

Research explores the secret life of Australia's rarest coastal dolphins

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University of Queensland researchers are using behavioural observations together with the latest molecular techniques to providing insights into the life of Australia's rarest coastal dolphins.

Dr Guido Parra, from UQ's School of Veterinary Science, is using innovative genetic techniques together with photo-identification of individual animals to understand the ecology and genetic health of the Australian snubfin and the Indo-pacific humpback dolphin.

Australian snubfin and Indo-Pacific humpback dolphins are found in coastal waters of Queensland, Northern Territory and Western Australia.

“Despite their apparent wide distribution we know very little about their ecology, behaviour and genetics,” Dr Parra said.

Recent research by Dr Parra in both remote and more urbanised regions of the Great Barrier Reef World Heritage Area indicated Australian snubfin and Indo-Pacific humpback dolphins occur in very small populations close to coastal and estuarine environments.

“Because of these biological characteristics, populations of both species are vulnerable to human activities close to the coast and rapid population declines,” he said.

“Understanding the ecology and genetics of these species is critical for their conservation.

“In the past, in order to obtain ecological and genetic information it was often necessary to capture and sacrifice the animal to obtain samples.

“Today, minuscule samples of their skin and blubber can be obtained remotely without having to immobilise or disturb the dolphin for more than a few seconds.”

Dr Parra said individual animals could be identified through photographs of their dorsal fins, while skin samples were obtained by firing a dart from a modified tranquilliser rifle.

“The dart is designed so that on impact with the animal they retain a small sample of skin tissue that can be stored and used later for genetic analysis,” he said.

“The dart is positively buoyant so it can be easily retrieved after it bounces off the dolphin.

“Skin samples, together with photo-identification data, can then be used to determine the sex of the animal sampled, their social relationships, their movement patterns, and the genetic variability found in a population.”

Dr Parra will conduct his studies between September and November this year in the Townsville region, north-east Queensland, where resident populations of both snubfin and humpback dolphins can be found.

Dr Parra's research will substantially contribute to our understanding of several issues critical to the conservation and management of these dolphins in Australian waters.

Source: University of Queensland

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