible thanks to the commitment and skill of the PNMS staff, namely the leader of the logistical operation and the support of the Portuguese Navy. On 29 November Desertinha arrived at the Desertas on the Zaire, a Navy vessel. With the assistance of staff from the Seal Rehabilitation and Research Centre Lenie 't Hart (Pieterburen, the Netherlands) it was now possible to undertake a more rigorous examination, as a result of which pneumonia was also diagnosed. Moreover, Desertinha was refusing food, and becoming increasingly weak. She died on 1

December, the subsequent necropsy indicating cardiomyopathy, a chronic disease of the heart, which led to her weakened state, and also a dysfunction of other internal organs.

At the Desertas Islands, the seal is transferred from Navy vessel to Park inflatable.

Under observation by veterinarians at the Desertas Islands Rehabilitation Unit.

It was also possible to determine from her teeth that this was an old individual (the molars were missing, and also completely worn down to the gums on the lower-left jawbone. All remaining teeth were yellowish, blunted, and with exposed roots). Her age was estimated to be 20. This was based on her physical characteristics in 1993 when she was identified for the first time – a female no more than 200 cm long, and with few scars. At that time, we estimated her to be no more than 5 years of age.

Desertinha was one of the first identified monk seals on the Desertas Islands and one of the first individuals to be sighted on Madeira itself. She made a great contribution to increasing the monk seal population, giving birth to 9 pups during her lifetime.

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Perspectives

Vol. 12 (1): June 2009

Our Sea, Our Life

Konstantinos Mentzelopoulos

Northern Cyclades Marine Conservation Project Coordinator

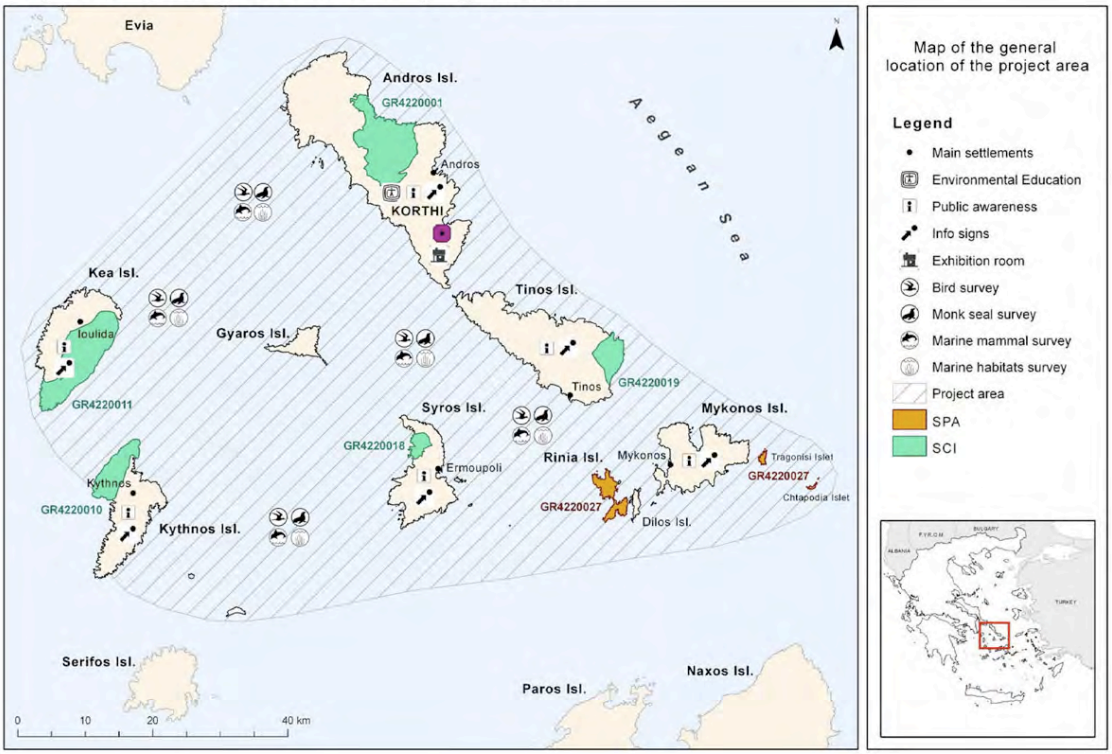
When I grew up as a child in Athens, my family always took their August holiday by the sea. I remember fishing with my brother and father, swimming in crystal clear water and feeling the cleansing and restorative powers of the sea.

