

Lifeline?

by Wade Hughes

It is a rope made from the same plastic used for the manufacture of rice sacks. Seen from a different perspective, it is, perhaps, a clue to the prospects for survival of biodiversity in the sea.

It arcs downwards under the press of the tide, from a marker buoy on the surface, to a massive concrete block on the seabed, 37 metres below. Here, in mid channel between the island of Misool and the rocky islet of Ketimkerio in the Raja Ampat archipelago of Western Papua, it serves as mooring line for boats servicing the Misool eco resort.

If the rope was not here, this would be open water. Elsewhere, in the near vicinity other mooring lines woven from different plastic polymers, are only thinly smeared with green algae.

But because this particular rope is here, and, serendipitously woven from material conducive to marine colonization, the blank blue space of open water is etched by a line of profuse and diverse life. Soft and hard corals, cowries, fish, shrimps, barnacles, and other invertebrates all crowd sections of this flexible strand of vertical reef.

Just thirty metres or so away, beehive shaped concrete reef-balls, pegged on a rusting mat of steel mesh draped over the shoulders of the reef facing the channel, offer additional clues to what the rope might be telling us. They are all – rope, reef-balls, and steel mesh, fulfilling the same fundamental need for life on Earth, and particularly for life in the sea; somewhere to call home. With the exception of marine mammals, reptiles, and sharks and rays,



Wayne Osborn scans the Misool mooring line for macro subjects.

most life in the sea, animal and vegetable, begins with a planktonic phase; microscopic and adrift, vulnerable, and at the mercy of chance. Those coral plankton that happen to bump into suitable substrate get the chance to settle and a shot at living through their full natural life cycle. Those that do not, simply drift into oblivion in the oceanic wastes,



Splendidly camouflaged amongst the soft corals, a crab shys away from unwelcome attention and flashing strobes.

are eaten by predators, or they're killed by hostile environmental conditions. Consequently, reefs - coral, rock, artificial- are widely understood to be the foundation for life in the sea. So simply, and perhaps simplistically, the more reefs, the more life in the sea. And human life depends on life in the sea.



Impossibly fragile and delicate, a transparent shrimp uses its natural chopsticks to pick food from amongst the polyps of a soft coral.

Of the seven billion of us, most of us live within 60km of the sea. We suck up to about 90 million tonnes of life out of the sea every year... well we did, until last year, when the annual rate of increase of fish mined from the sea failed to keep pace with the annual rate of increase in human population. Those trend lines are now sharply diverging as the capacity of the sea to replenish what we slaughter is in rapid decline.

But perhaps not irreversibly. I haven't been able to discover any research that indicates what percentage of the total planktonic biomass survives to complete its full life cycle. But I would contend that it is a very small percentage, based on the prodigious amounts that are produced. It is generally accepted that the total weight of plankton in the oceans exceed the combined weight of all the fish and mammals in the water. There's good reason



Little-finger nail sized coral cowries; life and colour suspended on a mooring line.

for this. Natural systems naturally take into account natural attrition rates; hence about 1000 turtle eggs are produced to ensure that a single turtle makes it through to sexual maturity. Human industrial predation introduces an unnatural aberration to this system. But there is a huge reserve of oceanic proto-life, in the form of plankton, that humans are



Timeless interdependency: Humans depend on the sea for food, economic livelihoods, and oxygen. For those of us fortunate enough to be born in societies that enable us to profit from our natural and developed talents – the seas offer an opportunity for adventure and an appreciation of the diversity and splendour of Nature. But today, more than at any other time in history, life in the seas depends on human intervention to continue its support of human life.

At Misool, in eastern Indonesia, even the jetty acts as a marine life magnet and haven, simply because it is protected from exploitation. It is at places such as this that the possibilities for sustainable, harmonious existence are being learned and demonstrated.

capable of nurturing and protecting.

And so back to the rope. What might it be telling us? Given the right conditions. Given time. Given education and innovative programs to help support people dependent on exploitation of the sea's resources (perhaps supplemented

with motivational applications of .50 calibre ammunition, as was required when the Thai government set out to protect and restore the marine nurseries of the Similan Islands and needed to convince poachers of the long term value of conservation measures). Given all

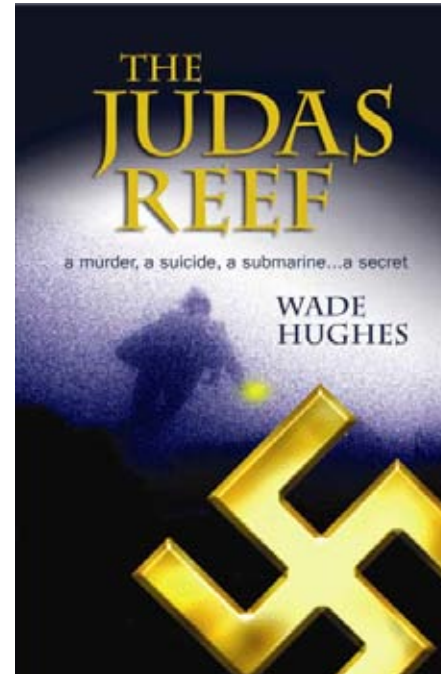
these considerations, perhaps we can tap into the resilience of the sea, reduce some of the volume of natural attrition, to ensure that our great, great, grand-kids will be able to rely on the sea for food, oxygen, adventure, and a sheer sense of wonder at the diversity of life on Earth.

Sixty percent of atmospheric oxygen is generated by photosynthesis of phytoplankton (embryonic marine vegetation). We acknowledge the role of terrestrial vegetation, such as the Amazonian rain forests as the 'lungs of the world' but the significantly higher contribution from marine

and freshwater vegetation is often overlooked.

Wade Hughes

Wade Hughes is a Fellow of the Royal Geographical Society and a Member of the Explorers Club.



In 1978, the news that celebrity author Kip Whitman had murdered his wife then committed suicide rocked high society on both sides of the Atlantic.

The deaths of Whitman, a rags-to-riches British World War II hero, and Babs, his wife and heiress to a US industrial conglomerate, set in motion a fierce and deadly struggle for wealth and power. And brought to the surface secrets that had been hidden for decades.

<http://books.google.co.uk/books?printsec=frontcover&id=2uQLqngzSx4C#v=onepage&q&f=false>