

Where have we got to?

Where are we going next?



PLANET CRUNCH



The Life
(or Death?)
OF PLANET EARTH

A personal view
of the planet
from Richard Brock,
a producer at the
BBC Natural History Unit
for 35 years

What will
happen then?



Planet Crunch

by Richard Brock

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Written by Richard Brock

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Abbreviations

Because many of the sources of
the material I've included vary
considerably, so do the forms of
abbreviation such as % and per cent;
trn, b and m = trillion, billion (bn) and
million; UN and U.N.; km - kilometres;
I do hope you can understand - literally!



Sustainability and the environment.

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Planet Crunch

THE LIFE (OR DEATH?) OF PLANET EARTH

by Richard Brock

This book and the three films are dedicated, with much gratitude,
to my mother, Eileen, and my sister, Cherry, who helped them happen
in our efforts to survive the crunch of planet Earth.

PUBLISHED BY RICHARD BROCK,
THE BROCK INITIATIVE, CHEW MAGNA, BRISTOL, UK



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Richard Brock’s introduction to his method of working i.e. searching the media for appropriate content to be included in a total of 19 chapters. 2021 is a crucial year for planet Earth, and the media have featured this fact – alongside Covid-19 of course.

Chapter 2 – Greta Thunberg 6

is a phenomenon. A little schoolgirl from Sweden who doesn’t fly but uses boat or train for environmental reasons. No one is too small to make a difference. From school strikes to presidents she makes her points forcibly and persistently in her determination to fix the climate crisis and rescue biodiversity.

Chapter 3 – Biodiversity 10

A celebration of the wonders of nature on our unique blue planet, a mere dot in the solar system. A wonderful mosaic of life from plants and insects up (in evolution) through the fish, amphibians, reptiles, birds, mammals and humans. Our species has changed the planet hugely, and so the challenge into 2021 is to try and repair the damage whilst there is still time – just. There are some encouraging signs as our “theme bird” the white stork will reveal.

Chapter 4 – Mural 20

Greta appears again – this time on a wall at a supermarket in Bristol, England! Her forceful eyes see the shoppers collecting all sorts of “stuff”, much of which we take for granted, with little idea where it comes from, and what the true cost to the planet is – not just at the check-out. For example, now the notorious palm oil may lead to the deaths of orangutans the other side of the world where ancient rainforests are felled to enable us to indulge in ice cream, shampoo and cosmetics. And more and more people want more and more “stuff” from a planet that may have already reached its limits.

Chapter 5 – Forests 22

The lungs of the planet are ill. Like any living thing our forests need help and in some places they’re getting it by us re-planting and protecting. That’s good for the great diversity of wildlife which can then move in. And the timber may be used, on a sustainable basis, into a greener future, and the climate crisis averted (perhaps?) as the dangerous CO₂ gets absorbed by the trees. But will it work? Looking at the Brazilian Amazon and South East Asia it doesn’t look too promising. But we can try.

Chapter 6 – Farming 28

A major reason for clearing forests is to use the area for cattle, crops and mining. Once the roads are in, so are people, looking for that land and money that they may be able to earn. Can you blame them? Increasingly, we are being urged to eat less meat and dairy (if only for our health), so that less forest is felled to make way for cattle or soya which is sent across the world to feed, for example, chickens and pigs. Right there ... another food chain, with us at the end of it.

Chapter 7 – Fishing 32

A very obvious food chain involves fishing lines and nets. It’s a fairly primitive form of hunting which started with simply collecting shellfish or seaweed off the shore, on to massive industrial freezer trawlers that can dredge a whole marine ecosystem to death. Which is a shame because fish, given the chance, can multiply exceedingly. The answer is to set aside reserves for the species to breed and be protected when small. With enforced fishing quotas the future could be bright for fishing forever. Millions of people worldwide depend on aquatic food in both sea and fresh water. But as long as a giant bluefin tuna (“the Porsche of the sea”) can assuage the greed of a Japanese customer for £1 million, sorting out the industry will be a challenge. More fish fights? Give a fish a chance! They’re good food.

Chapter 8 – Food 36

So far we’ve looked at major sources of food for the human planet. From the “Three F’s” – forests, farming and fishing it’s pretty obvious we’ve exploited just about every possible edible, or drinkable product from our activities everywhere we can reach. Aviation (until Covid-19) could bring anything, anywhere, particularly if the price was right. In some rich countries like the UK and Europe the choice, in say, large supermarkets is enormous, with competition between them always fierce. Nature often avoids this problem by, for example, giraffes eating the top-most leaves right down to a hippo at ground or underwater level, or a wart hog in its burrow underground.

Chapter 9 – Supermarkets 44

Some shoppers would say there’s not much that’s super about these ever-expanding sellers of everything...all that queuing, searching for the best price...until you have to go back once again. Simply ingesting so much merchandise is a big complex job for all the main eight or so supermarket chains in the UK. But that’s nothing compared to China where, on Single’s Day consumers spent \$1 billion in just 1 ½ minutes. That makes Black Friday in the West look like a bring-and-buy sale. But, either way, every item is probably wrapped (or even over-wrapped) in materials you don’t want, even perhaps really dislike, though it did reach you safe and sound. Think the hated plastic – so useful, so deadly in both sea and on land too.

Chapter 10 – Waste, Plastics and Recycling 46

David Attenborough remembers how plastic was hailed as a kind of miracle product (of oil). Strong, transparent, long-lasting, cheap, potential to be in any shape or form, in theory, for ever. And so it’s turned out to be many years later as revealed globally on television. Now the world can see the problems of this magic disaster. With similar ingenuity and invention can we turn the problem around so that we don’t end up with a plastic planet? Can we cut waste? – surely we can.



Chapter 11 – Energy and Oil 54

Oil has seemed to be the solution to human needs. Not just plastic everywhere, but for transport, heating, cooling, in fact to us, living anywhere, anyhow. But now it’s changing fast. “Big oil” is getting smaller – and greener. Really? “Green-washing” is a trick that needs watching, because immense corporations like Shell, BP, Exxon and their shareholders (you, me?) are terrified of words like “decline” “reduce” and “loss”. They imply failure and on a planet addicted to endless growth it simply won’t succeed as a policy. Much has to change with that attitude and just words simply won’t do to deflect the problem.

Chapter 12 – Climate Change 64

And that couldn’t be more true than with the climate. Originally, mild “climate change”, to “climate warming” to “climate crisis”, to climate emergency. In the shadow of a pandemic Covid-19, the importance of this subject has been weakened, though it will probably turn out to be much more important than the much-publicized coronavirus. Ecologically, the disease may reduce the human population pressure on the planet (the “unsurvival of the unfittest”). That may enable nature to recover, with help from surviving humans. That’s a controversial view, but the next few years will reveal the results of “Planet Crunch”.

Chapter 13 – Water 72

In this chapter we follow the familiar journey of water from melting ice, rain, downwards, via streams and rivers to that rather different kind of water, the sea. In all its forms water is essential to life, and it’s been manipulated massively by humans. In many countries rivers have been blocked for hydropower or irrigation. The impact of these large dams affects fish migrations, and the resulting reservoirs may silt up, meaning yet more dams have to be built. Pollution is often a problem but these days big efforts are being made to clean up these vital waterways. That’s going to be even more important as more people on the planet want more and more of it.

Chapter 14 – Media 80

...is an all-encompassing term, which, today can connect almost every person on the planet. Social media connects space with a Masai nomad on his phone selling a cow, to the deep-sea where submarine signals by the military distress whales when their own communication is damaged, possibly causing death. Is anywhere sacrosanct and silent now? Wildlife television can be a powerful influence, but not when it endlessly depicts sharks in “fang TV” “ruthless assassins”, “deadly killers”. That’s more like us, making wars around the world.

Chapter 15 – Money 86

Can money save the planet? Much is carefully hidden away or exists in the value of human property. If the people really wanted to set aside, protect, re-wild nature it could surely be achieved. Forget Mars and the Moon and the astronomical costs involved? Try to reduce that massive spending on military hardware. Question the costs of the unsustainable fashion circus, especially “fast fashion”. Take a hard look at places of great consumption like Dubai, “bling city” – which we do in this chapter.

Chapter 16 – Trump 94

The Donald. The Loser. Air Force None. Gone. Can Joe Biden, the new President, turn terrible Trump’s plans around?

Chapter 17 – Aviation, Tourism and Travel 98

The steady growth of this apparently glamorous sector has gone into reverse, especially airlines and cruise companies. Before Covid-19 it seemed the sky was the limit, for aviation with cheaper fares, more destinations, so, as it was turning out as a result, much more of the dreaded CO₂, adding to the climate crisis. Greedy companies (and their shareholders?), and the disastrous Trump didn’t want to know. But they do now. Is “now” too late?

Chapter 18 – China / Population 104

The influence of China, in one form or another, is appearing everywhere, pushed by the appetite for just about everything, of 1.4 billion people. That’s a lot of mouths to feed and huge consumption by a fast-increasing middle class. When you add in the demands of the USA, Europe, India, it comes to an alarming total for the future of planet Earth. In fact, the Crunch.

Chapter 19 – Nature and Us 122

So, is there any room for nature left? Can we live together on a limited blue dot? Probably not, at the rate we’re going. Consumption and population are negative pressures. However, being a clever species of considerable initiative, it’s possible (just) to change (if Covid-19 doesn’t get us first). There are many examples, worldwide, of winning, rather than losing. (Please see 100-film series “Wildlife Winners and Losers – How to turn losers into winners” on YouTube and Vimeo. www.brockinitiative.org plus 3 special 25-minute films called “Planet Crunch”). As at the beginning, when we started with the formidable Greta Thunberg, we come back to the young people of today. The politicians and corporation bosses must listen and, at last, act, act, act! At the end of 2021 a major conference in Glasgow, Scotland, offers perhaps the very last best chance to repair a broken planet. It’s certainly a crunch.

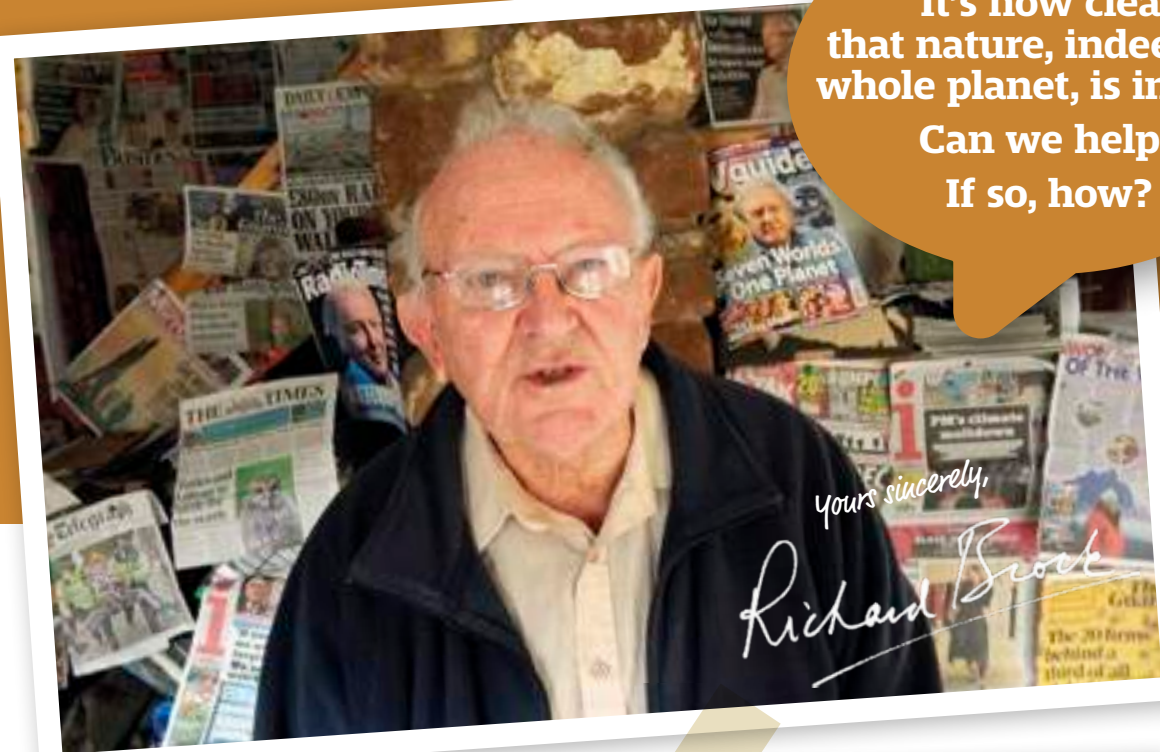
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Chapter 1

Foreword

It's now clear
that nature, indeed the
whole planet, is in peril.
Can we help?
If so, how?



For some two years I will have scanned and clipped from newspapers, including The Daily Star, The Sun, The Daily Mirror on (up?) to the The Daily Express, The Daily Mail, to The i, The Daily Telegraph, The Guardian and The Times.

I also checked the Sunday papers and regular magazines like The Week and Time, as well as many environmental/wildlife/conservation publications, plus TV, radio and social media. I've made (100) films on such subjects ("Wildlife Winners and Losers - How to turn losers into winners") for YouTube and Vimeo. I wouldn't say I've become an expert on such green issues, but what I have really noticed is the way such subjects have moved from small items on inside pages to front page displays.

Some of my many hundreds of clippings and pictures, and cartoons, may contain errors, due perhaps to the hectic rush of publishing, and printing deadlines.

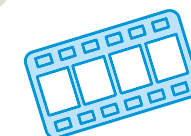
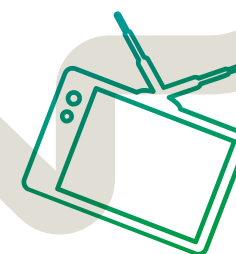
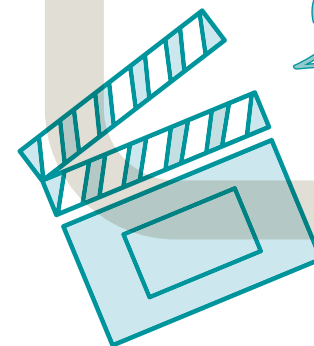
**Storks Back to Breed
in UK After 600 Years!**



For the
good news
read on...



**Worth Saving?
All of us? By whom?**



Apologies are due in those (hopefully few) cases. Some people may object to my selection, context and presentation. But I do not apologise for my bias. In my long career (35 years) at the BBC Natural History Unit in Bristol, often filming with David Attenborough - on *Life on Earth*, *The Living Planet* and much else, the golden rule was "balance". Increasingly this has turned out to be very difficult to achieve. Instead we have "a personal view"...as various presenters travel round and round the world seeing and assessing

what they find to show us. My own view comes from many years (81!) of loving wildlife and being able to help it via television. It's now clear that nature, indeed the whole planet, is in peril. For a long time the BBC avoided telling the truth - the bad news that might affect ratings. To some extent, those who allowed or planned or commissioned that to happen are to blame. At long last the facts and the message seem to be getting through with a surfeit of attention in all the media in autumn 2020. But how long will that

continue? So I have written this book to provide a lighter, more refreshing perspective. Major conferences on the subject are planned for 2021 and they should be the real crunch. Too often these events end up as lots of promises and hot air - rather like one of the subjects climate change! The other is biodiversity, on which, ultimately, every human being depends. One of those is a very special schoolgirl from Sweden who challenged the people and politicians of the planet, no less. Her name is Greta Thunberg.



Chapter 2

Greta Thunberg

It's just amazing how one small girl can make such a difference.

Greta's campaign to force adults to stop prevaricating, and act to save the planet has inspired thousands of like-minded young people. School strikes have taken place in Belgium, Australia, Switzerland, Canada and the US. Greta, Swedish, was just 15 when she started her one woman, or rather girl, crusade – the campaign which has gone truly viral and all around the world. How did this happen? It's an extraordinary story, which we'll follow through in this "Planet Crunch". It's a mixed media review of the life (or death?) of a planet. That's us.

Greta refuses to eat meat, and has converted her own parents to her cause. One of her biggest challenges was to visit the USA, the United Nations in New York. She doesn't fly, uses trains for distance, but in this case she came across the bumpy Atlantic in a zero-emission racing yacht with pretty basic living conditions. She sailed across an ocean that is rising as glaciers melt at both ends of the planet, the Arctic and the Antarctic, from polar bears to penguins. That's what science tells us, and that's what Greta is pushing and she's made it front page news on The Times and The Guardian – not bad for a 15-year-old. And she's focussed on the next 15 years when she and her millions of followers will be grown-ups, all around the world. Uniting nations in fact. There at the UN she told them how it is, what the science says. At the climate action summit she delivers. But did Donald Trump get it? Her brief glance could have re-frozen a glacier or two. She also met a very different president, the previous one, who saw sense. Of course, not everyone agrees with Greta, being told: "If you fail us we will never forgive you. We are watching." Very mixed opponents – Putin, and less so broadcasters and journalists Piers Morgan and Jeremy Clarkson who prefer business as usual. Except it can't be, as Greta keeps telling everyone.



Front Page Girl

Can She Win?



And she moves on to spread her words to South America – Chile. But not – in fact. Because of political unrest there the conference was switched to Madrid, Spain, very disappointing to some of Greta's followers who'd sailed from Europe to Chile. But, if nothing else, like Greta, they're totally committed to the cause. Extinction Rebellion. Greta, meanwhile, had another 4000 mile voyage to endure. In the beginning, in London on 31st October 2018... "When I was about eight years old, I first heard about something called climate change, or global warming. Apparently that was something humans had created by our way of living. I was told to turn off the lights to save energy and

to recycle paper to save resources." To Poland to the huge Climate Change Conference in December 2018... "We have not come here to beg world leaders to care. You have ignored us in the past and you will ignore us again. You've run out of excuses and we're running out of time. We've come here to let you know that change is coming whether you like it or not. The real power belongs to the people. We are about to sacrifice our civilisation for the opportunity of a very small number of people to continue to make enormous amounts of money. We are about to sacrifice the biosphere so that rich people in countries like mine can live in luxury. But it is the sufferings of the many which pay



“I will not be silent while the world is on fire – will you?”

Climate activist @ GretaThunberg tells crowds in Bristol, UK, that “world leaders are behaving like children” so it falls on young people “to be the adults in the room.”

for the luxuries of the few”. Greta is Swedish but her words have appeared in two best-selling books both called “No one is Too Small to Make a Difference”. Two years later Greta was to confront the private jet-set, and the “Denier-in-chief” President Donald Trump, Greta’s main adversary in this battle for the planet – the “Crunch” no less.

But back then, to all over Europe, from COP 24 in Poland, to Belgium, and Germany for a film and TV award... “I dedicate this award to the people fighting to protect the Hambach Forest...But here is the truth, we can’t do it without you in the audience tonight. People see celebrities as gods. You influence billions of people. We need you. We are standing at a crossroads in history. We are failing but we have not yet failed. We can still fix this. It’s up to us.”

Greta also visited France, Austria, Italy and London, UK. “We are the ones making a

difference. We, the people in Extinction Rebellion, and those schools striking for the climate, we are making a difference. It shouldn’t be like that, but since no one else is doing anything, we will have to do so. And we will never stop fighting, we will never stop fighting for this planet, and for ourselves and our futures, and for the futures of our children and our grandchildren. Thank you.”

So, welcome to some new words: “Climate strike”. It took off in late 2018 when Thunberg’s decision to skip school on Fridays and protest in front of the Swedish parliament made headlines. In September 2019 an estimated 6 million people joined the worldwide climate strike. It was Collin’s Dictionary’s 2019 word of the year. And there was the “Greta Thunberg Effect” that took hold too, resulting in big increases in individuals and businesses opting to offset emissions by investing in carbon-reducing projects in developing countries. Medical doctors and nurses

were said to have a duty to protest over climate change because it’s the “most important existential crisis facing the human species” with a website of Doctors for Extinction Rebellion.

“Climate Change Dwarfs Brexit” as John Newman of High Coniscliffe, County Durham wrote to The i Newspaper on 20/9/2019. “Our juvenile manoeuvrings around Brexit feel like squabbling over the arrangement of the deckchairs on the Titanic.”

The 36 Dutch activists, who’ve been trolled and received death threats had planned to sail to Brazil, take a bus across the Andes (as you do) to Chile. Sadly they had to travel back and missed the re-arranged COP25 meeting starting on 2nd December 2019.

Greta appealed for a lift by boat and managed to get to Madrid, Spain in time. Her enemies were there too – the US sent a delegation but President Trump has

begun the process of withdrawing from the previous conference, the 2015 Paris accord. A lot of wasted hot air, human emissions from delegates from around our heating planet, into which the US and China send the most emissions.

So Greta and Extinction Rebellion face a massive challenge. As ever, nothing much came out of COP25 except for yet more hot air in lots of languages, with some 200 delegates attending, most flying by plane, adding yet more emissions. The United Nations said... “levels of greenhouse gases that are the main contributor to climate change hit a new high in 2018. The concentration of carbon dioxide (CO₂) in the atmosphere exceeded the average annual increase of the past decade, according to the UN’s World Meteorological Organisation (WMO). The levels of both methane and nitrous oxide also hit record highs last year...so no sign of a slowdown let alone a decline”... The intention is to keep global warming below 2 degrees Centigrade. The US, Russia, China, India and Australia are not helping. And look what happened to Australia, its people and its wildlife two months later. As Greta famously said to a privileged group of millionaires, billionaires and the ultra powerful at the World Economic Forum in Davos, Switzerland in January 2019: “Our house is on fire.” And she’ll be back – as we’ll see.

For Greta, it’s now back to London, which she left several weeks ago, crossing the Atlantic to Canada and the USA, then back again, via Portugal to Spain, briefly to Italy, and always carrying her message “School Strike for Climate” – in her own language of course. She said that 2020 would be the “year we bend the global emission curve”. Time for a brief chat to Sir David Attenborough, another formidable adviser on the future, handing over the baton of environmentalism. She was then 17 and him 93. He’s seen the world human population grow three times in his lifetime to the current nearly 8 billion people. At this rate we’ll need several more planets – and there’s nothing else like the Earth. The Moon and Mars are no use – except for the view of our tiny fragile planet. And, of course, that connects very much with our changing climate, oceans, and biodiversity as we’ll see at the end of our story. And Prince Harry backed her too.

At last Greta’s got back home to Sweden to her parents, sister and her dogs, Roxy and Moses. And a happy Christmas.

After that it got even happier. Greta seems to be unaffected by fame and that may be why the much-respected Time magazine devoted some 18 pages to her as “Person of the Year” – the youngest ever, and beat

the US President to it. It’s said Donald Trump always desired that accolade so he had that kind of front page made up as him. “Person of the Year”. But he wasn’t. Apparently, the “covers” were displayed in his many golf clubs and had to be taken down. More fake news, from Donald Trump, Greta’s adversary.

Rather different to her fame-hungry opponent, Greta wanted to share the award with others in the global movements she helped to inspire. Another time she declined another award because many finalists had to fly to Stockholm for the ceremony. That sort of thing doesn’t seem to worry “The Donald” who used his own 747 jumbo jet “Airforce One”, plus a spare, several helicopters and a fleet of special limousines plus a large entourage. And that may be for a long distance, short-term visit, as at Davos, or London to meet the Queen for tea... and a few hours in England. You do wonder what a poor African who’s saving up for a bike would make of that. It so happens that previous critics of Greta had to swallow their tea, or wine, too. Piers Morgan from TV’s “Good Morning Britain” stopped twiddling his pen for a moment to acknowledge Greta’s immense efforts and Jeremy Clarkson had his petrol head mind changed when he found a lake in Cambodia almost dried up and the mighty River Mekong a trickle of its former self. It was that which eventually turned him green – and he’s even started farming. Remember, he apparently said to Greta “How dare you stand there and lecture us, you spoilt brat?” (September 2019). He called such people “eco-mentalists”. “But we don’t blame mankind for it” he said, “we’ll let Greta Thunberg do that” and, “Now go back to school. But I genuinely hope people are working on what on Earth to do about it”. Well, some are and some are not.

The United Nations two-week climate talks, COP25, ended in Madrid with a compromise deal that was met with almost universal disappointment. A very sad result, or non-result, for Greta and her followers. As is typical, the 200-or-so delegates prevaricated, pledging to set new improved carbon-cutting plans by the time they meet at their next planned conference, COP26, in Glasgow, Scotland. Because of Covid-19 that was postponed to late 2021. But, for many, this merely kicks the climate can down the road. It could

even be too late by then, a classic case of our species not being able to fix things when all the warnings are there. As Greta says “the longer we wait the harder it will be to turn things around, for too long the people in power have gotten away with basically not doing anything to stop climate and ecological breakdown. They have gotten away with stealing our future and selling it for profit. But we young people are waking up. And we promise we will not let you get away with it anymore.” But there was a big fly in the ointment. And a rather nasty one – Donald Trump who was personally trying to withdraw from the previous Paris agreement. What kind of message does that send to other nations? Will it weaken their resolve next time, whenever it’s rearranged? As long as Donald Trump remained in the White House, the US would continue to impede global climate efforts.

So, perhaps Greta needs a little cheering up. How about having a beetle named after you? Well, that really happened, as yet another accolade appeared on the scene. Actually it was found over 50 years ago but was only discovered recently by scientists in the Natural History Museum in London. You may not think it very flattering to have a tiny beetle with no eyes or wings named after you, but the Museum was “very impressed with the work of this young campaigner, raising awareness of environmental issues.” Sir David Attenborough has also had various species around the world named after him. Greta was nominated for a Nobel Peace Prize in 2019.

At the Museum, finds of lichen, marsupials, snakes and even long-extinct dinosaurs were among the 412 species officially named in 2019. However, experts warn that species are being lost faster than they are being discovered and many may vanish before they are known about. 2019 saw the naming of 8 lizards, 5 snakes, 4 fish and an amphibian native to India, plus the first new species of pit viper described from the country in the last 70 years, as well as wasps, centipedes, aphids, snails, moths and butterflies. We do still have a treasure trove of life on Earth. Take beetles, like Greta’s, with 350,000 species, and counting. Some people think there were only four, musical ones, with an ‘a’! That’s John, Paul, Ringo and George.

Chapter 3

Biodiversity

Solar System and Earth

If there is really any point in going to the Moon or Mars, at exorbitant expense, it's for this view.

Earth is the only place at all out there where life exists, where people and nature live together. Or at least seem to be trying to. But it would appear that wild plants and animals are the losers these days and we'll track those changes across the following chapters over one year and beyond. That's "Planet Crunch".

Dodo:
Extinct: about 1681



Golden Toad
Extinct





A certain loser has been the Dodo... "as dead as", a flightless pigeon-like bird, that was not born to win, on the island of Mauritius in about 1681.

On the other side of a changing planet, in Costa Rica, the brilliant golden toad crashed to zero and is now totally extinct. No one knows exactly why, possibly a global disease which continues to spread.

We'll look at solutions later. Never give up! Can three "extinct" species return? - Formosan clouded leopard, a giant bee and a giant tortoise in Galapagos, difficult to confirm you'd think, last seen in 1906.

For the good news read on...





Man and seal
A very rare monk seal and its friend - probably a too common species. Us



 **Follow our stork**
A winner or a loser?

Flowers and Insects

Flowers are pollinated by bees, butterflies and other insects as they feed on nectar. Our own survival depends crucially on the continuing success of these interactions. Some orchids bloom at just the right time and emit scents that attract specific insects. Certain members of the bee orchid group have even evolved to look like their pollinators. One site in Wales, with over 10 orchid species, is ideal for observing this miracle of nature.



Staggering diversity

A single protected place in Wales is home to 14 species of orchid







Bee Orchid



"One million species at risk of extinction"... out of 8 million, according to the UN biodiversity report of May 6th, 2019.

Planet in Crisis

That loss is now happening "tens of hundreds of times" as fast as the average rate over the past 10 millions, posing a dire threat to ecosystems all over the world. So how have we got what we have and why are we losing it?

Sir David Attenborough is a great butterfly fan and supporter of research into our 58 or so species.





Fish

The sun, the sea, life. From the simplest invertebrates – organisms, like jellyfish, later creatures developed backbones, a crucial structural move towards other vertebrates culminating in us millions of years later. Is that progress? Or are we now travelling backwards and destroying that incredibly diverse inheritance? The fishes have moved in everywhere. The sharks and rays with their primitive skeletons of cartilage with the Greenland shark living to a great age under the ice, unless slaughtered by temporary man, to the international harmless blue shark to the infamous great white whose territory we have invaded, and whose reputation has been exaggerated and wrecked by the media with the myth of *Jaws* and its many sequels.



Sunfish



Basking Shark



Grouper



Piranha



Sawfish

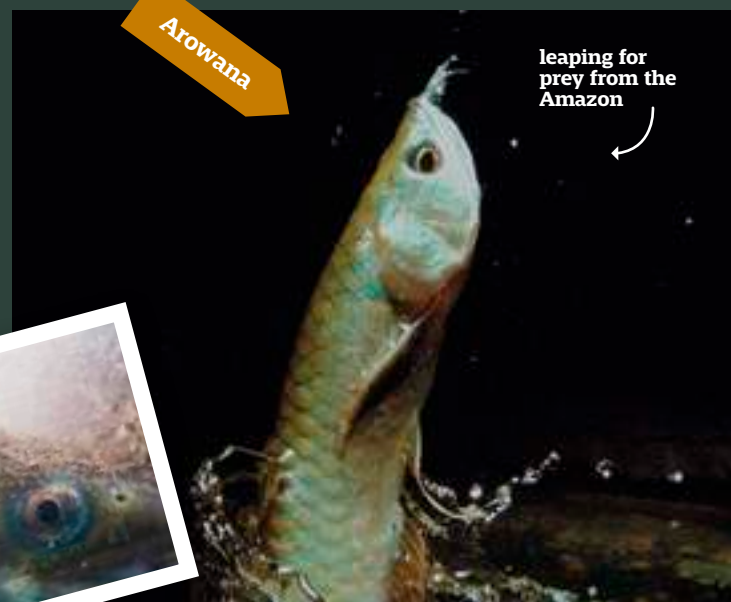
Mouths and teeth for the Job!

From sawfish shark, basking shark sieving plankton (their very distant ancestors) at the surface to the depths.

Yes, mouths for the job. Such a versatile group. And that's just the sea where it all started. The conquest continued to fresh water not just accessible to fish but, as it turns out, vital to us as food, as we'll see later. Whether it's the Amazon, or across the world, both in the sea or fresh water, with eels crossing the Atlantic to spawn, even sliding across land to get there.



Eels



Arowana

leaping for prey from the Amazon



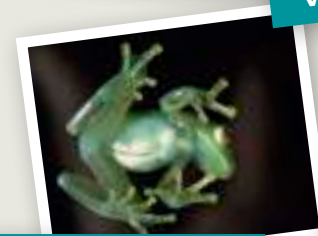
Amphibians

The junction between below the water and above is a strangely elastic one. Surface tension. Amphibians, as their name says, must break through and make that huge move to the land, yet still, all of them are tied to water for breeding. That may have its limitations but frogs, toads, newts and others have shown it can be done – that's over millions of years of evolution. Not only that, but like their predecessors, the fishes, the amphibians are a success story. So far that is. Just look at their global diversity. But pressure from us can make their lives very difficult. If not impossible. That's called extinction. The final crunch.



Amazing variation

Poison arrow frogs are brilliant variations on a theme.



Some are see-through.

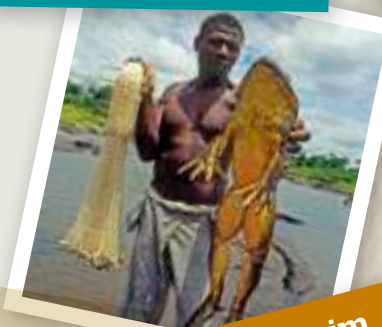


Some are being reared in tea!



Some are tiny.

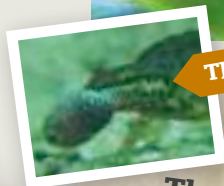
Some are goliath – and eaten by local people.



Jump, and swim away if you can!



It's tense at the top!



This frog tadpole is a loser.



The newt is a winner!





