

<http://newsweekly.com.au/issue.php?id=400>

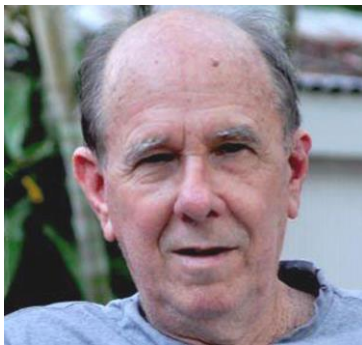
COVER STORY It's the science, not the reef, that is being polluted

by Walter Starck

News Weekly, September 27, 2014

*Australia's Great Barrier Reef is many kilometres offshore, and no detriment to the reef attributable to coastal dredging has ever been documented, writes marine biologist **Dr Walter Starck**.*

In the fable about the boy who cried wolf, the villagers quickly decided the boy was lying and ceased to respond to his alarms.



Walter Starck, PhD

It seems modern-day journalists must be much more gullible than those ancient villagers. Every year for almost a half-century the news media have breathlessly reported alarmist claims of imminent threats to the existence of the Great Barrier Reef. Despite the fact that all have proved to be fictitious, trivial or short-lived fluctuation of nature, the phoney alarms never seem to lose credibility with news reporters or even provoke any investigation.

The latest such instance has involved uncritical propagation of alarmist claims regarding the threat from some additional dredging of an existing dredged shipping channel in connection with expansion of the coal-loading terminal at Abbott Point in central Queensland. (See Marian Wilkinson and Ali Russell's report, "[Battle for the Reef](#)", presented by Kerry O'Brien and broadcast on ABC television's *Four Corners*, August 18, 2014).

Only a modicum of investigation would reveal that all of the ports along the Queensland coast have been dredged and require periodic re-dredging to maintain their entrance channels.

The GBR itself is many kilometres offshore, and no detriment to the reef attributable to coastal dredging has ever been documented. A scattering of low-diversity inshore reefs does occur in the region; but these are restricted to rocky outcrops, where wave action prevents sediment build-up, and these reefs are comprised of a limited range of silt-tolerant coral species.

Most of the inshore sea floor of the GBR lagoon is heavily blanketed by fine sediments accumulated over millennia. This is a windy coast and wave action re-suspends the top layers of sediment every time there is a strong blow. These are naturally very turbid waters, and the turbidity from dredging is only localised and short-lived.

The most noticeable ongoing effect of dredging is that the dredged channels create a more favourable habitat for fishes and a noticeably better fishing area than the naturally flat silted sea floor through which they are constructed. The port dredging amounts to not much more than moving some mud and sand from one place to another of similar substrate.

Dredging

In the matter of the dredging at Abbott Point, alternatives are suggested but not examined. One is pumping the dredge spoil onto the land, but this would require the destruction of a large area of coastal wetlands with much greater environmental impact than simply moving it to similar sediment bottom nearby. Another suggested possibility has been to extend the existing 3 km long loading wharf farther offshore into deeper water, but this would entail greater cyclone risk and much higher cost.

Environmentalists always prefer hypothetical solutions to imaginary problems, at least so long as these remain only theoretical or uneconomic. They advocated aquaculture, tree farms and biofuels until they became a reality. Now they oppose them.

Despite incessant claims of dire threats to the GBR, it is in fact in excellent condition. Fishing pressure is at less than 1 per cent of the average sustainable level for reefs cited by the most recent and comprehensive global survey of coral reefs.

Tourism only regularly visits fewer than two dozen of the more than 2,500 named reefs which comprise the GBR.

Nutrients and agrichemicals from land run-off are at trace levels and far below any concentrations known to have harmful effects. They are also well below the levels commonly found in our own food, and their usage in the GBR catchment area has decreased over the past two decades.

The warming and reduction in alkalinity (misleadingly called ocean “acidification”), predicted for the end of the century due to climate change, would in fact only result in levels that now occur naturally in other regions where reefs thrive and even reach their peaks of biodiversity.

Severe cyclone frequency is not increasing and has been much lower over the past century than the previous one. Coral-bleaching events are in line with past occurrences, as evidenced by the characteristic scars they leave in coral skeletons and crown-of-thorns, likewise as evidenced by the varying frequency of their characteristic spines in reef sediments.

Why then are all the reef “experts” so alarmed? For a start, expertise is based on facts, and facts speak for themselves. When we have to be told someone is an expert, they probably aren't.

Then too, our actual understanding of reef biology remains very limited. There is much we don't know, and much of what we think we know is simply wrong.

In the 1970s and '80s, reef researchers were beginning to make good progress in our knowledge of reefs; but, since then, basic research has largely ceased. Most research now focuses on environmental concerns; and most of these are only hypothetical possibilities, not demonstrable problems.

Unfortunately, though, when funding is obtained to investigate a possible problem, it is unlikely that the finding will be that there isn't one. The usual result is that the situation is found to be uncertain and more research is called for.

We now have a whole generation of researchers whose entire experience of the reef has been in the context of investigating environmental "problems", and they see every variation of nature as evidence of some threat. As the Law of the Instrument states, if the only tool you have is a hammer, it is tempting to treat everything as if it were a nail.

Worse yet, the academic system from which all researchers derive has itself become the very font of political correctness, and PC has come to encompass environmental correctness. By this diktat, environmental concerns are morally beyond question, any attempt at objectivity is a delusion, and scientific ethics are subordinate to some higher truth known to all right-thinking people to be politically correct. In short, the science itself has become corrupted.

