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Shark Artificial Insemination Research

SEA LIFE centres in Australia have been working with scientists on ground breaking research to try and save shark species for the future.

The aim of the research is to develop and establish a programme of assisted breeding (using artificial insemination) for key shark species held in SEA LIFE aquaria with a view towards aiding regional and international management of populations in the wild. The research has been ongoing in Australia since 2012 and assisted breeding techniques for the grey nurse shark (*Carcharias taurus*), an iconic species in Australian waters, are of particular interest. The grey nurse shark, also known as the sand tiger shark or ragged tooth shark, is an important aquarium species worldwide and is listed as critically endangered on the east coast of Australia.

Although the goal of the work has been to develop reproductive techniques that will ultimately benefit the grey nurse shark, the procedures developed have application across a wide range of other shark and ray species. Artificial insemination has been used successfully in brownbanded bamboo sharks (*Chiloscyllium punctatum*) at Melbourne SEA LIFE Aquarium. Semen collected from males at Underwater World SEA LIFE Aquarium in Queensland was transported to Melbourne and used to inseminate female brownbanded bamboo sharks that then gave birth to pups.

Being able to mate male and female sharks across the world without having to move them would not only reduce the stress to these animals but also help captive breed genetically healthy animals for reintroduction programs in the future.

It is hoped that this work will lead to the creation of a genebank for endangered shark species from both captive and wild populations, and act as an important means of preserving the genetics of endangered species such as the grey nurse shark to provide insurance against extinction.