**Rotary District 9685 Vocational Excellence Awards 2018**

 **Dr Douglas Cato**

**Acoustician, Marine Scientist**

There are some fields in science that by their very nature tend to get overlooked in the hyperbole and publicity that might surround other seemingly more glamorous disciplines – yet their importance should never be underestimated, nor the achievement of those in the field go unrecognised. Consider the field of Marine Acoustics and our local hero, Lindfield Acoustician and Marine Scientist, Dr Douglas Cato.

It may even be difficult to comprehend that there is much sound at all beneath our great oceans, but man made and naturally occurring submarine sound waves play a complex role in military defence, mineral exploration, marine conservation and the ability of the great sea mammals and many other populations of the deep to conduct their day-to-day lives.

Dr Cato’s research has led to the discipline of marine acoustics being accepted at the highest levels of science and government, as he became a Principal Scientist in the Commonwealth of Australia Defence Science and Technology Group. The aptly name “Cato Curves” that he developed, predict the background noise in the ocean generated by all the different sound sources, becoming a vital element in the effective application of sonar systems.

Douglas received the prestigious Commonwealth of Australia Defence Minister’s 2012 Award for Achievement in Defence Science. He has contributed to numerous scientific journals, including Nature. His paper “Cultural revolution in whale songs” in Nature 2000 has since been cited by more than 300 researchers.

The imagination of the community at large has been captured by Dr Cato’s work on whale song, the need to protect marine life from man-made sound including seismic surveys, and annual surveys of whale populations demonstrating that humpback whale numbers have returned to pre-whaling levels.

Not only has Dr Cato completed outstanding and unique research in his vocation, he has also fostered the passions of numerous post-graduate students to continue and expand the work, encouraging Curtin University to become a centre of excellence in marine acoustics. He was a driving force during the Integrated Marine Observing System formulation period, importantly supporting the establishment of a national archive of ocean noise.

For this quiet unassuming gentleman impacting his vocational field in such unique and significant ways, it is most appropriate that we make as much noise as possible right now to recognise Dr Douglas Cato with a 2018 District 9685 Vocational Excellence Award.