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ANALYSIS OF THE MEDITERRANEAN GREEN TURTLES POPULATION COMPOSITION AND DYNAMICS, USING THE MITOCHONDRIAL DNA STR HAPLOTYPING.

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Green sea turtle (*Chelonia mydas*) living in the Mediterranean are endangered species. There are only a few hundreds of nesting females, all in the eastern shores of the Mediterranean. The attempt to evaluate their genetic variation using the common haplotyping system, based on sequence analysis of a segment of the mitochondrial DNA (mtDNA) control region (D-loop) as an indicator, revealed very little polymorphism. Almost all of the turtles have the CM-A-13 haplotype, and the only other detected haplotype, CM-A-14, is very rare. Polymorphism is therefore detected only when repeat sequences, like STRs are used for analysis. Mitochondrial DNA STRs proved to be the perfect tool for such an analysis, as they reveal polymorphism and allow for understanding of maternal lineages of the nesting females. We have looked at mtSTR haplotypes of 238 nesting females from different regions: Turkey, Cyprus and Israel as well as 200 stranded turtles from Israel. We have constructed a phylogenetic tree containing all the different haplotypes. Our results support historical documentations implying that the current Mediterranean population is the remnants of a much larger population. A look at the stranded turtles from the Israeli shore gives another perspective of migration patterns supported by satellite tracking.