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# Preliminary observations on whale sharks in Nosy Be, Madagascar

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## Background

The northern Mozambique Channel is a global hotspot for whale shark sightings, based on observer records from the tuna purse-seine fleet and published literature. Nosy Be Island (NW Madagascar) hosts a flourishing marine tourism industry based on viewing whale sharks and other species. Following reports of declining sightings in other regional hotspots, such as Tofo in Mozambique, it is important to establish if these declines represent a simple shift in aggregation site, or a broader reduction.

## Approach

Data on population structure were also collected during a preliminary field season from August to December 2015.

## Results

Approximately 200 sightings were recorded by a single operator during 2015. Preliminary analysis indicates that the majority of whale sharks sighted were males of lengths between 3 and 10 meters. Most whale shark sightings were from October to December.

## Conclusions

Regular whale shark sightings occur off the Nosy Be area from August to December. Limited sex and size data suggests a juvenile male-biased aggregation where whale sharks were most commonly observed traveling and feeding on copepods. New data will help to establish whether oceanographic variability has resulted in a shift in abundance to Madagascar, or whether a broad-scale decline has taken place. No species-level legislation protects whale sharks in Madagascar, and the whale shark tourism industry is presently unregulated with regard to interactions. Further work on the population ecology, movements and social importance of whale sharks in the country is justified and will inform the development of effective conservation and tourism management initiatives.

*Keywords:* photo-identification, population ecology, Madagascar, Indian Ocean

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