Reptiles

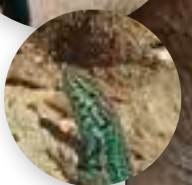
The age of modern reptiles, continuing their survival from the dinosaurs, is possible because of their waterproof skin, an advance on the water-dependent amphibians though they haven't done too badly except for that disease spreading worldwide. Famously, Charles Darwin, worked out the natural selection process in the Galapagos Islands in the Pacific. Different islands produced different giant tortoises, and some land iguanas floated across from the South American mainland, diversified, some even becoming marine, holding their breath and diving to munch kelp. Back in Europe a somewhat similar radiation of lizards took place on the Balearic Islands notably on the island of Formentera, fortunately not (yet) damaged by mass tourism as on Ibiza and Majorca.

The reptiles have hung on around the planet but a crunch is coming. Crocodiles and alligators are not easy to live with, and humans are increasing everywhere. And snakes are so often portrayed as "fearsome predators, deadly killers" by crappy TV. Yes, like many species that must catch prey to survive, they have made the most of where they are.

Baby turtle in the Pacific



Galapagos tortoise



Formentera Lizard



British grass snake Waterproof skin



Fangs like they've always been



Teeth on living dinosaurs



from press-ups in the Namibian desert

Deadly snakes hiding on the brown jungle floor



And up from those dead leaves to green ones, where many species of snake can climb with their serpentine bodies... like the brown tree snake too successful you may say.



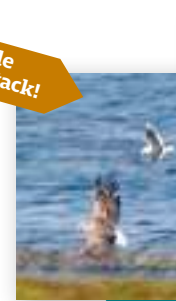
or up in the green trees

Birds

You certainly would if you were a Guam rail, isolated on an island in the Pacific. Flightless, therefore vulnerable, it was an easy prey to the snake accidentally introduced at the end of the Second World War. The poor rail was actually declared extinct. But, was saved by captive breeding and reintroduced - Hoorah!

It does show what nature can do if it's given half a chance "a spark of hope", against the odds. The snake population had grown to two million but scientists captured 21 of the rails and bred them and brought them back from the brink. But worldwide, many bird populations are declining, mainly because of what we do. In North America three billion birds have disappeared over the past 50 years, especially small species. British ones are

Sea Eagle - gull attack!



More stone curlews



Award for team's success



Sea Eagles: have been reintroduced to Scotland.

Turtle Dove: down by 94% since 1995



affected by climate change - up to a third, research suggests.

For example, the turtle dove - famous for its Christmas role "in a pear tree" - is down by 94% since 1995, probably due to habitat loss and farming; though an encouraging re-wilding is under way in Sussex and at a wildlife park in Norfolk. But when they migrate across the Mediterranean twice a year to and from Britain they are "hunted" in their thousands. However, now illegal bird killing by poachers at a military base seems to be falling - by 70%, though Cyprus is hardly

famous for its commitment to justice, including hunting of innocent female tourists.

But in our changing world of Wildlife Winners and Losers, now in "Planet Crunch" there is a scattering of good news. For example, in New Zealand, the fattest species of parrot is winning with a lot of help from its friends. There are only some 150 kakapos alive today. They used to be really common, before being hunted and killed by introduced predators (similar to the problem with the brown tree snake and the flightless Guam rail). In 2019, 76 chicks have hatched and 60 are expected to grow up due to heavy seeding of its favourite food tree. So some will be even fatter than normal. What a thought! Though disease is still a problem. We'll see. As ever, food is crucial. And that's certainly true for sea eagles. Successfully reintroduced to Scotland, they've done well on plenty of fish, but farmers worry about their lambs. Hopefully that's a false alarm. A rabbit or a squirrel or even a deer calf would be tasty. Again, we'll see.

Feathers What a breakthrough!

An amazing invention! The feather; derived from the reptilian scale, and must always be meticulously maintained. Their lives depend on it - to fly across continents, to display, to mate and generally survive. And man has helped that happen, as white storks increase and share the same habitats, and even houses, on which they nest. We'll follow them through this book as they lead each chapter towards a happy ending.

Another great traveller, the osprey, can hover and hunt with a steady stare at fish below. Then plunge for catch of the day. No problem. And... perhaps next to a puffin, whose wings will carry it over the waves and then effectively "fly" under the water to grab its prey in that brilliant beak.

Penguins use their flippers in a similar way, but they're not much use on land. They can't fly. We need aeroplanes and submarines. In many ways birds are better and they now rule the skies on those amazing feathers.

Vulture



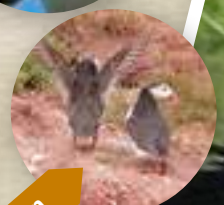
Stork



Osprey



Puffin





Mammals

This most advanced group, the mammals, goes from the smallest shrews and bats to huge elephants on land and the great whales in the oceans. Who's best? Man? Man is a mammal, but is that word "best" appropriate? At his rate of increase, and consumption, it may or may not prove to be true. Pandemics permitting, that is. He may become too successful for his own good and that of the planet and its wildlife. Some British mammals are winning, others losing. Take squirrels for example. You see, when the greys were introduced to Britain from North America they pretty much took over from the native reds. The greys are tougher, and carry a disease that kills the red, not the greys. To the rescue – another mammal, the pine marten. Once rare, it's now increasing and hunts grey squirrels, whereas the lighter reds can escape by climbing to the slender ends of branches where the heavier greys can't follow. You win some, you lose some. The State of Nature Report 2019 found that 26% of British mammals could be disappearing, partly because of intensive agriculture and climate change. But people are helping to turn the tide, whether it's bats, hedgehogs, harvest mice, water voles, and the very rare Scottish wild cat. On the other hand, deer, both native and introduced, can be a problem overgrazing and then there are controversial foxes and badgers all jostling for space on Britain, a very crowded island. And getting more so. Worldwide, mammals have become a successful group, with humans probably too successful. We admire them in the confines of nature reserves, and, in one particular case, well outside. A fantastic Arctic fox was tracked wearing a GPS collar right across the Arctic. Sea ice, now melting with climate change. Such is the indirect impact of our species as our numbers increase so much.



Pine Marten



Tougher - grey squirrel



At risk - native red squirrel



Arctic Fox

Arctic animals: are being affected by melting sea ice now – the indirect impact of our ever-growing species.



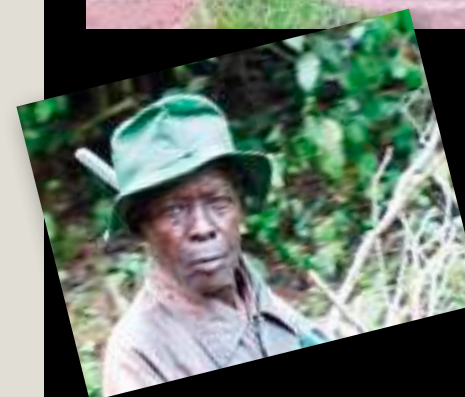
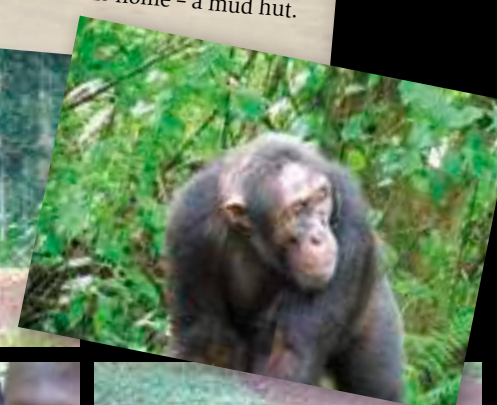
26% of British mammals could be disappearing

according to The State of Nature Report 2019

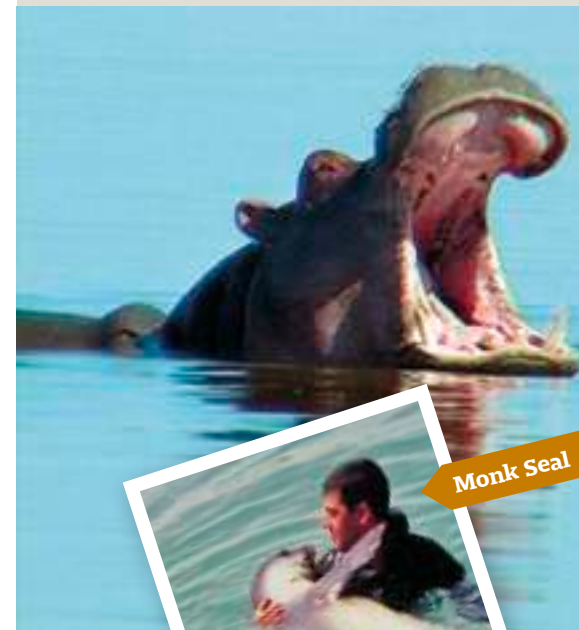


Chimp story

As we compete for space and resources with our nearest relatives, it seems inevitable who will win and who will lose out. A huge sugar corporation takes away the home of the chimps and much else. A local man who's lived here for years needs only sticks for a cooking fire in his home – a mud hut.



Scientists study chimp behaviour, so like ours in many ways, but will there be chimps to learn from in the future? We'll see.



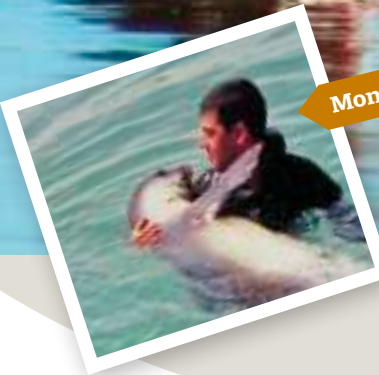
Bongo



Otter



Monk Seal



We win some, we lose some. Biodiversity is threatened as never before. Biologists in Turkey try to help the endangered Mediterranean monk seal driven from the once empty beaches and remote breeding caves by the ever-increasing tourism. But on Britain's coasts and rivers from the far north to the far south, otters have made a comeback with a lot of help from their friends. The very rare cat the Iberian lynx is slowly recovering in Spain despite its home being changed to grow strawberries, perhaps for

Wimbledon, or a supermarket near you – or me. We're all linked by a lynx. And we do like cats, and they like eating rabbits. And people in other countries, and there are many millions of them, enjoy all sorts of food, some of them very traditional, they claim, like "bush meat" – chimp – bongo – sort of "jungle venison". Or elephant plus ivory or rhino horn as "medicines". And thereby hangs a sorry story as the pressure on "Planet Crunch" increases even more. A lot more in fact.



Wildlife Trade



Elephants:
Threat to crops as
they search for food



How to help elephants and rhinos?

Educate the next
generation about
the deadly source



Rhino horn:
Worth its weight
in gold



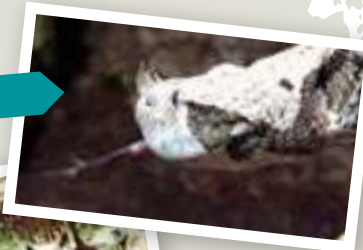
One of the biggest trades on the planet is the wildlife trade, now being confronted by Prince William, Tusk, and several other conservation organisations. They may be winning. Just. But, as human numbers grow and demand increases, it's a race against time, using education as a major weapon – especially to the young. Ivory and rhino horn – many people in South East Asia don't know where the stuff comes from – not unlike the chicken/egg, cow/milk “gaps” in the UK.

Elephants can be a big problem – really big. An African farmer may have a few crops to feed his family in the future but when a herd of hungry elephants, perhaps displaced from a nearby protected area, invade his only source of food he's obviously devastated, as is his corn. Then some men turn up and offer to “remove” the threat, i.e. kill them. We call those men “poachers” because they'll find the elephants, kill them and send the tusks to China, where a middle-man makes a lot of money from the ivory.

It's a very sad sequence of events and it happens increasingly as man and wildlife collide. Rhino horn, which is made of keratin, like our fingernails, is believed to have medicinal and aphrodisiacal properties (perhaps because of its posture). They say it's now, literally, worth its weight in gold in the markets of China, Japan and Vietnam. And it's there, in those crowded and often illegal surroundings, that you could say suffering creatures and their products got their revenge.

Wuhan Market

Snakes



Wolf pups



Bats



China

Pangolin



The harmless vulnerable
pangolin in a market of dying
and death. Did Covid-19 start
in this way? Here?

Virus



Welcome to Wuhan, China, January 2020. Not exactly the place or time you'd like to be welcomed, because it turned out to be the source of one of the most virulent, contagious viruses ever to hit the human race. Indeed, it was a race to control its spread right across the planet. Previously, SARS had the same impact. And ebola, the black death, polio, leprosy, they've all threatened the, apparently, so successful homo sapiens. “Sapiens” means wise but do we have the wisdom to learn from our mistakes, not decimate wildlife and to try to reduce our numbers? It's

perhaps humbling to consider a tiny, tiny, microscopic organism, a virus, a million of them can fit on this full stop. And can effectively bring humanity to its knees – its money markets, its tourism, its politics, its future. Planet Earth is the only one like it and, seemingly, so vulnerable. It turned out that the coronavirus probably started in a bat (as did the SARS in the past) and in Wuhan it could have been wolf pups, rats, badgers, snakes and even, would you believe, koalas? (As if they hadn't had enough problems in Australia from the fires, caused indirectly by us, through

global heating), and particularly pangolins, a mammal, the most trafficked animal on the planet for its meat and the very dubious medical value of its scales.

Because of the Covid-19 disaster out of Wuhan, the Chinese have been forced to close down many markets. But they will always find loopholes if the demand and the greed is there (see China chapter later). Hopefully future generations (and that's a lot of people) will understand the real cost to the planet – our planet.

Chapter 4

Mural



Supermarkets

Worldwide, people throng to markets, whether it's a potential lethal one in China, or one like this typical Aldi supermarket in Bristol, England.

They come here not to buy koalas, wolf pups or snakes, but familiar items for the home – soap, chocolate, shampoo, ice

cream, toothpaste...and thereby hangs a tale. There's plastic and water too, which we'll investigate in a later chapter. And, believe it or not Greta is here too, as a mural, watching, as she said she would. Fortunately Trump's not here as well, ex-president of the most consuming country on the planet – the USA. Here in Britain Aldi has 874 stores, plans to have 1,200 open by 2025 for the consumers of the future. It's hiring more than 4,000 staff this year. And it's only one of some eight huge supermarket chains. Consumption is massive, and competition is intense

amongst these really “big boys”, all offering lower prices than the other one. Globally, the demand for resources and millions of items and products is ultimately unsustainable on a finite planet. Much is wasted often causing pollution.

Many products include an apparently essential ingredient called palm oil. And it connects through to our relatives, another primate, the orangutan. It turns out that the real cost of many of our purchases is not money, but a red ape, thousands of miles away in South East Asia. It starts



Chapter 5 Forests



For the
good news
read on...



Truly a scar on the landscape. Which would take many years to heal and can't, anyway, if poor people move in and inevitably increase.

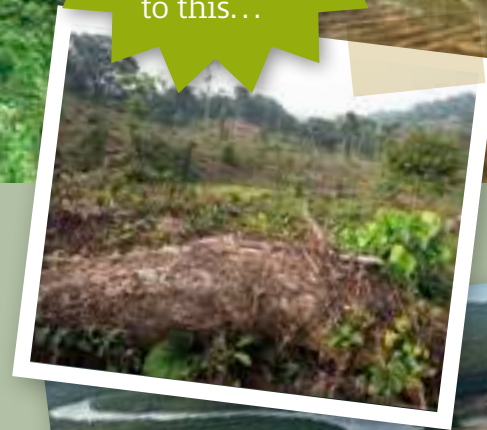
Many may earn a living from palm oil, so preventing forest clearance presents a tricky dilemma. And, don't forget we, comparatively well-off, seem to really need the so-called "golden liquid" for our KitKats and Nutella. The Roundtable on Sustainable Palm Oil (RSPO) is trying to solve the dilemma, but alternatives are more expensive and many need more land, so the problem doesn't go away. Less consumption would help but big companies like Unilever don't like those two words – nor do their shareholders. Now though, the global situation is changing. As climate change speeds up and sea levels rise, more and more people around the planet are having to adjust, especially in the tropics. In Indonesia, home of the orangutan and huge biodiversity, planners are going to move the whole capital city of Jakarta, home to more than 10 million people, to another island, East Kalimantan 800 miles away. More roads will bring more and more people to crowd the landscape. Is this "progress"? And to add extra pressure that huge city of Jakarta is currently sinking into the sea – and sea level rise threatens too, as ice melts at the north and south poles. It's beginning to look like a global crunch.

These changes affect the whole planet top to bottom. Donald Trump (remember him?), in North America, may even notice when his US palace, and various low-lying golf courses start being flooded, and Florida is overwhelmed with people, looking for the sunshine, which is becoming hotter and longer. On south to Brazil where, in the past, they did

what Indonesia is having to do. They created a new city, inland, called Brasilia to take the pressure off coastal Rio de Janeiro and Sao Paolo. Again, another large, ancient community of plants and animals – and indigenous people were to be affected. Later came the "Trump of the Tropics", Jair Bolsonaro. His plans and promises hit the Amazon, the world's largest rainforest and the headlines all over the world. It was pointed out that the Amazon, "the lungs of the planet" are vital to all, everywhere. Bolsonaro didn't see it that way. He wanted to "use" it, for agriculture – to grow soya for pigs and chickens in China and Europe. Mining with big corporations and their money. Timber for anyone who would buy it legally or not, and he threatened to reduce, or weaken the forest reserves of indigenous people who had learned how

to live sustainably off the original jungle. And of course so had the wildlife. All was about to change in August 2018. And then came even more fires. It incensed the world. But Bolsonaro didn't seem to care about the headlines – rather like another current president, up there in North America. Power of the few, damage to the many. Apparently some Amazon native people have been killed trying to protect their land.

A huge diversity of plants and animals is reduced to this...





Front Page News

But what difference can it make?



Forests or fields?



Lone tree – the true cost of a tea plantation



A mighty grab



Under threat

Not only were the indigenous people threatened by the chainsaw, fires and mining, but by land grabs for almost anything. Hundreds of endangered wildlife species were listed as the number of fires increased by almost 30 per cent, the fastest level of tree-felling recorded since 2008, equivalent to about two football fields a minute. Britain pledged £10m to help protect and restore – there have been nearly 40,000 fires in Brazil in 2019. Back in 2017 the world lost tree cover the size of Italy using fire according to Global Forest Watch – from the Amazon to the Congo Basin, equivalent to 40 football fields a minute, that sadly familiar unit. Forest destruction drives climate change. Norway has invested about £2bn in the past decade, more than any other rich nation. Norway's massive income from oil raises questions about burning fossil fuels which is increasingly criticised for adding to emissions damaging the planet.

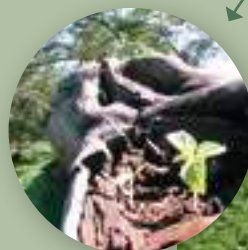
Boris Johnson did say he would focus on natural solutions to climate, such as reforestation and called for tougher targets on protecting and restoring natural habitats, conserving wildlife, tackling pollution and environmental damage and dealing with invasive species. "We cannot sit back as animals and plants are wiped off the face of the planet by man's recklessness". He also urged countries to back Britain's call to protect a third of the world's oceans by 2030 and reverse the damage inflicted by overfishing, plastic pollution and climate change. That was back in August 2018. Despite, perhaps having a partner of similar intentions, maybe Brexit, HS2, Heathrow and other pressures will empty some of those words. They are in fact some of the main topics of this book "Planet Crunch".

Fires in Brazil threaten the lives of indigenous people and 265 endangered wildlife species.

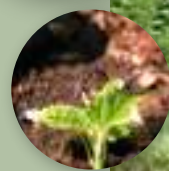




Trump blames forest fires on poor management



A tiny tree sprouts in a fallen log



Britain
A green and pleasant land. Because of trees, planted and nurtured.



Planting Trees



Trump's Golden Age of American Energy: Upsetting ecology



From the “Trump of the Tropics” to the “Trump of the USA”. He blamed the fires of California in 2015, and also in 2020, for poor management, having apparently cut funding. \$13½ billion was paid out in settlements. Then Trump wanted to lift a logging ban to unleash a “golden era of American energy”. That, in the 25,000 square mile Tongass forest, would, it is said, upset the ecology of trees, soil, streams, salmon and bears that catch them. Then ecology was never Trump’s strong suit. Whatever size it is.

On the other hand (little ones) Trump was later to say one trillion trees would be planted. But was that to prove to be “fake news”? In fact there is, good, bad and “maybe” news about tree-planting around the world. Good – National Trust to plant millions of trees on its farms by 2030. The Daily Mirror newspaper were giving away 20,000 trees praised by the Dalai Lama, who thanked Greta Thunberg for her campaigns. Eurostar will “plant a tree for every train”, saying the carbon emissions plans to spend £230 million planting millions of trees around the world to help absorb the greenhouse gas emissions

caused by its fossil fuel products. Joining in are individuals in the Punjab in India, if you want a gun licence you must plant at least ten trees. (Not sure what he shoots with it?) An individual, Felix Dennis, who died in 2014 left money to pay for a 30,000 acre forest in central England. It’s already got fantastic wildlife. The front page of The Times announced Britains must plant billions of trees, consume less beef, lamb and dairy; 200,000 miles of hedgerows will need to be grown and flying is likely to become more expensive. It all requires a huge effort, and the Woodland Trust provides it. And Danish TV, in a telethon, enabled people to “plant trees” from the comfort of their sofa with a “green levy”.

More good news – Ethiopia in Africa has suffered droughts and deforestation. But on the 29th July 2019, Ethiopians planted more than 220 million trees in one day

which officials claim is a world record. In Turkey, mass-planted 11 million trees at 2,000 sites. But now, for the bad news. Apparently up to 90% died there due to lack of water. And “maybe” news. Robin How of Peterborough wrote in the Daily Telegraph (21.11.12): “Planting 30 million trees shouldn’t be too much of a problem; based on current British population figures, that’s about half a tree each. Perhaps a national tree-planting day is required”. As above, that’s what took place in Ethiopia and Turkey with definitely mixed results. But it seems planting billions of trees is a very good way to save the planet, to tackle the climate crisis. An analysis shows that 1.7 billion hectares (4.2 bn acres) of land is

without trees, on which 1.2 trillion native tree saplings would naturally grow. The area equates to about 11% of all land, and is equivalent to the size of the US and China combined. Tropical areas could have 100% tree cover, while others would be more sparsely covered, with, on average half the area under tree canopy. Sustainable cartons mean that European forests are increasing in size by the equivalent of 1,500 football pitches per day. That unit again!

And of course, Donald had to Trump that. He came to the World Economic Forum in Davos, Switzerland in January 2020 and announced he would plant a trillion trees – not personally one assumes. Along with

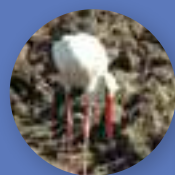
other squillionnaires, and royalty, they discussed the climate emergency, probably not helping with flocks of private jets. Trump, plus daughter, boasted for half an hour. Tremendous boasting. Phenomenal boasting. He was boasting like no other American president had ever boasted before. His boasts were some of the biggest boasts in the history of boasting. His boasts were truly incredible. You wouldn’t believe them. Very soon the US will hold a presidential election. Everyone is saying he’s going to win it. If he loses, it will be incredible. It will be tremendous. It was.

Greta delivered two speeches – she told leaders they need to “panic” about the

climate emergency. Local school children held a strike, protesting at the lack of action. Greta said she was still not used to being a public figure. But she did get to meet the Prince of Wales who had, rather controversially flown in by private jet, continuing in a greener Jaguar electric car. And very green company Jane Goodall, famous for her studies of chimps in Tanzania. Their forest home is now much reduced. Somehow I don’t think Trump’s trees would be appropriate. And, four days later it’s all over at Davos.



Chapter 6 Farming



Bar, the shouting – which is what it was. All good stuff, no doubt. But what about the future of deforested land that doesn't get replanted, like this misleading "green" area in famously green Costa Rica? Just a few big trees left standing, grass grazed by cattle and horses. It will never go back to what it was as a diverse home of a wealth of wildlife. Effectively, it's now a dead zone and will get even dead-er (if that's a word). A farmer can change it again using big tools and more fire. He, and large corporations, recently encouraged by President Bolsonaro in Brazil, can

plough it, plant it with soya, and sell the crop on as animal feed to other countries. When Trump cut demand from China of American soya, the Chinese switched to Brazil, thus increasing the pressure on the Amazon landscape – more logging, fires, cattle. Some countries have tried to reduce their import of red meat by changing to chicken, but the problem with that is chickens are fed soya – so the food chain from the Amazon to us continues or increases, as do our numbers worldwide. From A to Z, the Amazon to Zimbabwe. Victoria Falls known as "the smoke that

thunders". Then, not any more – no smoke, no thunder. The famous falls almost stopped due to a severe drought. Livestock died partly because cash-strapped farmers couldn't afford to buy supplementary feed their animals needed. A 50 kilo bag sold for a third more than the year before. In one area 2,600 cattle died. The real price of climate change. The rains returned but such is the price of climate change, which affects everything.

So drought empties Zimbabwe's "cattle bank". Animals, crops, money, it all adds up for farmers everywhere.



Sheep – come in Number 19, your time is up



In Turkey a deadly mist is sprayed on trees and fields. It costs money, big income for big corporations who make and sell it to farmers often struggling to make a living. Bees may not be spared and they are crucial pollinators. The produce may look better, rid of insects, but the consumer either in Turkey, or in the country of export, may pay a price later in terms of human health. These are potions made to kill. And micro plastics are now everywhere, and have been shown to contaminate soil, that vital



basis of farming, but also in tap water, seas around the world, human stools, in the air and a wide variety of other environments. For the soil, phosphate fertiliser use has quadrupled in the last 50 years as the world population needs more food. It could run out, like any limited, unsustainable resource. But the thing is that farmers have become dependent on "chemical farming", such as wine growers in France. They want, possibly need, to keep on spraying. The weed killer, glyphosate, was originally developed and



marketed by the US firm Monsanto under the Roundup brand. The World Health Organisation, in 2015, said it was "probably carcinogenic to humans". Those locally affected complained strongly, but the possible beneficiaries, the farmers and Monsanto, objected to any ban. So, more French strikes!



Nomadic Tribes

Increased size of herds put added pressure on the land



Further south, in east Africa, in Kenya, the nomadic Masai and Samburu tribes own their wealth on the hoof. They consume milk, blood and meat. They buy and sell these days on mobile phones. To add to their income they increase the size of the flocks and herds. That puts extra grazing pressure on the land turning it dry and dusty. With the Masai increasing, and the

desert too, the effect of climate change is damaging their lives. And further north from there, in Ethiopia, sloping fields of barley and potatoes stretch far into the distance. It's the home of Babel Tena who's been cultivating low-yielding varieties of those crops for more than 40 years. Not drought so much as water. "Our soils and produce have been washed away by rain run-off because we farm on the side of the mountain" said the 58-year old, ploughing his field with an ox and a horse. It's a classic example of a crop and animal connection. "I have nine children. I have no farmland to hand over" he said, blaming a scarcity of land and a growing population. Those like Mr Tena have no other option for survival apart from trying to grow crops and breeding animals. Ethiopia's ambitious plans to reforest the landscape may or not help solve the problem, but in the meantime will those new trees survive climate change and being eaten by cattle and goats?



Literally half a world away in the UK a weed called black-weed costs the economy £400 million a year in lost crops. It has developed resistance to herbicides meaning it can destroy 800,000 tons of wheat crops in the UK a year, reports the Zoological Society of London. According to The Guardian (16/9/2019), \$1m a minute global farm subsidies “are destroying the world”. Much of it promotes high-emission cattle farming, forest destruction and pollution from use of fertilisers. A report found that avoiding meat and dairy was the single biggest way to reduce a person’s environmental impact on the planet. A vital message, bound to be opposed by the huge corporations and politicians involved, and upsetting a vast industry which is probably bad for our health – let alone the planet’s.

Farming happens right around the world, where people are and need food. In the mountains of Crete, Greece shepherds still milk sheep. In Australia, with cattle, a helicopter is an expensive herder. In England, with sheep, a cheaper version is a drone – which barks. But that trick soon wore off. Sheep are cleverer than you might think! So a plan was hatched to train the ewes to associate the drone with food. The farmer set up a tube to the sheep’s trough and hid behind a hedge, secretly dropping food down while flying the drone overhead. The sheep started coming to the trough when they heard the drone overhead, even if there was no food. This then led to them following the drone. Easy technology is changing the face of farming. We now have lab-grown food and vertical farming. “If we want to save the planet we need to use less land. Vertical farming enables us to produce as much food as we want” (The Week 29/6/2019). Multi-storey containers of food, growing under a synthetic sun were once a sci-fi fantasy but are now a realistic solution to many problems facing humanity. On a rooftop in Paris, producing one tonne of food a day; in a bunker in Cambridge, England. No soil. No sun. 20 tonnes of tomatoes a day warmed in two huge greenhouses and creating 360 jobs. And you could be flushing away useful stuff connected

Ancient and Modern

A landscape of greenhouses



to juicy tomatoes for your lunch. A kind of manure, the human sort, a kind of recycling!

Meanwhile other jobs are disappearing thanks to robots, like Tom and Dick, on a National Trust estate, that can identify weeds specifically, and zap them with an electrical charge, or plant precisely.

It’s hoped the robots will remove the use, and spraying widely, that harms biodiversity. And just imagine trying to invent a robot that can select and pick soft ripe raspberries? With some £300,000 Fieldwork Robotics are doing just that and they’re now worth £5m. The aim is dealing with the increasing shortage of migrant labour.

McDonald’s – hamburgers of today, with leaf-cutter ants passing by



The loveable bumblebee

But no cleverness will beat that of bees. Much of our food depends on them and we harm them at our peril. Fortunately more and more people provide bee hotels and grow plants that bees use. The high level of pollination in towns is in stark contrast to intensively farmed land for crops outside. But then we do eat the crops don’t we – can we strike a balance with the loveable bumblebee?



Wooden necklaces

Man’s history of farming has moved on – some say in the wrong direction because of the inexorable rise in human numbers. Way back on the open range “Marlboro Man” was advertised as a classic cool cowboy amongst his cattle. Unfortunately that publicity for cigarettes backfired when it was proven that tobacco kills worldwide, and so the scene on the range was shattered.

“Free range cattle” were being restricted – wooden “necklaces” stopped them getting through fences as farms became more and more enclosed. Later enormous food lots would contain thousands of cattle (“lots of lots”), pigs would be confined to the extent that swine fever spread and threatened to kill a quarter of the world’s pigs. It’s been devastating in China which has approved imports from abroad. US pork sales to China have doubled while European pork prices reached a six year high (The Guardian 1/11/2019) “the biggest threat to any commercial livestock of our generation.” The disease doesn’t spread to humans but is virtually 100% fatal amongst pigs. As many as 100

million pigs have died in China and it can spread to wild boars. China’s record for controlling viruses is not a happy one - it can be spread with infected animals, and via ticks. It can survive several months in processed meat and years in frozen carcasses. It’s turned up in Ireland, Poland, Russia and Belgium. Maybe that’s the real cost of intensive breeding and overcrowding of a highly intelligent animal. It would seem more intelligent than the incarcerators involved. Then, the most notorious inmates of all – battery chickens. The only electricity here is to stun them on their way to our fast food snack. Conditions have been improved due to public pressure, but then there’s the threat of chlorinated chicken from the USA. And as we squeeze up on animals, invade their homes and breed like – er – chickens, that killer-in-chief Covid-19 (and other pandemics to come?) will cast its vast shadow on planet Earth. Is it unbeatable?

In some countries animal welfare standards are lower because cheaper is a driving force. Down. “There are

two billion pigs, 1½ billion cows and 20 billion chickens being farmed today and it’s killing the planet” (BBC/Radio Times 23-29 November 2019). There are 7.7 billion humans on planet Earth in 2020. And counting. As we mess with animals, nature and the climate, they will certainly make a mess of us. The dreadful coronavirus has changed and will change everything, everywhere. Right up to Christmas 2020 and into 2021 and beyond. Hell of a crunch. And, as we expand, (or maybe not as the disease kills), we will become closer and closer to the threat and transmission may well occur.