Half a century later, I have become increasingly alarmed by the global warnings about the health risks associated with swimming in contaminated waters, the limit on fish consumption to minimize ingestion of toxic elements, and, worst of all, the suffering of marine life and the lives of those who depend upon the sea.

These profoundly disturbing changes in our oceans prompted me to respond with alacrity when Dimitri Zannes, President of the Fishermen's Union of the Southern Aegean, asked for help to develop the Union's idea to create a marine protected area in the Northern Cyclades where the office of the Union President is based. He expressed the urgency for immediate action in the region to protect the threatened marine ecosystems and develop measures to rehabilitate the declining fish stocks.

In July 2007, Mr. Zannes sent me a map illustrating a suggested Northern Cycladic marine protected area within the somewhat circular island chain of Andros, Tinos, Mykonos, Delos, Renia, Syros, Kythnos and Kea connecting back to Andros. He also suggested the establishment of a fully protected marine reserve, which the Union agreed would be a no-fishing zone, to replenish fish stocks and marine life around the uninhabited island of Giaros, which lies in the centre of this island chain.The Northern Cycladic marine area is characterized by the presence of a rich variety of important species and natural habitat types, many of which are identified as legally protected in the Annexes of the EU Birds and Habitats Directives. There are marine mammals, including at least 8 reported resident cetacean species and a very valuable population of the critically endangered Mediterranean monk seal (*Monachus monachus*). The area is also home to threatened sea bird (e.g. *Larus audouinii, Calonectris diomedia*], reptile (e.g. *Caretta caretta*) and invertebrate (e.g. *Pinna nobilis*) species; Posidonia sea grass beds; sandbanks with Maerl beds; mudflats; reefs; and submerged as well as partially submerged sea caves which are of critical importance to the monk seals.

Map of the general location of the project area



According to MOm (Hellenic Society for the Study & Protection of the Monk Seal), the Mediterranean monk seal population in the project area "represents 32% of the Greek population and approximately 27% of the European population of the species". The Northern Cyclades host numerous sheltering caves for the seals in remote areas along its 442 nautical miles of coastline. Some of the caves feature multiple entrances, interior beaches with soft substrate, and may be inaccessible to humans. It is therefore imperative to locate, record, map and evaluate all resting, feeding and pupping habitats in the region; document the population size; record the threats to the species; and formulate protection measures, to which MOm is eagerly committed.

Two monk seal pups in a cave on Giaros.

The extent to which Mr. Zannes and his Union colleagues have understood the relationship between the degrading condition as well as population size of marine species due to poorly managed anthropogenic activities and the problem of declining fish stocks has been impressive. Although the Union President had attempted in the past few years to solicit active support in resolving the problem by meeting with representatives of the European Commission, NGOs and government officials, he received only ideological support for a resolution to the problem. Mr. Zannes nevertheless continued to seek the concrete partnership of experienced organizations and individuals who would join hands and commit to the fulfilment of shared marine conservation aims.

This was the genesis of the Northern Cyclades Marine Conservation Project in Greece, launched in April 2008 for the rehabilitation and conservation of marine wildlife as well as the development of a sustainable fisheries industry, to which the following team has committed its long term participation: MOm, Hellenic Ornithological Society,

ARION Cetacean Rehabilitation and Research Centre, Hellenic Centre for Marine Research, Fishermen's Union of the Southern Aegean, OIKOM Ltd., and the Korthi Municipality on Andros Island.

Now uninhabited, the island of Giaros was once a place of exile and imprisonment for political dissidents.

In addition, ten more municipalities – Andros, Anos Syros, Exomvourgo, Kea, Kythnos, Mykonos, Panormou, Posidonia, Tinos, and Ydroussa – which surround the 5.955 km2 project area have expressed their support for our project through municipal council decisions that were each passed unanimously, with no abstentions or opposition, and which included representation from all of the Greek political parties. In view of the aims, credentials and range of public as well as private sector project participants, the Alexander S. Onassis Foundation has agreed to support the project financially, sharing our long-term vision of a succession of projects designed to achieve marine conservation and sustainable fisheries development goals.

