Defending the Wild

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Hobart, 2008

'For the past several billion years evolution on Earth has been driven by small-scale incremental forces, such as sexual selection, punctuated by cosmic-scale disruptions – plate tectonics, planetary geochemistry, global climate shifts, and even extraterrestrial asteroids. Sometime in the last century that changed. Today the guiding hand of natural selection is unmistakably human, with potentially Earth-shaking consequences.

The fossil record and contemporary field studies suggest that the average rate of extinction over the past hundred million years has hovered at several species per year. Today the extinction rate surpasses 3,000 species per year and is accelerating rapidly. In contrast, new species are appearing at a rate of less than one per year.

Over the next 100 years or so as many as half of the Earth's species, representing a quarter of the planet's genetic stock, will functionally, if not completely disappear. The land and oceans will continue to teem with life, but it will be a peculiarly homogenized assemblage of organisms unnaturally selected for their compatibility with one fundamental force: Us. Nothing – not national or international laws, global bioreserves, local sustainability schemes, or even 'wildlands' fantasies – can change the current course. The broad path for biological evolution is now set for the next several million years. And in this sense the extinction crisis – the race to save the composition, structure, and organisation of biodiversity as it exists today – is over, and we have lost.'

These are the opening paragraphs of *The End of the Wild* by Stephen M. Meyer. It is a clear, harsh, and compelling story. His argument raises fundamental questions, both about how we must behave toward the Earth that gives us life, and how we must act to protect and preserve the Earth.

Meyer is right, we have lost. The Earth we think we have is ending. The next few decades will see global and regional ecosystems, the varied richness of wild nature, swept away by a tidal wave of environmental change that we cannot stop or avert. The world of our children will be poorer, less diverse and full of weedy, invasive, species that thrive amongst the degradation we cause. There will be feral cats but there will be no Tasmanian devils.

But this is not news. In 1997, the journal *Science* devoted an issue to what they called 'human-dominated ecosystems'. There is nowhere on Earth that we have not degraded, be it by pollution, the chainsaw, or fishing net. The most recent satellite imagery reveals that more than a third of the Earth's surface has been converted to animal pasture or cropland. The oceans are being depleted and degraded at an ever faster rate with current research indicating a global fisheries collapse within the next forty years. On top of that the amount of carbon dioxide in the air right now means that the oceans will acidify for the next few centuries, greatly changing the entire ocean environment. The Great Barrier Reef will disappear and this cannot be stopped because the carbon is in the air now. You will watch it on your lounge room TV.

From all points of the globe, research is coming back that paints the same picture and it is a grim one. The Millennium Ecosystem Assessment, which collated and synthesised much of this research, is as important a document as the global warming reports issued by the IPCC. Yet it remains largely ignored. This is simply because it documents and discusses the damage we are doing to the environment that sustains us, the environment that we profit from, while the IPCC reports document changes that threaten us and our consumer lifestyle. One discusses the damage we do, which our culture largely ignores in the rush for profit and lifestyle, and says we must stop. This plea is carried on by a very few who are generally mocked and reviled as 'greenies' because they are crying

out 'Stop the destruction!'. The other is paid far more attention because it threatens our profit and lifestyle, even when the only way to minimise that threat is to make significant changes to that lifestyle – something we are not willing to do, if it were even possible.

The US has defunded carbon capture research. The EU has admitted that it will not reach its minor carbon reduction targets. Canada has reneged on its own targets, opening up that countries vast tar sand deposits to extract oil to feed the US. The Australian energy industry predicts that Australian electricity consumption will rise by more than 150% over the next two decades. The international shipping industry expects to double the number of large ships by 2017, allowing the globalised trade economy to grow unimpeded. Aircraft manufacturers are on a boom, with Boeing expecting $50 billion in orders over the next decade. Short haul flights, which are the most polluting, are now the most common form of passenger air travel. The targets agreed at the Bali climate talkfest are aspirational, lower than required and set comfortably in the future when they need to happen in the next decade, according to the IPCC.