Not long ago salmon was regarded as a special, rather upmarket, food. Today, huge factory farms float in Scottish lochs, supported by the powerful Norwegian salmon industry. The fish are fed on other fish as fish meal, and soya (where from?). These coastal farms create pollution, the crowded fish become infested with lice which eat into their living host. Seals are attracted to easy prey and may be shot – they’re hardly to blame: they’re only doing what comes naturally and we provide the temptation. Those salmon that escape the crowded cages may breed with the declining wild salmon and thus weaken that stock – so those two really cheap salmon fillets, reduced from £2.97 to £2.80 for 240 grams, at Asda, may look like a bargain. But is it? Considering the story behind the offer?

Everyone likes salmon – as cheap as possible. But what’s the real cost?





Chapter 7 Fishing

Jacques Deval is quoted
“God loved the birds and
invented trees.
Man loved the birds and
invented cages.”



Simple fishing
– on stilts
in Sri Lanka

Cod stocks
halve in 2 years

An excellent meal
collected from the sea



Sustainable?
Our demand on
fish increases
as resources
decline



Gleaning
– shellfish
by hand

Much of the planet is covered by sea water, with a relatively small amount of non-saline H₂O, like rivers and lakes. This is crucial to millions of people who depend on them for food and drink. To get that food may be by farming fish, prawns, shellfish, and even kelp, seaweed that is the basis of much life in the ocean. To collect the “easy” food, one of the earliest forms of getting hold of it was, literally, that. It’s called “gleaning” and, then, humans typically, using that built-in ingenuity, moved on to all sorts of clever, but simple, devices to catch prey, that was more mobile than shellfish and seaweed. Fish, small ones would do to start with, and in France near La Rochelle, an excellent seafood meal could be collected one way or another. But this is just one family. Fishing boats with bigger nets pull in bigger catches to supply more and more customers. But there’s a snag which turns out to be a big one too.

And all around the world as that dependent human shoal increases, so the resource decreases.

From gleaning seaweed and shellfish, to rods, nets and bigger boats, the pressure on the world’s waters has steadily increased with hunger around the world. This potential food supply is potentially very sustainable. Fish can be amazingly prolific given the chance. But mostly they’re not. However, there are some encouraging developments coming along, but whether they can work in time is uncertain. We’ll see. In the meantime, consider the state of the cod, that traditional much-loved British meal that usually comes along with chips, salt and vinegar and wrapped in newspaper (for example like these quotes I gleaned in my search through cuttings “Cod Crisis!” “British Cod has had its Chips after stocks halve in two years” (The Daily Telegraph 25/9/2019)).



Salmon:
A declining resource

Valuable Tuna

One third
of fish netted
never make
it to the table
according to the UN

One’s got a
rod, the other
a beak

Can we really make a difference?

For the
good news
read on...



Depending on quotas, chemicals, even climates the cod stocks have shifted like a roller-coaster, or a very up-and-down rough sea, and it’s there that the real culprit or many of them can be found. Japanese, Spanish and Hawaiian cuisine is squeezing the market for octopus. Chinese-owned trawlers are costing Ghana in West Africa millions in money – one official trying to stop it has been missing for months (The

Times 18/11/2019). In Italy, crime flares up around the prized red prawn business with Libya involved. There’s tension with Spanish trawlers, and the French “scallop wars”. So Europe has become a fishing fight, allegedly “devastating marine life with electric shock fishing”. Far away in South Africa, penguins are starving from their lack of fish food. And nearby there Namibia has been involved in a major

political, corruption and financial scandal with a big Icelandic fishing company. And, really crazy, the so-called protected areas in the UK are not. Foreign trawlers trash the sea floor, wrecking it for now, and for ever – probably. Will Brexit make any difference at all? It’s supposed to. If we really do get total control of fishing, later on, in our own waters, then the bottom line should be about sustainable stocks and not human greed.



In the old days, selective fishing with a rod from a horse, or ploughing with one for shrimps was sufficient. But when you look at the fortunes of that famous “King of Fish” the salmon, in the wild, you see what’s happening there. Here on the River Tweed between England and Scotland, netting and quotas affect the catch – and the price. These fish migrate great distances and are caught elsewhere – in Greenland, Norway, France and Ireland hungry for salmon and money. It’s an extraordinary fish, hatched from an egg, way upstream in fresh water, then they come downstream, change and grow, enter the sea and travel to a range of countries where they may be caught by big boats. Those that survive enter the same river they came down, return as strong adults to spawn in the same upstream gravel in which they were hatched from an egg. The salmon is an extremely valuable, but declining resource and not easy to manage because of its extraordinary migrations. You could say the same about the bluefin tuna, mismanaged despite man’s attempt to save it. But as long as Japan and the sushi trade will pay up to £1.3 million for a giant, human greed will defy any kind of sustainable sense.

The Real price of fish

(The Times 11/5/2020) Slave fishermen made to work 18-hour days. The government of Indonesia has condemned what it called the inhuman treatment of its citizens by a Chinese fishing company that allegedly, kept them as virtual slaves, leading to the deaths of at least three. Their bodies were then thrown overboard...maybe to be eaten by sharks, ironically what the Chinese catch in huge numbers for their fins, eaten as status symbols at events. More recently many Chinese vessels have been fishing close to the rich, protected waters of the Galapagos Islands a world class national park. Their appetite is insatiable. There are not plenty of fish in the sea. Our seas.

All kinds of disputes and fights break out, which is what you’d expect with more and more mouths to feed everywhere and increasing technology to catch the prey, fast declining through what is now usually called “overfishing” (like “overtourism” and “overpopulation”). In Indonesia 125 mostly foreign vessels involved in illegal

fishing have been sunk. There’s a strong message there. Across its vast maritime territory, at 11 locations the sinkings were carried out simultaneously. Indonesia says it has sunk 488 illegal fishing vessels since October 2014. Thousands of desperate North Korean fishermen are risking their lives to poach off Russia’s Pacific coast amid food shortages at home. “It’s the only way to earn money. They are not afraid of violence or gunfire, and, to them Russian prisons are comfortable”, said Andrei Lankov, a North Korean expert. And Russia detained five Japanese fishing boats near some disputed islands, where they were trawling for octopus, probably for sushi, that resource-hungry lifestyle. In the past there were “cod wars” between Britain and Iceland. Now there is pressure to protect national stocks in the UK with naval protection vessels, a subject as entangled with international politics as in any modern fishing net. One million tonnes of mackerel is the recommended total catch level to protect the stock in the north-east Atlantic. Meanwhile, according to the UN, one third of fish netted never make it to the table, dumped as “trash” – in fact perfectly edible to many people around the world. Icelandic businesses have ordered super trawlers costing £30m to £40m. Will the intended catch end up in the Iceland supermarket? Well, they say they are the first British supermarket to sell fish otherwise dumped (thus depriving a lot of seabirds by the way!). This “bycatch” sold for £8 per bag. Nick Fisher (yes), a fisherman, said that such is the demand for the likes of salmon, edible fish gets transported to Scottish salmon farms for feed.

The Chinese, believe it or not, (those great eel-eaters), have banned fishing on parts of the Yangtze River. Thousands of fishermen are being forcibly retired and their boats destroyed. That’s what happens with overfishing. The stocks can’t take it. Pen Yunha, 73, who began fishing aged six said: “I used to make decent money from fishing, but as the fisheries declined, so did my profits”. The authorities hope the ten year “rest” will replenish stocks. It can be that simple. Give fish and other aquatic life a chance and it can bounce back. But it must be enforced. Restore the ecosystem, as on New York’s Hudson River, once partially dead from every kind of pollutant you could think of – for example, they said “fishermen could tell what colour General Motors was painting cars upstream that day by looking at their nets”. Then

biologists got a massive shock – certainly massive, because on the sonar screen they picked up the outline of a 4.3 metre sturgeon, a fish famous for its eggs, caviar, in other places. The largest ever sturgeon was a 7.2 metre beast. So people can really help. Lights are put on nets off Peru to warn turtles and dolphins to avoid them. Underwater sounds help corals grow and attract fish to damaged reefs in Australia. In the USA the Whoosh Passage Portal is a kind of cannon or “fish tube” that helps salmon on their struggles upstream past dams. And in California king salmon have leapt back after a five year drought and three years of very low catches. Then the rain came with heavy snow melting in the mountains. “Give nature a chance” is the lesson. And don’t mess up the climate. Please.

There’s a fortune to be made from raiding the oceans: from millions of creatures that swim from the sea to the rivers on a migration as astounding as the famous salmon’s. To the Sargasso Sea in the North Atlantic adult eels make a nearly 4,000 mile trip to spawn. The larvae, later called elvers, then make the return trip in their millions. When adults, years later, they will return to the Sargasso Sea. Amazing. But what is not amazing, knowing human greed and ruthlessness, is the trade in those millions of baby eels, intercepted after their epic journey across the Atlantic to Europe. In fact eel smuggling can pay as much as drug trafficking. Europol says there’s been a 50% increase in arrests, seizing 15 million of the endangered species. Exporting them from Europe to Asia is said to be worth £2.6 billion (3 bn Euros) each year. For example, Gilbert Khoo, 66, hid them under chilled fish but Border Force opened a package in February 2017. Half of the 600,000 elvers had died. What a waste.



Elvers

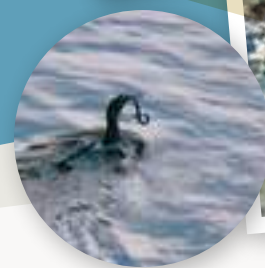
As human numbers rise, so does the challenge of dealing with climate change.

It now reaches every corner of the planet. Even the “picky” sex life of the star of *Finding Nemo*, the clown fish, may be about to vanish again because its peculiar mating habits put it at risk. Given that both anemones and their clown fish tenants ultimately rely for survival on coral which is under threats from warming seas, pollution and human intrusion, they may need to adapt quickly. Scientists say this can only be achieved with great difficulty. Another problem was being too famous! Because of the movie lots of people around the world wanted a pet Nemo, so numbers in the

Clownfish & anemone



China bans fishing in parts of the Yangtze River



That’s if the eel doesn’t get shagged!

wild crashed. But marine fish are not the easiest pets to keep – wasteful deaths were disappointing to the many movie fans – so the craze died too. Giant leatherback turtles are having to travel almost twice as far to find food, jellyfish, because their prey is moving north with climate change warming the ocean. Seas have now reached the highest temperatures since modern records began. It’s attributed mainly to human activity, with the heat absorbed by the oceans equivalent to “five Hiroshima bombs...every second, day and night, 365 days a year” (The Times 14/1/2020). Most people now know the Arctic and Antarctic ice is melting“...except Donald Trump? Who? Gone. And now for some more good news. At last!

One person who’s trying to draw attention to the impact of climate change and overfishing is activist Lewis Pugh, risking his life swimming under the ice. In 2016 he helped to persuade world leaders to approve a marine protected area of 1.5 million sq km of the Ross Sea off Antarctica, home to millions of sea birds, living on huge fish stocks. But humans increasingly want access to that resource. So it’s another “eco-collision” with Russia and China – really big boys – objecting for the eighth consecutive year to this enormous marine haven for vulnerable species like whales, seals and penguins. They feed on shrimp-like krill, which occur in massive swarms, that themselves feed on tiny plankton. So this is a vital Antarctic food web, possibly now threatened by a health-food outlet selling dietary supplements. Vessels from Norway, China and South Korea are also on the hunt for krill. Greenpeace referred to this threat as “licence to krill”. Even overkrill? No.

Bio-food packaging

It’s a bio-plastic made from organic fish waste (half a million tonnes produced every year in the UK). Skins and scales produce a biodegradable, compostable, eco-friendly – “Marina Tex”. Lucy won a £30,000 Dyson award for her invention, that could replace plastic. Well done, her.

So, next time you’re at the supermarket have a look at the fish section. Fish - yes. Plastic – yes, plus mercury maybe? Next – food.



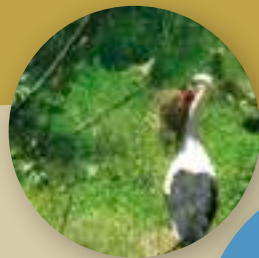
Giant leatherback turtle



Spy in the sky: Albatrosses monitor illegal fishing



Chapter 8 Food



The life cycle...

the lifetime pair
build the nest, display,
and eggs are laid



Stork margarine



Stork margarine is a spread primarily made from the controversial palm oil, and water. It's been a strong traditional symbol, and there's even a road in Staffordshire called Margarine Corner where a Stork margarine lorry once overturned to the delight of some locals who tried to salvage its load.

Food. Yes, we all need it, some sadly more desperately than others.

Is there a way we can share it out more fairly? Treat the land better? In the next few chapters we'll discover who's winning and who's losing. And how our species may be able to turn losers into winners. Which will our iconic stork be?



Do you agree with me?!

But, first, let's look at the natural world, of which we are now an increasingly influential part, and focus in on one beautiful corner of Kenya in East Africa, which turns out to be red in tooth and claw (literally) when it comes to being a successful carnivore. As well as the Masai who live on the blood, milk and meat of their main wealth, their livestock, there is a rich diversity of wildlife around Lake Naivasha, rather a rare freshwater lake in the Rift Valley. In terms of food, which all the locals need, the area offers a fantastic menu – that's if you can get it. Well, a giraffe can, in the treetops, where there's not much competition, except for some serious defensive thorns; bark can be stripped, and, as a baby colobus monkey, also up there, tries out young acacia leaves, a nice salad, which in itself, hosts a wide range of insects, some only recently identified by scientists. We'll go from top to bottom in our food chain and, from antelope to zorilla, to

show how our wild neighbours get their food and why it's essential to succeed. Because their lives depend on it. As do ours. Many are herbivores – like vegetarians, vegans.

So is the gerenuk a “giraffe – antelope” who adds to its height by standing up on its back legs, and can thus outcompete other antelopes that can only operate a bit lower down. The plant food supply grows at various levels, from the canopy above to the grass below. And even below that if you've got the trick. That means digging, like a zorilla, to crunch a termite.

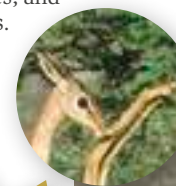
So it really is “A to Z”, antelope to zorilla. There are lots of herbivores here, and carnivores, and omnivores. Like us.

There is food everywhere and it comes in all shapes and sizes at all levels.

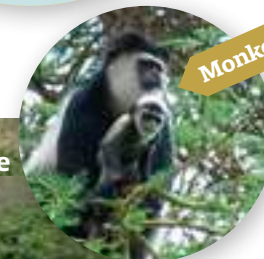
High up in the tree tops



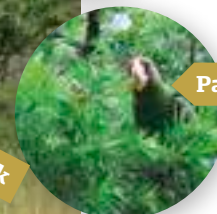
Giraffe



Trying to be a giraffe



Monkeys

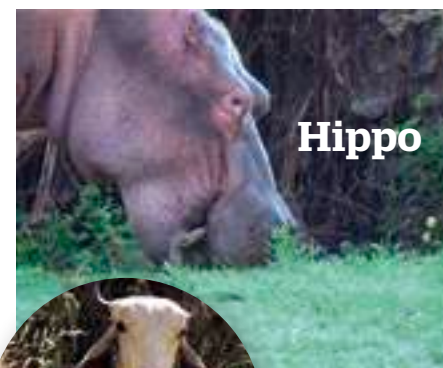


Parrot



Gerenuk

Down to earth



Hippo



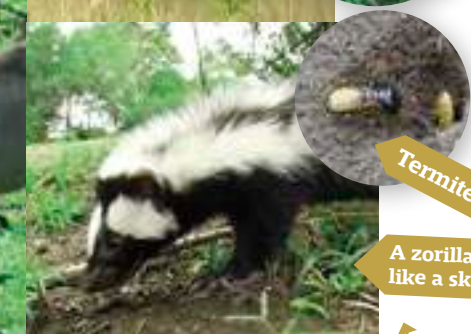
Warthog



To lake



At lake



Termite

A zorilla, like a skunk

Underground



Lake

For the good news read on...



Going Fishing

Yellow-billed stork and pelican with different techniques and equipment



Stork flushes fish out, uses raised wing to shade prey.



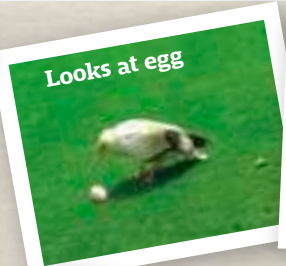
Same trick for black heron – makes an umbrella



Egyptian Vulture

If you think that's clever, meet the Egyptian vulture. When presented with an ostrich egg and a stone it automatically starts throwing the stone at the egg. This apparently inborn behaviour does work, and illustrates the well-known past advertising slogan "Go to work on an egg". Good food from a flightless bird – the ostrich egg that was.

Looks at egg



Tries to pick it up



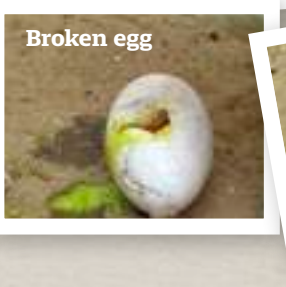
Gets stone to throw



Stone thrown



Broken egg



Eating egg



sorted!

Then there's the fish department – or, rather the fishing department. Piscivores. From browsing in the treetops, snacking in the bushes, grazing below on grass, even under the ground, if you've got the kit it's all possible. But fish are tricky – quick, aware and slippery. No easy meal – except if you're a black heron with a portable flexible umbrella for shading, to see the prey.

Hérons and egrets are a successful and versatile group exploiting all sorts of food resources from rubbish tips to sheep and cattle away from water. Cattle egrets have spread around the world travelling, riding, watching, and picking off insects disturbed by their hosts. Oxpeckers or "tick" birds are there too searching for ticks, even blood from sores, whether it's a giraffe, rhino, elephant or cow.

There's food everywhere and it comes in all shapes and sizes. That giraffe, which was feeding in the treetops is now being "cleaned up" by benefactors, skilled at refuse disposal. Super-recyclers. Vultures and hyenas. Bone-merchants. Not only that, the vultures share out the meal, some with big beaks and long necks for reaching inside, and other species, like the hooded vulture, which picks up small bits with a small delicate bill. And there's more... The lammergeier, or bearded vulture, flies off with a bone, at the end, when there's nothing else left, and drops it on a favourite rock to break out the marrow, and eats it. No wonder he's called the "bone-breaker". Also said to do that with tortoises – to break them. A bit of a (sad) surprise to said tortoise. Also to any person passing below. Interesting insurance claim?

Food is all about food chains, links that connect soil to vegetation, to herbivores, to carnivores and, very often to us, a dominant consumer making more and more inroads on these vital connections, which, in the end, could mean breaking links, and destroying our future. Whether it's a sparrowhawk and a pigeon, which eats seeds; a crowned eagle, "King of the forest" that snatches monkeys, or a little sunbird that sips nectar; they're all essential components in the web of nature's life. And it's a struggle to survive. From the smallest to the biggest and, potentially, the worst – us. To get its prey a huge sperm whale takes a breath to dive deep for fish and squid. The prey, in turn, feeds on tiny plants and animals, the plankton. We also eat the fish directly, if we can catch them, and we do so, too much for our own – and perhaps the whales' good. In Norway you can watch whales, a very successful business worldwide, or eat a small part of one that evening in a restaurant. So a customer becomes the end of that food chain. A whale steak for man. Or lunch for a lion – the "king of the beasts". Surely that's us! Without the "King".

Food is all about food chains: – links we are in danger of breaking

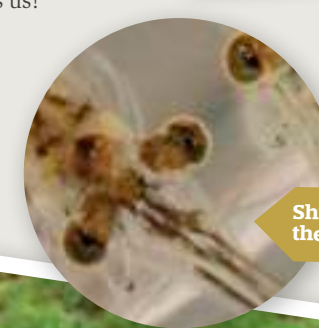
Egrets on sheep – On the Move



Whale



Shrimps – Basis of the ocean's food web



Whale steak

Bearded vulture



The bone-breaker, swallows its prize. Nothing of the carcass is wasted – the last in a sequence of up to some six kinds of vultures.



We humans have found ways of eating just about anything – some more controversial than others.

Cow: the biggest meat

OK. So from A to Z, aardvark and antelope to zebra and zorilla, we can see that, whether it's termites, grass or mole crickets, a great variety of animals depend on a huge spectrum of food. And they're good at getting it. So what about us? With our ingenuity around the world we've found ways of eating just about anything that moves and a lot that doesn't – like plants. We are omnivores in the widest sense; whether it's a kangaroo steak on the barbie; a seal hunted in the Arctic; a fruit bat from the jungle (plus fruit on the side); farmed deer as venison; bears for paws; ostrich or

rather controversially – horses and dogs. But by far the biggest “real meat” business is the cow, a way of life globally, idolised where people like to eat beef, and it can be a massive export trade. But that is now a tricky problem, as we'll see.

Humans have eaten meat ever since they dragged it back under the cave arches – a “McMammoth” – a small one perhaps. A long time later, as so-called “civilisation” continued, we've now arrived at an extraordinary situation. We don't need meat from an animal like a pig, chicken or

a cow. We can make something in a lab, from chemicals, which looks like, tastes like, but isn't from an animal we've killed. The whole process is changing fast and it has huge repercussions for the meat industry, and the vegetarian and vegan enthusiasts, whose numbers are growing all the time. This affects the restaurant trade worldwide, the animal welfare lobby, shops, supermarkets and the fast food industry which, up to now has infiltrated almost everywhere, bringing potentially ill-health and litter, but also cheap, easily accessible “drive-in” food.

Obesity crises

Are there really plenty more fish in the sea?

Lionfish

The future of sustainable food?

A healthy snack, not just for ducks!

As our diet changes, encouraged by large food corporations in some cases, choice increases as do both the opportunities and risks. The sugar industry is everywhere where we consume – from fizzy drinks to chocolate to ice cream, which also contains the very problematic palm oil, killing orangutans in its deforesting wake. In the USA about four in ten adults are obese, because of diet and lack of exercise. Type 2 Diabetes can follow, causing blindness and amputation of limbs. Are fizzy drinks worth that? And the USA is the home of burgers and colas – (Coca Cola notorious for the equivalent of nine cubes of sugar per can – The Times 10/9/2019).

Of course there are many other healthy options and you may be able to help the planet by eating this kind of fish – a dragon or lion fish. This aggressive, venomous species is invading the Mediterranean from the Red Sea. But it may be about to meet its match, as conservationists urge people to starting eating them. It preys on native species and reproduces at an alarming rate. A lack of natural predators has been blamed on overfishing in the Med. However, environmental groups believe fishermen should begin catching them – the wrong species in the wrong place, an increasing problem around the world, as we spread across it in increasing numbers – human overpopulation. With lionfish there's a small difficulty – its elegant dorsal fins are poisonous, certainly bound to spoil a romantic meal out. But the fins can be carefully removed, and the rest of it sounds great: “It's very tasty and it's easy to cook” said Anni Mitropoulou, head of the Cyclades Preservation Fund. “I've had it in a soup, grilled, and as sushi and it is delicious. It's a double pleasure as you know you're doing something good for the environment. It's a win-win.”

Sushi is a rather vague term – sea yes, but beyond that almost anything from seaweed to the world's most expensive fish, bluefin tuna, that can cost more than £1 million pounds for a really big one the size of a small car with the speed of a Porsche. That's for the whole beautiful thing – much better swimming free in the oceans than served up in some posh sushi bar. Probably not sustainable – there are not “plenty more fish in the sea”. Man is short-sighted and crude when he resorts to fishing. For sushi, seaweed harvesting is easier, and possibly sustainable (in Scotland sheep graze on it.) It tastes different perhaps, and according to scientists the diet produces less methane, a greenhouse gas responsible for about 25% of global warming. In one end and out the other? Tastes vary. The so-called “penis-fish”, as The i reported on 13/12/2019 “some things once witnessed are hard to unsee.” And fat innkeeper worms probably fall into that category – beachgoers in Cefn Sidan, West Wales were treated to the sight of thousands of the 10-inch worms, which might be said, in polite company, to resemble pink sausages, stranded on the shore after a storm. They usually live in burrows under the sand but recent gales exposed the distinctively phallic worms. They are food for otters, seagulls and humans. In South Korea, they're a delicacy, typically eaten raw, “a bit chewy”, and said to have aphrodisiac effects for men, is that a yes or a no?

As the global menu extends, partly due to hunger in impoverished regions,

other unlikely creatures get added to the list. Yes, we eat prawns, and farm them specially, but not insects much. Yet, they can easily be reared too, often on waste matter which we need to get rid of anyway. They take up much less land than cattle, for example, and are very nutritious, apparently “nutty” being the usual response, and, of course, they can be incredibly prolific. Mealworms maybe? Or what about locusts? An adult locust, wings and all, can make a useful snack at least for big flocks of specially-adapted ducks, or for many predators. To me, the question has been why don't humans catch and eat their way through some of the huge swarms which, in turn, are devouring crucial crops? A food chain right there. Poor people eat food, get rid of the pests and save their veg income at the same time. It sounds too good to be true. And it probably is. Spraying is usually unsuccessful because of the scale of the problem, as in East Africa in February 2020. And you wouldn't want to eat a pesticide-flavoured locust. The whole place will suffer too. But at night they rest and at one stage, as happens, they can't fly anyway and cover the ground in a moving mass of potential “nutty” food. That's possibly more nutritious than the crop the people are growing to eat. Or has someone said that before? I haven't seen it in any of the many news items/photos I've looked at.



Monkeyface prickleback

Why are we interested in it?
It could be the saviour of the world.



There are 34,000 species of fish in the world. That's a lot of different fish, ranging from the biggest shark in the deepest oceans in the Arctic to the tiniest guppy in your aquarium – and, boy, do they breed! Fishes are highly versatile, flying, walking on land, angling with a rod on its head, migrating across the planet like eels and salmon. I could go on past a lot more of this fishy list until I come to the most unlikely top of the pops. So, there is, with its improbable name MONKEYFACE PRICKLEBACK. That's not to confuse it with the psychedelic frogfish, the

whitemargin stargazer, or the fangtooth. Oh no, those guys are not in the same league as MP. It's certainly not a winner for its looks, as its name suggests. It's up to 30 in (76 cm) long, weighs up to 6 lb (2.7 kg) and favours rocky areas close to the shore off the Pacific coast of North America. And it lives up to 18 years (unless caught and cooked with garlic, spring onions and soy sauce.) Now that sounds to have the ingredients of the familiar phrase “food-chain”. There are reports of tasting good “delicate and mild”, a speciality in upmarket restaurants in San Francisco. Is that why it's at number one?

No, the mainly simple answer is that it's vegetarian, eating algae and seaweed. It's one of only 5% of all those 34,000 fish species around the world. Breeding plant-eating fish cuts pollution, costs less, and reduces the pressure on meat, and, ultimately, the rainforest with its connections to the climate change crisis. So, to be a top winner, be a marine herbivorous fish. Doesn't matter about your looks. On the other hand, if you taste good by eating seaweed, you just might become food yourself.



Vegan trainers

As change took hold of the food industry you might expect the major players – and they are seriously major – to try and stamp out any new competition. And they have vast advertising budgets to persuade us. McDonald's, KFC, Burger King are empires unto themselves. Organic has been rather niche but more recently vegan has really become a way of life for millions of people worldwide. Good for health, good for the planet – what's not to like? A big problem with farmed beef and soya exported from Brazil's felled forests is that the Amazon rainforest, “the lungs of the planet”, is suffering. Not just the trees but a huge biodiversity, including, almost certainly species we will never know. And those could include plants with fantastic potential for later generations. The indigenous people, who depend on the forest are under threat. Many others, settlers, are poor and desperate so logging, then farming the land briefly and mining would seem to be a suicidal formula, partly caused by the demand for Brazil's products from around the world, especially China, USA and Europe. So we are really all in this together. And if it's not beef cattle on the deforested land, then the soya grown there will be fed to chickens and pigs thousands of miles away via political deals that seem to be unconcerned with their environmental impact. Such is the pressure and power of modern day with its 7.7 billion humans - and counting.

But it seems the really big players in the food industry decided not to confront or compete with the “new” kind of food. It's made from chemicals, and even, they say, “thin air”. So rather than try and beat the opposition, join them. Then it became a race, with the main problem, getting customers to accept what looked like a hamburger but wasn't. Taste? Crucial. Price?

So you got Katy Perry raising \$300 million, amongst increasing demand for vegan protein products. Impossible Foods – which uses plant-based proteins to make a “bleeding” hamburger – is valued at about \$2 billion. It's hoped this will help rid the world of intensive animal farming. That, of course, won't go down too well with the cattle, chicken and pig businesses. The replacement is derived from wheat and potato and the fat from coconut oil. Mind you, that too has to come from somewhere. What is the ecological cost of an Impossible Burger – or millions of them? Is it possible to work that out? And make it truly sustainable? Impossible backers also include Serena Williams, the tennis star, and Bill Gates, the founder of Microsoft. That may help. Part of the meal could be milk that's been “bioengineered” – udderless you could say. The UK consumes 2.2 million chickens a day, so substitutes are a massive market. Burger King released the plant-based Rebel Whopper. There's KFC (isn't Colonel Sanders versatile!). Greggs too – how could they usurp “that” sausage roll? But they did – and did very well. In January 2019 (a huge hit as “Veguary”) Piers Morgan appeared, predictably, disgusted by the newly launched Greggs vegan sausage roll. All this is front-page news, with The Daily Star: “Pond Scum on Toast Anyone?” We cannot keep the kind of meals we have known and also keep the planet we have known. We must either let some eating habits go or let the planet go. That's it. Our health would be better too. Michael Mansfield, Q.C.: “I think when we look at the damage eating meat is doing to the planet, it is not preposterous to think that one day it will become illegal.”

That's called “ecocide”, and at the moment many of us are guilty. “Ecocide was going to be a crime but two nations objected: the United Kingdom and the United States. So when it was going to be the fifth crime against humanity, security and peace, it was removed and hasn't got back again.” The very latest meat substitute that avoids the dilemma is air-based meat that can be raised in the dark. It takes just hours to produce the protein, they say, at Air Protein. The test will be in the taste.

Plant-based fish, chicken and meatballs, all being developed, particularly in the USA with its huge appetite for many kinds of foods, especially the fast sort, eaten on the move. In Britain more than 800,000 people cut back on eating animal products for at least a month in 2019. Sales of red meat fell by £185 million in the past 12 months, more than any other supermarket category according to Nielsen.

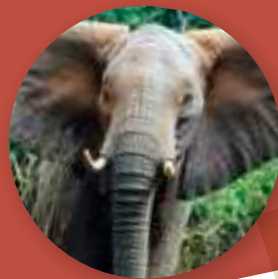
And it's not just food. You can get stuff that isn't just trainers, they're M&S vegan trainers, not so much for eating, as with the “V” for vegan food, but are made using “sustainably sourced raw materials”. Derek Long of Sheffield wrote to The Daily Telegraph 28/12/2019: “I received a pair of Marks and Spencer slippers for Christmas and luckily I spotted the warning label “suitable for vegans” just as I was about to eat them. But there was no apology label to eco-warriors for the fact they had been transported 10,000 miles or so by boat and road. They are very comfy though”. And Michael Johnson of Woolavington wrote: “My recently bought packet of crustaceans states “Argentine red shrimp caught using trawls in the south west Atlantic. Produced in Vietnam. Packed in the UK.” They were purchased from Iceland (that well-known supermarket, not country). And thereby hangs lots and lots of very very long connections, between not only food, but many many other products which we get via supermarkets – the retail battleground of our greedy times. Going back to the old normal, thanks to the vaccine in 2021, could be going back to what was the problem in the first place – unsustainability, on a finite, unique, fragile planet.



Chapter 9 Supermarkets

There is no question that we can be a very aggressive and greedy species.

In fact, elephants probably have more sense than we do. But when it comes to where and why we go in for mass shopping the big supermarkets become the biggest of the big.



And our stork flies on...



