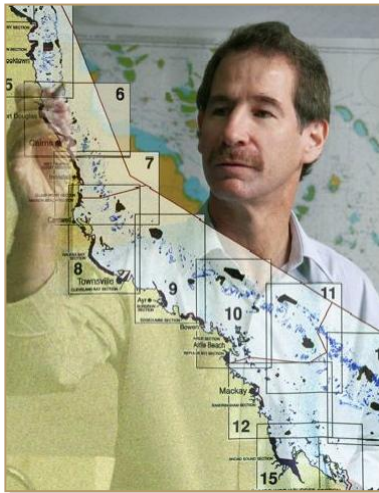


Virginia Chadwick Reef Talk Series: 2010

Reef Talk Notes

Saturday, 7th August
**'Virginia Chadwick and the Great Barrier Reef:
Her Perpetual Legacy'**



Do the fish appreciate the legacy of Virginia Chadwick?

Professor Garry Russ,
School of Marine and Tropical Biology and
Australian Research Council Centre for Coral
Reef Studies, James Cook University.



Garry Russ is a Professor at James Cook University where has conducted extensive research on fish populations in marine parks, especially in the Philippines and on the Great Barrier Reef. He graduated from the University of Melbourne in 1981 and conducted post-doctoral research at the Australian Institute of Marine Science.



A visionary legacy creating a resilient Reef

Professor Terry Hughes FAA, Director, Australian
Research Council Centre of Excellence for Coral
Reef Studies, James Cook University



Terry Hughes is the Director of the ARC Centre of Excellence for Coral Reef Studies based at JCU. A two time Federation Fellowship recipient, Terry was recently awarded the prestigious Australian Museum Eureka Prizes for Environmental Research and has been named as one of the 'most pre-eminent researchers working in Australia'.

Do the fish appreciate the legacy of Virginia Chadwick?

Professor Garry Russ,

School of Marine and Tropical Biology and Australian Research Council Centre for Coral Reef Studies
James Cook University.

Virginia Chadwick AO, a former head of the Great Barrier Reef Marine Park Authority (GBRMPA) has indeed left us an extraordinary and perpetual legacy. It is important to stress that this legacy is not just for the Great Barrier Reef, not just for Australia, but for the entire world.

As the chair of GBRMPA, Virginia championed and implemented a major rezoning of the GBR Marine Park called the Representative Areas Program (RAP) in 2004. RAP improved the level of protection for the Great Barrier Reef substantially, increasing the area of no-take ('Green') zones from 5% to more than 33%. The objective of this re-zoning was to give greater protection to the biodiversity and habitats of all of the 70 'bioregions' of the GBR, an Australian icon. This objective had general public support. But even though the objective was greater protection of bioregions, the local political issue rapidly turned to "they are taking my fishing spot!".

In this talk I will briefly pose two questions:

1. What did the RAP do for reef fish?
2. What is the global significance of RAP, and thus Virginia's legacy?

What did the RAP do for reef fish?

Very soon after RAP was implemented we (James Cook University/Australian Institute of Marine Science) were able to document, for fish species targeted by line fishing, that the green zones produced 'more fish and bigger fish' over a very large expanse of the Marine Park. But as we had learned in 2002-2003, during the period of intense debate leading up to RAP, a common and understandable response to such findings from fishing interests was "That is great, but what good is having more fish where I can't fish?". In the past 3 years 'ground-breaking' science has shown, for the first time

anywhere in the world, that having more fish and bigger fish, in no-take green zones can mean direct benefits to fished areas as well. Why? Because the green zones increase the levels of spawning fish inside them and all of this extra spawning results in more young fish ('recruits to the fishery') ending up in nearby fished zones.

What is the global significance of RAP, and thus Virginia's legacy?

RAP was the largest spatial closure to fishing in the history of the world (~ 115,000 km²). Management of renewable marine resources has been dominated by the concept of '*Mare Liberum*' (the 'Freedom of the Seas') since 1608, courtesy of a Dutch lawyer

named Hugo Grotius. This concept lasted for almost 400 years, but was a failure, since it inevitably lead to over-exploitation of resources. Implementing large areas of the oceans where humans do not fish is a 'new order of things' in human history. Implementing 'new orders of things' is always difficult and dangerous. RAP was the first ever large-scale marine park. Since it was established, the USA has established two in the Pacific that are 'larger'. The great Ozzy come-back may be in the form of a Coral Sea marine park that joins onto the GBRMP, making it the largest in the world. Virginia certainly started 'A new order of things'.

The Great Barrier Reef Marine Park is what it is today because of the determination and courage of a truly great Australian. All Australians, all global citizens, including the fish, say thanks, Virginia.



A visionary legacy creating a resilient Reef

Professor Terry Hughes FAA, Director, Australian Research Council Centre of Excellence for Coral Reef Studies, James Cook University

Virginia Chadwick led the Townsville-based Great Barrier Reef Marine Park Authority for 9 years, her work culminating in a visionary plan to enhance the level of protection for the Great Barrier Reef in 2004. Her lasting achievement has been the most comprehensive and innovative marine conservation and biodiversity program ever developed in the world. Virginia's determination to improve the protection of the Great Barrier Reef was a response to growing scientific evidence of accumulating impacts – pollution, depletion of some heavily-harvested species, and coral bleaching caused by global warming. Demographic and economic data over the past 20 years showed rapid growth in human population, land clearing, coastal development, tourist visits, and fishing pressure. Gradually, it became clear that the existing level of protection was inadequate to ensure that the entire ecosystem remained healthy, productive and resilient into the future. Coral bleaching in 1998 was a rude wake-up call to the dangers of global warming for the Great Barrier Reef that required an urgent response.

The management programs Virginia and her team developed have already significantly enhanced the resilience of the Great Barrier Reef to mounting environmental pressures, and will assist industry, particularly tourism and fisheries, to achieve increased levels of environmental sustainability and financial security.

The Great Barrier Reef Marine Park Zoning Plan took effect on 1 July 2004. To achieve this result, in 2002, Virginia Chadwick and her team conducted the most extensive community consultation process ever conducted in Australia. The first phase of community consultation with stakeholders and local communities in Queensland involved hundreds of meetings with thousands of people in coastal Queensland. Over 30,000 submissions were received and incorporated into new zoning plans. The result, the Great Barrier Reef Marine Park Zoning Plan, has minimized as far as possible impacts on users of the Marine Park, while maximizing the level of biodiversity protection.

The ability of the Reef to cope with future shocks is being enhanced by these initiatives, by restoring it to a better condition. The rezoning was specifically designed to protect representative examples of each type of habitat, within a network of no-take (no-fishing) areas. The objective, therefore, is protecting biodiversity and maintaining ecosystems, rather than the more traditional management focus on a few species of commercially important fish.

These achievements have made a very significant contribution to fostering international awareness of sophisticated environment conservation initiatives, and have served to enhance Australia's international marine conservation reputation. The rezoning and other initiatives have been recognized by numerous major awards, international and national - and have set a new global benchmark for marine conservation. This outcome would not have been possible without Virginia's amazing drive and vision.



Stone Island 1883



Stone Island 1997