The alternative, 'biofuels', which promise to let us happily continue driving our cars as if nothing has changed, have been shown to be worse than oil in terms of carbon emissions and they consume agricultural land that we need for food, land that we take from the wild. Food prices are already rising as corn and other crops sell to the higher bidder: Biofuel. In Indonesia, special teams of workers are systematically eradicating orangutans, killing them, because they are endangered and if they are found in a forest it can't be clearfelled for conversion into the palm oil plantations that are the increasing international source of biofuel. Australia has just built a major refinery to process Indonesian palm oil. 'Sustainable' transport initiatives in Europe rely on biofuels sourced from countries like Indonesia and Brazil, which itself has recently recorded a significant rise in the clearfelling of the Amazon as the biofuel gold rush accelerates. In India, a 'car for the masses' is in production, hoping to sell to 500 million people; a prospect that the lead researcher for the Indian IPCC section says has given him nightmares.

The catch-cry is 'Earth hour' and 'sustainability', wherein we can live like we do now, a lifestyle that has no impact; one that is 'zero' or at least 'low emission'. Sustainability is a myth. A comfortable story we tell ourselves. One that says we can live in our McMansions, eat our McDonalds, watch nature documentaries on our home theatres, chat on FaceBook, and fly away on holiday paying a token extra for fake 'offsets' so we are 'sustainable'.

The predicate of 'sustainable' is 'lifestyle' which, living in the developed world, we see as what we enjoy now. Valentine's Day is a day for lovers. In Africa, Kenya's second largest export industry is cut flowers. Kenya supplies one quarter of Europe's flowers, every one of which is quickly airfreighted to the shops, so a Parisian man can buy a rose to give to the girl he admires. A rose that will wilt and be thrown out in but a few days. This is our carbon consumer lifestyle. A Kenyan rose in Paris, courtesy of global warming.

China is building two new coal-fired power stations every week. They have said they will not stop until the Chinese people have reached the lifestyle that the West enjoys. Eighty per cent of global carbon emissions come from twenty per cent of the world's population: Us – The US, the EU, Canada, Australia, New Zealand, Japan.

If the one billion population of China achieves the lifestyle of the US, carbon emissions will rise by more than 300%. Does the world have the resources to do that? Furthermore, it comes back to us because the Chinese economic boom is driven by the production of cheap goods, like sunglasses, toys, plasma televisions and bicycles, that are made to satisfy the consumer demand from countries like the US and Australia. India, with it's hundreds of millions, wants to follow the path of China. Yet all the research says we have to reduce global carbon emissions by 80% within the next forty years.

Another critical consideration is that projections of human population growth indicate that the global population will rise by 50% in the next forty years. In the same time fisheries are expected to collapse, fresh water become scarcer, agricultural production decline, drought and storm increase, oil resources dwindle, and global warming to really bite. Where is a 'sustainable' lifestyle for nine billion people? Is it solar-powered broadband, backyard chickens, and a bicycle made in China? Where does this 'sustainable' lifestyle, which looks just like the life we have now, leave the wild Earth?

I say 'wild Earth' because 'wilderness' is a comfortable anthropocentric (human-centred) word. It is a word we use when we go hiking to somewhere that has no houses. It does not describe the environment we are in. We have a habit of killing predators that we think are a threat. Eagles, wolves, snakes, sharks, dingoes. Or any animal or plant that threatens our profit; possums, badgers, seals that 'steal our fish'. The wilderness we gaze upon is not wild.

Furthermore, it has been even more changed by the subtle chemical poisons we have released into the air and water, the invasive species that we have introduced. The first which causes genetic damage affecting the next generations, the second which crowds out and overpowers indigenous life; like the canetoad in Northern Australia which is sweeping through and decimating that ecosystem. The world is now a myriad of animals and plants that we have driven to the edge of extinction, existing as endangered remnant populations, or falling into extinction vortexes as 'ghost species'. Even where we cannot, or rarely, see this is happening. For more than the last decade frogs have been disappearing from the depths of even the remotest regions, from the cloud forests of South America to Cape York in Australia, over 200 species that we know about so far in just a few areas. The wild is dying.

