

# Two whale sharks and their 22-year annual pilgrimage

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Murdoch University researchers have demonstrated that two whale sharks, affectionately known as Stumpy and Zorro, have been making an annual pilgrimage to Ningaloo Reef for at least 22 years.

Dr Brad Norman and Associate Professor David Morgan from the Centre for Fish and Fisheries Research and their collaborators, have been photographing Stumpy and Zorro at Ningaloo since 1994. They are easily identifiable by the shapes of their caudal (or tail) fins.

The researchers believe the [whale sharks](#) are the longest studied individual wild sharks in the world.

Dr Norman and Professor Morgan estimate that Stumpy and Zorro are at least 40 years old, and suggest they could continue visiting WA for another two decades, becoming among the longest studied individual fish on the planet.

Whale sharks are thought to live to around 80 years and are the largest known fish species.

Recording the whale sharks so often and over such a long period has helped the researchers gather valuable information which is helping to increase biological knowledge of the species.

"Our studies of Zorro and Stumpy are helping us to understand when whale sharks first mature and become reproductively active," said Dr

Norman.

"Based on photographs of the shape and length of the claspers, which are the paired external reproductive organs of whale sharks up to 60cm long, Zorro first reached maturity in 1998 and Stumpy in 2001.

"Our longitudinal studies have also revealed when Zorro and Stumpy became sexually active, as evidenced from scarring on the claspers, which for Stumpy has been since at least 2005."

Dr Norman said the two fish may have fathered many offspring. In whale sharks, females can give birth to litters of approximately 300 pups. However, neither mating nor pupping of whale sharks has been observed.

Ongoing research work by Dr Norman and Professor Morgan is using satellite tracking to see where these mature animals migrate, with a goal of finding where breeding activities are occurring.

"Identification and protection of these critical habitats will be imperative for the long-term conservation of this remarkable species, which has recently been listed as endangered by the International Union for Conservation of Nature," added Dr Norman.

A journal article on their research has been published in the scientific journal *Frontiers in Ecology and the Environment*.

Provided by Murdoch University

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