Desperate competition as new cheaper end shops take more of the market share

There are now newer names on the block with Aldi and Lidl competing head-on with more familiar ones, going from the cheaper end with Asda, Tesco and Morrisons up to Marks and Spencer (queen of the undieworld) to fairly posh John Lewis (which is “never knowingly undersold” Really?) And as the crucial Christmas season starts hotting up, so does the competition, pushing prices down and, hopefully, sales up. But for mighty John Lewis there was to be a shock in the cracker – good news and bad news. Good

– competition exposed supermarkets who removed plastic toys, but bad – Bad – “staff bonus shrinks to just 2% as profits fall by quarter” (The Times 6/3/2020). In 2018 British firms spent £6.4 billion on Christmas advertising on television and social media alone. That’s hoping for a hell of a lot of consumption, a hell of a lot of consumers, reaching as many of us as possible, and they’re of every age and everywhere. And many more to come – to be “educated” to buy new “products” all the time. The Chinese are famous for this.

And “products” include a lot more of their own. Then here comes Black Friday, when much of the action will be online, with more and more fuel and more and more space on our already crowded, polluted roads. Or, if you’ve got £2,000 to spare, at Harrods, you can spend a “minimum” of that to meet Father Christmas in the special “grotto”. Harrods is now setting its sights on China, but did they see that virus coming?

The \$31bn mega-sale that dwarfs UK’s little Black Friday

Massive Black Friday

The facts of the matter:-

- Part brand, part mascot – it’s a giant neon cat.
- It’s the face of Alibaba that represents one of the greatest consumer machines on the planet.
- So-called “Singles’ Day”, created for the single consumer turns out to be more, hugely more, than that...equivalent to a religious event where many prayers are answered. In exchange for cash. Lots of it.
- You want it, you get it. Some 200,000 brands from China and around the world. That’s a lot of “stuff”.
- The shopping extravaganza’s theme song is simple:

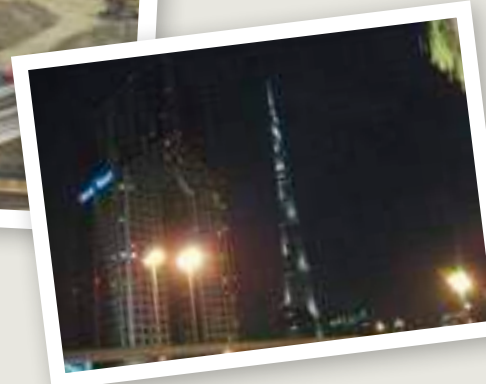
“Buy, buy, buy” So-called celebrities are very well-paid to turn up, and to apparently endorse this extraordinary spectacle in a world where millions of others have no “stuff” to speak of. Except bits of plastic, perhaps, as we’ll see.



Shop around the clock!



Where are we going by growing endlessly? Do we know the price of everything but the value of nothing?



Chinese consumers spent \$1bn in just 1½ minutes

Big shops and supermarkets are like hungry organisms, swallowing huge amounts of deliveries.

For example, Brits spent £1 billion a year on pizzas. Stuff comes in from all over the world – veg and fruit air miles. At the other end of the process, at the check-out thousands of items per minute are collected by customers, and much of it is contained in that now-notorious material, plastic. Previously welcomed as tough, transparent, and really useful, it’s now become a global problem whose durability has turned it into a subject where the fighting supermarkets are trying to look better than their competitors. Talk about “survival of the fittest”, which Charles Darwin explained with wildlife in the Galapagos Islands and elsewhere. Recently perhaps we have a similar process in action. As the pandemic rips through our species, Covid-19 could be said to be weeding out the “unfittest” – the oldest, and with “underlying health conditions”. That could also be interpreted as strengthening the remaining stock.

Today supermarkets compete fiercely over products of forests, farming, fishing and food, the previous chapters in our story so far of “Planet Crunch”. So, next is the knock-on of all that consumption.

...all through the night

Waste, Plastics and Recycling



Our pair bring plastic and paper to the nest.



As an ingenious, widespread and increasingly abundant species we excrete a huge variety of stuff.

Some could be useful to other people elsewhere but the “throwaway” lifestyle has now been encouraged and adopted worldwide. That might seem to be good news, the spread of so-called “progress” but the bad news is that there’s now no “away” to throw it to. Because from the sky to the deepest sea, this stuff is being broken up, and is dispersing and is being

absorbed as part of the ecosystem. These substances, especially plastics, may be poisonous and kill. And that can include us at the end of the food chain with filter feeders like shellfish which concentrate poisons in their bodies. Similarly, with dolphins and whales; they gradually die from chemicals in the oceans, sometimes also trapped in fishing gear, or the young killed by what’s in the mother’s milk. In the English Channel, PCB’s and mercury, banned 40 years ago, have been found at high levels. In humans they have been linked to cancer.



Then there is the wet wipes saga...



Health food chain becomes first big retailer to ban wet wipes

Holland & Barrett is to become the first UK high street retailer to stop selling wet wipes in a drive to reduce the environmental damage caused by them blocking sewers and waterways.

they do not biodegrade quickly when they enter the sewers and can lead to blockages.

Joanne Cooke, head of beauty at Holland & Barrett, said: “There is growing awareness of how much our current throwaway culture is damaging our oceans, beaches and rivers.

We want to encourage our customers to think about what they currently throw away and encourage them to swap to more sustainable alternatives. The quickest way for us all to make a positive impact on the world we live in is to choose to spend our money on more sustainable products.”

The Marine Conservation Society’s annual beach clean last year found an average of 12 wet wipes in 100 metres of beach cleaned – a rise of more than 300% compared with a decade before.

Meanwhile, cities are becoming used to the scourge of subterranean fatbergs – caused mainly by a buildup of wet wipes, sanitary products and cooking fats into a solid mass. These include a 250-metre fatberg in Whitechapel in London in 2017, which weighed as much as 19 elephants.

Since January, manufacturers have been able to use the “fine to flush” symbol on packaging only if the wipe passes Water UK’s stringent tests. The symbol aims to reassure consumers that they do not contain plastic and will break down in the sewers.

But Holland & Barrett said this was not effective as it was not mandatory and called on other retailers to follow its lead. (The Guardian 9/5/2015)

Showing, later, what damaging press publicity can do, and if you change for the better, you can beat your competitors. As has now happened (2020).

Take it home



Chuck much of it away – to the rubbish tip



Even the trolley



At least someone’s using it – and the vultures too (though plastic can kill)

Andrex told to stop claiming that wet wipes are ‘flushable’

Andrex has been told to stop claiming its wet wipes are “flushable” after the Advertising Standards Authority say they do not meet tests for UK sewers.

A website for the Andrex Washlets wipes, seen in April, featured a logo headed “flushable” with the text underneath stating:

“Look for this label!”

However, the ASA banned the ad after Andrex owner Kimberly-Clark admitted that the product did not meet Water UK’s “Fine to Flush” standards and relied on international industry guidelines instead.

The ASA stressed that it had made no judgement on

the flushability of Andrex lavatory wipes, but had banned the ad for failing to make clear that the product did not conform the relevant UK standards.

Kimberly-Clark said they recognised their product did not meet Water UK’s Fine to Flush specification but disagreed that this was

the most useful measure of whether a wipe was flushable.

(The Daily Telegraph 16/10/2019)





The E-Waste Race

It's called E-waste. That could stand for Extremely nasty, dangerous waste. Not your common or garden rubbish, which is comparatively harmless, though it's definitely unsightly and untidy. No this stuff can be deadly and it lives with us all the time. Until it doesn't. When we throw it away. A small proportion may be separated out and recycled, indeed sifting through it, and all its hazards, may be a life-line (or death-line?) to e-waste scavengers. They're looking for your old microwave, hairdryer, TV, phone, computer, many of which are quickly replaced when the new "improved" model comes on sale. Which means the

old – not that old – one is chucked out. Where to? The heavy metals such as mercury, lead and cadmium – commonly found in LCD screens, refrigerators and air conditioning units – as well as chemicals such as CFC's and flame retardants found in plastics can contaminate soil, pollute water and enter food chains. The European Environment Agency estimates that Europe still illegally exports 1.3 million tonnes of e-waste each year. The UK is the worst offender in Europe for electronic waste exports to developing countries, with most going to Africa. (The i 27/2/2020)

E-waste is the fastest-growing element of the world's domestic waste stream

according to a 2017 report by the United Nations' Global E-waste Monitor

If The National Trust were to switch it's membership cards to paper, they would avoid using 12½ tonnes of plastic. **That's equivalent to two African elephants!**

On television there are relatively few moments which hit the audience, indeed the country, really hard. But it did happen – on BBC 1 on *Planet Earth II*. With some trepidation the BBC decided to reveal the terrifying implications of plastics in the sea. Many biologists already knew about the current and frightening fast-approaching crisis, not only in the oceans but everywhere on the planet. Revealing this to a mass audience, risking ratings, had a huge impact which has reverberated globally ever since. And it's not only plastic. As we increase so does our output of all sorts of waste. Trying to look better in the increasing public awareness, and a competitive commercial world, changes are being urged and thus pushed through. The National Trust is changing its plastic annual membership cards to strong durable paper. With its almost six million members this will avoid the use of 12½ tonnes of plastic, equivalent to two African elephants. This sort of thing may not sound that much but if these kinds of changes are applied everywhere, the scourge of plastic may be overcome. Of course the powerful plastics (= oil) industry will fight back, but hopefully produce something as useful but less damaging to the environment. And shareholders should push them to do that for the good of the planet. Other ways to go...clear the bathroom of plastic clutter. Use soap. In the "burger wars" McDonald's is recycling Happy Meal Toys and Burger King responded similarly. That's fierce competition for you. One farmer suggested: "The technology to put the car registration number on litter as you queue up to get your drive-through takeaway is there" he said. "It could be printed in UV which would stop people seeing where it is printed and destroying it." The wrappers look untidy, farmers have to pick them up, and they can harm livestock and wildlife.

Huge plastic business. Deadly product

and killing puffins in the sea

In albatross food



Plastic – free plastic wrap?

From Richard Malin, Leamington Spa i 25/11/2019: "Plastic – free plastic wrap. Today in Morrisons I stood beneath a sign that said: "Plastic Free". I looked around and at least 90 per cent of the fruit and veg was wrapped in plastic. Maybe the sign is telling us that they are not charging us for the plastic wrapping."



What about those little stickers on fruit and veg? Tesco, Waitrose, Sainsbury's, Morrisons and Asda are amongst 85 companies set to ditch them by the end of 2020 as part of a plastic pledge by the Waste and Resources Action Programme (Wrap). The charity said that the materials the stickers are made from can be difficult to recycle and often account for 25 per cent of consumer plastic packaging, of which only 4 per cent is recycled. Since 2018, Wrap says that supermarkets have removed 19,000 tonnes of non-recyclable black plastic and 3,400 tonnes of plastic packing from fresh produce. At the end of 2019 Tesco said it would remove one billion pieces of plastic from products by the end of 2020, and Dave Lewis, chief executive of UK's biggest supermarket retailer said: "Our work to remove, reduce, reuse and recycle is already transforming our packaging."... "if packaging can't be recycled it will have no place at Tesco". In August, Tesco told suppliers that packaging would influence its decisions as to which products it would sell.

Then comes the competition to reduce food waste; energy waste from open fridges, online and food delivery, and the sheer scale of it all. And they don't come much bigger than Amazon.

The American Jeff Bezos, the founder of Amazon, has been accused of hypocrisy and "planet wrecking" behaviour over his calls to "protect the Earth" while the retailer destroys unsold goods.

Reports of the destruction of millions of items from Amazon warehouses came days after Mr Bezos, the world's richest man (Autumn 2020), called for the colonisation of space to preserve the Earth and its environment.

Speaking at the unveiling of a lunar lander for his Blue Origin space company, Mr Bezos, 55, said: "Please make no mistake about this, Earth is the best planet. We do need to protect it, it's essential, it's our job. We're now big enough to hurt this planet."

According to critics, Amazon is part of the problem. An undercover investigation by the Capital programme on the French TV channel M6 found that staff were loading unsold toys, kitchen equipment and televisions into skips to be moved to landfill and incinerators. The programme traced unused consumer goods from an Amazon warehouse to a waste disposal centre and on to a landfill site, and obtained internal figures which indicated that more than three million new items were destroyed by Amazon in France last year.

Experts say that the dumping of goods in landfill has negative environmental effects, including producing greenhouse gases and contaminating soil and groundwater. Such dumping is more controversial when items are new and could still be used. Destruction of unsold goods appears to take place in the UK too, although Amazon says that some unsold items are given to charity.

A Mail on Sunday reporter posing as a worker at an Amazon warehouse in the Midlands was told by a manager that some unsold goods were returned and others destroyed.

Craig Bennett, chief executive of Friends of the Earth, said: "There's clearly little relationship between what Mr Bezos says and what he does. This kind of planet-wrecking behaviour from one of the largest companies in the world is an appalling example of real and active environmental damage.

Where do Amazon's unsold products end up?

Paper delivery?

The fact Amazon is getting away with this shows the right laws aren't in place, so it's time that government steps in to stop this kind of disgraceful behaviour and keep the worst excesses in check. Until then, perhaps it's up to consumers to vote with their wallet."

The Labour MP Mary Creagh, who is chairwoman of the environmental audit committee, told The Mail on Sunday: "This is both shocking and heartbreaking to see. At a time when millions are struggling to make ends meet and afford everyday essentials, it is scandalous that unused products are simply being destroyed when they could be given to people in need.

On top of that, this kind of policy has disastrous consequences for the environment. Amazon was one of the worst-performing retailers in the audit committee's recent inquiry."

It is not clear which products were being destroyed, though it appeared that many may belong to "third-party" sellers who cannot afford long-term storage fees. A Chinese company that sells stationery told Capital that if goods were not sold within six months to a year, Amazon charged storage fees and it was more cost-effective to pay the retailer to destroy the items.





How do we change a throw away culture?

The US chucks away 18.2 million mattresses a year

Vegas casino praised for feeding pigs

Las Vegas, a city known for excess, has been praised for developing innovative ways to deal with thousands of tons of leftover and uneaten food. The Bellagio casino has been commended for sending food waste to pig farms and oyster shells to Chesapeake Bay, where they help to restore wildlife habitats.



Last month 7,164 Amazon employees wrote to Mr Bezos asking him to release a company-wide climate plan, saying that the existing proposals were inadequate and citing its work for oil and gas companies. Amazon said that its commitment to environmental issues was “unwavering”. It was unavailable for comment on the landfill claims.

The Mail on Sunday reported that an Amazon spokesman would not comment on the claims of product destruction but had said: “For unsold products we partner with a number of charities including In Kind Direct, which works with non-profit organisations to distribute goods to charities across the UK.”

There is talk of “peak stuff”. All those clothes unused in the wardrobe, those Christmas presents that turned out to be surplus over here, but would not be in many other parts of an unfair world. Millions of people don’t have a bed. The UK threw away more than 7 million mattresses in 2017. Most went straight to landfill. The US chucks away 18.2 million mattresses a year.

But even landfill can be positive if we manage our waste with a bit of thought. One of the biggest landfills in Europe was on the Thames estuary at Thurrock in Essex. Now it’s a flourishing nature reserve including avocets, nightingales and the very rare shrill carder bee. This is a glimpse of good news but the monster challenge is how to reduce our impact across the whole planet. But up to now such is the momentum of people pressure and commercial greed that the outcome is far from certain, and that now includes disease. How that affects the outcome remains to be seen.

Amazon was one of the worst-performing retailers in the audit committee’s recent report



Nightingale in full song on an ex-rubbish tip



Landfill can be positive if we manage our waste with a bit of thought

Plastics everywhere



Kenya beach clean

Has this become Plastic Planet?



Can we stop it?





“Planet Crunch” in 2020 reveals these huge, fast-changing contrasts.

The UK’s major supermarkets sold more than one billion plastic water bottles in 2018 according to Greenpeace and the Environmental Investigation Agency (EIA). That’s water! Britons threw away or wasted almost ten billion paper receipts in 2018. Matty Cusden-Ross of the Beat the Receipt Campaign said: “Every year we print billions of paper receipts at the cost of millions of trees, millions of barrels of oil and billions of litres of water. This is completely unnecessary wastage.” Rough sleepers are sheltering in bins all year round, with surging homelessness blamed for a rising number of crushing deaths and near misses when bins are emptied. At least seven people are known to have died in five years, according to the Health and Safety executive.



Cut food waste and eat more veg to save the planet, say scientists

Cutting food waste and eating less meat will reduce climate change by saving millions of square miles of land from being degraded by farming, according to a United Nations report.

The Intergovernmental Panel on Climate Change (IPCC) said that a quarter of the world’s ice-free land had been damaged by human activity, with soil eroding from agricultural fields up to 100 times faster than it forms.

The body, which advises governments on the science of climate change, called for more sustainable use of land, such as tackling over-consumption, which it says has resulted in two billion adults, more than a quarter of the world’s population, being overweight.

The panel said that about 25-30 per cent of food produced was wasted and that this accounted for 8-10 per cent of manmade greenhouse gas emissions.

Governments were urged to tackle food waste by encouraging “improved harvesting techniques”, educating shoppers and improving packaging, transport and storage on farms.

If the world’s population moved to a more plant-based diet, emissions could fall by

up to 8 billion tonnes a year and health would improve, the report says. It adds that food from animals should come from “resilient, sustainable and low greenhouse gas emission systems”.

The UK needs to reduce food waste, promote healthy diets and use land sustainably

Corinne Le Quéré from the Committee on Climate Change

Jim Skea, professor of sustainable energy at Imperial College London and co-chairman of the working group that produced the report, said: “A move to more balanced diets could help us adapt to and limit climate change. Some diets require more land and water and lead to higher emissions than others. Diets that are high in grains, nuts and vegetables have a lower carbon footprint than those that are high in meat and they lead to better health outcomes. But of course dietary choices are influenced by local production practices and cultural habits.”

The report, written by 107 experts from 52 countries and based on a review of more than 7,000 studies, says that soil on degraded land is less able to absorb carbon. Vast areas are also turning into desert, with 500 million people now living in places that have experienced desertification since the 1980s, the report says. The frequency and intensity of dust storms have increased over the past few decades.

The IPCC warned that food security would be affected by climate change through reduced nutrient quality and low yields, especially in the tropics.

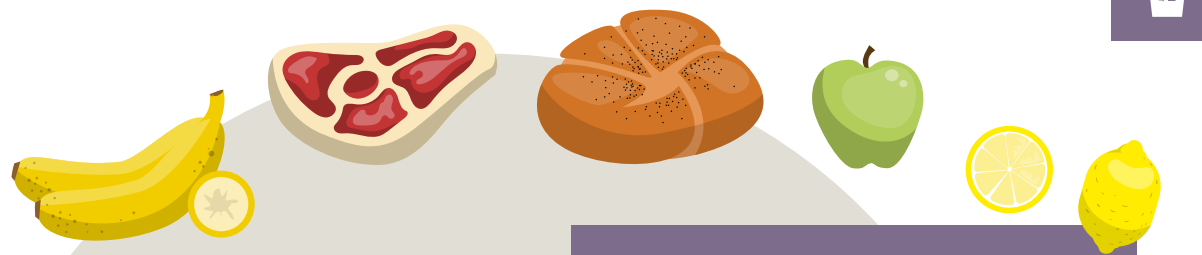
Priyadarshi Shukla, who co-chaired the IPCC working group, said: “There will be more drastic impacts on low-income countries in Africa, Asia, Latin America and the Caribbean.”

Corinne Le Quéré, a member of the Committee on Climate Change, which advises the government, said: “The UK needs to reduce food waste, promote healthy diets and use land sustainably, including planting more trees.”

(The Times 9/8/2019)

Turn the world upside down

It’s important to note that that report has been superseded by later global assessments from the UN, and The Living Planet Index – all in the autumn of 2020. So we know what’s gone on before, what’s still going on, and will probably, go on into the future. We know what to do, yes, we can do it, but will we? In time? That really is the crunch for the Earth, the only one we’ve got.”



It’s time to change the word on waste

Despite population growth and increasing famine, 1.6 billion tonnes of food is lost or wasted worldwide, every year. With an estimated carbon footprint of 3.3 billion tonnes, this wastage eats up 28 per cent of the world’s agricultural area and drinks enough water to fill Lake Geneva three times.

“If food waste were a country, it would be the third biggest emitter of greenhouse gases after China and the United States,” says David Green, director of the US Sustainability Alliance. “One third of food produced on the world’s farmland goes uneaten. That is too compelling for food growers, producers and farmers to ignore.”

(The Times 12/12/2008)

Well, there’s waste, and waste. Bamboo in the loos, on a roll of success apparently, though it may be mainly the Chinese who feel it that way. Three billion (who’s counting?) nappies are thrown annually into landfill and each baby uses about 4,000 disposables before the Everest of potty training is achieved. There’s possible future business there for the highly successful Greta Thunberg merchandising machine which includes T-shirts, mugs, gnomes, badges and bags. Made in China, they are mostly not very eco-friendly and wouldn’t be endorsed by the Thunberg family. But it does help to strengthen her uncompromising campaign, going green. And, going brown, cow manure will be powering hundreds of John Lewis delivery trucks from 2021. Almost 300 John Lewis and Waitrose trucks will be fuelled by biomethane made from manure slurry, which is carbon neutral. Asda, Argos and Hermes will follow. So, who has got ahead in the greening of the big supermarket boys? Well, Waitrose wins the in-store supermarket survey by “Which?” scoring

top marks in nearly every category. With changing attitudes, and trying to avoid “green washing” (false claims). Ethical shoppers spent record levels, including food, drink, clothing, energy and eco-travel – a total of £41 billion. Customers now pick up 90% fewer plastic bags than in 2015. Because of the “Blue Planet II/Attenborough effect.” Such is the influence of television, other media, and customer choice and purchasing power.

Nestlé is the world’s biggest food company, it has more than 2,000 brands sold in 191 countries, and expanding. More people, more product. In a rather opaque report Paul Bulcke said “As Nestlé advances its nutrition, health and wellness strategy for accelerated growth in targeted consumer products categories and for sustainable value creation, each of these nominees

Wasted: food that gets binned the most

Research reveals Brits are having to cook two dishes on average each mealtime to cater for household dietary requirements, contributing to more than £one billion a month on food that ends up in the bin. And UK households are throwing away seven million tonnes of food every year – enough to fill 40 million wheelie bins.

1. Bread
2. Cheese
3. Potatoes
4. Celery
5. Lemon
6. Bananas
7. Lettuce
8. Apples
9. Bagged salad
10. Mince

(i 9/10/2019)

The top 10 most wasted food items



brings a unique depth of experience and expertise that will be directly relevant to Nestlé.” Now they know. Sort of. Corporate-speak. Plastics are becoming a big challenge because of media exposure. In September 2020 in the firing line, were Nestlé, Coca-Cola, PepsiCo and Mars – the biggest of the big boys. Coca-Cola said it had learnt from the 1990 target and was “committed to do more”. Nestlé said two thirds of its plastic was recyclable or reusable. Cynics say that recycling is a kind of cover-up and people think they’re doing a good thing, whilst those big corporations only really want to make more new plastic, hiding behind the “recycling myth”. They need to be checked relentlessly all the time.

Energy and Oil

The Rise and Fall of Big Oil

Let's go back, not nearly at all as far as when "fossil fuels" were formed from very ancient plants and animals.

We have been exploiting these non-renewable resources as if there was no tomorrow – or coronavirus for that matter. In this part of "Planet Crunch" we'll look at three-plus years from 2017 to 2020 and, with that perspective, assess how well, and badly the fossil fuel industry has behaved. There's no doubt that oil has enabled humans to dominate the Earth... to explore, colonise and to improve the standard of living of millions of people, but also to pollute everywhere, whether it's the air we breathe and the land and water we depend on. Plastics (made from oil) are ubiquitous and deadly to people and wildlife. Those threats have increased with the human population globally. Unless those numbers are controlled, ideally reduced, it is difficult to see a solution...except if non-renewable fossil fuels can be replaced by renewable green energy. Of course that is a massive challenge. The sun, tides, wind and hydro have been tried in the past, but up against the massive lobby of the oil and petrochemical industries, and certain politicians, the renewable businesses stood little chance. Billions of people have cars, airlines are powerful and want more planes, more airports, and tourism appears to be unstoppable. But all that changed with Covid-19. Up to then Big Oil was already beginning to look a lot less big...you could say "Big Oil down to Little Oil". It's a fascinating story.

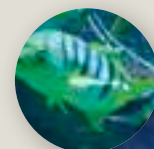
2017–2020
Up to the current situation

For the good news read on...



2017

Ocean acidification and drilling in the Amazon



Plans to drill for oil in the mouth of the Amazon basin face fierce opposition



Coral reefs support an amazing diversity of wildlife worldwide

The latest climate research suggests that ocean acidification is worse than feared and that the world's safe carbon budget is less than supposed in the Paris Accord.

It is a near certainty that some form of carbon tax or pricing will become a global fact of life.

For Opec and the petro-powers it has turned into a running three-year disaster.

Not only do they face slow death by electrification, they face a nimble US shale industry in the short run that seems able to turn on production almost at the flick of a switch whenever crude pushes back above \$50 a barrel.

Recoveries are quickly capped at half previous price levels, and at levels far below the fiscal break-even cost needed by Saudi Arabia and most Opec states to maintain their cradle-to-grave welfare systems and patronage machines.

Little wonder that Crown Prince Mohammed bin Salman is so determined to sell off the crown jewels of Saudi Aramco and reinvest the proceeds in an industrial and economic reinvention designed for life after oil. The window is suddenly closing very fast.

The British and French announcement that they will not require a single drop of crude must have sent shivers through a lot of mid-East spines.

Which begs a question: why would anybody purchase shares in a company like Aramco that was valued at \$2 trillion in an old energy order that no longer exists?

A month later Emily Gosden in The Times revealed how the big boys of Big Oil had been opposed to save a coral reef in Brazil. These are serious numbers, though oil is rich, but is this a clue to the way things are going?

Total and BP suffered a fresh setback in their efforts to drill for oil near the mouth of the Amazon river after Brazilian regulators rejected their latest environmental assessment.

The plans have faced fierce opposition after it was confirmed last year that there was a vast and unique coral reef system close to the proposed drilling area.

Ibama, Brazil's environmental regulator, has repeatedly refused to accept the environmental assessments put forward by Total, which operates the blocks, BP has a 30 per cent interest in the licences.

Ibama has warned Total that it will suspend its environmental licence application unless the company provides more information, which it said it had failed to do despite three previous requests.

The agency wants Total to address how to limit the impact of drilling on marine mammals and turtles and to clarify how oil would disperse in the event of a spill, according to Reuters.

Total and its partners spent almost £200 million acquiring the exploration rights in 2013 and have spent at least a further \$60 million since developing drilling plans.

A spokesman for the French group said that the environmental licensing process remained under way.

Greenpeace, the environmental group, has been protesting against the drilling plans. Helena Spiritus, a campaigner at the group, said: "The only right decision by Total now is to give up their plans to drill at the Amazon mouth, instead of trying to find ways to convince authorities to approve this risky project."



2018



Oil firms face global warming lawsuit



It was hardly a Happy New Year for the world's biggest oil companies with Shell and BP very much under scrutiny.

Were they on retreat because of climate change? Robin Pagnamenta seemed to think so in The Times of 11/1/2018.

Five of the world's biggest oil companies, including BP and Royal Dutch Shell, are set to face legal action from New York City, which claims that they have contributed to global warming.

Bill de Blasio, the city's mayor, said that New York would be seeking damages worth billions of dollars from the companies.

The lawsuit is linked with a \$20 billion spending programme on schemes designed to boost the resilience of the city of 8.5 million people to flooding and other effects of climate change. Other defendants include Chevron, Conoco Phillips and Exxon Mobil.

"We're bringing the fight against climate change straight to the fossil fuel companies that knew about its effects and intentionally misled the public to protect their profits," the Democrat mayor said in a statement released last night. "As climate change continues to worsen, it's up to the fossil fuel companies whose greed put us in this position to shoulder the cost of making New York safer and more resilient."

The city claims that the oil industry was aware for decades that burning fuel was contributing to climate change, but took no action.

Mr de Blasio made the announcement as he unveiled plans for the city's five pension funds to end their investments in fossil fuel companies. About \$5 billion of the funds' \$189 billion of assets are invested in nearly 200 fossil fuel companies.

"New York City is standing up for future generations by becoming the first major US city to divest our pension funds from fossil fuels," he said.

Scott Stringer, the New York City comptroller, said: "Safeguarding the retirement of our city's police officers, teachers and firefighters is our top priority and we believe that their financial future is linked to the sustainability of the planet."

The city said that it would submit a "joint resolution to pension fund trustees to begin analysing ways to divest from fossil fuel owners in a responsible way that is fully consistent with fiduciary obligations".

New York City seeks damages worth \$ billions

From oil companies it believes have contributed to global warming

Other American cities including San Francisco, Oakland and Santa Cruz, all in California, have filed similar lawsuits against oil producers.

Hurricane Sandy wrought havoc on New York City in 2012, causing an estimated \$71 billion of damage. A study published last October said that New York faced the prospect of catastrophic flooding as often as once every five years by 2030 to 2045.

BP declined to comment yesterday. Shell said that climate change was a "complex challenge" that should not be addressed through the courts.

The real cost of oil/plastic/nets: millions of seabirds globally

BP Deepwater bill increases by \$1.7bn

A week later also in The Times, from Energy Editor Emily Gosden.

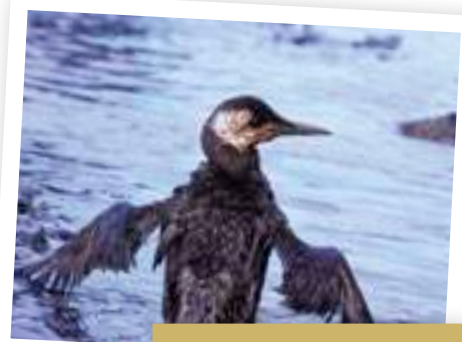
The bill facing BP for the Deepwater Horizon disaster will top \$65 billion after higher compensation settlements than had been expected forced it to book a fresh \$1.7 billion charge.

The oil major said that the average value of compensation payments being awarded to businesses affected by the disaster had soared sevenfold in the fourth quarter.

The explosion at BP's Macondo well in April 2010 killed 11 men and spewed millions of barrels of crude into the Gulf of Mexico in the worst offshore oil spill in American history. BP, which is based in London and operates in more than 70 countries worldwide, was nearly brought to its knees as a result.

The company suspended its dividend as it faced huge costs, including \$14 billion for the initial clean-up and \$18.7 billion in fines and damages payments to the United States and state governments.

In corporate-speak Brian Gilvary, BP's chief financial officer said: "With the claims facility's work nearly done, we have better visibility into the remaining liability. The charge we are taking as a result is fully manageable within our existing financial framework."



But you lose some, you win some.

Palm oil dumped in UK waters

Also in The i of 4/2/2018 Mark Bridge filed a story about another kind of oil, not a fossil fuel in this case, but a biofuel.



Foreign tankers are routinely dumping huge quantities of noxious palm oil off the British coast.

In the past two years satellites operated by the European Maritime Safety Agency identified seven large spills in British waters, two with trails extending for more than 44 miles. All were classified as "permitted discharge" by the Maritime and Coastguard Agency (MCA), according to documents obtained by The Sunday Telegraph.

Palm oil is used in products including foods, soap and biofuels. Ships often clean their tanks after delivering the substance and are allowed to dump a limited amount of the contaminated residue at sea, provided they do so more than 12 miles from the shore. Large spills of the waxy substance have an environmental impact similar to those of fossil fuels, killing birds and marine life. A number of dogs have died after eating palm oil "fatbergs" on British beaches. The oil is contaminated by chemicals and covered by a layer of poisonous bacteria when it reaches the shore. It also lodges in animals' throats.

Palm oil. Huge plantations of this monoculture crop are grown across the tropics, removing the original natural biodiverse rainforest. And as a biofuel it's burnt as energy. What a waste of a unique ecosystem that has taken millions of years to evolve. And the more of us, the more palm oil we will consume in its many various forms. India and China are big customers, with Cambodia's palm oil exports rising by 143 per cent in 2017.



World's most powerful wind turbine is installed in Scotland



In April 2018 in The i Chris Green wrote:

The world's most powerful wind turbine has been installed in Scottish waters despite being opposed by Donald Trump, who complained that it would ruin the views from his golf course.