One widely-cited recent example of this from reef research has been the claim that the expanded green zones on the GBR have resulted in a doubling of coral trout numbers on the protected reefs. This arose from claims made in a media release issued by the lead research institution involved in the study, but is inconsistent with abundant other evidence including that which is presented in the report itself.

In the actual study, the claim of a doubling of fish on protected reefs appears to rest on a single example from among eight reef areas surveyed, and that area had the lowest level to begin with and lowest difference between fished and unfished reefs. In five of the seven other areas, the protected reefs actually showed a decline in coral trout numbers. In the remaining two areas, no statistically significant change was found. On fished reefs, three areas showed increases in biomass, while five showed declines.

This is clearly not the "extraordinary" two-fold increase in protected areas that was bannered in the press release and widely reported in the media. Such natural variability is in fact common between reefs and, over time, on the same reefs.

While one might excuse this as only the result of an over-zealous copy writer in the PR department, no effort was made to correct this grossly misleading claim.

Another recent and widely reported study claims a halving of coral cover on the GBR over the past 27 years. Interestingly, only two years earlier, a co-author of this report was the lead author in another study using the same survey data, but found no evidence of any widespread decline in coral cover.

The only additional evidence comes from surveys made to assess coral damage from two severe tropical cyclones which crossed the reef in the two subsequent years. Naturally these

surveys were made in the affected areas and not over the majority of the reefs, which were outside the storm track. With a bit of statistical jiggery-pokery, this new data was incorporated and smoothed into a 27-year decline.

The new study was published in a high-profile, peer-reviewed journal, which requires that any conflicting evidence be addressed. Although the earlier study was briefly cited, no mention was made of its directly contradictory conclusion.

By not mentioning any conflicting evidence in a journal which specifically requires this, the clear impression is that there was none. Obviously, this was not just a matter of not being aware of the earlier study, but had to be a deliberate decision to ignore its conflicting findings. At minimum, this kind of misrepresentation must be seen to constitute scientific misconduct and quite arguably could be seen as fraud.

Government and taxpayers have been paying extravagantly for, and relying heavily upon, scientific advice which is often provably false, highly selective or of grossly exaggerated certainty. Laws against fraud and false or misleading advertising are being blatantly violated and need to be enforced.

Trying to frame it all as simply honest differences of opinion among researchers makes a farce of the very concept of scientific integrity. There is compelling *prima facie* evidence of violations of existing legislation regarding fraud and unethical business practices. This deserves proper investigation and charges being made if indicated.

If those found guilty were simply stripped of all public funding and barred for a lengthy period from any future funding, the humiliation plus the horror of having to find some honest means of making a living would surely inject a much needed concern for honesty into the research community.

Australia now faces a developing economic crisis that may well become the most serious in our history. Three-quarters of our small miners, fishers, timber-cutters, farmers and graziers have been forced out of a cherished way of life that helped sustain us all. Misguided and often malignant environmental restrictions and demands have played a major role in this decline.

We have the most expensive housing and power in the developed world, soaring food prices and the smallest manufacturing sector of any OECD nation. There are numerous other more real and important needs for our limited government revenue than maintaining several hundred bureaucrats and academics on a permanent Barrier Reef holiday.

To further confuse the issue, much of the opposition to the dredging is being driven more by opposition to coal-mining than by any actual threat to the reef. Unfortunately, both the world economy and our own are still going to require a lot of coal for a few decades yet to come. Trying to force a premature adoption of alternative energy at this point is a recipe for disaster.

Fortunately, the real situation is far less bleak than the alarmists proclaim. The GBR is in excellent condition and under no threat. The warming effect of increased CO₂ has been greatly exaggerated, and the net effect of a slightly warmer climate plus the stimulation of plant growth from CO₂ is more likely to be a net benefit than a detriment. Meanwhile,

population growth is falling in most nations, and is already below replacement level in many, with the global population projected to begin to decline by mid-century.

A variety of technological advances in energy generation, use and storage are on the horizon and promise to eliminate the problems associated with a heavy dependence on fossil fuels. However, their ongoing use for a few more decades will be essential to get from here to there.

In the meantime, the most certain way to assure a speedy recovery of the GBR would be to take the reef experts at their word, accept it is doomed and stop throwing good money after bad in a hopeless effort to save it. If it got as bad as they claim, despite all the money and effort expended and while starting from a vastly better condition to begin with, surely nothing can save it now.

Closing down the Great Barrier Reef Marine Park Authority (GBRMPA), and reducing reef research to palliative care in the form of a modest monitoring effort, could save over \$100 million annually. If this were done and future expenditure made contingent upon any positive signs of a possible turnaround, I am confident we could soon expect a miraculous recovery.

Dr Walter Starck has a PhD in marine science, including postgraduate training and professional experience in fisheries biology. He is the editor and publisher of www.GoldenDolphin.com, a quarterly publication on CD, focusing on diving, underwater photography and the ocean world. This article first appeared in [*On Line Opinion*](#).

Reference

Marian Wilkinson and Ali Russell, "Battle for the Reef", *Four Corners*, ABC Television, August 18, 2014.

URL:

www.abc.net.au/4corners/stories/2014/08/18/4067593.htm?t=dXNlcmlkPTE1MzA3MyxlbWFpbGlkPTU0ODE