

Multilocus Molecular Evidence Supports the Recognition of at Least Two Species of Spotted Eagle Ray (*Aetobatus narinari*)

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The spotted eagle ray (*Aetobatus narinari*), a batoid of conservation concern (Near Threatened IUCN category), is currently described as a single, circumglobally distributed species. However, geographic differences in parasite diversity have raised suspicions that *A. narinari* may constitute a species complex. Here we assessed the validity of *A. narinari* as a single cosmopolitan species using 1570bp of sequence data from two mitochondrial genes (cytochrome *b* and COI) and the nuclear ribosomal ITS2 locus. Specimens from three major geographic regions were examined: the Caribbean and Florida, West and Central Pacific, and the East Pacific. Phylogenies for each locus described three distinct lineages with no genetic exchange among regions, and genetic distances among the most divergent lineages were comparable to batoid and bony fish congeners. Using combined genealogical concordance and genetic distance criteria, we recommend that the West/Central Pacific population be recognized as a distinct species from populations in the Caribbean, Florida, and East Pacific. We further recommend that the Caribbean/Florida and East Pacific populations, separated by the Isthmus of Panama, be given subspecies status. Dramatically higher nucleotide diversity and sequence divergence coupled with a basal position in multiple phylogenetic analyses support an Indo-West Pacific origin for the *A. narinari* species complex with subsequent migration into the Atlantic. Evolutionary relationships among lineages suggest a westerly migration around the southern tip of Africa, with intensification of the Benguela coldwater upwelling system a possible vicariant mechanism underlying speciation.