The 191-metre-high device off the Aberdeenshire coast has three 80m-long blades, which in a single rotation can generate enough electricity to power the average UK home for an entire day. Wind turbines may be good news for us but bad news for passing birds which may get the chop.

The turbine is the first of 11 which will make up the European Offshore Wind Deployment Centre (EOWDC), where next generation technology will be trialled. It was installed by Swedish state-owned energy firm Vattenfall, despite the project being hit by a series of delays, including a legal challenge from the US President.

Mr Trump claimed that the "ugly" wind farm would be visible from his multimillion-pound golf development at Balmedie, north of Aberdeen, and should be scrapped. But the Scottish Government approved the plans in a decision upheld by the UK Supreme Court.

And at the other end of the world a wiser less greedy head-of-state was looking forward to a renewable energy future for her country.



2018

● New Zealand cuts off quest for fossil fuels

New Zealand has banned new offshore oil and gas drilling as part of an effort to cut its net greenhouse gas emissions to zero by 2050.

The centre-left Labour government led by Jacinda Ardern also plans to plant 100 million trees each year and ensure the electricity grid runs entirely on renewable energy.

The decision to end new offshore exploration was hailed by conservation and environmental groups as a victory in the battle against climate change.

Ms Ardern, 37, who campaigned on the issue in last year's election, told cheering university students in Wellington: "We have been a world leader on critical issues to humanity by being nuclear free and now we could be world leading in becoming carbon neutral."

The ban will not affect the country's 22 existing exploration permits.

Ms Ardern said her government was looking to a carbon-neutral future. "Transitions have to start somewhere and unless we make decisions today that will essentially take effect in 30 or more years' time, we run the risk of acting too late and causing abrupt shocks to communities and our country."

Interest in oil exploration in New Zealand has waned in recent years as a result of lower global oil prices, with only one permit issued in 2017, compared with ten in 2014.

Neil Holdom, mayor of New Plymouth, in the Taranaki region, said the ban was "a kick in the guts". (The Times, 13/4/2018).

● Ardern bans sea oil exploration

New Zealand's government is to ban all new offshore oil and gas exploration in a historic climate win that has come after seven years of public protests.

By ending new oil and gas exploration, Jacinda Ardern's coalition government has effectively put the fourth-largest exclusive economic zone (EEZ) on the planet – covering more than four million sq km – off limits for any new fossil fuel exploitation. (The i 13/4/2018)



What will happen in 2019?

Trump is for coal – and that's going backwards. He's up against The Church which is to use its huge wealth to help tackle climate change by ending its investment in fossil fuel companies. So what will happen in 2019? Trump doesn't like to lose. Nor does the virus.



2019

● Criticism mounts and activism against climate damaging policy grows

Up to now Big Oil appeared to be impregnable, the whole world needs it, shareholders love it and it has enabled humanity to push on, almost regardless. But now there are a few snags.

Pollution, sustainability and in the case of the biggest companies a growing distrust, increased by reputations of green-washing enmeshing some of the world's (up to now) respected politicians and businessmen earning vast salaries. Such a scenario attracts criticism, and action, from the activists who seem to stop at nothing to expose the world of Big Oil. For example in The Guardian of 22/3/2019: "The largest five stock market-listed oil and gas companies spend nearly \$200m (£150m) a year lobbying to delay, control or block policies to tackle climate change. BP, Chevron and Exxon Mobil (the biggest of the "Big Boys"), lead the field in direct lobbying to push against climate policies to tackle global warming." In his questionable wisdom Donald Trump said we do need more warmth in New York in a cold winter. That's weather, Donald, not climate. More fake. Activists got angry and that was building. Greenpeace stormed a drilling rig in protest against oil and gas drilling in the Norwegian Arctic. Norway's government has given the go-ahead for its \$1trn (that's trillion!) (£774bn) oil fund to invest in renewable projects not listed in the stock markets. With this sort of money sloshing about, you can see big reputations and huge changes are on the line. That's banks too – big hitters like Barclays, Goldman Sachs, JP Morgan, who topped the Banking on Climate Change ranking of fossil fuel financiers, compiled by the Rainforest Alliance. All this is connected and subject to activist and shareholders' protest. In March 2019 Bank of England Governor Mark Carney said: "Once climate change



Increased action by climate change activists: Big impact on Big Oil?

becomes a clear and present danger to financial stability, it could be too late."

And that was before COVID-19 brought banks, oil, and humanity to its knees. That all took a long time to reach this stage of "progress", but only a few short months to shatter it. It's turned out to be a double whammy of the worst imaginable

sort compounded by human greed in the fossil fuel industry and what could be said to have been the "revenge" of captive, tortured, exploited innocent creatures, in a market in Wuhan, China. Wolf pups, bats, snakes, even koalas, according to The Daily Mirror front page (4/12/2018).



Can Big Oil still exist if it doesn't adjust?

Big Oil's bid to go green has never been more literal.

In the coming years, major oil companies are expected to invest billions of dollars planting forests, rolling out grasslands and establishing natural wetlands. Italian giant Eni will create millions of hectares of forests across Africa, BP is investing in trees across the US and China, and Royal Dutch Shell is eyeing Europe, where they might just spot the Energy Observer, an oceans and environmental research vessel that aims to circumnavigate the world with zero carbon emissions. The trimaran, developed by engineers at France's CEA Liten project set off from Amsterdam after being fitted with a new device which allows it to produce fuel from wind, in addition to using recycled hydrogen. But a lot will depend on what sort of world it will find out there as climate change and disease take their toll on a unique planet Earth. Two crunches at once. It's a massive challenge. And there's not much time. Shell plans to invest up to \$2 billion a year on new energy, but that is less than a tenth of its capital budget. Too little, too late? "If some companies and industries fail to adjust, they will fail to exist" Mark Carney again (The Times 29/4/2019). With these sorts of words from such a key financial figure, protests grew, the press picked up on it and it seemed everywhere you looked there was embarrassment.

And it appeared, prominently, in various forms. Greenpeace, an increasingly powerful force, that now frightens misdemeanours. At Mansion House the great and good were surprised to find a red-gowned lady right there. The hijack went viral – a visual sort. Job done. Though it has to be said the Government has committed to a zero-carbon economy by 2050, and that's good news. But with so-called "wankers and bankers" running the economy, it's not clear where we'll all be that much later on.

Not so dressed-up were the protesters at the heart of Government, the House of Commons. Six men and six women from



Many miles of oil

the group Extinction Rebellion had some points to make about the threat of burning fossil fuels like oil. And of course those images went around the world, which is, and has been, so dependent on the stuff. That's a fact. And does getting naked make a protest more visible – or more risible? There are many dilemmas in this slippery business. BP have funded arts and supported students. But they are criticised for "greenwash". Environmentalist Jonathon Porritt: "Together with other oil majors, BP has been accused of fully understanding the science of climate change as far back as the early 1980's, and downplaying and obscuring that science...ever since... Regrettably, its current (2019) leadership is stuck in the same pattern – all the time using philanthropy to hide its past and present culpability." (Yes, that's greenwash - RB) BP or not BP?... investing £24m in turning natural gas into animal food. And North America dominates the list of new pipelines. Just over half of the world's new oil and gas pipelines are in North America, with a boom in US drilling set to deliver

a major blow to efforts to slow climate change. Of 302 pipelines currently in development globally, 51% are in North America, according to Global Energy Monitor, which tracks fossil fuel activity. If built, these projects would increase the worldwide number of pipelines by nearly a third, and mark out a path of several decades of substantial oil and gas use.

Towards the end of 2019 George Monbiot of The Guardian wrote: "Oil companies argued that they are not responsible for our decisions to use their products. But we are embedded in a system of their creation – a political, economic and physical infrastructure which creates an illusion of choice while, in reality, closing it down. We are guided by an ideology so familiar and pervasive that we do not even recognise it as an ideology. It is called consumerism."

2020

COVID-19

Into 2020...With an approaching serious climate change crisis overshadowed by a global pandemic warned about but not prepared for.

Some might say this is some sort of natural response from the planet. Despite all of human "progress" Covid-19 has proved to be a great leveller, ignoring national boundaries, rich and poor people, race, colour and creed.

Oil pipeline turmoil

In the recently troubled ups and downs of Big Oil, there is an interesting trend behind the dreaded Covid-19. Fighting continues.

On one hand more oil pipelines are being built. Political dynamite, with Trump, still apparently unaware of the threat of burning coal, either massively in the US, China, India, and controversially in Australia, where Prime Minister Morrison seemed surprised when his country caught fire, then became flooded. Pipelines challenged by Canadian tribes damaged Prime Minister Trudeau's green credentials. Judges had halted the project, taking oil from heavily polluting and habitat-destroying tar sands in Alberta (enter Shell), citing inadequate consultation of indigenous groups, and a threat to endangered killer whales/orcas from inevitable oil leaks and

increased shipping (remember the huge Exxon Valdez spill?) in similar terrain. Canada is the fifth largest oil-producing country. The pipeline scheme would triple the capacity of the present Trans Mountain conduit to nearly one million barrels a day cutting reliance on the US market. Work began on another controversial Canada-US pipeline, the Keystone XL after 12 years of wrangling. (The Times 9/4/2020).

More to come. Yes indeed!... The project was stopped when Joe Biden took over from Trump (Jan 2021). It will be an interesting relic of the decline of fossil fuels and the power of personal politics.



Threatened: killer whales

Canada is the 5th largest oil producing country
New pipeline scheme would reduce reliance on the US



In “Planet Crunch” there’s the opportunity “to fight the pandemic coronavirus Covid-19 and the climate crisis/global warming/sea level rise simultaneously. Industries that contribute most to climate – airlines, oil and gas companies – are in a position of vulnerability. We can demand that the assistance they receive requires them to decarbonise businesses.”

(The Independent 7/4/2020,
Eli Mitchell-Larson, Kaya Axelsson)

“Scientists have long warned that climate change will impact not just our environment but our health by increasing rates of infectious diseases.”

(from the Business Insider, Ibrahim Alttusseini)



Chapter 12

Climate Change

Back in 2018 Sir David Attenborough warned about the near future, including the fate of the extraordinary diversity of plants and animals that share the fragile planet Earth with us.



Sweltering, gasping, incubating too



Sir David Attenborough has warned that our planet is on the brink of destruction. He told a UN climate change summit civilisation faced collapse and much of the natural world risked becoming extinct because of global warming. He said: "Time is running out." (The Daily Mirror 4/12/2018)

As one of the most trusted, most travelled, most skilled and versatile broadcasters, his pleas should be heeded. And action should be taken. The biodiversity ranges from mountain gorillas in Africa's forests of trees to the underwater kelp forests of Sussex in England.



Save our kelp to fight climate change, says Attenborough

Britain's "underwater forests" could be the key to beating climate change, Sir David Attenborough has said as he joins a campaign to save them.

Launching the Help Our Kelp campaign today, Sir David said that the algae seaweed was "vital" for tackling climate change.

The campaign hopes to restore a large underwater kelp forest off the Sussex coast in the first marine kelp rewilding initiative.

Kelp forests previously stretched along 25 miles (40 km) of the West Sussex coastline, extending at least 2½ miles seaward. But storm damage, changing fishing practices and the dumping of sediment by dredging boats cut them to "almost nothing".

Sir David said: "The loss of the Sussex kelp forests over the past 40 years is a tragedy. We've lost critical habitat that is key for nursery grounds, for water quality and for storing carbon.

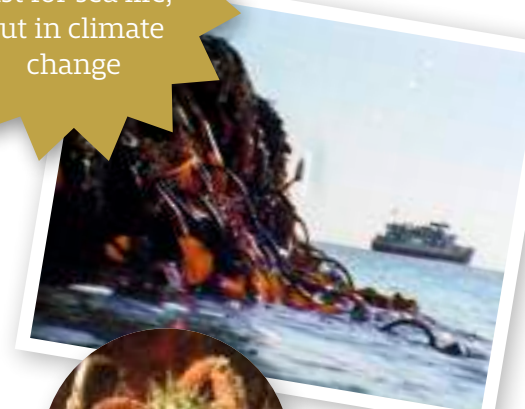
"This marine rewilding project, if approved, will ensure the Sussex seas remain healthy for generations to come, and could have far-reaching impact for other parts of the UK coast."

Sarah Ward, the living seas officer at Sussex Wildlife Trust, said the pioneering rewilding project would help to "fight climate change". She added: "Kelp forests can absorb and lock up carbon just as effectively as woodland, if not more so, and we're able to create this habitat on a scale that simply couldn't be replicated on land. This will be a huge step forward in addressing the escalating climate crisis."

Globally, kelp forests absorb 600 million tons of carbon – roughly twice the amount the UK emits per year – said Dr Ian Hendy, the Blue Marine Foundation head of science, in a film made in conjunction with the campaign.

Kelp forests, which range along 25 per cent of the world's coastlines, provide habitats in the UK for seahorses, cuttlefish, lobsters, sea bream and bass.

Kelp forests are vital, not just for sea life, but in climate change





Narrating a film by Big Wave Productions, Sir David said the “magical” underwater forests are “one of the most biodiverse environments on the planet”. He added: “The forests are vital nursery grounds, giving sanctuary to the young of many commercial fish, as they feed and hide among its fronds. We’re discovering these underwater forests are vital, not just for sea life, but in climate change.”

The Help Our Kelp campaign supports a new bye-law proposed by the Sussex Inshore Fisheries and Conservation Authority (IFCA) to stop trawling within 4km of the coast. It is led by Sussex Wildlife Trust, Blue Marine Foundation and the Marine Conservation Society, which urged the public to respond to the consultations by Oct 10.

Once the trawling management is in place, the partnership will be able to take forward plans to restore the forest.

Dr Sean Ashworth, the Sussex IFCA deputy chief officer, said: “If we want healthy seas that are sustainable for wildlife and fishing for generations to come, we urgently need to give our kelp forests a chance to regenerate.” He added that the bylaw was “critical” and they needed “support from the local community to make sure this happens”.

Alice Tebb, the project coordinator at the Marine Conservation Society, said the restoration of the kelp forests would benefit the fishing industry. She said: “Local fishermen used to row their boats off the beach before starting their engines to get clear of the kelp. Now, the kelp is gone and fishermen are reporting fewer fish.”

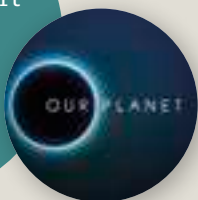
The campaign follows the announcement of the biggest seagrass restoration scheme in the UK last month, with one million seeds being planted off the west coast of Wales to help tackle climate change. (The Daily Telegraph 1/10/2019).

The media in all its forms, particularly these days with social media, can play a vital part in awareness about climate change. Short films like “Help the Kelp” to “epic, landmark, milestone”



Sea grass – a rich habitat

The media plays a vital part in awareness about climate change



efforts from the BBC Natural History Unit, such as “Seven Worlds, One Planet” draw attention to the impact of climate change. Attenborough said at the premiere: “The series celebrates biodiversity and the variety of life on our planet whilst also shining a spotlight on the challenges.” He also narrated the series “Our Planet” for Netflix which looked at various habitats of the world and how climate change is affecting them and the people who live there. These big expensive series take some four years to make and are shown all around the world. Put it another way. There’s no reason why millions (billions?) of people shouldn’t know about what is going on with climate change. The media provides a perspective to what is, increasingly, affecting them personally, whether it be floods, droughts and conditions that destroy their crops and livestock. Attenborough was quoted in Radio Times of April 2019 about his programme “Climate Change: The Facts” on BBC 1, saying that the time had come for the BBC to “make firm statements about what, until five or ten years ago, were matters of opinion...it’s about what the facts are. And the facts are the facts are the facts.”



Checking climate clues

Paris-style UN proposal sets 2030 target on biodiversity to save humanity

Almost a third of the world’s oceans and land needs to be protected by the end of the decade to stop and reverse biodiversity decline that risks the survival of humanity, according to a draft Paris-style UN agreement on nature.

To combat what scientists have described as the sixth mass extinction event in Earth’s history, the proposal sets a 2030 deadline for the conservation and restoration of ecosystems and wildlife that perform crucial services for humans.

The text, drafted by the UN Convention of Biological Diversity was expected to be adopted by governments in October at a crucial UN summit in the Chinese city of Kunming. It was to have come after countries largely failed to meet targets for the previous decade agreed in Aichi, Japan, in 2010. Like so many other events worldwide Covid-19 caused it to be delayed, probably to the ultimate detriment of many threatened species. But it doesn’t have to be that way. Help is increasingly at hand, though it’s a race against time to make a difference.

The 20-point draft plan, which has been likened to the 2015 Paris agreement on the climate crisis, aims to introduce controls on invasive species and reduce pollution from plastic waste and excess nutrients by 50%.

Seahorses



One of the first seahorses to be spotted after lockdown in 2020 at Studland Bay after an absence of 2 years. A long winter and lack of humans meant the seahorses recolonised very quickly. Sadly, the recovery was very short-lived.



A pregnant male short-snouted seahorse at Babbacombe Bay in Devon, he is about 4 to 5 years old



With head tucked into her chest this spiny seahorse blends into the seagrass



This stunning image was caught by underwater photographer John Newman as the pair of short-snouted seahorses, started their morning courtship dance. John spent 3 months going down every single day to study this pair.



A pair of spiny seahorses at Studland Bay in Dorset, the male is on the left and is heavily pregnant



Head of a spiny seahorse showing the distinct spots that act like fingerprints when identifying individual seahorses



Stark headlines

Yes. Sea level rise. Climate change. Stark headlines in January 2020. Along with the virus, the biggest story of our time. Floods. Ocean heating. Hurricanes. We're certainly not winning. But we're also probably losing in terms of "disaster fatigue". With flooding part of increasing climate change there is a different, less familiar perspective. Of course it is a traumatic experience and, I have personally endured it. It will probably recur, but the very traumatized people who are affected may have taken flights, used a car and generally added to the cause of climate change. Clearly if we personally stopped flying, driving and consuming so many natural resources, it would solve that massive increasing problem. All sorts of flood protection schemes and big money may help, but, in the end, the basic cause, climate change, must be tackled and that will involve a huge international effort, and sacrifices, particularly from those who can least afford it. In the perspective of the Universe, planet Earth is a tiny fragile, unique blue dot. The coronavirus and climate change have brought it to its knees, revealing how our so-called advanced society can crumble so fast. People, money, aviation/travel, are being shattered faster than anyone ever imagined. Humans (homo "sapiens" – meaning wise) are facing the test of time. And there's not much of that left, it would seem. We are an incredibly resourceful and successful (so far) species. "Planet Crunch" will reveal how all this may pan out. Climate change is the strongest indication yet. It's got to be the biggest test for our species so far. Talk about "Survival of the Fittest". Here's what needs to be done – to save ourselves and planet Earth. It's the only one we've got. But at least one of us is Greta Thunberg plus her family and many supporters in Extinction Rebellion.



World weather watch

Nature
always
wins



Devastating storms with embedded tornados swept across parts of the US overnight on Friday, stretching over 600 miles from south-east Texas to Missouri at one point.

Heavy rain, strong winds and violent tornados resulted in widespread destruction and loss of life, with 11 deaths reported and more than 350,000 homes left without power. An estimated 5 million people were placed on a flood watch as the storms ripped through metropolitan areas.

Torrential rainfall in Dubai brought the city to a standstill on Saturday.

During the three-hour deluge, peak rainfall rates of more than 150mm (5.9in) an hour were reported. Thunderstorms over the city resulted in flooding, requiring 3,100 workers to clear the roads. Usually, Dubai would see only around 10mm for the month, making this an exceptional rainfall event.

The Taal volcano in the Philippines erupted on Sunday, creating its very own lightning display as ash and smoke filled the air.

Pyrocumulonimbus formed above the volcano, resulting in spectacular lightning, heavy rainfall and ash deposits over a 40 mile area. More than 8,000 people were immediately evacuated from their homes. (The Guardian 16/1/2020).

The crisis is not imminent.
It is here.

On 20/1/2020 in the Guardian, the respected environmental journalist George Monbiot wrote:

"The crisis is not imminent. It is here. The infernos in **Australia**; the storms and floods in **Brazil**. **Madagascar**, **Spain** and the **US**; and the economic collapse in **Somalia**, caused in part by a devastating cycle of droughts and floods, are not, or not only, a vision of the future."

Then came the coronavirus, considered both a health and economic crisis. The two challenges of the virus and climate changes will test us to the brink. The first has clearly overtaken the latter in terms of global public concern. So can high profile efforts make a difference?





Prince Harry's ecocrusade.

Prince Harry calls out climate crisis deniers

The Duke of Sussex has strongly criticised climate change deniers just days after schoolgirl activist Greta Thunberg lambasted world leaders for failing to act.

On a visit to Botswana during his tour of Africa, Prince Harry signalled he had no time for those who sought to undermine the overwhelming scientific evidence that climate change was caused by humankind and posed a major threat to society.

"I genuinely don't understand how anyone in this world – whoever we are, you, us, children, leaders, whoever it is – no one can deny science, otherwise we live in a very, very troubling world," he said.

The Duke also paid tribute to Greta Thunberg, the 16-year-old Swedish campaigner who led a global climate march on Friday.

"Led by Greta, the world's children are striking," he said from the Chobe Tree Reserve as he stressed that saving the environment was a race against time.

On Monday, Greta warned a United Nations meeting of world leaders that her generation "will be watching you" – adding: "If you choose to fail us we will never forgive you."

Harry added: "There's an emergency... it's a race against time and one which we are losing."

Harry's climate change stance has been criticised after he reportedly took four private jet journeys in 11 days during the summer with Meghan, a decision apparently at odds with his environmental views.

In response he said earlier this month that he spent "99 per cent of my life" using commercial flights but occasionally needed to ensure "my family are safe". (The i 27/9/2019).

"No one can deny science"

says Prince Harry

And his father was also on the case

Charles tours turtle islands on path to extinction

As night fell on the southwestern edge of Malaita, in the Solomon Islands, rangers set out in search of leatherback turtles, patrolling a strip of sand between the surf and the tree line.

Crabs scuttled across the rangers' torch beams but they kept their eyes fixed ahead in the hope of spotting a female leatherback crawling ashore to lay her eggs.

For these critically endangered animals this is one of the few remaining nesting sites in the south Pacific. But each year rising sea levels swamp more and more of the beach; soon there may be no place for them to come ashore.

It is this kind of threat that brings the Prince of Wales to these islands, more than 9,000 miles from Britain.

After a six-day tour of New Zealand – with the Duchess of Cornwall, who then flew home – the Prince carried on to Tuvalu and will today make his first visit to the islands, where he will discuss climate change and lend his support to sustainable fishing schemes.

Charles gave a speech in Christchurch on Friday, in which he warned that humanity was running out of time to tackle climate change. "We face an urgent global crisis, in fact a climate and biodiversity emergency," he said at Lincoln University.

Charles and Camilla visited several environmental groups in New Zealand, including a project in Auckland where volunteers help to clear plastic from coastal waters.

In the Solomon Islands, Charles will see first-hand the devastating effects of rising

sea levels on a low-lying country. Several communities have had to move inland as their traditional stilted houses are washed away when the tide reaches their doorsteps, ruining agricultural land and polluting the drinking water. Villagers point out grey, skeletal tree trunks to show where the coast once lay.

Many of the rangers live within 200 yards of the beach and worry that they, like the turtles they tend, may lose their homes. "Each year we see the sea coming closer and closer to the village," said Nicho Raroi, 25, who works for the Wai-Hau Conservation Foundation.

As well as the advancing ocean, the islands also face cyclones growing in ferocity, while foreign-owned logging businesses plunder forests. "Sometimes the sea makes it hard to work now," said Raymond Hoahania, 58, one of the senior rangers. "The waves will come all the way up the beach so the leatherbacks can't land."

Locals in the former British protectorate with a population of just over 600,000 hope the Prince's interest will encourage the world to take action. The Pacific leatherbacks are vulnerable, with only 2,300 adult females left.

Deforestation brings more problems. "When the young people grow up, they won't even have trees to make their houses," Raroi said. (The Sunday Times 24/11/2019).

Sea level rise

And then there's the sea level rise.

These widespread changes, drowning islands, destroying beaches and cliffs are very visible warning signs. One solution is to reduce the burning of fossil fuels – those that have enabled us to progress so far, so fast. But perhaps their time is up and that of the huge corporations behind them. That does seem to be the way it's going.

More emissions, more global warming, more ice melting on mountains, into rivers, and glaciers pouring millions of gallons into the sea.



Charles sets climate deadline

The Prince of Wales has warned global leaders they have 18 critical months to solve climate change and restore the balance of nature, ensuring the survival of the human race.

The Prince, addressing foreign ministers from around the Commonwealth, said they were "uniquely positioned" to lead the world by example, urging them to match ambition with "the practical action that is required".

Speaking as the future head of the Commonwealth, a position which was confirmed during a convention in London last year, he emphasised the next 18 months would bring "critical meetings that would collectively determine the global agenda for the coming decade". The leaders of Commonwealth countries will gather next year in Rwanda for a week-long summit, at which they will discuss the "unparalleled challenges caused by rapid climate change and biodiversity loss". (The Daily Telegraph 12/7/2019)

Wind farms supply record levels of power

Greenhouse gas emissions fell by their largest amount in three years as coal-fired power stations shut and output from wind farms rose to a record high.

The 3.6 per cent fall was the seventh successive year of declining emissions, aided by record levels of power from onshore and offshore wind including Hornsea wind farm in the North Sea, the biggest development in the world.

The provisional figures, published by the Department for Business, Energy and Industrial Strategy, show that renewable sources generated a record 36.9 per cent of electricity. Coal fell to 2.1 per cent and last May, Britain went two weeks without using electricity from coal-fired stations, the longest spell since the Victorian era.

Gas-fired power stations contributed 40.9 per cent of electricity last year and nuclear plants 17.4 per cent. The overall

share of low-carbon electricity, which includes nuclear, rose to 54.2 per cent, up from 52.6 per cent in 2018. Wind provided a fifth of UK power.

Last year's decline in emissions was greater than the 2.1 per cent in 2018 and 2.4 per cent in 2017, but below the 5.1 per cent recorded in 2016.

Kwasi Kwarteng, the energy minister said that the figures showed the "extraordinary progress the UK has made".

The figures also show a 2.8 per cent drop in transport emissions last year, now the biggest source of pollution. (The Times 27/3/2020). Remember – there is no vaccine for climate change.

Chapter 13

Water

Water delivery service

Nearby is a river. The parents have a vital job to do

It's hot, and the now large chicks are very thirsty

Water is poured out

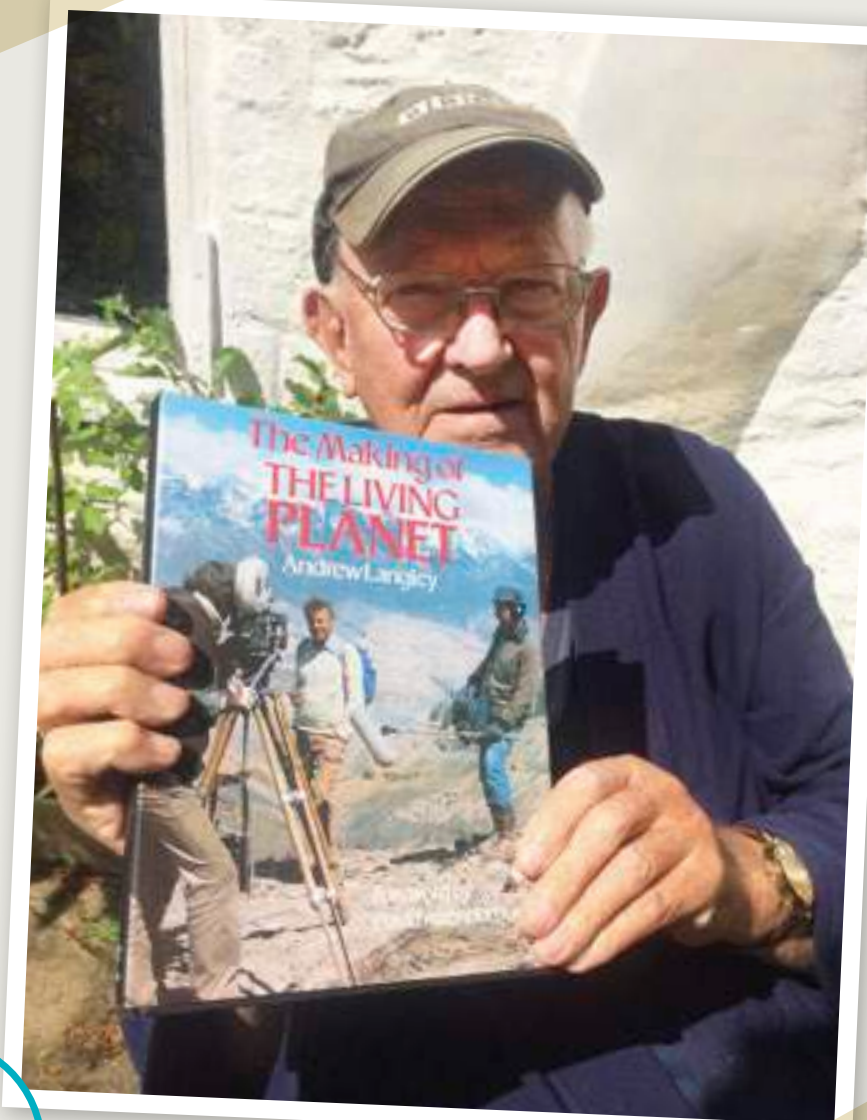
And everyone gets a drink

For the good news read on...



Quite early in my career at the BBC Natural History Unit in Bristol I had the wonderful, literally, job as Executive Producer on "The Living Planet" with David Attenborough.

Making the series took over three years and we filmed in an amazing (literally) variety of places. At that time, in the 1980s, it was less of a changing planet than it is today. But the programme subjects still apply. Amongst them were the sky, mountains, snow and ice, fresh water and salt water – the ocean. In this chapter of my book "Planet Crunch", about the water, we follow some of those sections, starting with the sky, and ending in the sea. In fact most of our planet is covered by water, without which, we, and just about every other living thing would cease to exist. Today we seem to get too much of it when rivers flood, or none, when life dries up and dies off. These changes affect humans and it would seem that it's humans that cause them – increasingly. As we'll see.



Sky:
It's raining plastic!

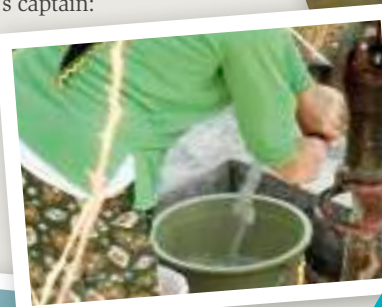
Inevitably these days, plastics are part of the problem so, if they're in the water they're in us too. Starting in that "The Living Planet" book chapter on the sky above, we now know microplastics, from all sorts of human products, are up there in their billions. From the Arctic southwards, scientists have found them, blown in by the wind in snow, mostly derived from rubber and paints, used to coat

the surfaces of ships and offshore oil rigs. 14,400 particles is the number counted in a litre of meltwater found in snow in Svalbard in the Arctic. It's raining plastic! Glaciers are melting and that water flows on down thousands of streams and rivers around the world. According to current trends, all glaciers in Iceland will disappear in the next 200 years, and it is losing approximately 11 billion tons of ice per year.



Snow & Ice: Glaciers are melting

Greenland – more white than green, because of that vast sheet of snow and ice that stretches north for some 1,500 miles covering an area three times the size of France. (You may remember Donald Trump apparently considered buying that country – for oil? – but was firmly refused). The huge ice sheet holds 10% of the world's fresh water frozen solid for millions of years. In the glacier calving season the adjacent channel is full of thunderous roars and cracks of icebergs breaking apart. Each time the water level changes, if only by a tiny amount. In the research lab, scientists from Germany and Denmark watch melting ice drip into beakers and they peer down microscopes looking for clues to the planet's future. These are samples of glacial past and present, retrieved from under the Mittivakkat glacier, which is in mortal retreat on the plateau above. Local ship's captain: "That noise you hear out there. The fizzing and cracking," he says, "that noise is the end of the world".



