

SHIP COLLISIONS STRIKE DOWN WHALES

BY KEITH INGRAM

Four years ago I attended a whale strike meeting at the University of Auckland, where a number of eminent marine mammal scientists and environmentalists discussed their concerns about whale strikes on the northeastern coast of New Zealand involving the Bryde's whale.

At that time there was an estimated local population of some 200 animals. The meeting focussed on the prevention of whale strikes, with the greatest contributor of deaths being caused by large ships travelling in excess of 12 knots.

While this preliminary workshop highlighted the growing concerns of the dangers of shipping to this unique population of whales, I cautioned those present that they needed to take the maritime industry along with them, and not attempt to develop policies behind closed doors and then expect the shipping industry to endorse them. There was a need to focus on robust research, communication and education.

Subsequent to this meeting there has been silence. But to be fair to researchers close to these marine mammals, they did respond in gathering more information and better research, and identifying the risks and threats, with possible solutions. The latter will always be the hard question.

In June I attended a ship strike seminar hosted by the Department of Conservation that brought together all the key parties to review the current situation.

Historically, almost half of the world's 80 species of cetaceans (whales, dolphins and porpoises) have been recorded in New Zealand waters. At least 13 of them are found in the Hauraki Gulf. While New Zealanders are generally strong supporters of whale conservation, it is not widely known that cetaceans are facing a wide range of relatively new threats from human activities, and it's not just Japanese whale hunters.

Ship strikes are one of the more serious emerging threats, especially to larger whales. The number of large passenger and cargo ships transiting our northeastern coast has significantly increased, and while the number of cargo ships visiting Auckland has dropped, the size and speed of these newer ships has increased.

These cruise liners and modern cargo ships have a service speed of over 20 knots. The combination of increased size and significantly higher speeds has led to a sharp increase in the reported number of collisions with whales in the world's busiest shipping lanes. Unfortunately, our local experiences echo this global trend.

DoC investigates the deaths of all whales, including those suspected of being struck by ships in the Hauraki Gulf. Over the past 10 years there have been many suspected ship-strike animals in this region, including three in the past six months.

The latest estimates of our local population of Bryde's whales that appear to be semi-resident in the gulf and the surrounding waters now number somewhere between 150 and 200 animals, a concerning drop from the last estimates of 200 four years ago.

The Bryde's whale is a small baleen whale that grows about 13m long and weighs approximately 20 tonnes. They feed on baitfish such as pilchards, anchovies and mackerel, plus shrimps and krill. They can be found in groups of up to five in a family, but are mainly seen in ones and twos.

Since 1997 there have been 25 recorded whale deaths in the Hauraki Gulf, 23 being Bryde's, one sei and one pregnant blue whale.

Four were found wrapped around the bulbous bows of ships, 14 were found during post mortem examinations to have died from injuries consistent with collision with a large vessel, and one from entanglement with fishing gear.

The problem we face is that the breeding replacement of our local population is around four percent per year, and on the negative side of the ledger, we are killing them through strikes at three to four percent per year. As the scientists put it, we are effectively spending our returns in making no allowance for the natural mortality of these animals, and hence we have a diminishing population.

When we look world-wide, the only similar situation we are experiencing in the Hauraki Gulf can be found in Cape Cod Bay in Canada's Atlantic seaboard, where their problem of ship strikes is associated with the North Atlantic right whale, which has a population of around 300 animals.

In their situation, of the recent deaths of some 60 right whales, 52 percent were attributed to ship's strikes, 15 percent to fishing gear entanglement, and the remainder to unknown or natural causes.

Both Canada and the United States have established a marine mammal protection area with rules that include a 500 yard (457m) protection zone around the animals, mandatory reporting by ships of all whale sightings, alternative shipping routes to destinations, and reduced speed when passing through the marine mammal protection area.

Could these management tools apply to New Zealand? Maybe. Unfortunately the Bryde's whale, while smaller, is harder to spot, and its area of roaming is not restricted to the Hauraki Gulf, as they venture as far north as Whangaroa and as far south as Whale Island.

Given their reduced numbers, it is only when they are in the sheltered confines of the Hauraki Gulf that they become more visible and easily identifiable. So, how do we mitigate against reducing the population further?

While I have focussed on the shipping industry, I am also mindful that the smaller commercial fleet and the larger recreational boating fleet is not without blame, as we only have to look at the many injuries sighted on whales and orcas to see the results of high-speed propeller strikes.

One of the key problems identified with our larger, faster ships is that they have a "noise shadow" directly ahead of the vessel, which may lull the animals into a false sense of security that they can surface to breathe safely, only to be struck.

Finding alternative shipping routes in the gulf is just not possible. Nor is making a designated approach practicable, as the whales follow food, and the food doesn't see lines on the water.

The solution is not easy to find. Reducing ship's speeds to less than 12 knots may give a whale time to escape, or if hit, reduce the effect of blunt force trauma.

An acoustic deterrent may be developed which could be fitted to ships as a requirement when transiting our waters. This could be costly and meet with resistance. Reducing ship speeds would increase costs and lengthen timetables. Mandatory reporting would improve information.

Whatever the answer, there is no quick fix. The marine mammal advocates, DoC and the shipping industry must work together in seeking solutions.