'Wild' is the term preferred by ecologists. It describes the full richness of a functioning ecosystem; one where the range of interactions includes the top predators and where biodiversity grows and exists untrammelled by human presence. There are very, very few areas where this is the case. The oceans are possibly the last parts of the Earth where the wild can be found. Even there, we reign supreme. The latest research indicates that there are no parts of the ocean untouched by human presence. Tuna are a top predator, an essential part of the deep ocean ecosystem but they are a prime food fish and they are becoming endangered. We kill more than 100 million sharks every year, mainly for sharkfin soup with the rest of the body being discarded overboard; an extra 50 million are thrown back into the ocean, dead, as unwanted bycatch. Sharks are now becoming endangered around the world. In South Africa a vicious system of nets are set permanently in the ocean specifically to kill sharks. If a shark escapes the nets and kills someone, it is seen as a 'rogue' and hunted down to teach other sharks 'a lesson'. We do not tolerate the wild, we prefer wilderness.

On a personal level, we can still enter the wild and be part of the world, instead of apart from it as we live in the bubble of our consumer culture. Floating in the ocean and watching a large bull shark swim towards you with its back arched is to be in the wild; where you are not the centre of the world but just one not-so-important occupant, a morsel for the richness of Gaia. On a cultural level, an industrial level, we are dominant. No animal, plant, or ecosystem challenges us. We convert, consume, use, pollute and destroy as we wish. Nothing, even ourselves, is safe from us. As Pogo said, 'We have met the enemy and he is us'.

This is the challenge. On a global scale the wild is vanishing, being replaced by a comfortable wilderness where the only challenge is the terrain and the weather. Even these wilderness areas, where some semblance of untouched biodiversity remains, are under threat from expanding commercial use and human colonisation. How do these areas remain protected from us to carry on as wild, the core of life on Earth?

Around the world, compared to the general population, there are a vanishingly small number of people working to keep the wild alive. Simply because it is there and it deserves to be. Many of the techniques are carefully considered and incorporated in treaties and policy. Reserves, heritage areas, marine protected areas. Many involve scientific expertise and theory. But as Meyer so lucidly points out, they are failing.

From the pressure of chemicals and invasive species. From commercial interests and population. From the fact that these 'protected' areas are small and isolated from each other. From the fact that these 'protected' areas are human constructs with artificial boundaries laid over the wild. From global warming which will force the forests to walk, until they run into our fences and die.

There are choices to be made in the immediate future. To keep the wild our consumer society must be kept out, but this flies in the face of human domination. To defend the wild is to be condemned by most. When the decision to use armed guards to protect the critically endangered black rhino was made it was supported. Yet apparently when the first poacher was shot, the guard who killed him faced calls to be charged with murder. In his defence he reportedly said, 'If a man tries to rob a bank in downtown Harare and the guard shoots him, he is hailed as a hero, because he has protected money, an important thing. Here I am, I am protecting an important thing, the living jewel of our nation, and I am being called a murderer?'

To defend the wild is no small thing, because it is the Earth that is being defended. The Earth is wild and that is more important than we are. When groups like Sea Shepherd or EarthFirst! defend the wild, they are condemned as 'violent' and 'extreme', but they are working to continue the wild, the life that exists independently of us. The wild Earth that does not need us, does not know us, but is threatened by us. The wild Earth needs no defence but it needs more defenders.

Notes and further information

'biofuels', … have been shown to be worse than oil…
'Converting rainforests, peatlands, savannas, or grasslands to produce food-based biofuels in Brazil, Southeast Asia, and the United States creates a 'biofuel carbon debt' by releasing 17 to 420 times more CO_2 than the annual greenhouse gas (GHG) reductions these biofuels provide by displacing fossil fuels.' 'Land Clearing and the Biofuel Carbon Debt.' Joseph Fargione, *et al.* (2008). *Science.*
Published online, February 7th, 2008 at:
http://www.sciencemag.org/cgi/content/abstract/1152747v1

'…we found that corn-based ethanol, instead of producing a 20% savings, nearly doubles greenhouse emissions over 30 years and increases greenhouse gases for 167 years.' 'Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land Use Change.' Timothy Searchinger, *et al.* (2008). *Science.*
Published online, February 7th, 2008 at:
http://www.sciencemag.org/cgi/content/abstract/1151861v1

