

DOCUMENTING AN ENDANGERED SPECIES, MEDITERRANEAN MONK SEAL (*MONACHUS MONACHUS*)

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The most important basic knowledge necessary, either in a scientific work or for a conservation attempt, is a reliable estimate of population size of the species in question. As regard to endangered species, the direct counting technique is an appropriate method since these species are generally very few in numbers. The major problem in direct counting is the stretch of the region on which the individuals are distributed. The time needed to survey entire extent of a habitat usually is long enough to rise the risk of recurrent counts. The only way to eliminate recurrent counting is to document and identify each individual within the population. This is the method applied in the research activities carried out to protect the world's most endangered marine mammal along the Mediterranean coast of Turkey.

The length, color, scars and natural marks on the body, ratios on the body of an individual are some of the characters used in the identification of an individual. To see these characters seals are observed at the most probable encounter sites, such as around resting caves, feeding grounds. As the individual specific peculiarities of the seals are observed they are noted. Observations made by naked eye, are, however prone to bias. Therefore photographing is a preferred technique.

The seals are timid and shy animals. The most probable observation time is at sun rise and sun set, when the light is too dim for photography and hence requires expensive equipment and considerable experience in photography. These two factors are not always available. In the project, the approach is disregarding the quality concerns to take as many photos as possible from a fixed position. Additional effort is being spent to include a reference object, such as rocks, within the frame. Afterwards using precise measuring techniques, images are analyzed in order to get as much information as possible. The slides are examined under binocular with micrometer attachment to facilitate precise measurements at micrometer level. The dimensions of the seal and the reference objects are compared and the size of the seal is calculated with appreciable precision. This approach made even possible to estimate the growth rate of the individuals.

The evaluation of the sighting records gathers during the research surveys revealed the fact that the majority of the sightings were done during cave surveys rather than observations from land. But on the other hand, it is well-nigh impossible to take a photograph without disturbing a seal in a dark cave. In order to monitor and photograph the seals within their cave and without disturbing them infrared monitors attached to a camera were installed into the caves which are used frequently by the seals. This setup enables to record date and time of the seal movements in the cave and takes photos with given intervals. These data can be stored up to three months.

As a consequence of documentation studies and image processing, 18 individuals were identified within the region between Taşucu and Gazipaşa.

KEY WORDS: Mediterranean Monk Seal, Documentation, Population Assessment

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