This support is vital to the successful development of the marine conservation project's actions, including the development and establishment of **(a)** a new environmental NGO called BLUEnature.eu, to facilitate the development of scientific research, marine wildlife mapping, community support, and improved enforcement of fishing regulations, with the potential cooperation of the Ministry of Defence radar facilities on Andros that is under discussion; **(b)** the Northern Cyclades Marine Conservation Centre in Korthi, Andros; **(c)** legally protected areas, including Natura 2000 and IBA sites; and **(d)** EU fisheries programmes and measures to resolve the current unsustainable level and forms of fishing, which include those that destroy our natural marine resources.

On December 1, 2008, the Fishermen's Union President acknowledged the merit of the project strategy to utilize environmental protection laws to the fullest extent during the process of sustainable fisheries development in the Northern Cyclades. This conclusion was based upon an evaluation of the current ill-conceived fisheries policies which have not prevented the continuing degradation of marine life, including commercially exploited species (evidenced in part by the recent ICAAT decision for allowable 2009 bluefin tuna catches, including during the May/June spawning season, disgracefully supported by the EU contrary to all accredited scientific recommendations). As a result, the Union supports the Northern Cyclades Marine Conservation Project which is focusing on multiple wildlife conservation issues with its partnership team, including the development of new methods of reducing the often lethal conflict between fishers and pinnipeds, as well as cetacean species, protecting the natural habitats upon which fish reproduction depends and raising consumer awareness about the importance of ascertaining the methods, sources and locations from which their fish purchases originate.

Mr. Zannes stated at a 2006 news conference with Greenpeace, “We [the fishermen] are on the brink of collapse… We know now that we will only continue to exist if we create a healthy ecosystem… If the sea perishes, so will we.”* It is with this understanding that organizations, some of which are now setting aside their past differences with one another, are now focusing on the marine environmental crisis that must be addressed swiftly and comprehensively if we are to improve the prospects for our shared destiny. After all, it is our sea and, thus, our life.

*IUCN European Newsletter, Volume 13/2007

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Perspectives

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The 1st International Conference for Marine Mammal Protected Areas: a long overdue workshop on both *Monachus* species

Spyros Kotomatas[1], Vangelis Paravas[1], Harun Güçlüsoy[2] and Rosa Pires[3]

1. MOm/Hellenic Society for the Study and Protection of the Monk Seal
2. SAD-AFAG Underwater Research Society – Mediterranean Seal Research Group
3. Divisão de Conservação da Natureza Serviço do Parque Natural da Madeira

It is a very long way from the Mediterranean Sea to the Hawaiian island chain in the middle of the Pacific Ocean. They are actually on opposite sides of the world. However, these two areas have something in common: both host the last remnant populations of the two species of the endangered genus *Monachus*, the Hawaiian and the Mediterranean monk seals. What brought us 13,000 km away from home was the workshop organized by NOAA (National Oceanic and Atmospheric Administration) on "MMPAs and MMPA networks for monk seal conservation: Hawaii vs. Mediterranean".

Dr. Spyros Kotomatas of MOm, addressing the ICMMPA.

The workshop was hosted under the umbrella of the 1st International Conference for Marine Mammal Protected Areas (ICMMPA) and took place on Maui, one of the Main Hawaiian Islands, from the 30th of March to the 3rd of April 2009. More than 200 participants from more than 40 countries attended the Conference, to discuss the current status of marine mammal protected areas globally, the threats these areas face, and the potential for establishing networks between them to improve their effectiveness in conserving marine mammals. A entire session was devoted to the *Monachus* genus, which was actually one of the few topics on pinniped conservation during the ICMMPA.

The week-long experience of the ICMMPA was characterized by contrasts. We were, in fact, visiting the country of contrasts: from the austere faces of the Homeland Security Officers in their black Orwellian uniforms, who "welcomed" us, taking our fingerprints and iris scans for "security reasons"; to the laid-back Hawaiians welcoming us with *Alohas* and flower necklaces at the Kahului airport in Maui; from the ocean views of the five-star resort rooms at the Grand Wailea Resort and Spa, where the ICMMPA took place, filled with Bottero sculptures; to the tents of the homeless Hawaiians scattered

across the park of the famous surfing beach of Waimea in Oahu; from the difficulty in coordinating the various governmental agencies and universities involved in MMPAs in the US; to the severe lack of resources and governmental initiatives criticised by NGOs involved in MMPAs from smaller countries around the globe.