Salt water: Rising sea levels

Andrew Shepherd from the University of Leeds: "It's a rule of thumb for every centimetre rise in global sea level, another six million people are exposed to coastal flooding around the planet. These are not unlikely events or small impacts, they are happening and will be devastating for coastal communities." That sounds like a crunch in Jakarta, Rio, New York,

Shanghai, Stockholm. Los Angeles, Vancouver, Cape Town, Vladivostok, Sydney, Miami, Mumbai, London. In fact any coastal large town or city will be at risk. London has the Thames Barrier, though increasing pollution from roads is a threat to people and wildlife, but urban wetlands can capture run-off before it gets into our rivers and can provide an amenity too.

A perfect English pond

Scientists in Kenya carefully check a lake



Fresh water: Essential to life

The supply of water is crucial. These days, we are getting too much or too little. The chalk streams (rare on a world scale) are threatened by increasing human demand as more houses are built, and also there's a lot of wastage. For example, Thames Water has a plumbing problem. In 2018 the UK's largest water company mislaid 150m gallons of the stuff every day. For this they were heavily fined - £120m. They turned to a dog for help. Snipe to the rescue! He's a sprocker (that's a cross between a springer and a cocker spaniel) and can detect chlorine which would be in the water from a leaking pipe. It's added to kill bacteria at about one part per million. Dogs, which have up to 300m olfactory (smelling) receptors can detect concentrations as low as one part per million. Snipe is no stranger to tricky conditions: 10 years serving with the Royal Veterinary Corps he worked with other dogs detecting mines and drugs, from Bosnia to Afghanistan and Iraq. This job in

England makes a change and there's plenty to do. He can cover 2 ½ miles on a good day (any more and he risks "nose fatigue"). Thames Water has 20,000 miles of pipes, so it could take Snipe 30 years to sniff the lot (with weekends off).

Shifting lots of fresh water around has its ecological problems. There is talk of quenching England's thirst by sending water from Scotland. Loch Ness contains more water than all of England and Wales combined – and that's just one loch. Scotland has more than 31,000 freshwater lochs and most are unused. Birmingham would go dry in a day if it wasn't for the Elan Valley Reservoirs in mid-Wales, completed in 1904 at a cost of £8m.





Zimbabwe: Victoria Falls almost dry!

On planet Earth fresh water is a relatively rare commodity, at least compared with the salty oceans which cover much of the surface. Both kinds support a beautiful variety of plants and animals; plus brackish waters, such as estuaries and mangroves, adding to the list. Humans depend on all these communities, but as people pressure builds, so is their own livelihood threatened. When the mighty Victoria Falls in Zimbabwe almost dried up, it had a drastic damaging knock-on effect. This was the worst drought in years in the South African nation, which suffers from a collapsing economy, resulting in massive food and water shortages. With the coronavirus hitting eco-tourism the biggest national park receives a lot less income. Animals stray, looking for food and water, so they destroy crops and sometimes kill people who are trying to defend their only livelihood. Hwange Park can handle 15,000 elephants but it went up to some 53,000. The drought is drying up water sources and the underfunded wildlife agency has been drilling wells as deep as 400 metres to find water for the animals. But at least elephant poaching has been reduced – for now.



Elephants search for water in drought conditions



Rhinos too



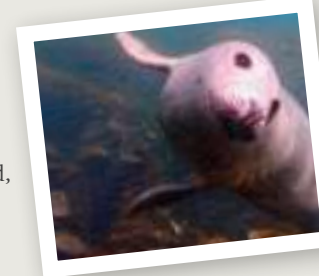
Australia: Fire then flood

In Australia bush fires swept the country destroying people, homes and wildlife. Three billion animals was the estimate. Then came the floods.

If we start to run out of “sweet” fresh water we’ll be in big trouble. Both floods – too much – and droughts – too little – are increasing worldwide because of climate change. Nowhere is the importance of fresh water more obvious than in Africa, where there has been a huge row between Egypt and Ethiopia; big countries, big military powers, big river – the Nile and a very big dam. Back in 2011, Ethiopia announced it would build the upstream Grand Renaissance Dam, which infuriated downstream Egypt, of whom 95%’s population live in the Nile Valley. The Nile, the world’s longest river is the source of nine-tenths of Egypt’s fresh water on its long journey from the source, as the Blue Nile, to join the White Nile in Khartoum, the Sudanese capital which is also involved. Eventually, much depleted, and dissipated in the delta, the Nile flows into the Mediterranean Sea, which had been formed, would you believe, when a huge empty trough was filled with sea water pouring in for millions of years from the Atlantic Ocean! Man’s impact on water and its wildlife has often been drastic with polluting and overfishing increasing all the time as humanity expands into every river, lake, or seas of the world. It’s a race against time, but winnable. The River Thames in England, in the past functioned as a giant open sewer. During the Great Stink of 1858 Parliament was inoperable (? a previous version of Covid-19). By the fifties the Thames had been declared biologically dead, a victim of millions of tonnes of waste, including human excrement, tampons, sanitary towels and anything else that our society flushes, washes and drains away. Huge “fatbergs” build up from so-called “flushable” wet wipes, and other plastic rubbish, we dispose without thinking of the effect down the pipe, downstream towards the river and the sea.

Well, it does seem we can do better, not just down the Thames but all around the long and lovely British coastline it meets. Environmental campaigners hope that the Covid-19 pandemic will change the way we view our world (is it really “our” world/planet?) The recent rush to affluence has seen much of nature junked in favour of development. And the seas have suffered everywhere we go; even now talking about mining the deep sea for minerals, as well as the Moon. Why not repair, instead of yet more rape? In some selected places more than some 40 marine conservation zones (MCZ’s) are being set up with some 12,000 sq km (4,600 sq miles) of England’s seas forming a so-called “blue belt”; also

to include 220,000 sq km (18,500 sq miles) of Scotland, Wales and Northern Ireland, a total of 91 MCZ’s. But they must be respected and enforced. Otherwise they’re useless and may even be more exploited than before. On the other hand, if they work, they could lead to increased stocks and better catches for the fishing industry, away from the MCZ’s. Can this “blue growth” be a win-win, with the development of sustainable ocean economies that benefit whole communities – of people and nature? That can include basking sharks off Scotland, and Ireland (where they were once hunted for their oil); to puffins and grey seals on the Farne Islands off Northumberland, where there’s both a fishery out of Seahouses, and a thriving tourist business to see the wildlife. With protection by the National Trust it’s all increasing, especially the grey seals, like those that visit the Thames estuary much further south, according to the Zoological Society of London census.



More help is at hand. It had to be, otherwise we would have been inundated in the centre of London, as in June 2011,

when half a million tonnes of raw household and industrial sewage overflowed into the Thames, killing tens of thousands of fish and depositing faeces and condoms and other pollution along miles of riverbank (at least the condoms suggest there were attempts to control yet more human expansion and its resulting consumerism). A solution is quite literally in the pipeline; construction on the “super-sewer” began in 2016, a huge project to build a tunnel more than 7m diameter at its widest, running 25 km at a cost of £4.2 billion and rising, like the waters. The bill is to be picked up by Thames Water customers who will pay an estimated extra £20 to £25, with questions being asked about value for money. But some would argue the sights of seals, even a whale or two! and the always hoped-for resurgence of salmon will be well worth it. They may seldom see the seahorses, rare endangered eels, even two shark species and some of the over 100 species of other fish in the murky water but many people will be pleased to know it’s being cleaned up and numbers should increase when the huge project is completed. Covid-19

permitting. In the meantime, there are seals of approval, proved indeed by aircraft counts in the harbour seal pupping season by scientists from the Zoological Society of London (ZSL). They were “thrilled to discover 138 pups on the sandbanks and creeks of the river in the first comprehensive pup count”. Anna Cucknell who leads ZSL’s Thames conservation said: “Incredibly harbour seal pups can swim within hours of birth, well-adapted to tidal estuaries like the Thames, where they can swim away. Grey seals breed elsewhere and come to the estuary late to feed on some of those over 100 species of fish (but, please, not the rare eels!). The most recent results from 2017 recorded 1,104 harbour seals and 2,406 grey seals. Londoners may regard those numbers as good news, but not every fisherman loves seals as much. They’re competition and protected. The question is, as always, can we share place (plaice?) and space in the sea?

And yet more help is at hand seriously.

Ben Webster in Times (30/5/2020) reports:

“The world’s largest superyacht has been equipped to satisfy the whim of any billionaire with three swimming pools and two helipads, just in case.

Close inspection reveals, however, that this is no ordinary vessel for those with extraordinary wealth. The 600ft REV Ocean, being fitted out in Brattvaag, Norway, is about to earn its keep.

Kjell Inge Rokke, made his fortune exploiting the oceans, building a fishing and oil exploration business. Now he wants to give something back.

He plans to invite up to 400 marine scientists a year to spend three to four weeks each on board studying how to protect the ocean from climate change, overfishing and plastic waste.

Scientists will be given free use of the Ocean, a research and expedition vessel, for a third of the year. It will be used for expeditions for another third and for private charter for the rest of the year to help fund the science.

The £280 million vessel has eight laboratories and scientific equipment worth more than £20 million, including a submarine for three people that can descend one and a half miles. It also has a robot to survey and gather samples on the sea bed at a depth of almost four miles.

The ship has a unique trawl system to gather samples of fish and suck them into a laboratory without crushing them,



allowing them to be released unharmed. It uses up to 25 litres of diesel per nautical mile at ten knots and can stay for 120 days at sea without needing refuelling, allowing it to reach the most remote parts of the ocean.

Mr Rokke, 61, began as a deckhand on a fishing vessel after dropping out of school in Norway. He plans to spend about two months a year on board and hopes to join some of the science trips.

He amassed his £1.4 billion fortune initially by running a fleet of fishing vessels before moving into offshore drilling. His company, Aker Energy, has a range of subsidiaries focusing on oil and gas. He has no plans to stop drilling and admits that he is “part of the problem” that he is inviting scientists to investigate”.

The ambitious 250-day maiden voyage from Norway, via London, where there’ll be a display visit, can be seen as a link between some very promising developments in ocean conservation. For example, the recovery of Jamaica’s coral reefs in the Caribbean...On southwards, past Belize in Central America, where the huge barrier reef there has been removed from the United Nations list of endangered world heritage sites. The Belize government then implemented protection for the coastal mangrove forests and imposed a moratorium on oil exploration around the reef. (That’s an interesting one for Mr Rokke, owner of REV, who made his enormous money out of oil and fish). Then on to the famous Galapagos Islands, mostly protected, at least in theory, but shark-stealing for their fins for the Chinese is always a threat. Further south again there’s Argentina, in South America, creating its first marine parks that will provide 101,000 sq km of protected ocean for sharks, sea lions, penguins and other species. The measure increases the country’s conserved oceans, to nearly 10% of its total territory, which is close to its commitment to the 2020 goal agreed by the UN’s Convention on Biological Diversity. All the way from Norway and the Arctic to the Antarctic, to one of the most sensitive and revealing ecosystems on Earth. A previous unknown colony of 1½ million Adélie penguins had been discovered on the Danger Islands at the tip of the Antarctic Peninsula. Scientists launched an expedition to the islands in 2015 after satellite images picked up patches of penguin guano (=poo). Now, with drones to estimate the size of the colony, they found it holds 751,000

breeding pairs (pairs – and how to count?). The population seems to be stable. Dr Tom Hart of Oxford University, who was on the trip said it was: “incredible in this day and age that something so big can go unseen.” But the statistics can change, as the climate does, affecting the food and location of the colony. It’s just the sort of things that REV may check up on, using those impressive tools for the job.

With both REV and Mr Rokke, and, in Argentina with the purchase of a huge chunk of ocean, big money has come to the aid of the natural world, especially the sea. The same is true elsewhere: in the Seychelles where Leonardo DiCaprio (he of Titanic) helped an enormous part of the Indian Ocean around the island nation of the Seychelles. The president, no less, Danny Fauré, 56, made a plea for the planet. Live. Underwater from a submersible. “The scientists have spoken. We are running out of excuses to not take action, and running out of time too.” About 5% of oceans are protected. Countries have agreed to increase that to 10% by 2019. But experts and campaigners say between 30% and 50% outside nations’ territorial waters should get protected status to ensure marine diversity. That’s happened in New Caledonia, a French overseas territory in the Pacific. “Underseas” is more accurate perhaps. 9,300 marine species inhabit near-pristine coral reefs and now 11,000 sq miles of water are safeguarded. As that legendary, pioneering, diving Frenchman Jacques Cousteau said many years ago: “For most of history man has had to fight nature to survive; in this century he is beginning to realise that, in order to survive he must protect it.” So, today, in his happy diving grounds of French New Caledonia, the French navy checks up from sea, air and space. Now, even in some places, albatrosses carry temporary cameras, and transmitters to monitor illegal overfishing. Chinese, watch out for the avian “spy in the sky” “sentinel of the seas”! The Philippines and Thailand allow their beautiful beaches to “rest” banning mass tourism (though Covid-19 probably achieved that. Thanks.) Australia pledged \$500m (£275m) to rescue the ailing Great Barrier Reef from pollution and to fighting the spread of crown-of-thorns starfish – a poisonous coral-eating predator. A generous gesture from an environmentally insensitive government that ignores climate change, the burning and shipping of coal, through a channel carved through the reef itself, defiling a wonder visible from space. Widespread

bleaching caused by warming seas and climate change, due partly to burning coal, have damaged great areas of the Reef. But with coral “farming” working, and the reef starting to fight back, it could be, for once, that wildlife is winning. We can definitely help that happen. Everyone that is!

Hopefully that huge investment in a global survey of the blue planet will lead to its improvement not only for its wonderful, unique nature but for humans too, if only for selfish reasons – our own survival. We therefore come to the crunch in “Planet Crunch” in 2020 and beyond. Dealing firmly with both Covid-19 and climate change are, and will be, essential to all life itself. No more dithering hither and thither at international conferences where the US, Russia, China and Australia try to postpone anything that gets in the way of so-called “progress”, endless, impossible, unsustainable growth. It would take at least two more equivalent planet Earths to keep the (only) one we have alive and well. The Moon and Mars are basically sterile. Some say Mars looks like how Earth will look like when we’re done with it. So what’s left? As far as we know, nothing at all. So, shouldn’t we make the very best of what we’ve got right here? That means protecting, nurturing, explaining the importance of the many life support systems on which we depend – soils, aquifers, rainfall, ice, winds and currents, pollinators, biological abundance and diversity. The oligarchic control of wealth politics media and public discourse explains the comprehensive institutional failure now pushing us hard. Think of Donald Trump and his cabinet of millionaire cronies; the influence of the Koch brothers in funding rightwing organisations; the Murdoch empire and its massive climate science denial; or the oil and motor companies whose lobbying presents a faster shift to new technologies. (George Monbiot. Guardian 14/11/2018). BP, for example, continue to promote green energy, but the commitments are comparatively vague, and are serious contenders for the champions of greenwashing – Shell is not far behind. Fossil fuels are, in fact, probably on the way out and that may, just may, alleviate the real and urgent threat of climate change. The question: how can the people of the planet adjust to cope with all this, including products we have come to depend on so much? At least Trump’s gone. Now that all too familiar word: “unprecedented”, or should it be “depresidented”?

Mexico: Colorado river battles



Only 1/3 of the world’s great rivers are free-flowing

And over in Mexico, water became another international issue. The Colorado river originates in the Rockies and flows through seven US states before reaching Mexico. It is supposed to flow into the Sea of Cortez but, instead, the river is stopped at the Hoover Dam US- Mexico border, and on the other side the river channel is nearly empty. Locals are now battling to bring it back to life – so-called “environmental injustice”. The huge lake behind the dam irrigates much of America’s food crops in the Imperial Valley.

Only a third of the world’s great rivers remain free-flowing, due to the impact of dams that are severely reducing the benefits that healthy rivers provide for people and nature. From the Danube to the Yangtze most large rivers are fragmented and degraded. Untouched rivers are largely confined to remote places such as the Arctic and Amazonia. China, the builder of the world’s biggest hydroelectric power project, the Three Gorges has announced the start of 25 new energy projects with a total investment of 58bn yuan (£6.4bn). With a total capacity reaching 3.92m kilowatts, the projects are scattered over 14 provinces and regions, and are expected to create 17,000 jobs. Some of these new lakes behind the dams may or may not prove to be a benefit to wildlife and local people. Certainly any migrating fish could be affected. “In Europe we have detected 400,000 barriers and by the end of 2019 we estimate that we’ll have 600,000”, said Professor Carlos Garcia de Leaniz, director



Man-made lakes can attract wildlife

Venice: City underwater

of Swansea’s Centre for Sustainable Aquatic Research. “These dams and weirs pepper Europe’s rivers and prevent migratory fish, like salmon, from swimming upstream to reach their spawning grounds in river headquarters. They also stop vital nutrients flowing downstream, to the detriment of marine ecosystems.

And then there are the floods, disrupting life as we know it. And sea level rise. Venice, in Italy, where fresh and sea water meet. Hotelier Gloria Beggato: “Nature has returned and is

taking back possession of the city”. Sky to sea... the end of this journey and this chapter too.

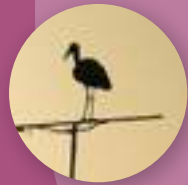
What with the virus, and “overtourism” from cruise ships, can there be any good news? Well, Venice’s murky waters have turned transparent and fish and dolphins have been seen as the virus empties the city of boats, which stir up sediment. (The Guardian 21/3/2020).





Chapter 14

The Media

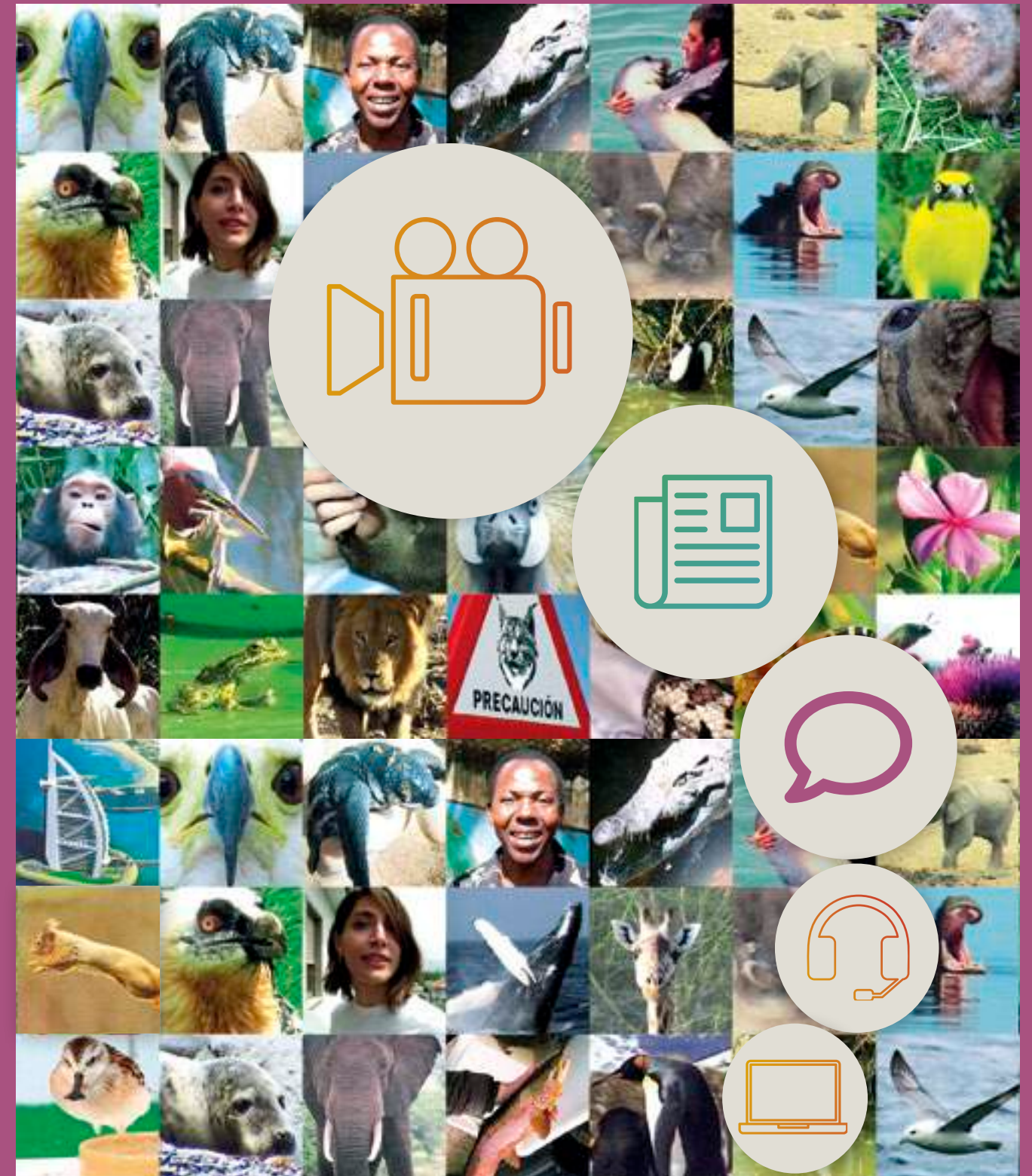


A stork on television – so many channels, cable, satellite – a multi media world on a planet of huge biodiversity. But for how long? And can we turn losers into winners?

For the good news read on...



In this mosaic of life, how many can you identify?





Ever since early 2020, almost everything, everywhere has been disrupted by the really scary Covid-19

And, don't forget it all started in a cruel "wet" animal market in Wuhan, China, a disgrace to all humanity, which, some say, got what it deserved. A pandemic. Climate Change. Biodiversity loss. No wonder 2020/2021 turns out to be the crunch for the planet. If ever humans reach the brink it is/was then. Thank you Greta and David for warning us, and let's hope the next chapters in "Planet Crunch" will offer some encouragement via the media and money. But is it too late? Is there good news? Yes, later. Saved by the vaccine? Maybe. Who's winning the war?

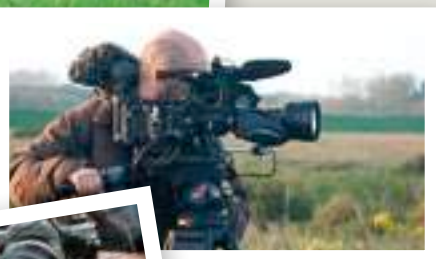


He's washing not just his hands!

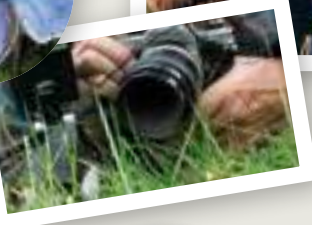
Costa Rica rainforest



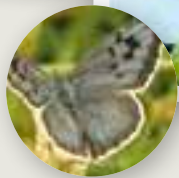
BIG



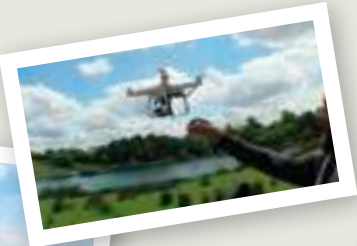
and small



Down amongst the blues



A drone – a stork's eye view



Wildlife and environmental film making have come a long way, but the question has to be how much difference can it make when it's so sorely needed? Long ago a German Heinz Sielmann made a film right inside a woodpecker's nest. Back then, in the days of ancient water-coolers (if there were any?) that was the talk of the moment. Not unlike the recent plastic revelation in *Planet Earth II*. In the past people were amazed to see the wonders of the natural world on TV. And as Sir David Attenborough says viewers won't care about the subjects unless they know about them. That's what the wildlife media can do. On the other hand, to show pristine places, and wildlife with no problems is a lie, because, mostly, it's not true today.

As well as the ever-improving photography, stories, structures and messages need to be clever. A simple device we tried was to avoid the "bulldozer/chainsaw moments". That's when the wonderful place you've been enjoying is brought crashing down at the end of the film.

On a gyro



Or underwater on Ross's tiny screen



Up amongst our storks



Richard Brock, David Attenborough, Keith Rodgerson and Martin Saunders having a gourmet meal in a tent in the Canadian Arctic in 1981 whilst looking for narwhals, unicorns of the seas, for *The Living Planet* series

NETFLIX



Attenborough turns his emphasis to conservation

Now Sir David Attenborough, the greatest of wildlife broadcasters, has turned his emphasis to conservation. His reach is global, his message is emphatic. Save the planet. Now! Too late is never. Beautiful pictures are a powerful weapon as his many epic series have shown. But how much actual action has resulted? Will the Covid-19 and climate change be averted? You might think making these wonderful films was a lot of fun. Well, filming in the Arctic for *The Living Planet* back in 1981 was not always so, as the crew shows. Even David seems less than sparkling! More "life" series followed by David's main output, plus BBC and many skilled film teams around the world. In 2019, a four year project, filmed in 50 countries, called *Our Planet* was shown on Netflix with David providing the English commentary

for the eight-part series. Also a book to go with it. There were also local narration in 10 languages, with Spanish (a huge global audience) by film stars Penelope Cruz for Spain and Salma Hayek for Latin America. Such celebrities and the money that can come with them is a vital asset to the natural world, as we'll see. Netflix are careful about revealing statistics, but they claim (The Times 22/1/2020) "they attracted more new subscribers than expected at the end of 2019, but still disappointed investors last night by missing its target for the USA and offering a pessimistic forecast for the coming quarter." It said that it had 167 million paying subscribers at the end of 2019 up from 158 million at the end of September and above its forecast of 166 million. The big question is how many subscribers



David Attenborough on the way up a giant rainforest tree, filmed by a BBC crew for *The Living Planet*. He also rose through the ranks of the BBC to the very top. He then returned to a very different jungle, which he preferred, and became one of the most respected and trusted broadcasters on the planet. And later, about it and its problems, and how they might, just might, be solved.



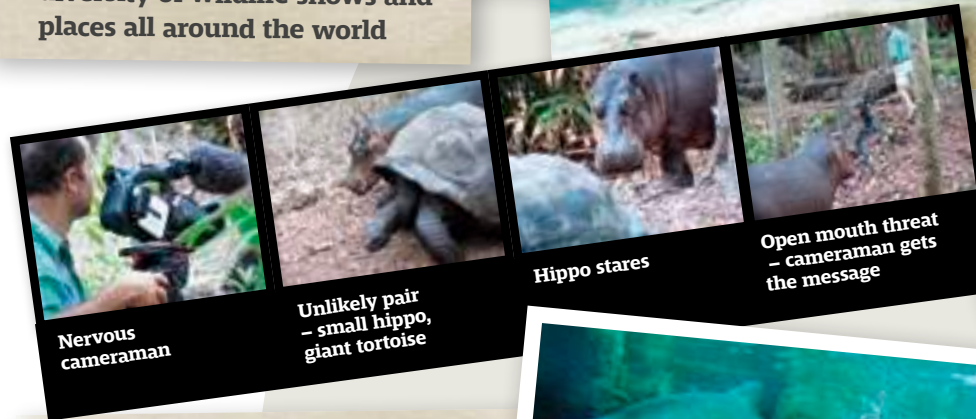
On many locations

From those jungles to both poles, and much much more

actually viewed? And for how long? Who were they? What ages? Streaming coming round the corner from serious very rich contenders, such as Apple, Disney, Amazon...yes it's a jungle out there, equivalent to anything in Costa Rica... or even the BBC! - with its 20,000 or so species as I remember it!



There is an ever-increasing diversity of wildlife shows and places all around the world



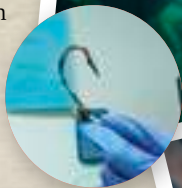
Nervous cameraman

Unlikely pair – small hippo, giant tortoise

Hippo stares

Open mouth threat – cameraman gets the message

Ever since *Jaws* bit the cinema, sharks have been destroyed – not only their reputation, but by humans, hooking them on fishing lines, like this harmless blue shark killed in Majorca with predictably inflammatory headlines. Blame National Geographic for this, apparently a conservation outfit, but consistently using misleading vicious, exaggerated adjectives that are only there, apparently, to get ratings. Sad. And really bad for sharks. Typical: *Monster Croc Wrangler* which was relentless animal torture on Nat Geo Wild (18/10/20). Please stop it.



In a dribbling mood? Ask your dad

Sex & Violence
Nature programmes cover even the more intimate details of life in the wild



One wonders what the demographics are for the ever-increasing diversity of wildlife shows, now including better stories, more truth, and a much wider spectrum of content. The range is from so-called, modestly, “milestone”, “epic”, “landmark” or even “mega-landmark”, with massive budgets, years in the making, and the formidable “most trusted man in the country” right down to exploitative National Geographic Wild who consistently feature shows that seem obsessed with violence, conflict and death, “Fang TV” – a truly bloodthirsty channel from the US where perhaps there is an appetite for this kind of thing, especially amongst young males? Example – TV quote: “Africa’s deadliest. Fangs that kill. The deadly teeth of some of Africa’s most ferocious predators.” Especially younger viewers of these series may well get the impression that wild animals are vicious, to be feared,

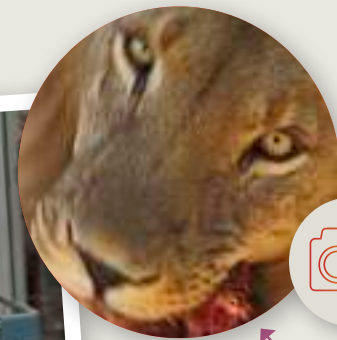
and they are, effectively being demonised. It is us that are the deadly predators. The audience attention span is limited in these days of a small screen at the bus stop, or on the train, or in the lunch hour. How much useful information can be conveyed then – on the move?

Violence – and then there’s the sex of course. In 2015 the TV vet Mark Evans presented a nature programme which dared to look at sex, pregnancy and birth in the animal world for a joint PBS/Channel 4 production. Perhaps a useful education show? – entitled “*Born in the Wild*” in the US, but retitled “*Sex in the Wild*” in the UK. One episode showed elephants on heat. “To attract the ladies, he dribbles pungent urine almost constantly”, went the narration. Not perhaps the best form of education for a young viewer, who then looks at both parents.

So-called blue-chip, that classic style, may or may not be helpful in saving the planet. *Hawaii: Earth’s Tropical Islands*. BBC 2. 9pm. “Tonight we visit blue Hawaii and are instantly plunged into the warm tropical shallows, where humpback whales spend an idyllic winter. Then it’s on to lava-spewing volcanoes, somersaulting manta rays and beak-clattering albatrosses. There are no depressing climate warnings here. Instead the series is all ultra-scenic vistas – the photography helped by gliding drones – and the overall feeling of a blissful transportation. Dive in”. It sounds it would almost be worth being locked down for. Not so, perhaps, for Meghan Markle’s Duchess of Sussex’s narrated, *Elephant* (Disney). “Maybe people are sick of experts narrating nature documentaries. To anyone raised on Attenborough though, it all feels shallow.” (The Times, Ed Potton 1/4/2020 April Fool’s Day?)



King of the jungle of wildlife TV



Sir David’s habitats are as contrasting as a freezing beach in Iceland for *Seven Worlds, One Planet* (which went on to win a narration Emmy for David), to a pop star appearance at Glastonbury, in 2019 ahead of top of the bill Kylie Minogue. Thousands cheered as he said “That is more than a million bottles of water that have not been drunk by you”, a reference to cutting back on plastic use, the crisis highlighted in *Blue Planet II*. “There hasn’t been a series in the last 30 or 40 years where I haven’t made an appeal at the end about caring for the natural world. At the time, I dare say people thought we were cranks”, Sir David said. And in more sedate surroundings, in January 2020, at the Royal Gallery of the House of Lords he continued with the “moment of crisis has come”. Down the road Carrie Symonds was trying to help the oceans and badgers, supported by a photogenic little dog called Dilyn. Her fiancé at the time had not yet been hit by Covid-19, incubating fiercely in Wuhan in China.

