Photo-identification catalogue for Mediterranean monk seals - a functional methodology

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A catalogue of individual Mediterranean monk seals (*Monachus monachus*) has been developed, starting in 2018 within a photo-identification project in the Central Ionian Sea, Greece (Fig.1), using camera traps. Seal identification is based on the pattern of fur coloration, the ventral patch or the shape of its lateral remains, and presence/shape of scars. Animals are categorized into pups, juveniles, subadults and adults, along with their gender if detectable.

Figure 1. Location of the study area: (a) Mediterranean, (b) Greece, and (c) Central Ionian

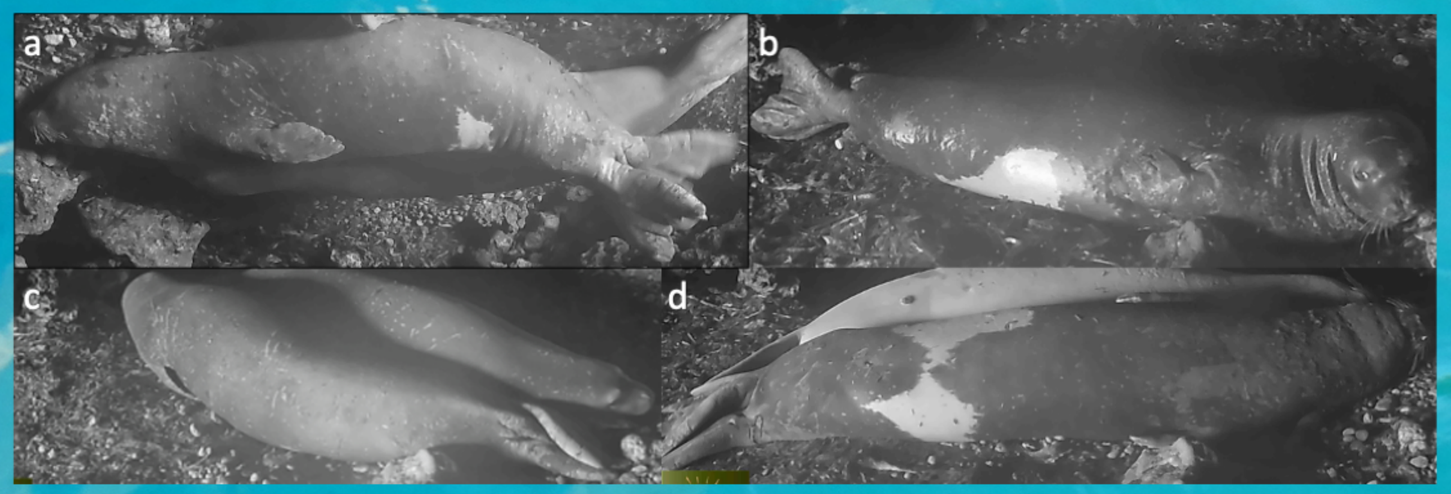

Figure 2. Some pictures showing the left (a) and right (b) sides, and back (c) and ventral (d) views of seal A021 - Jannis a completely identified adult male seal

For each session (period from installation to retrieval of a camera) data are registered in an Excel file (Fig.3) including the classification of each animal. A **Completely identified animal** is a seal for which both sides, back, and belly are recorded within the session, and it is classified with a unique code. The morphological features of a **Partially identified animal** allow to diversify it from completely identified seals but one or more of the above-mentioned records is lacking. It is classified with a temporary code. **Not identified seals** are listed under the generic code UK.

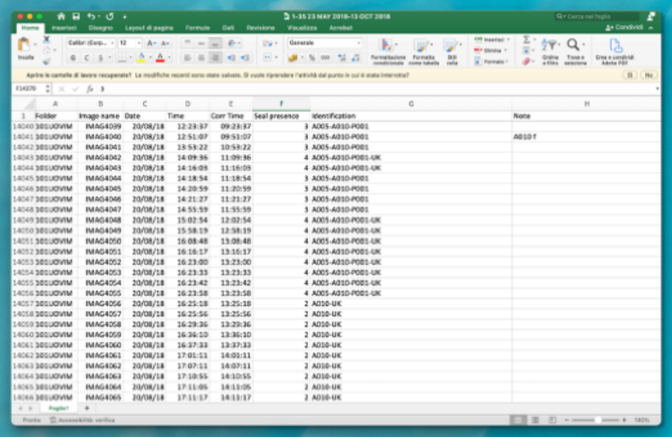

Figure 3. Excel file example

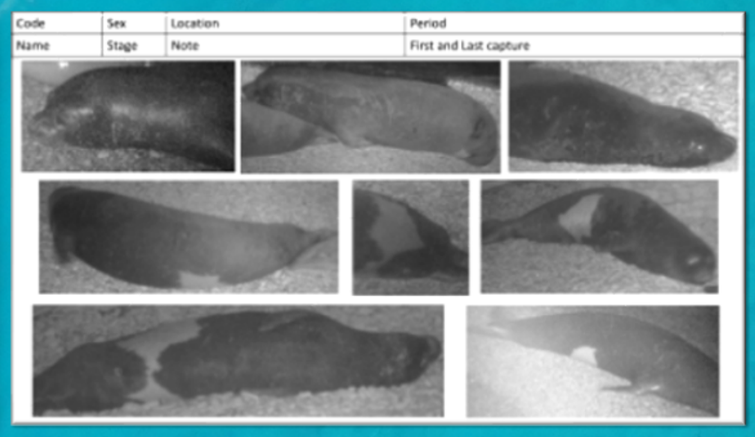

Figure 4. A sheet of A021 from the catalogue

Characteristic pictures of completely or partially identified seals are included in sheets forming a **Session Catalogue of individuals**. In subsequent sessions and/or re-examining the previous ones, a seal partially or not identified can be re-classified. Only completely identified subadults and adults, with information on recaptures through the sessions, are included in a **Main Catalogue** (Fig.4), thus representing the absolute minimum number of potentially reproductive seals composing the population. Long-term monitoring is essential for evaluating population numbers and other ecological parameters.

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