Aside from these distinct contrasts, the Conference was viewed by all participants as a huge success. First and foremost, it brought together scientists, managers, enforcement officers, government officials, NGOs, indigenous people and entrepreneurs concerned with or working on MMPAs. It provided the opportunity to exchange ideas, experiences and techniques on numerous issues, such as marine mammal research, strandings, design and management of MPAs, enforcement, education, participatory processes and even international legislation. A key theme throughout both the formal part of the Conference and the most informal get-togethers was the need for local, regional and international networking between people that work on MMPAs and between the MMPAs themselves. In fact the beginning of several such initiatives was announced at the summary session that closed the ICMMPA.

The monk seal workshop took the lead on this theme. The numerous US participants working on the Hawaiian monk seal *Monachus schauinslandi*, welcomed wholeheartedly their Mediterranean colleagues from Greece, Turkey and Portugal. In fact, such a meeting was long overdue, since the last time they had met was in 1998 in Monaco, immediately after the distressing die-off of the Mauritanian *Monachus monachus* population. During the workshop, following several technical presentations, there was in-depth discussion on the status of both *Monachus* species, the efforts exerted on both sides of the planet to conserve them and the key lessons learned from both successes and failures.

Our US colleagues were pleasantly surprised by the existing collaboration between various countries working on the Mediterranean monk seals and especially by the recent formation of the “i-monk Alliance”. Furthermore, they were impressed by the success of efforts to recover the Mediterranean monk seal in Greece, Turkey, Madeira and Mauritania, especially in view of the extremely limited resources available. To us it became evident that the status of the Hawaiian monk seal remains quite alarming in view of the continuous and steady decline of the North Western Hawaiian Islands population. Despite considerable efforts exerted by the numerous agencies involved, it appears that various factors create quite a complex and not an easily resolved situation. On the other hand we were quite pleased to see a steadily increasing breeding population in the Main Hawaiian Islands (MHI), of approximately 100 individuals. This news brings a new hope for the species, as long as the necessary steps are taken to conserve the MHI population and its habitat from the already existing and intense threats (fisheries, tourism, disease, etc.).

The workshop closed with extended discussion and agreement to establish immediate and continuous exchange of information between the people that work on both species, on issues such as protocols and procedures in enforcement, monitoring and sampling, animal tagging and capture, rehabilitation and health evaluation. The workshop concluded in long-term recommendations on the conservation of the two species of *Monachus*. The recommendations were addressed to IUCN, aiming at greater representation for the *Monachus* recovery efforts, and to all other involved institutions, NGOs and governmental agencies, for building capacity and expertise through exchange programs for training and research, for designing strategic plans to build stakeholder support and enhance funding for the support of MMPAs and *Monachus* recovery, and for developing a classification for levels of protection designated both within and outside MMPAs.

Hawaiian monk seal on Oahu.

Until we meet again… this time sooner… Aloha.

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Letters to the Editor

Vol. 12 (1): June 2009

Monk seal conservation: Can we volunteer?

I would be very interested in taking 10 days' or 2 weeks' vacation to help out on a monk seal project. Can you recommend anywhere? It would be great to participate in field work, but also in a rehabilitation centre, or actually anything where I might be helpful. Two weeks may sound like little time, but I can adapt to all sorts of living conditions (bivouac is fine for me) and I'm interested in learning possible new skills, which would be required for the project.

– *Thomas d'Eysmond*, PhD student in biotechnology and bioengineering, Lausanne, Switzerland, 5 May 2009.

I have informed myself about the monk seal from your web site. I study Biology in Göttingen and would like to make an internship or work as a volunteer abroad after finishing my diploma, from June onwards, for some months. I would find it extremely exciting to participate in a research project for the protection of the monk seal. Do you have any advice, or do you possibly even know of a project where I might apply?

– *L.S.*, Göttingen, Germany, 31 January 2009.

✓ **Editor's reply:** We often receive letters from students and others, enquiring about the possibility of volunteering on monk seal research and conservation projects, or taking up a longer internship. Below, we describe some of the projects and positions currently on offer. Those wishing to apply should contact the projects concerned directly to check on availability and other conditions that may be subject to change.

Greece

Where? The National Marine Park of Alonissos, Northern Sporades.

Who? The Management Body of the Park, based on the island of Alonissos.

What? "Volunteers are required to assist in the implementation of the Park's day-to-day Management Program which includes field work and office duties."

National Marine Park of Alonissos, Northern Sporades.