Chris Packham (an Attenborough in-waiting?) tried to use his influence with the media to make a difference at a BAFTA Television Lecture: “Wildlife programmes have failed wholeheartedly... some film-makers have made parts of the world look like an absolute utopia...has it made any difference?...has the love of the audience for these places transferred into any real change?...well, no it hasn’t... we’ve lost between 40-50 per cent of wildlife across the world – the only one like it anywhere.” When the pandemic arrived he formed the “Self Isolating Bird Club”. Being a bit of a rebel with a cause, he challenged the hit ITV series to stop “animal abuse” on *I’m a Celebrity*, exploiting “unattractive creatures” eg insects not the celebrities, “the whole thing utterly appals me and goes against everything I seek to achieve as a broadcaster” (The Daily Star 10/11/2019).

Climate change: Still happening despite the media’s focus on the Coronavirus

Series stand-in for regular presenters Ant and Dec, Holly Willoughby later found herself the official two metres apart in the studio, as the virus spread on. But also spreading, perhaps during lockdown at home, were press items about climate change still inexorably changing whilst people, and the media, are understandably pre-occupied by the oncoming disease. Politicians are going to have to make some really tough decisions in the near future if we’re to stave off terrible things happening to hundreds of millions of our fellow human beings. If we are completely unprepared for that discussion it will make the chances of change virtually impossible. That may well have been the case since

then as a result of not telling the truth. See the attempts of Malcolm Turnbull to achieve meaningful change on carbon emissions, when that prime minister of Australia, who was ejected twice by colleagues who couldn’t face unpopular decisions – or, worse didn’t believe they were necessary. Worse was to come when his successor Scott Morrison had to return from holiday in Hawaii to defend digging out, exporting and burning tons and tons of coal in which, allegedly he had serious commercial interests, along with his mates. Climate change, huge fires, then floods were, of course, nothing to do with burning all that coal! And much of it was sent to India to pollute the sky there, discolour and damage the Taj Mahal. A dispute in Australia blew up about a huge proposed coal mine in Queensland which would have meant dredging a channel in the Great Barrier Reef for ships taking the fossil fuel to be burnt far away, thus creating more emissions and adding to global warming, which, in turn, causes

the oceans to heat up, which destroys coral reefs and then causes widespread bleaching. They often say the Great Barrier Reef is one of the few features that can be well seen from space, as well as the Rift Valley in Africa and the Great Wall of China. From that viewpoint it would seem the greed for coal is pretty stupid, and Australia looks like a sad story.

But the media may not be telling us how it really is. There’s that (in)famous Australian family, the Murdoch empire, of whom Rupert could be said to have influenced the world’s public, as have other media barons and their dynasties, with reference, or especially not, to climate change. The younger James Murdoch declared that he felt frustrated by News Corp and Fox coverage of climate change. There had been suggestions that James would join the combined behemoth of 21st Century Fox and Disney. In fact, he walked away with billions of dollars. In the process he left his brother Lachlan, in charge of a new, much smaller Fox Corporation which controls a group of TV channels including Donald Trump’s favourite outlet, Fox News. It’s that sort of channel. So “the media” has become a massive animal, reaching out devouring and copulating, like those “ruthless predators” in a National Geographic series. Or the BBC for that matter. Its future, and the licence fee, have been in the balance for a long time. Now there are more and more ways to get your wildlife and environment pleasure and information, and this may be affected by Covid-19, because of having to be at home in lockdown. You can learn with the Open University (OU) which is the UK’s largest academic community with over 170,000 students, many aiming for a degree: “Learning about the environment is crucial if we are to conserve it in the face of ever-increasing threats. But it’s also a life-enhancing experience. As new technologies allow more and more of us to observe the wildlife around us, we have a fantastic opportunity to gain a richer understanding of the world we live in.” (Hugh Fearnley-Whittingstall) (*Hugh’s Wild West* BBC Two/OU). Then Sir Ridley Scott, director of films such as *Alien* and *Gladiator* is planning a giant outdoor screen in London, the Outernet. Festivals and touring films in cinemas may also appear as and when. Even a huge Live Aid-like (rebooted) event is in the works with the biggest stars trying to raise the biggest money. The question is can enough money save the planet? It’s a financial crunch and a fantastic opportunity...if we change our ways? *The Perfect Planet* BBC1 January 2021. Yes, all very well until the last in the series. Can it make any difference? It must.



Chapter 15

Money

A Question.

A Very Big Question.

The answer could be a vital one for us all, including the nature of the world. It's a financial crunch. Could money save the planet? That probably seems a naïve question to high-powered bankers or low-powered politicians around the world. But these days, as Covid-19 and climate change threaten all life on Earth, it seems to me at least useful to go through the motions.

For a start where, and in what form, are the apparently vast amounts of money quoted by the mega-money operators? From the Wall Street Journal of 15/1/2020 via The i newspaper: "JP Morgan Chase and Co's fourth-quarter profit soared, closing out the bank's best year on record and producing more evidence that the US economy remains strong. The nation's largest bank report a profit of \$8.52bn (£6.55bn) or \$2.57 a share." Just think how many hospitals, homes for poor people, or wildernesses and their wildlife you could buy for that sort of cash. In the meantime UK aid money is invested in oil and gas projects in Africa and South East Asia, despite the government's insistence it wants to lead the world in the race to hit net zero emissions. According to Greenpeace, the bane of fossil fuel companies, CDC Group, the UK's development finance agency has invested \$785m (£627m), saying that only a tiny fraction of its funds go into oil and gas. They say. And BP drills on to massive profits, depleting the planet, but also fuelling our lifestyles and those aspiring to copy them around the world. That will include Indonesia with its huge and rapidly-increasing population.

The result is having to move the capital, Jakarta. As you do. Tony Blair, a possibly wise ex-British prime minister is to join the Crown Prince of Abu Dhabi and a Japanese billionaire in a colossal project to move the waterlogged city to the jungles of Borneo, an area that will surely be wrecked completely. The deal agreed was \$23 billion in business during a visit to Abu Dhabi by President Widodo of Indonesia. That is the cost of too many people, too much traffic, sea level rise, and extreme weather. And that deadly combination will be repeated in the near future everywhere else. Construction of the new Jakarta is due to begin in 2021 and 1½ million civil servants will begin to relocate there in 2024 at a cost of \$34 billion (The Times 15/1/2020). But Covid-19 will surely have delayed that plan. Meanwhile Indonesians keep on increasing, driving and causing increased climate change and sea level rise. As all this continues everywhere, the world is using up a fortune of natural resources per year for the first time, while global

recycling of raw materials has fallen – we are, in fact, consuming the planet.

Eco-activists like Extinction Rebellion want central banks to help the booming market (as was) for green bonds – debt issued to fund climate and environmental projects so as to thrive, and, also clampdown on the investment mammoths standing in the way of change. Blackrock, the world's largest investor has

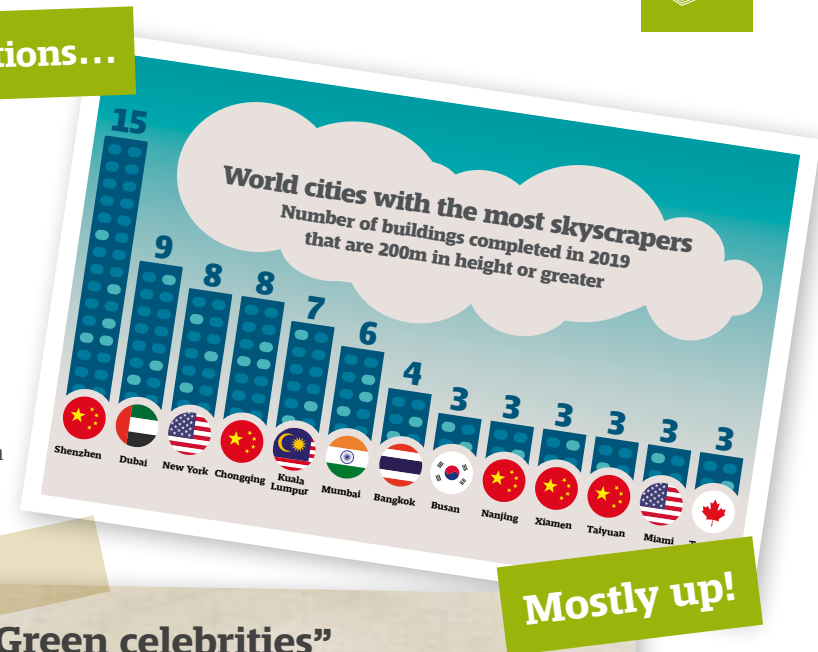
joined an influential pressure group calling for the biggest polluters to reduce their emissions after criticisms that it was undermining action to address the climate crisis. Blackrock manages assets worth \$6.9 trillion, including the major oil producers such as Shell, Exxon Mobil and the always-controversial BP. Extinction Rebellion said: "Blackrock remains waist-deep in fossil fuels, and is the world's top backer of companies that destroy the Amazon rainforest and ignore the rights of indigenous people."

The US economy remains strong with the nation's largest bank reporting a profit of \$8.52bn

Money goes in many directions...

So money goes in many directions – some good, some bad, depending on your attitude, and your own personal position. Some are rich and unhappy with it, others less so, but striving hard, led on by commercial encouragement and pressure. And, sadly, the many millions of poor and very poor and destitute are increasing all the time, whilst making, inevitably, and often unknowingly, demands on the planet that can never be met.

But can they? Surely, if we can put a man on the Moon, we can put our planet where it should be. Thriving, with a promising future, and not a diseased, destroyed and derelict one.



Mostly up!

“Green celebrities” can set a valuable example to their fans



“a model for new conservation projects”

Leonardo DiCaprio

Seychelles Project:

Safeguard an area twice the size of Britain

Fishing and over exploration will be banned

Tourism will be restricted

Famous donors include: Leonardo DiCaprio and Robert Grantham

But it could be that certain individuals can make a real difference. So-called “green celebrities” can set a valuable example to their fans, often a huge following, on social media, whether the stars are royalty, play football, are in movies, fashion or music. Sir David Attenborough must surely be amongst them, and has immense influence. These people have international reach and appeal (sometimes for donations) and may feel proud to have done their bit to save part of the natural world. Take Leonardo DiCaprio, 45, who you might imagine can well afford it, as he uses private jets to various abodes and yachts around the world. He's already spent a fortune in central Africa to save rainforests and employ local staff in a protected area, effectively a war zone. Off the East African coast in the Indian Ocean are the beautiful Seychelles islands, with Aldabra, and DiCaprio made a Titanic effort there too. The scheme will help to safeguard an area twice the size of Britain. Fishing and over-exploitation will be banned in the new reserves, while tourism will be restricted. Overfishing and the killing of dolphins, sharks and turtles as bycatch has taken its toll. The islands and waters of that tropical nation are home to spinner dolphins, lemon and tiger sharks, the dugong or sea cow, and 100,000 rare giant tortoises. One of the reserves includes lovely Desroches Island, close to where the Duke and Duchess of Cambridge spent their honeymoon. A (not so) common

connection between Hollywood and British royalty.

The funding for the Seychelles project was made possible after \$22 million of national debt owed to the UK, France, Belgium and Italy was bought up by the Nature Conservancy, an American charity. It also raised \$5 million from donors including \$1 million each from DiCaprio and Robert Grantham, a British asset manager. DiCaprio said “the deal was a model for new conservation projects”. And he certainly knows about models, lucky chap! But one has to wonder how all this will pan out after Covid-19, including searching for oil, and the income from tourism and fishing, for the population of 98,000. As the world becomes more aware of ecological change, and the real cost to the planet, the seriously “big boys” are getting increasingly sensitive. “Greenwashing” may not help, or spending big money on PR or lobbying politicians, using questionable deals. One of the richest men in the UK is Sir Jim Ratcliffe, of Ineos, who uses sport to look good – even green. Cycling, football, sailing, athletics, motor racing – even building a Land Rover type, the 4x4 Grenadier, which is a £1 billion project. Some of this is eco-friendly. Some less so. Like petrochemicals for plastic now seen to be the scourge of the planet from pole to pole, mountain-top to deep-sea, in rivers, the sky, and in us too – long term effects unknown.



Dubai Excess

\$ Billions of products were sold in 2018 with pesticides toxic to humans and bees

Looking to the future – if any?

Otters and penguins in the aquarium in the mall in the desert

In charge

Tall bird, tallest tower

Skiing, with food on the side

Man-made island properties

Will they sell? Or go under?

Shop 'til you drop

"It costs a lot to look this cheap"

famous quip from legendary country singer, Dolly Parton

Ratcliffe and his huge fortune has a lot to answer for, though plastic is crucial material, and anyway, can't be uninvented. The PPE (personal protection equipment) saga against Covid-19 was proof of that. But where did all that disposable plastic end up? All around the world where the coronavirus spread. Other "bad big boys" include some of the world's richest companies which make pesticides, and millions of dollars a year. They pose severe hazards to human health or the environment, analysts have found – in other words, they can kill people as well as the pests that they are aimed at. Residues may reach watercourses, and eventually the sea, damaging all that lives there. Poisoned fish kill too – the people who depend on them. Remember DDT? Today the pesticides market is dominated by Bayer, BASF, Syngenta, FMC and Corteva (formerly Dow and DuPont). These five companies sold \$4.8 bn of products in 2018. The Unearthed and Public Eye analysis calculated that almost a quarter of sales by these five firms were of products containing pesticides linked to human health effects, including known or presumed carcinogens. And 10% of sales concerned were pesticides that are toxic to bees. Another 4% of sales were of chemicals acutely toxic to humans, the analysis found. About 200,000 human suicides each year are attributable to pesticide poisoning almost all in developing countries. By killing those ace pollinators, bees, and other vital insects, we run the risk of mass human suicides anyway. That's if tobacco doesn't get there first. British American Tobacco is supplied

with tobacco leaf by more than 350,000 farmers in 37 countries where, perhaps, pesticides protect the world-addicted crop, but create a double whammy of death. That's a high price for smokers to pay. BAT's revenue is some \$26 billion. So there really does seem to be an awful lot of money sloshing around the planet, for good and bad. What are the chances of it being used more for good than bad? Later chapters in "Planet Crunch", in the light of Covid-19, will update that question. Read on? In case you thought being super-rich made you super-happy, well that's not always the case. The 230ft superyacht Nourah of Riyadh, worth £65 million, had a spot of bother in dry dock in Greece, when it collapsed there and then. Hopefully the hot tub and cinema weren't damaged, and they will soon be able to enjoy the Titanic movie, and even join Leonardo DiCaprio in helping the oceans we all depend on. Back in Saudi Arabia a \$500 bn futuristic coastal city at Neom was in "crisis", a rather bigger problem than the yacht. Crown Prince Mohammed bin Salman, 34, must have been gutted. It's to be a "green city". An expensive step in the right direction.

The good news is that there's already something to compare it with. The bad news is that it's called Dubai. Not everyone will agree with that. And it's now trying to be greener, if only to attract a larger range of visitors than those addicted to "bling-on-sea", an extraordinary concoction on the coast, a creek and

the desert. Almost everything has to be imported, costs more, not only money, but pollution by shipping, aircraft and thousands of cars, many of them luxury models. Others, the human sort, are tempted to the glamorous shops – for them this is retail heaven, where "spend, spend, spend" is the message (also adopted by Boris Johnson at the lockdown unlocking in June 2020). "Build it and they will come". And that amount of concrete, now increasing around the world is a huge use of resources and the production of CO₂. Glass and tarmac too. But the tallest "vanity" tower, air-conditioned whole islands (of course) dredged from the once-fertile sea have been sold, with mixed success. As the climate heats up, they talk of cooling the sand on the beaches – even the bus shelters are air-conditioned! Being Dubai, it has to have snow and a ski-run. And an impressive aquarium, including penguins – nice and cool, and nice for the consuming masses to see. They shop as if there's no tomorrow and one wonders what tomorrow will turn out to be like, with this, apparently, endless flow of stuff.

Fashion is teetering on its high heels. At one, the top end, are its huge profits and extravagant travelling circuses to New York, London, Milan and Paris. There, at the Balenciaga Show, water and the climate crisis was the theme including designs no one would ever wear in the real world. And in Milan the virus wiped most every other story off fashion's own front page. A London label's £120 million turnover came from Japan in 2019. That was then, but now uncertain Dubai must be worried – "Malls of Death", some say. At the bottom end, fast fashion is a killer too, costing the Earth and needing to slow down fast. But are the customers listening? They're teens and twenty somethings adding up to a surge in sales of £473.7 million for the four months to the end of 2019. Most of Boohoo's dresses cost less than £5 – in a frequent sale, £3. Many will be worn once, photographed, shared on social media, then returned or chucked out on their way to landfill. The clothing and footwear industries produce more than 8 per cent of global greenhouse gases with nearly three fifths of clothing ending burned up in incinerators, or landfill. That's rubbish – what a con – people talk about: "Sustainability." Yes, "sustainability" – do they know what it means? They should. Clothing companies have been

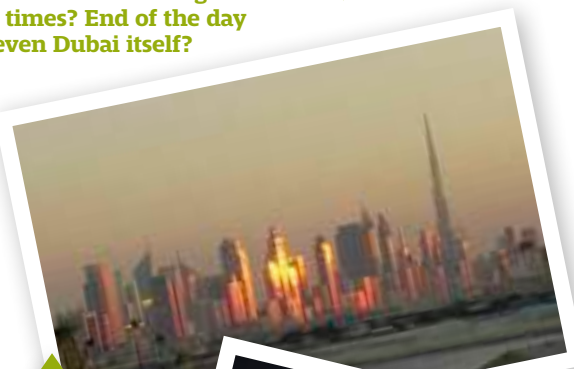
asked to pay 1p on every item they produce to fund recycling. The government rejected the proposed levy, a decision that was baffling, foolish and short-sighted in the extreme. There's a global cost – and that includes the voracious consumption by Dubai – and the lower the price tags the more expensive to the planet it becomes. "Slave labour" to build Dubai's fragile opulence earn a pittance, in the same sad league as perhaps one of their relatives back in Bangladesh sweatshops...But without those jobs they have nothing. Back in UK you can buy a bra for £2, a bikini for £1 (from Missguided – yes), trainers for £700; cheaper ones with the hashtag #WashEmYouPlonkers. The amount the fashion industry contributed in the UK GDP was £32.3 billion in 2017. Luxury giant Burberry burned unsold goods to protect its brand; later PPE production for the NHS would do a better job. And the planet? The fashion industry is as harmful to the environment as aviation and shipping combined, as you get in Dubai. What you could get there at a Fashion Week are some very high heeled Moon Star Shoes worth \$20 million (£16 million) featuring 30 carats of diamonds and pieces of meteorite discovered in 1576. Which is where we came in...



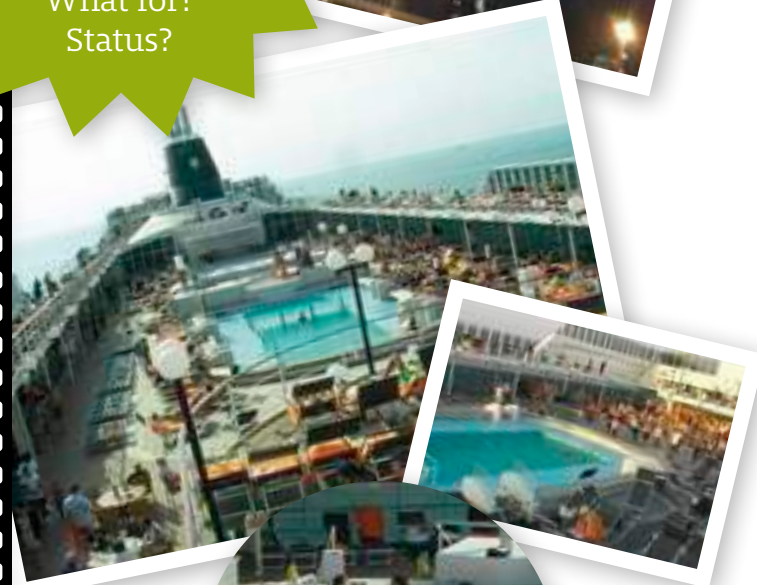
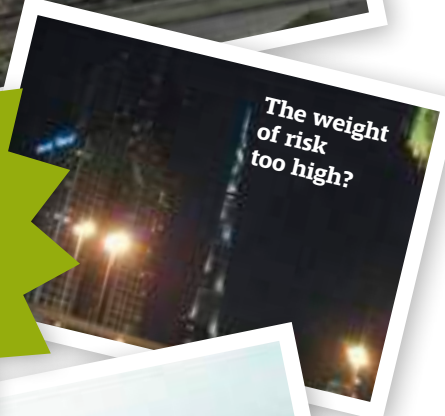
It's no secret that the cheeky lingerie brand Victoria's Secret has failed to hold up, and that smog, air pollution and sea level rise are growing problems as is the case now worldwide. In Dubai they always seem to believe everything is possible. Until it probably won't be. Will it become another Stonehenge, Machu Picchu, or even Detroit, USA; abandoned places, where archaeologists of the future will wonder, "What happened here? What went wrong?" Famously, when the financial crisis hit Dubai, there was mass panic. Many residents weren't. They had to get out. Quick. They simply drove to the airport left the car – a Bentley, BMW, Ferrari, Mercedes or some such, jumped on an Emirates plane leaving the car behind – not expecting to return? Dubai's that ephemeral. Is Dubai Doomed? Who can say: Is that weird invention sustainable? But at least the local flamingos have a future. And they can fly away too. And not want to come back?



Sunset on Dubai – Sign of the times? End of the day or even Dubai itself?



Flamingos. Tall towers. But the race is on elsewhere to build ever higher. What for? Status?



Pollution leading to climate change and sea level rise



Flamingo City



Expo 2020. No go. Covid-19



How high/vain can you get?

Hormuz Strategic waterway



From Dubai, the pink flocks fly over the Straits of Hormuz, one of the most strategic waterways on the planet. Another is claimed off a belligerent China as we'll see. Below the flamingos there's an extraordinary contrast. Passing Dubai is a cruise ship where the girls romp in hot tubs and just over there the boys are in their uniforms on a warship. These are ships that pass in the day. In the meantime, the bruised cruising business has sank almost without trace, along with the grounded frustrating airlines, like Bloody (expensive) Airways, Uneasy Jet and Lyingair (no refunds) and other travel. Such has been the impact of Covid-19. An infected cruise ship is

hardly the best place to be when the dreaded virus hits. Nearby Dubai wants tourists but not deadly ones. It wants big spenders though thousands of poorly paid Asians are acceptable to build that monstrosity in the desert. As ever, with humans, money counts. It's what drives the world (or rather insects do, as has been pointed out). Priorities are strange. In an age when we compete, at great cost, to build the tallest "vanity" tower, which is not much use to anyone except property developers, we also continue to throw a fortune at so-called 'defence', with arms races around the world. We seem to be a fundamentally aggressive and territorial species, whether it's

oil, land or sea. That's the Straits of Hormuz for you, the lifeline of the now-strongly criticized fossil fuels like petroleum and natural gas. Massive money is to be made there, as well as on military hardware such as aircraft carriers that patrol the Straits. The cost of these ships is unbelievable. The Royal Navy's £ billions carriers lack sufficient support ships, with funding for its Lightning II fighter jets unclear. For unclear read-nuclear expensive kit whether underwater submarines or rockets with warheads that can obliterate much of our delicate planet caught in the crossfire. Will it happen? Or will Covid-19 do the job?



Sky high funding to explore a future in space

Idea: perhaps from an enthusiastic (as ever) estate agent or property developer... "Now we've trashed the Earth, can I sell you plots on the Moon (back or front?) Nice view. Or for a bargain price, bits of Mars (not the chocolate sort)." "Are there any potential amenities?" Answer right now – zero. Cost? Getting there, living there. A good idea? Probably not. Both the Moon and Mars are very expensive to get to, very difficult to adjust to. But hold the front page! They've found dried mud on Mars (but that's all really). Really. And, amazing, they've got a whiff of gas on Venus (September 2020. Nothing else though.) Where can I get tickets? Try Bezos, Branson and Musk (does better). Perhaps that money would be better spent on repairing the Earth whilst it's still possible and there are many of its inhabitants who want it to be done. Surely, that's where the millions of dollars should go? But it doesn't. How short-sighted can we be? Look no further than the disappointed men of the Middle East whose "green city" Neom is still just an idea – albeit a very expensive one. Nearby the United Arab Emirates, not famous for thinking small, believe they're heading for Mars. And maybe building some very nice, very tall hotels there? That's Dubai and Abu Dhabi. Emirates as astronauts in Russian rockets. Maybe the property developer persuaded them. The late astronomer, Carl Sagan said, "That's home. That's us." of this pale blue dot. "Our posturing, our imagined self-importance, the delusion that we have some privileged position in the universe, are challenged by this point of pale light. Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity, in all this vastness, there is no hint that help will come from elsewhere to save us from ourselves". Covid-19 throws this into perspective. A microscopic virus could eliminate the human species, leaving other species to recover to an original state.

Meanwhile back on Earth, customers are queuing up to get some of that real estate that's on offer. But just how real is the experience up there on Mars or the Moon? It turns out earthquakes could be a problem. And there's nothing there.

Is it a waste of space?

Cheaper to stay in California? That's where Tesla car tycoon Elon Musk tweeted his ambitions recently for Space X to build a city of one million people on Mars by 2050. The sort of money being spent on these projects is sky high. Billions, upon billions, dollars, pounds, Yen – where, in Japan, in 2023, Yusaku Maezawa, 44, a lonely online retailing tycoon aimed to be the first paying passenger on the Space X flight advertised by American entrepreneur Elon Musk. He's looking for a girlfriend to go with him (not your average date – RB). "I want to shout our love and world peace from outer space...where I can see the beauty and uniqueness of the planet Earth" and therefore, with that privileged view, spare a bit of extra cash say £1 bn, from his £1.4 bn as Japan's 17th richest person. When you think of the many billionaires and mere millionaires and the then comparatively poor super-rich, just very rich, and the mere rich you see that, in theory, they could buy up nature and save it for future generations! Increasingly young people today will urge that to happen. Hopefully Mr Maezawa will find a girlfriend. It may help that he has a large collection of bespoke suits and Bugattis and Aston Martins, which he rarely drives. One snag might be his famous eccentricity. At the presentation of the company's financial results one year he dressed up as a mushroom. As you do. It takes all sorts... as in the Irish joke about how to land on the Sun? Answer: at night.

"Cheap at the price. Bargain! Making a killing! Just £14 billion" (Headline: The i 11/1/2020) "Weapons manufacturers are set to benefit from a new Middle East

What happens if we cannot save our planet?



arms race. A good time to be in bombs and bullets – with US and Britain leading sales." Well done. Starting at the cheaper end of the bonanza of death, there's Babcock in the UK who said that operating profits, in a trading update for the first nine months of this financial year, which runs until the end of March, would probably be only about £540 million (The Times 13/2/2020). (Note the words: "only" and "about" = always useful). Next up the money scale, "BAE Britain's leading arms manufacturer sold £15 bn worth of arms and services to the Saudi military in the last five years during which Riyadh was heavily involved in a deadly bombing campaign in Yemen." (The Guardian 15/4/2020). It was probably once a beautiful part of the planet. Lockheed Martin, the American conglomerate which is by far the world's largest arms producer at one point increasing by \$4.2 bn to \$116 bn in a single day. A single day. Think how much and how many desperate fishermen around the world you could pay with that sort of money, to stop overfishing the oceans and allow them to recover to a sustainable future. Or how many women could be helped not to over-populate the planet, make their lives easier, and better for fewer children. Sustainable resources are crucial to a living planet. And onwards and upwards...in Britain the National Audit Office said the Ministry of Defence planned to spend £183 bn in the next decade "about" £2.9 bn "over" budget. Warning. Boris Johnson tries a review of these escalating costs. But what will happen to them as the coronavirus takes its toll and lots of money is diverted?

Captain Sir Tom Moore brought the world together...



Amazing war veteran Over £30 million raised for NHS

Is that goodbye to all those green initiatives, promises, and commitments to tackle climate change, which is arguably a bigger threat than the scary pandemic itself. Some say Covid-19 is a rehearsal for global warming and sea level rise. But now for some good news from the military with the amazing story of the late Captain Sir Tom Moore who raised some £38 million from all around the world for the NHS, the National Health Service in the UK. He achieved that by walking round and round his garden 100 times leading up to his 100th birthday on 30th April 2020. That extraordinary military man brought the world together, uniquely. Which is more than you could say for a certain Donald Trump, who seemed to have done exactly the opposite in the USA – hardly United. His country has been presided thus: from his luxury golfing resort he boasted that the US had... "just spent Two Trillion Dollars on Military Equipment. We are the biggest and by far the BEST in the World! If Iran attacks an American Base, or any American, we will be sending some of the brand new beautiful equipment their way... and without hesitation." His colleague, Alan Shaffer said "It's wonderful that the UK is working on a warhead." The cost is "estimated" at £31 billion. Delayed Trident nuclear submarines cost the taxpayer an extra £1.35 billion described by an official as a "farce". Indeed. Back in the US the Pentagon found \$6.5 billion (£5 billion) of efficiency savings in 2019 (i 11/2/2020).

And Trump promised to "totally destroy" North Korea, encourages police officers to bump suspects' heads and muses publicly about murdering 10 million Afghans and tweets that 52 Iranian cultural sites, and Iran itself, WILL BE HIT VERY FAST AND VERY HARD. "He enjoyed describing graphic violence perhaps because in his mind it evokes shows and films rather than reality". (TV guide 21/2/2020). (And the sort of wildlife rubbish that degrades animals in "fang TV". RB) Apparently, what we really need, instead of a much better NHS, a much healthier planet and global peace, is a superfast missile, the sort that can so usefully travel at up to 21,000 mph, avoiding all defences. There's apparently a hypersonic boom on its way as Russia and China compete with America's "war room", setting aside more than \$3 billion in the latest global arms race with the sort of toys that Donald Trump liked to play with. From the sky above to the deepest sea, all once unpolluted and supporting mankind that cared for those vital assets, we now want to fly everywhere, even mining the deep ocean, without knowing what we're doing, greedy for its potential riches. They say. "On land, the UK dismissed early warnings about coronavirus, spending billions on the arms industry while ignoring real threats (why spend billions on fears instead of the real dangers?) This Covid-19 crisis focuses our minds on where priorities really lie; the NHS will undoubtedly emerge as a front runner" (The Guardian 11/4/2020).

"In that light, one has to question whether spending between £2 bn and £3 bn (actual government figures are hard to come by) on maintaining a Trident submarine on constant nuclear deterrent patrol at sea – when the missiles are not targeted, and have been at "several days notice to fire" for over 20 years for lack of any perceived nuclear threat – is now a proper use of our rapidly vanishing national financial resources. This is on top of some £60 bn – plus to replace the submarines, their missiles and other assorted costs associated with Trident."

Cmdr Robert Forsyth RN (Ret'd)
Former executive officer of a Polaris submarine and nuclear submarine commanding officer

Cmdr Robert Green RN (Ret'd)
Former Fleet Air Arm nuclear-armed aircraft bombardier-navigator

(They should know – RB)



Chapter 16 Trump

Many hoped a petulant Donald Trump wouldn't throw all his toys out of his pram, especially the nuclear ones.

And did he know where the button is – perhaps behind the TV, always set on Fox TV? And it's marked PRESS. That's P.R.E.S.S., Donald. Or not, we prayed. When he's not doing deals, he's playing golf at one of his several opulent golf courses, which his family help run. But he got into a bit of a hole when the Turnberry one, in Ayrshire, Scotland, lost £18.8 million. Over in Balmedie, Aberdeenshire Trump International had a tax loss of £1.1 million on sales of £2.8 million. He promised the links course would be the "world's greatest" (of course) when it opened in 2012. It has lost £9.5 million since then. He doesn't like to lose does our Donald, either money or at golf. In fact it seems well-known that he often cheats at golf. He managed to push through permission to change and build on a protected nature reserve, but then really ending up in the rough. He'd tried to stop 11 wind turbines being built offshore "spoiling the view". His family business then paid a £225,000 legal bill to the Scottish government. According to the Washington Post newspaper Donald Trump has made more than 15,000 false or misleading claims in less than three years since he became President (The i 18/12/2019). The truth is US taxpayers spent some of the \$1 ¼ millions (nearly £1 million) on VIP accommodation etc, visiting London, meeting the Queen. Along with his third wife Melania, Trump brought along all four of his adult children – Donald Jr, Eric, Ivanka and Tiffany. On his trip to India, which lasted all of less than three hours his hosts had built a wall to hide the view of the slums along Trump's motorcade route. The visit cost \$14 million. And he does like walls, and not

what's behind them, whether they're very poor Indians or desperate immigrants from Central America and Mexico.

