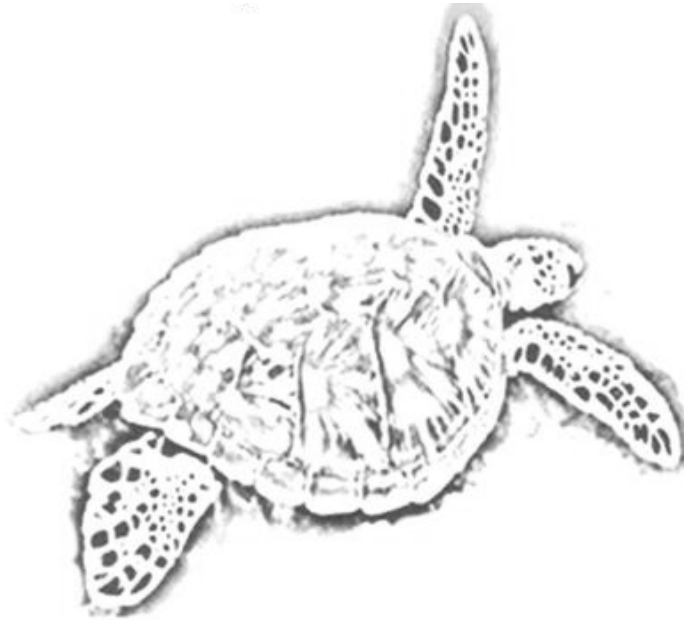


**PROCEEDINGS OF THE  
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**GENETIC STRUCTURE OF THE LOGGERHEAD TURTLE (*CARETTA CARETTA*)  
MEDITERRANEAN NESTING POPULATIONS**

**Carlos CARRERAS (1), Marta PASCUAL (2), Luis CARDONA (1), Alex AGUILAR (1),  
Dimitris MARGARITOULIS (3), Alan F. REES (3) Oguz TURKOZAN (4), Yaniv  
LEVY(5) Avital GASHID (6), Monica AUREGGI (7) and Mona KHALIL (8)**

- (1) University of Barcelona, Faculty of Biology, Department of Animal Biology, Avda.  
Diagonal 645, E-08028 Barcelona, Spain
- (2) University of Barcelona, Faculty of Biology, Department of Genetics, Avda. Diagonal 645,  
E-08028 Barcelona, Spain
- (3) ARCHELON, the Sea Turtle Protection Society of Greece, Solomou 57, GR-104 32  
Athens, Greece
- (4) Adnan Menderes University, Faculty of Science and Arts, Department of Biology, 09010  
Aydin, Turkey
- (5) The Israeli National Nature & Parks Authority, Sea Turtle Rescue Center, Mevo'ot Yam,  
Mikhmoret 40297, Israel
- (6) Tel Aviv University, Faculty of Life Sciences, Institute for Nature Conservation Research,  
Israel
- (7) MEDASSET, 1c Licavitou str., GR-10672, Athens, Greece
- (8) MEDASSET, P.O.Box 19, Tyre, Lebanon

We assessed the genetic structure of the Mediterranean nesting populations of the loggerhead turtle (*Caretta caretta*) using a mitochondrial DNA marker and seven microsatellites. Genetic structuring was identified with both kind of markers, thus suggesting that both females and males are philopatric and that gene flow between populations is restricted, although exists for nuclear DNA. This demonstrates that some males mate with females of other populations. Mitochondrial DNA data suggest that the populations nesting on the islands of Crete and Cyprus have suffered a recent bottleneck or have been colonized recently (founder effect). However, no bottleneck or founder effect has been detected with nuclear markers, thus suggesting that male mediated gene flow from other populations highly increases nuclear genetic variability. In this scenario, Crete and Cyprus are thought to play a central role in the male mediated gene flow between Mediterranean populations. Due to these connections, the negative effect of genetic drift or inbreeding on the smallest populations may be less important than suggested by reduced population size.