The Park is also offering a postgraduate internship in Mediterranean monk seal research: "We are looking for enthusiastic, motivated people with an interest in marine research and conservation to join us as interns for a 8-12 week period during September-November 2009..." The Management Body adds: "Monk seal monitoring is carried out with the Park's research boats, a 10m motor cruiser and a 4m inflatable boat and the study method involves visits to monk seal caves (mainly during the night) and recording evidences of animal presence (tracks, faeces, presence of the seal etc). [...] Interns must be prepared to become members of the patrol boats' crew, assisting in the boats' operation (rope handling, rowing etc), which means involvement of some physical labour.

Further information: The Park website provides extensive information on the types of field and office work it has on offer from "enforcement of the Park's protection measures and regulations [and] monitoring of ecological conditions..." to "filing, letter writing [and] computer orientated [...] tasks": www.alonissos-park.gr

Madeira

Where? The Desertas Islands, a sub-archipelago of Madeira archipelago, a Portuguese territory, located in the Eastern Atlantic.

Desertas Islands, Madeira.

Who? The Parque Natural da Madeira.

What? The volunteer is integrated in the team of 2 or 3 nature rangers that are responsible for the guarding and monitoring of the monk seals at the Nature Reserve of Desertas Islands, for a 15-day period. The activities on the Desertas, which are managed by the nature ranger leader, also include reception of visitors, maintenance of material and equipment, and all the domestic tasks.

Further information: Accommodation is provided at the Desertas Islands, where a sleeping bag and other personal items are required. The volunteer is responsible for all the other expenses (travel, meals, accommodation in Madeira Island, and insurance to travel in the Portuguese Navy boat and for the stay at the Desertas).

The provisions for the 15 days are bought in Madeira a day before the departure to the Desertas Islands; the expenses are shared by all the team including the volunteer.

Language requirements: Portuguese and English.

Only in exceptional cases do we accept more than one volunteer at the same time.

To apply, please contact Rosa Pires of the Parque Natural da Madeira: rosapires.sra@gov-madeira.pt.

– Information provided by Rosa Pires, PNM.

Turkey

Where? Mersin – Erdemli, south coast of Turkey.

Who? Levant Nature Conservation Society.

What? Monk seal cave monitoring; Monk seal population estimation survey.

Further information: Two principal activities are planned:

Installing a photo-trap in a cave on the Cilician coast.

Activity 1 – Monk seal cave monitoring, using photo-traps. Based in Mersin – Erdemli, activity will be concentrated on a single breeding cave which is frequently used by seals. The cave used for the experiment is 10 km away from the METU – Institute of Marine Sciences in Mersin.

An experiment will be implemented to analyze the resting time of the seals when they are exposed to different flash intervals. That is, we deploy a photo-trap in a seal cave and change the flashing interval periodically. (A recently-completed study on the possible deterrent effects of photo-traps with visible flash indicated that there is no pronounced effect; however, flash intervals should be taken in to account in order to minimize possible disturbance.)

Duration: From 15 to 30 days per volunteer.

Language requirements: English.

Costs: Accommodation can be provided at the Institute's student dormitory. Electricity, gas etc. that is consumed should be paid for as well as contributions to cleaning costs. Total costs range between 35-60 euros per month. Lunch (2.5 euros) is served at the Institute only on weekdays, but the dorm has cooking and washing facilities.

Activity 2 – Monk seal population estimation survey. This will be a cruise survey, covering a large area along Turkey's southern Mediterranean coasts, from the Syrian border to Antalya, as well as the northern coasts of Cyprus. Infrared monitoring systems will be installed in certain caves, previously discovered, that are known to be frequented by seals.

Activity 2 plans to undertake an integrated survey for the first time, covering areas studied in previous surveys. It is expected that spontaneous photographs will be obtained from the installed photo-traps. This will enable us to make more precise population estimates.

Duration: The research cruise will last approximately 15 days.

Language requirements: English.

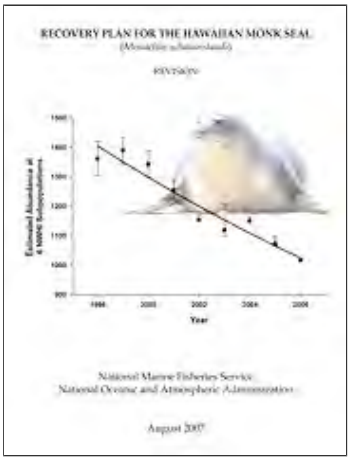
Costs: Accommodation will be on board. Only contribution to food expenses is expected.

Levant Nature Conservation Society was created by a group of academics from Middle East Technical University Institute of Marine Sciences, who work in marine conservation.

More detailed information, exact dates, and contact details will be announced on our web site, www.ecocilicia.org.