The UK Government has announced a review of the practicality and use of biofuels.
See the *Guardian Online*, February 2008, at:
http://www.guardian.co.uk/environment/2008/feb/21/biofuels.transport/

Brazil, which itself has recently recorded a significant rise in the clearfelling of the Amazon
'Deforestation of the Amazon has accelerated, in recent months and is likely to increase this year for the first time in four years, says a senior Brazilian government scientist. The rise raises questions over Brazil's assertion that its environmental policies are effectively protecting the world's biggest rain forest, the destruction of which is a major source of carbon emissions that cause global warming. "I think the last four months is a big concern for the government and now they are sending people to do more law enforcement," Carlos Nobre, a scientist with Brazil's National Institute for Space Research, told a seminar in Washington. "But I can tell you that it [deforestation] is going to be much higher than 2007." Nobre, whose government agency monitors the Amazon, said that 6000sq km [km!] of forest had been lost in the past four months.'
– From: *The New Zealand Herald*, January 2008, at:
http://www.nzherald.co.nz/section/2/story.cfm?c_id=2&objectid=10487854

special teams of workers are systematically eradicating orangutans, killing them,
'In February 2007, the United Nations Environment Programme (UNEP) called the situation a state of emergency in a new report, *Last Stand of the Orangutan*. According to the UN, "The natural forests of Sumatra and Borneo are being cleared so fast, up to 98 per cent may be destroyed by 2022."' At least 50 orangutan are dying for palm oil plantations every week. With the loss of their forests, and the killing, orangutans will become extinct in the wild within the next twenty years.
See the *Palm Oil Action Group*: www.palmoilaction.org.au

The Earth we think we have is ending.
'… the Coorong, a 110-kilometre long coastal system at the mouth of the Murray made legendary 30 years ago by the pelican movie *Storm Boy*… The beloved pelicans disappeared from the southern lagoon three years ago, and are failing to breed on the northern area… The fairy terns that relied on the Coorong as a prime breeding ground no longer nest there and, as *The Sunday Age* has reported, are almost certain to face regional extinction. … It can no longer support the 50 species of birds that once lived there. Also gone are the fish, worms and plant life they fed upon… [As] Professor David Paton, an ecology specialist from the University of Adelaide… has been [saying] in newspaper articles and public lectures, the Coorong of old is dead.'
– From: *The Sunday Age*, February 2008, at:
http://www.theage.com.au/news/environment/aflutter-with-life-yet-the-coorong-is-dying/2008/02/23/1203467459956.htm

The latest research indicates that there are no parts of the ocean untouched by human presence.
At least 80% of the ocean is commercially fished and 41% is considered heavily affected by human activity. Only 3.7% of the ocean is considered relatively pristine and this is found in polar waters, which are becoming available for industrial use as the world warms. A co-author of this recent assessment, Dr Mark Spalding, commented, 'What is surprising is the truly global spread of human impact. The map provides a challenge for us to start to think seriously about conservation.' 'A Global Map of Human Impact on Marine Ecosystems.' Benjamin Halpern, *et al.* (2008). *Science*. Vol. 319, page 948.

The oceans are being depleted and degraded at an ever faster rate

'The loss of deep-sea species poses a severe threat to the future of the oceans, suggests a new report publishing early online on December 27th and in the January 8th issue of *Current Biology*, a publication of Cell Press. In a global-scale study, the researchers found some of the first evidence that the health of the deep sea, as measured by the rate of critical ecosystem processes, increases exponentially with the diversity of species living there. "For the first time, we have demonstrated that deep-sea ecosystem functioning is closely dependent upon the number of species inhabiting the ocean floor," said Roberto Danovaro of the Polytechnic University of Marche, in Italy. "This shows that we need to preserve biodiversity, and especially deep-sea biodiversity, because otherwise the negative consequences could be unprecedented. We must care about species that are far from us and [essentially] invisible.'"

