MEDITERRANEAN MONK SEAL SIGHTINGS IN ITALY THROUGH INTERVIEWS: VALIDATING THE INFORMATION (1998-2006)

Giulia Mo *, Sabrina Agnesi , Taira Di Nora and Leonardo Tunesi
ICRAM, Via di Casalotti 300, 00166 Rome, Italy - giulia.mo@icram.org

Abstract
Despite the fact that the monk seal has been defined as absent from Italian coasts during the last decades sightings are still reported. The present paper illustrates the methodology used to validate monk seal sightings reported along Italian coasts since 1998. The presently outlined sighting validation procedure suggests that a small presence of individuals may still be occurring for short periods throughout Italian coasts.
Keywords : Conservation, Monitoring, Sampling Methods.

The Mediterranean monk seal (*Monachus monachus*) is considered extinct from Italian shores since the mid 1980s, in light of the absence of a stable resident population and of known reproductive activities. The sightings occurring over the last decades have been attributed to vagrant individuals originating from groups of nearby countries [1]. The Italian Central Institute for Marine Research (ICRAM) has collected information on seal observations, recorded by seafarers along the Italian coasts as of 1998, so as to monitor and evaluate the phenomenon. This information is shared with Gruppo Foca Monaca-Italia. Sighting observations are reported following a specific information campaign directed at the wide public (mass media comunications) and involving institutional bodies (Coast Guard, Maritime officers, Marine Protected Area).

The present paper illustrates the data collected by ICRAM for the period 1998-2006 and the methodological approach used to differentiate observations of seal sightings from unattendible incomplete observations. Monk seal observations are recorded through verbal interviews of the observers with a standard interview format aimed at collecting the technical details of the sighting itself taking care not to provide the interviewee with any technical hints on the species' characteristics. The format involves information on: the observer's general details, weather conditions, date and location, distance from the coast and from the sighted animal, number of animals, estimated length, pelage colour, physical characteristics (i.e. description and shape of any body parts), swimming characteristics, general behavior, photographic documentation. To provide a validation of the observations, a score of 1 was given for each of the following phocid physical/behavioural characteristics [2] reported by the observer: 1) rotund head, held out of water during swimming, 2) large ocular orbits, 3) presence of vibrissae/fur, 4) compressed snout/presence of nasal slits, 5) edge of posterior flippers trailing along water surface during surface swimming, 6) lateral oscillations of posterior body trunk during swimming, 7) round head smaller than round shape of body 8) shape and position of flippers with respect to body. The total score was tallied for each observation and those scoring 4 or more, for situations in which the observer was out of the water, were considered acceptable (validated observations). This total value was lowered to 3 for underwater observations because of the reduced visibility under water. Furthermore, sightings having acceptable photographic documentation were automatically considered validated. One or more validated observations occurring in the same location and time were considered as a single seal sighting. Selected features of the validated observations were analysed.

On the overall, 59 observations were recorded of which 38 are validated observations and correspond to 27 sightings. Figure 1 illustrates their distribution. Only two sightings had photographic documentation. The highest number of validated observations was reported by professional and recreational fishers (32 and 24%), followed by boaters (18%), scuba divers (16%) and locals (11%). Only 16% of the observations occurred underwater. Almost 75% of the observations occurred within 20 meters of the seal and almost 48% lasted less than 1 minute. The majority of observed individuals (79%) were estimated as being <1.5 meters long while only 18% of individuals surpassed 1.5 meters.

The concerned sighting areas regard the southernmost continental and insular locations that are most proximate to populations of nearby countries such as Greece and Tunisia [1]. Given the estimated lengths provided by the observers, it is likely that the individuals transiting through Italian coasts are composed principally of juveniles, a size class known to disappear from its original birthsite for unknown destinations for prolonged periods of time [1], followed by a minor amount of adult sized individuals. The generally limited duration of the observations appears to be sufficient in guaranteeing an adequate perception of the principal seal characteristics necessary for sighting validation, this is also probably determined by the close proximity of most seal encounters. The seafarer's typology analysis suggests that information campaigns geared at future data collection on monk seal sightings should address all of the typologies involved so as to guarantee an efficient sighting monitoring. The applied approach allows to screen indirect information in order to distinguish the most accurate seal sightings occurring along the Italian coasts, an aspect that is crucial given the species' rarity.

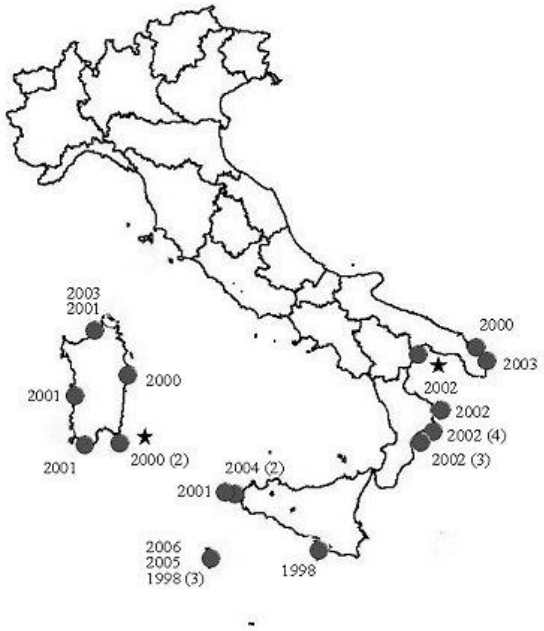

Fig. 1. Distribution of sightings and dates (number of sightings in parenthesis; stars indicate photographic documentation)

References

1 - Aguilar A. 1999. Current status of Mediterranean monk (*Monachus monachus*) seal populations. Aloes editions, RAC-SPA, United Nations Environment Programme (UNEP), Boulevard de l'Environnement, BP 337 - 1080 Tunis, Tunisia. 60p.
2 - Bonner WN 1989. The natural history of seals. Christopher Helm Ltd., Kent, UK. 180p.