– Information provided by Serdar Sakinan, METU-IMS.

Graph of Deep Decline



I am presenting a seminar on the interactions of fisheries and declining marine mammals and have been searching for a graph illustrating the deep decline of the Hawaiian monk seal, but have been unable to locate one that I can put in my PowerPoint presentation.

I've searched your website and come up empty. Do you have such a graph that you can email me or point me to on your website?

– *C.K.*, University of California, Santa Barbara, 3 December 2008.

✓ **Editor's note:** The decline of the Hawaiian monk seal is steep indeed – and the reason, no doubt, that NOAA Fisheries chose a graph depicting the species' dwindling numbers for the cover of its revised Recovery Plan in 2007.

NOAA. 2007. Recovery Plan for the Hawaiian monk seal *(Monachus schauinslandi)*. Revised. National Marine Fisheries Service, National Oceanic and Atmospheric Administration: 1-165. [PDF 1.2MB]

The editor reserves the right to edit letters for the sake of clarity and space

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Recent Publications

Vol. 12 (1): June 2009

In Print

Gucu, A.C., S. Sakinan and M. Ok. 2009. Occurrence of the critically endangered Mediterranean Monk Seal, *Monachus monachus*, at Olympos-Beydaglari National Park, Turkey (Mammalia: Phocidae). Zoology in the Middle East, 46, 2009: 3-8.

Mo, G., A. Zotti, S. Agnesi, M. Grazia Finoia, D. Bernardini and B. Cozzi. 2009. Age classes and sex differences in the skull of the Mediterranean monk seal, *Monachus monachus* (Hermann, 1779). A study based on bone shape and density. The Anatomical Record 292: 544–556. [Abstract]

Parrish, F.A. 2009. Do monk seals exert top-down pressure in subphotic ecosystems? Marine Mammal Science, 25(1): 91–106. [Abstract]

Politikos, D.V. and D.E. Tzanetis. 2009. Population dynamics of the Mediterranean monk seal in the National Marine Park of Alonissos, Greece. Mathematical and Computer Modelling 49(3-4): 505-515. [Abstract]

Schultz, J.K., J.D. Baker, R.J. Toonen and B.W. Bowen. 2009. Extremely low genetic diversity in the endangered Hawaiian monk seal (*Monachus schauinslandi*). Journal of Heredity 100(1): 25–33 (Advance Access published online on September 23, 2008). [Abstract]

Reports

Marine Mammal Commission. 2008. Annual Report to Congress 2007. Marine Mammal Commission, Bethesda, Maryland: 1-207. [PDF 6.3MB]

Office of National Marine Sanctuaries. 2009. Papahaānaumokuaākea Marine National Monument Condition Report 2009. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Silver Spring, MD: 1-54. [PDF 2.1MB]

Conferences and Workshops

23rd Annual Conference of the European Cetacean Society, Istanbul, Turkey, 2-4 March 2009.

Oral Presentation

Fernandez de Larrinoa, P., M.A. Cedenilla, L.M. Gonzalez, and F. Aparicio. Satellite tracking of wild Mediterranean monk seals: a non invasive innovative tool. [Abstract 60 KB]

Posters

Cedenilla, M.A., P. Fernández de Larrinoa, M. Haye, A. Varea, H. M'Bareck, A. Maroto, L.M. González and M. Muñoz-Cañas. Description of adoption behaviour detected in the Mediterranean monk seal (*Monachus monachus*) at the colony of the Cabo Blanco peninsula (Mauritania-Morocco). [PDF 854KB]

Muñoz-Cañas, M., M.A. Cedenilla, M. Haya, H. M'Bareck, L.M. González and P. Fernández de Larrinoa. Individual identification of the monk seal colony members at Cabo Blanco Peninsula (Mauritania-Morocco). [PDF 1.1MB]

Workshop

Who are our seals? Moving towards a standardized population estimate approach for *Monachus monachus*, 28 February, 2009.

Gucu, A.C., and G. Mo. 2009. Who are our seals? Moving towards a standardised population estimate approach for *Monachus monachus*. Workshop conducted within the framework of the European Cetacean Society Annual Conference [an event sponsored by RAC/SPA (Tunis) and Pelagos-Monaco (Principality of Monaco)], Istanbul, Turkey, 28 February, 2009: 1-5. [PDF 162KB]

TMG thanks Alexandros Karamanlidis and Harun Güçlüsoy for their help in compiling this listing

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