Whale researchers call for speed restrictions in Hauraki Gulf

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Innovative research has revealed why Bryde's whales are so vulnerable to being killed by ships in the Hauraki Gulf, and University of Auckland scientists Dr Rochelle Constantine and Dr Natacha Aguilar are calling for speed restrictions to protect the endangered species.

"We only catch brief glimpses of Bryde's whales at the surface in the Hauraki Gulf, but our research shows that they spend more than 90 per cent of their time in the top 12 metres of water," says Dr Constantine. "This makes them extremely vulnerable to being hit by vessels of all kinds, especially large ships that are highly likely to kill the whales when they do collide."

"Our findings suggest that restricting the speed of large ships in the Hauraki Gulf may be the best course of action to minimise lethal collisions with these whales. A similar approach has proven effective in protecting whales overseas." Dr Constantine says that mandatory reporting of whale sightings would also increase awareness of their presence.

The researchers used an innovative approach of attaching multi-sensor tags to the whales by suction cup, allowing their behaviour below the surface of the ocean to be tracked. The whales were found to spend most of their time at relatively shallow depths that bring them within striking range of ships entering the Hauraki Gulf.

They were very active during the day, foraging both at the surface and

underwater and performing mostly brief dives of less than 10 metres depth. However they came even closer to the surface at night. “This was a surprise - it’s very unusual behaviour for large baleen whales,” says Dr Constantine. “The pattern of being particularly close to the surface at night time when they’re resting, and likely to be less vigilant, makes these whales even more vulnerable to ship strike.”

The Hauraki Gulf has one of the few resident populations of Bryde’s whales in the world, but until recently relatively little was known about them. The research team had gathered records of 41 Bryde’s whale deaths in the region over the past 16 years and of 18 whales examined for cause of death, 15 were found to have died due to ship-strike making this the species’ main cause of mortality.

“Now that we know how the whales use their environment it explains the pattern of deaths we’ve seen,” says Dr Constantine. “Our findings will be used in upcoming discussions with Maritime New Zealand, Ports of Auckland, Department of Conservation and other stakeholders, through the Hauraki Forum process, in order to decide the best course of action to minimise collisions in the future.”

The research was led by Dr Constantine working with Dr Natacha Aguilar Soto of The University of Auckland and La Laguna University, Canary Islands, and Dr Mark Johnson from the University of St Andrews, Scotland. It was funded by the former Auckland Regional Council, The University of Auckland, and Department of Conservation. The work was published in a report distributed to stakeholders this month.

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