– From: *ScienceDaily*, December 2007, at:
http://www.sciencedaily.com/releases/2007/12/071227184100.htm

current research indicating a global fisheries collapse within the next forty years.

'There will be virtually nothing left to fish from the seas by the middle of the century if current trends continue, according to a major scientific study. Stocks have collapsed in nearly one-third of sea fisheries, and the rate of decline is accelerating. Writing in the journal *Science*, the international team of researchers says fishery decline is closely tied to a broader loss of marine biodiversity. But a greater use of protected areas could safeguard existing stocks. "The way we use the oceans is that we hope and assume there will always be another species to exploit after we've completely gone through the last one," said research leader Boris Worm, from Dalhousie University in Canada. "What we're highlighting is there is a finite number of stocks; we have gone through one-third, and we are going to get through the rest," he told the BBC News website.'

– From: *BBC News*, November 2006, at:
http://news.bbc.co.uk/2/hi/science/nature/6108414.stm

sharks … are now becoming endangered around the world.

There are presently 233 shark species listed as threatened or endangered in the international *Red Book* of endangered species maintained by the inter-governmental organisation, the IUCN. Nine more are to be added in 2008. The scalloped hammerhead will be globally listed as endangered. The shortfin mako shark, the bigeye thresher, and the common thresher will be listed as vulnerable. The silky shark will be listed as near threatened; while the tiger shark, the bull shark and the dusky sharks will be included as either endangered or threatened. The scalloped hammerhead made the *Red Book* because the population has collapsed by 98% in the last thirty years.

See the *Guardian Online*, February 2008, at:
http://www.guardian.co.uk/environment/2008/feb/18/conservation.aaas

the oceans will acidify for the next few centuries, greatly changing the entire ocean environment.

'The Royal Society report makes it clear that ocean acidification is irreversible within our lifetimes, and that it will take tens of thousands of years to recover.' – Simon Wright and Andrew Davidson (from the Antarctic Climate and Ecosystems Co-operative Research Centre and the Australian Antarctic Division), writing in the *Australian Antarctic Magazine*, Issue 10, Autumn 2006.

Available at:
http://www.aad.gov.au/MediaLibrary/asset/MediaItems/ml_388954837037037_17%
20Ocean%20acidification.pdf

Australia has just built a major refinery to process Indonesian palm oil.

This refinery is in the Northern Territory and will produce 122,500 tonnes of biodiesel annually while profiting from the deaths of over 2500 members of the orangutan people every year.

See the *ABC News Online* at:
http://www.abc.net.au/rural/content/2006/s1800099.htm

the global population will rise by 50% in the next forty years.
The current UN projection for human population growth is from 6.4 billion in 2006 to more than nine billion by 2050.

China is building two new coal-fired power stations every week.
See the *BBC News*, June 2007, at:
http://news.bbc.co.uk/go/pr/fr/-/2/hi/asia-pacific/6769743.stm

The original short essay that forms the basis of *The End of the Wild* is here:
http://www.zmag.org/content/showarticle.cfm?ItemID=7620

The MIT Press review of *The End of the Wild* is here:
http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=10941

Information about Stephen M. Meyer is here:
http://www-tech.mit.edu/V126/N64/64meyerobit.html

A Bill of Rights for Future Generations

We, the people of the future, like the twenty thousand generations who came before us, have the right to breathe air that smells sweet, to drink water that runs pure and free, to swim in waters that teem with life, and to grow our food in rich, living earth.

We have the right to inherit a world unsullied by toxic chemicals, nuclear waste, or genetic pollution. We have the right to walk in untamed nature and to feel the awe that comes when we suddenly lock eyes with a wild animal.

We beseech you, the people of today: Do not leave your dirty messes for us to clean up; do not take technological risks, however small, that may backfire catastrophically in times to come. Just as we respectfully ask that you not burden us with your deferred debts and depleted pension plans, we also claim our right to a share of the planet's ecological wealth. Please don't use it all up.

We, in turn, promise to do the same. We grant these same rights and privileges to the generations who will live after us; we do so in the sacred hope that the human spirit will live forever.

A curse on any generation who ignores this plea.