Since his (fatal, some say) election, Trump has continuously sought to undermine, confront and cancel his predecessor's, President Obama's, achievements... For the future of planet Earth this has been, and may prove to be disastrous. As well as pushing hard for fossil fuels like coal, oil and gas, he's most seriously tried to get out of the Paris agreement to limit climate change around the world. When other countries/signatories see this happening, what is the effect on the overall success of the crucial talks in the future? If climate change, sea level rise, and biodiversity loss take their toll the Earth's finger will point at Donald Trump. And that's true of humans too, as his handling of Covid-19 in the US has been considered a disaster, a case of economy before human health and ecology. With Trump's upbringing, and attitude, there's only one choice, money. He is "guided" by his gut and his vanity, admires power and profit, celebrities, headlines, and he needs

Donald Trump has made **more than 15,000 false or misleading claims** since he became President

The Independent
18/12/2019

immediate gratification. Maybe his family can help, especially with his behaviour about the environment. On energy-saving lightbulbs... "the new light bulb costs five times as much, and it makes you look orange" (really?). To the environmentalists' dismay they had previously won the light bulb battle, this time he rolled back, again, Obama-era legislation – decreeing their use. But much worse was to come as executive orders were being signed left, right, and centre, most of which would damage the planet, and nature itself, and in some cases the citizens of his own country. So "Make America Great Again" had a very hollow ring to it. Despite the threats to their own country, and countryside, Trump still had a strong, wild mass of supporters and battle was joined with Covid-19, and the next election was looming involving a chap called Bloomberg, 78, former New York mayor putting up \$1.2 billion, as a Democrat. Climate change didn't seem to be an issue, although the "Green New Deal" did occasionally surface. Bloomberg later dropped out. It seems money can't buy you everything. Trump probably doesn't agree.

Like Trump!

Always tweeting and shouting

And self-preening and self conscious



The disastrous world of Donald Trump

The descent of a nation and its wildlife





Meanwhile, Republican Trump was doing real damage. Again, overturning Obama's best efforts, he diluted rules on mercury emissions that can harm pregnant women and put infants and children at risk of development problems. He announced he would strip back environmental regulations so as to speed up pipelines, motorways and other big infrastructure projects, plus, again, anti-Obama, a go-ahead for the Keystone XL pipeline from Canada to the US, defying the rights of indigenous people along the proposed route. Climate change was off the agenda in international meetings, despite US Congress saying it has an "ironclad commitment on climate" – Nancy Pelosi (Democrat) "We're still in." Trump's understanding of climate is not great, at least not as great as his judgement, for example, in December 2019 he used a map on TV showing the forecast of Hurricane Dorian which had apparently been altered with a marker pen to support his disputed claim about which US state was threatened by the storm (The Times 26/12/2019). Sounds like fake news – or marking? His knowledge of animals is also thin, famously "grabbing a pussy" is not catching a cat; alligators and snakes may not prevent illegal migrants from crossing the Mexican border (or, he suggests, shooting them in the leg). The Trump administration was scaling back the US government's ability to protect species that are nearing extinction, despite warnings by scientists that a worldwide biodiversity crisis will soon put humanity itself at risk. As could be possible with the coronavirus disease everywhere. The Endangered Species Act, signed by Richard Nixon in 1973, is credited with helping to save bald eagles (the US symbol), California condors, and scores of other animals and plants from extinction. The UN report in 2019 found humans are disrupting the natural world, and putting one million species at risk of extinction worldwide. At least 680 vertebrate species have become extinct in the last 400 years.

Just 24 hours after that UN announcement the US had refused to sign an agreement on protecting the Arctic. Diplomats said that was because of the wording in the deals that stated climate change was a serious threat there. The Trump administration had consistently downplayed or even denied climate change. Perhaps when there are no glaciers left, and Miami and Florida are flooded, so Trump can't play golf there any more, they will change their minds.

In January 2020, Trump briefly attended the World Economic Forum in Davos, Switzerland. Certainly not sub-tropical Florida, but lots of snow and lots of criticism (what he calls "fake news"). Previously former Australian prime minister Malcolm Turnbull has claimed Trump to be "the leading climate denier". His successor, Scott Morrison, has resisted pressure to reduce his country's emissions

that cause climate change, fire and floods. Davos was to become another battleground for Trump. But he seemed to like a fight, and certainly doesn't like to lose. This time the stakes were high - simply the fate of the planet, and that was before Covid-19 really hit. And then his young adversary, 16, turned up to confront him, 73. The world was watching.

Sunset for aviation?
But less pollution
and CO₂



January 2020
Trump takes
two (not one)
jumbo jets to
Davos...

and helicopters...
and limousines...

*"If you're a
star you can
grab them
by the pussy"*



Trump's record of
damaging policies

- Dilutes rules on mercury emissions
- Plans to strip back environmental regulations in favour of big infrastructure projects
- Defies rights of indigenous people with go-ahead for US /Canada oil pipeline
- Refuses to sign Arctic protection agreement



Nature and the national emblem –
bald eagle threatened?



Trump
pledges to
plant
a **trillion**
trees!

?



*Greta, her look could
refreeze a glacier*



Tear it up

Trump had come from the US with two (not one) presidential jumbo jets, plus helicopters and several bullet-proof (wonder why?) limousines. Schoolgirl Greta Thunberg had come by train from Sweden with a lot of attitude, backed by young followers all over the world. He'd come with a very different attitude, but he does like a big event where he's the main attraction. She doesn't care about that sort of thing at all. She's a campaigner, a crusader. He's considered by some of his opponents to be a bullshitter of the most obscene order. Fake news? Who would win in 2020 at Davos, as squillionnaires appear to discuss the future of the planet? There, when Donald met Greta, he didn't want what she was getting. Fame, the face of the future meets a dinosaur, the media says. Fake news? That's why he hates her and her agenda so much, plus all that attention, so globally seen, and that millions of young people respond to. Not him.

To compensate, Trump announced he would plant a trillion trees – not personally one assumes. Along with other squillionnaires, and royalty, they discussed the climate emergency, probably not helping with flocks of private jets. Trump, plus daughter, boasted for half an hour. Tremendous boasting. Phenomenal boasting. He was boasting like no other American president had ever boasted before. His boasts were some of the biggest boasts in the history of boasting. His boasts were truly incredible. You wouldn't believe them. Soon the US would hold a presidential election. Everyone is saying he's going to win it. If he loses, it will be incredible. It will be tremendous. And his fans will drink to that (with bleach or disinfectant perhaps?).

Greta delivered two speeches – she told leaders they need to "panic" about the climate emergency. Local school children held a strike, protesting at the lack of action. Greta said she was still not used

to being a public figure. But she did get to meet the Prince of Wales who had, rather controversially flown in by private jet, continuing in a greener Jaguar electric car. And very green company, Jane Goodall, famous for her studies of chimps in Tanzania. Their forest home is now much reduced. Somehow I don't think Trump's trees would be appropriate. And four days later, it's all over. More than 200 billionaires went home in flocks of private jets, and thereby hangs a problem...a very big problem...which was to connect climate change and the coronavirus pandemic in a double whammy... And Donald Trump turned out to be a loser, which he hates, a proven loser, and, worst of all, a really bad loser. So can planet Earth breathe again? It's up in the air.





Chapter 17

Aviation, Tourism & Travel

A great way to fly – follow the storks!



Shipwreck beach, Zante, Greece – A classic tourist spot



For the good news read on...



What goes up must come down.

Must it? With the airline business that's particularly true these days. The industry often finds itself on the corporate frontline when global disaster strikes. The 9/11 attacks, the SARS outbreak, and the credit crunch (now Covid-19 and planet crunch), all have posed a serious threat to a sector that has always struggled to make consistent profits. Fares have dropped to absurd levels with some budget airlines, whereas first class and private jets are strictly for the wealthy for whom time and comfort are essentials. Modern aircraft are very costly, airports astronomical to build, with climate change becoming an increasingly important factor. Those trends, to an observer, were fascinating to follow, and we'll do that across a time which was to become a mega-crunch affecting not only aviation, but the massive tourism industry, connecting cars and roads, railways, shipping and cruises. In our growing millions we have reached every corner of the planet in every way that one can think of. That spread is like a pandemic, something that we are now only too aware of. It is, in fact, a dramatic story of the ups and downs that affect nearly everyone, especially in 2021/2022. And beyond.

First, some encouragement from the press: "Heathrow is ready to fly high in our new bountiful Britain" (John Holland-Kaye, the chief executive of Heathrow Airport). (He would say that wouldn't he! RB). But "Heathrow's pledge-busting third runway is out of control...a bigger Heathrow would

An uncertain future for the airline industry?



No, a disaster.

Flying to Galapagos? No. Can this very special place and its wildlife survive without tourism?

not only deliver a great dollop of filthy air on West London, it would make a mockery of policy and regional planning." (The Guardian)

In 2015 Boris Johnson famously pledged that he would "lie down in front of those bulldozers and stop the construction of that third runway." More delays, more protests against, more commercial pressure for...yet more growth on a planet with limited resources. It was a shaky time, not just for airports, Bristol's included, but also for airlines that use them and pay accordingly. Up to then climate change was not high on the agenda but it turned out that all of the world's top 20 airlines were risking falling short of the demands of the Paris Climate Agreement signed in 2015. They were not planning for the long haul on climate. In other words, little change on climate change. Aviation contributes 2 per cent to global greenhouse emissions and is growing fast, meaning that it is crucial for airlines to limit CO₂ if climate change is to be kept under

control (The i 6/3/2019). On one hand the public welcomed flight bargains that were almost unbelievably cheap, such as British Airways to Palma, Majorca from £29 (each way, based on a return fare) ..."Incredible is Within Reach"...full page advert. Ryanair: "More Choice. Low Fares. Great Care". Some may dispute part of that, but Ryanair's chief executive, Michael O'Leary, he of fearsome blarney, has suggested shooting environmentalists, and has repeatedly denied that the climate crisis is driven by carbon emissions. (The Guardian 5/2/2020). The pressure increasing all the time, as was the CO₂, not only in Europe, but around the world. American Airlines was rated worst in long haul where Singapore Airlines came top. Local "frivolous flights" for stag and hen parties have been criticized, and some kind of ban on air miles schemes was recommended as they encouraged excessive flying. You could say the sky's the limit, or could well be. It was beginning to look like the aviation industry was about to enter some serious turbulence. So, fasten your seat belts!

Conflict ahead!

When the determination of campaigners like Extinction Rebellion meet the might of the aviation business and associated interests, the media picks up on it, as do the public whose flying future may be threatened. But actually, any threat was nothing like the one to come. Very visible protests drew attention to a new word for the business "flight-shaming". That tireless train traveller, famous climate activist, Greta Thunberg from Sweden, was named by Shai Weiss, chief executive of Virgin Atlantic: "Neither she, nor this issue is going away. Nor should it." That was still up in the air, plus increasing CO₂.

Even if Europeans flew less, the predicted growth of air travel alone would mean an additional 1½ billion to 2 billion passengers flying each year by 2040. Solving the climate issue really depends on China, India and Asia (The Guardian 18/10/2019). (- that was then - the truth was to be very different). Football was in the spotlight too. Greta Thunberg's pigtails would surely flap in righteous indignation at the giant carbon footprint of often arrogant footballers flying around the world in private jets, followed by millions of fans in more modest commercial aircraft. Back in 2018 the numbers were looking bigger and

bigger. 17 months later aviation was heading for the biggest crash of its up-and-down life. With no seat belts to save it. Before that business seemed to be booming - with talk of supersonic; electric; record longest direct flight from New York to Sydney in 20 hours; flying cars; Harry and Meghan in the private jets row. Airlines were competing to look greener than the others... "Delta to invest \$1bn into environmental impact"... London City airport - carbon neutral... EasyJet - world's first major airline offsetting by planting trees costing £25m. BA pledged to remove more than 250 million plastic items of all sorts.



Air New Zealand went a lot further (it is) testing edible coffee cups to cut back on landfill waste. Plant-based, they can also be used as dessert bowls. Then, if you're still hungry you might be able to eat the latest tray as well, made of used coffee-grounds. (No news yet of an edible plane. RB). Waste can be turned into jet fuel to reduce CO₂ from local landfill sites and may be able to produce enough power for a long haul flight for at least five hours, while producing zero CO₂ emissions. The idea won British Airways BA 2119 future of fuels challenge. EasyJet brought forward its Easter 2021 booking period, putting journeys on sale as of 22/4/2020. Over 39,000 flights are due starting from as little as £14.99 (that's very cheap!).



Airlines competing to look greener

Air New Zealand:
Edible coffee cups
London City airport:
Carbon neutral
EasyJet:
Offsetting by planting trees costing £25m
British Airways:
Removing more than 250 million plastic items
Delta:
\$1bn investment into environmental impact

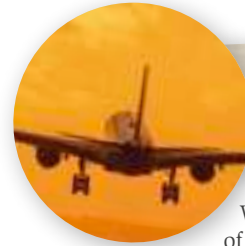


Is this the end of a lot of travel away from home?



What could possibly go wrong? This...

There's no business like when there's no travel business



Worldwide crash!

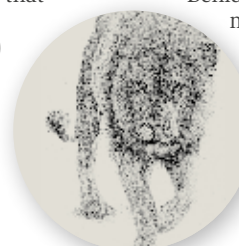
Welcome to the sunset of the aviation industry.

Worldwide. The crash caused by Covid-19, grounding the planet's planes, stuck in flocks like flightless birds. Like ostriches, airlines and airports already had their heads in the sand, ignoring warnings about noise, pollution, emissions, and, most important, climate change. Now could the dreaded coronavirus pandemic come to the rescue? The noise is less, the pollution is less and it's just possible the challenge of reducing CO₂ may be met. Put it another way, if aviation returns to the original "normal", which was an ongoing problem anyway, climate change will take its toll on travel and tourism, and disease will turn out to be just a rehearsal, of this crunch coming towards us. So, can it be avoided? What will happen to travel and tourism, which have been the biggest growth industries to change the planet? Not just the top end with those that use aircraft, but the service sectors, whether they work(ed) as guides, in restaurants, on railways, on cruise ships with crews trapped in their thousands and, so sadly, victims of Covid-19. The crash!

Headline (The Daily Telegraph 29/4/2020): "BA to axe 12,000 jobs as air travel collapses". Once upon a time British Airways claimed to be "the world's favourite airline". Not any more or any other airline, anywhere. BA's parent IAG announced losses of £1.8 billion for the first quarter of the year, admitting air travel will take years to recover from a global collapse and it doesn't help reputations when airlines refuse to refund actual money almost immediately. Not doing this is against the law. Vouchers for later is not the answer, as the future is a mess. Flybe airline was also broken.

There can be a huge knock-on, for example both BA and Kenya Airways flew direct daily to and from London. Passengers were often going on a much anticipated safari, staying at lodges and guided around the wonderful game parks, that were protected partly for their tourist income, which can be difficult to justify to the poor local people living nearby, who want more land, have bigger families and may not appreciate the protected elephants, who can raid a year's crops in a single night. Such "raiders from a threatened ark" may be killed by "helpful" locals, and the ivory sold on to China. So it's income for the poachers, and the farmer can grow his next crop in safety. According to the Sheldrick Wildlife Trust, a living elephant is now worth more than \$1.6 million (£1.2 million) over its lifetime, because of its value to that special word - ecotourism. Beyond

Benidorm, more and more people want to go and photograph real lions in the wild (no offence to Longleat! RB). In Kenya, lions, an endangered species, whose mere presence is worth at least \$1 billion, are the top attraction, working around the clock to boost the country's vital tourist industry. It depends on ecotourists flying in from all over the world, and they help to spread the word about wild animals, plants and places that others may visit and enjoy. Now those opportunities have gone. In 2019 wildlife tourism in Africa employed 3.6 million people and was worth \$29.3 billion. So what about the future? The infrastructure is smashed, jobs will be lost, and wildlife will be killed off as protection stalls.



Is this the beginning of the end for big aviation?

Nick Brandt, the co-founder of Big Life Foundation: "With no source of income, some people will likely feel forced to kill animals in order to eat, and some may try and poach to make money" he says. So what can we do to help? How can we save ecotourism when bookings are drying up and planes aren't flying? "Don't cancel your safari" implores Chris McIntyre, the managing director of Expert Africa. "Postpone it until next year. That's what most clients are doing and it's happening right across the industry." But will that be enough to prevent Africa's vulnerable wildlife from taking a massive hit? Big Life (biglife.org) is asking wildlife lovers to donate to its cause, helping to fund an increase in vigilance over the 1.6 million acres that its rangers patrol and the animals that live there. For now the priceless parks and game reserves are still intact, the very best of the natural

world. (Brian Jackman, The Daily Telegraph 18/4/2020). Of course there are many needs for our money, including especially the brilliant NHS. Saving lives is as vital as it can be, but Africa's wild life and wild places are irreplaceable...

"How unforgivable it would be to lose it all on our watch". Heathrow's plans for an extra runway are collapsing. So did Bristol's bid to expand its regional airport. Was this the beginning of the end for big aviation globally?

Or was it the beginning of the beginning for other forms of travel, more environmentally friendly and more likely to ensure reducing the effects of climate change, which, in turn affects all on planet Earth in the major Crunch. For the record, Spain had intended to spend £1½ billion on re-organising Madrid's airport, while raising passenger capacity from 70 million to 80 million (i 14/1/2020 - before you know-what? So, forget it). OR later...how much later?...take a train, a bus, go by car or bike, or on the water, river or sea. Is that an answer? Let's see.

Please don't cancel your safari

Wildlife tourism in Africa employed 3.6 million people and was worth \$29.3 billion in 2019





**Happy
Holidays!**



Popular
destinations
suffering
from
overtourism

Where is
everyone?



Dead hotel

From massed brown
beaches to empty resorts,
derelict hotels, where the
phone stopped ringing and
goats are the only ones
staying there



No one
answers



In danger



Deadly
Speedboats
cripple turtles



Dead



Only
inflatables
left



Before Covid-19 there was a word increasingly in use in the travel industry – “overtourism”. Destinations like Venice and Barcelona were suffering from it, though some of the residents didn’t mind the tourists’ income. Others wanted their city back. Then they got it as overtourism became undertourism. Several of the most popular countries in Europe for summer holidays, really suffered, because of the virus. The mass human migration in July and August each year used to bring millions of people to the beautiful beaches of the Mediterranean Sea. Some have been ruined in the past by bad and overdevelopment, though, in some places, repairs have been achieved. In the Balearic Islands of Spain an environment tax was brought in, and it would seem visitors will not object too much if they see where their money may be going – to help support those lovely islands, still wild in many corners, despite their mass-tourism reputation. In fact, many years ago, when conservation was a fairly new concept, there was a grand project at a large wetland, rich in wildlife. It was to be “The City of Lakes” on Majorca. There had been plans to drain it, but they couldn’t, so “another Venice” was proposed and canals were dug and hotels started. Some of those

are still visible. But, just in time, the government stepped in and stopped it. So La Albufera is now teeming with nature, and very popular with visitors, with an education centre and more plans for a fruitful future. It’s certainly a wild place where you can maintain social distancing, except for a frog, a duck or a heron!

A very different type of tourism was seriously affected – by climate change. The other half of the “Double Whammy”. Skiing. Not enough snow. Not enough income. Bust. Winter 2019/2020 mildest for more than a century. So, machines to make fake snow. White, yes, but not green, the eco-sort. Go there by green means. And that can involve rail or road, depending on the latest local social distancing regulations. That applies to those popular Mediterranean beaches as well. Greece and Spain made plans. In fact everywhere had to. Could we beat the virus?



Facing the future
challenges of travel

It’s been difficult to estimate the various costs of travel, and that should include the cost to the planet. Will the price of oil change a lot again? Will airline fares rise from the unreal to being too expensive for many, as the companies try to recoup their losses, when thousands of staff and aircraft were grounded. Mind you, that might have had to happen anyway, due to restrictions because of oncoming climate change. Young people would push for that, but the parents may not agree. “My 14-year old daughter has asked that we do not fly,” says the mother. “Both children are very very concerned about the impact air travel is having on the environment” – a lesson that is being drummed into them at school, as has taken place around the world as Greta Thunberg’s Friday’s strikes, and strikes again, and again. “We had the chance to take five days in the Maldives at Easter,” says another parent of two teenagers “It was an amazing deal, and some time de-stressing on the beach was just was the whole family needed. I suggested it at dinner and my son who is 15, looked as if I’d just suggested we kill the cat. He told

me we’d use more carbon in five days than we had a right to burn all year. He said it was incredibly irresponsible of me and there was no way he was going. Devon instead? – the so-called “staycation”.

The net result is not seeing the world as young people have always tried to do. And, by the way, the airline, and the staff in the Maldives are out of business. It seems Greta is still winning with her “effect”. She’s accused world leaders of failing her generation and ignoring the start of “mass extinction” in favour of “fairy tales of eternal economic growth” (Ben Clatworthy, The Sunday Times 23/2/2020). Again, greed before green. When (yes when?) those grounded aircraft are back in business, there are warnings of “pilot rustiness”, equipment maintenance errors and, would you believe, insect nests blocking sensors. Insects win again!

Hopefully, the electric car era will solve some problems, though the energy has to be obtained somehow, somewhere... Rare metals for batteries may be mined by children in the Congo jungle.

The Chinese will compete with the rest of the planet for supplies, use them up, and that could get nasty. They’re certainly a force to be reckoned with as we’ll see in the next chapter. On the water, they have spread around the globe. Cruise ships, that were being built as if there were no tomorrow, were becoming a huge industry. Now with Covid-19 turning some of them into floating coffins, with the crew, and the vulnerable elderly passengers in mortal danger, these massive ships were being refused to dock by unwelcoming ports. Even aircraft carriers were carrying infected personnel. Whether the burgeoning cruise ship industry will sink, seriously, without trace remains to be seen. “Tomorrow” has come and it’s a huge challenge. As is the biggest of them all... the human population, out there on the blue dot. Can it survive the threat, the elephant, not in the room, but on planet Earth. That’s China. And it’s scary. Very scary.

Chapter 18

China / Population



They're winners!

The Chinese are Coming!

There they were then. Two heavyweights, on the ropes, and on the world stage.

The inscrutably inscrutable Xi Jinping, President of China and, predictably unpredictable Donald Trump, President of the United States = POTUS as he's known to his friends and enemies of which there are many out there in the voting crowds. The fight is about the future of the planet, no less, and it's basically about the number of consuming human beings, and the demands they are making and will make into the future. Those demands are not sustainable. Too many of us. Are there any more inhabitable planets out there? Not really. It would seem there will be some big changes - Covid-19 is one of them; climate change is another. The first major round, and one of contention, was how the disaster started? Was it hushed up? Looking back to a similar pandemic... "originally the Sars-Cov-2 virus almost certainly started in bats, which have evolved fierce responses to viruses. These defences drive viruses to replicate faster, so that they can get past bats' immune defences. In turn, that transforms the bat into a reservoir of rapidly reproducing and highly transmissible viruses. Then when these bat viruses move into other mammals, creatures that lack a fast-response immune system, the viruses quickly spread into their new hosts. Most evidence suggests that Sars-Cov-2 started infecting humans via an intermediary species, such as pangolins, maybe in a market". (Professor Edward Holmes of Sydney University - The Observer 12/4/2020). It's ironic that the pangolin, or scaly anteater is the most trafficked animal for its meat, and scales for unproven Chinese medicine. Sold in markets, closed for a while, but always a victim to rampant senseless, unsustainable greed, this little creature, now highly endangered, can be compared with the destruction it happened to pass on, with drastic impact, to infect an apparently wise (?) species (homo sapiens (?)) right across the planet. Was that the "revenge" of such persecuted creatures? Was it our fault? Yes, it was.

Is a mask a gag too? What little we know about the internal workings of the Chinese state, and the state of its economy, is carefully manipulated by this particular man Xi Jinping, who was seen by the world as Trump's main enemy. This was despite

all sorts of grand plans for grand deals, the sort of thing Trump loved and may make him look good. If they don't work out, he could be in trouble with his committed (up to now) support crowd. What was a huge political punch-up was de-railed by something so tiny, so deadly, most of the world wouldn't have believed it possible. Until it hit. And hard. Covid-19 had already made fools of both contestants, the world's two most powerful men. Xi Jinping has faced unprecedented criticism over his handling of the first recorded outbreak in Wuhan. Was the news ruthlessly suppressed? The death from the disease of Li Wenliang, a young doctor, who sounded the alarm in Wuhan in December 2019, but was gagged by party officials. It sparked an online revolt. Xi Jinping tried to remain inscrutable but Covid-19 was out, and very soon, very much about, initially striking northern Italy and then right across Europe. And then the whole world.

In the USA Donald Trump more or less ignored the approaching threat. In this case the typically unpredictable Trump was predictable - the reaction was about him. But his usual trick of diverting attention to something else didn't work. His country and much of Europe, including the UK was fatally unprepared. Amongst Trump's other tactics, he suggested the pandemic was a fake Democrat plot to harm his re-election chances. "It's embarrassingly obvious Trump is not up to the job" (Simon Tisdall, The Guardian Weekly 20/3/2020). He claimed "China is desperate to remove me from power". That's fighting talk, so the battle continued...

Enter another combatant, the British government. It refused to knock down Trump's suggestion (another distraction?) that the coronavirus may have first emerged from a Chinese laboratory in Wuhan. It was an unproven (typical of Trump) theory that it had escaped/ was released (?) from the Wuhan Institute of Virology, a lab that studies bat coronaviruses. Trump latched on to that. In the UK and many other countries there are similar highly secret, highly lethal establishments working on killer diseases. If only those huge costs could be used to help nature instead of destroying our own species in stupid wars involving death and destruction...hardly signs of civilised societies. The USA must certainly have such labs and armaments to deliver them. Another twist to the story was when China's foreign ministry spokesman hinted

that US soldiers may have brought the virus into China. But back to the Wuhan lab and Trump's latest diversion...Fake news? His answer to a reporter asking for evidence about the lab being the origin of the virus: "Yes, I have. Yes, I have." When pushed later about what he'd seen: "I can't tell you. I'm not allowed to tell you that". (By whom? Fake news?) Meanwhile the Trump administration had abruptly cut off funding for a project on how coronaviruses spread from bats to people.

China denies Trump's allegations, repeated by his side-kick Mike Pompeo, US secretary of state, who claimed "enormous evidence" (Trump-type spiel), but with nothing to back it up. With nothing more to go on, the spotlight switched back to the original theory that the virus came from animals in the so-called "wet" market in Wuhan in December 2019. Pompeo urged China to close, permanently, such markets that sell freshly slaughtered wildlife close to live animals. Much of it is illegal, endangered and terrified, kept in horrific conditions until killed for whatever reason. Apparently, it tastes better when freshly killed and in total panic. That's what the Chinese customers want. One should accept, perhaps, the behaviour of a very different culture, but, as China's population grows inexorably, the toll on wildlife is bound to increase. These animals are brought in from all over the world, often in dire straits. They are of the planet, not for millions of Chinese to dispose of as they wish. For Traditional Chinese Medicine (TCM) doctors dole out procedures - including acupuncture and moxibustion - plus pills and powers, plus goat horn and bear bile. On so-called "bear farms" where bears are kept in cramped cages and subject to a method approved by China, and in which they puncture the bear's abdomen to allow bile to drip freely out from the gallbladder. They don't live very long like that. But we must remember how we use animals in some farms in Europe. And it's potentially much more serious. Poultry and pigs, for example, are factory-farmed and pandemics can originate there. Even wild species can be involved as expanding human populations (see later), pushing into previously undisturbed ecosystems, has led to increasing numbers of human infections of animal origins. Ebola and HIV are examples where small-scale farmers have been squeezed out by humanity spreading, and then coming closer to the edge of the forest where bats and the viruses that infect them survive.



The people may not, such is the virulence of the “Chinese disease” as Donald Trump clumsily called it. Beijing was not happy with that taunt, and it didn’t help the big trade deal much. Other countries are heavily connected with the wildlife trade, William Hague, (The Daily Telegraph 14.4.2020): “a consignment of six tons of pangolin scales, hidden beneath bags of cashew nuts, the largest ever such seizure, probably equating to around 15,000 animals, poached from the wild and killed. That was in Malaysia. Add on Vietnam, Laos, Burma (Myanmar), Indonesia and Thailand where Chatuch’ak Market in Bangkok is still selling wildcats from Africa, and foxes from the Sahara plus snakes, monkeys and lizards. Parts such as bear paws and tiger skins are trafficked too in the huge gruesome trade.” Loopholes remain and those involved will wriggle around them – fashion, TCM, entertainment.

It will take huge pressure to slow down and control the wildlife trade, now worth many millions globally. Shaming, and losing face may work in those Asian countries, but, if it doesn’t, the world’s wildlife will be shattered. If there are any of some species left they may just recover because there are no humans to trap, trade and torment them. Covid-19 will have killed us off. So is the answer to kill off the bats that seem to be the source of Covid-19? Or pangolins, another link? Mark Jones, a vet and head of policy at the Born Free Foundation said that wild animals may be the source, but they are not to blame for the transmission of the virus to people, “we all carry viruses all the time and normally animals are not made sick by viruses they carry”, he said. “But viruses can replicate very rapidly in the right circumstances.” When animals are stressed, ie, when trapped, traded or

traumatised in a market, their immune systems are suppressed, allowing viruses to replicate and mutate so they can infect new hosts such as people. Perhaps, understandably, in a vast country with 1.4 billion people all aspiring to better themselves, there is a massive cumulative need, indeed demand, for more stuff. That stuff can range from anything to anything. And it must come from anywhere, and the demand will inevitably go on increasing, driving the wildlife trade, not only in living animals but parts of dead ones. Ivory from elephants is used in ornaments and jewellery, hardly what in pandemic-speak is considered “essential”. Except to an elephant. An extreme example was that of the notorious Ivory Queen, convicted by a court in Tanzania, which dealt a significant blow to the Asian crime networks behind much of the slaughter of Africa’s elephants. Yang Fenlan Glan, 69, pretending to be a respected member of the community was jailed for 15 years, sending a powerful message to other Chinese smugglers. Secretive and under cover, this grandmother had stolen two tonnes of ivory from elephants, worth £1.7 million over 14 years. Yang from Beijing was among China’s first students to graduate as a translator during the Chinese-funded construction of a 1,100 mile railway between Tanzania and Zambia. She’d been watched for months before police arrested her after a car chase. The game was up for this Ivory Queen, but this game for big game is not over. It’s deadly serious and Chinese crime and influence reaches far and wide, a wide spectrum of territory – from your local takeaway to a global takeaway of the planet’s riches and resources – maybe offering Covid-19 in exchange? This “rape” reaches the deep sea where China is using a scientific ship

to explore the South China Sea in what the United States has called an appalling attempt to exploit the confusion caused by the coronavirus pandemic. The ship, the Haiyang Dizhi 8 spent months quietly mapping the seabed off Borneo; a perfect example of early global domination of the planet; in this case for potential minerals. No one knows what impact that would have on this mysterious zone, except that it would probably prove disastrous to the oceanic ecosystem, on which all life ultimately depends, not just that of the Chinese. By chance, two tourists on a trip to Antarctica in 2020 reported: “On March 19 the horizon lit up like a football stadium: a Chinese pirate fleet of hundreds of boats fishing illegally for squid, lighting and luring the prey to the surface. It took three days to sail past.” Hong Kong: Customs seized 26 tonnes of smuggled shark fins from about 38,500 endangered animals in two containers from Ecuador. The record haul highlights the demand for the “delicacy” served at wedding banquets. Most of the fins, cut off the living animals and dumped back in the sea to die, came from thresher and silky sharks, both endangered species (The Times 8/5/2020). But marine life can be very prolific and sustainable for humans. That requires quotas and protected areas for breeding. Whether China will be able to conserve stocks remains to be seen. Unless they can recover from overfishing, both the Chinese and their prey are doomed. But they don’t seem to care. But can they afford to?”

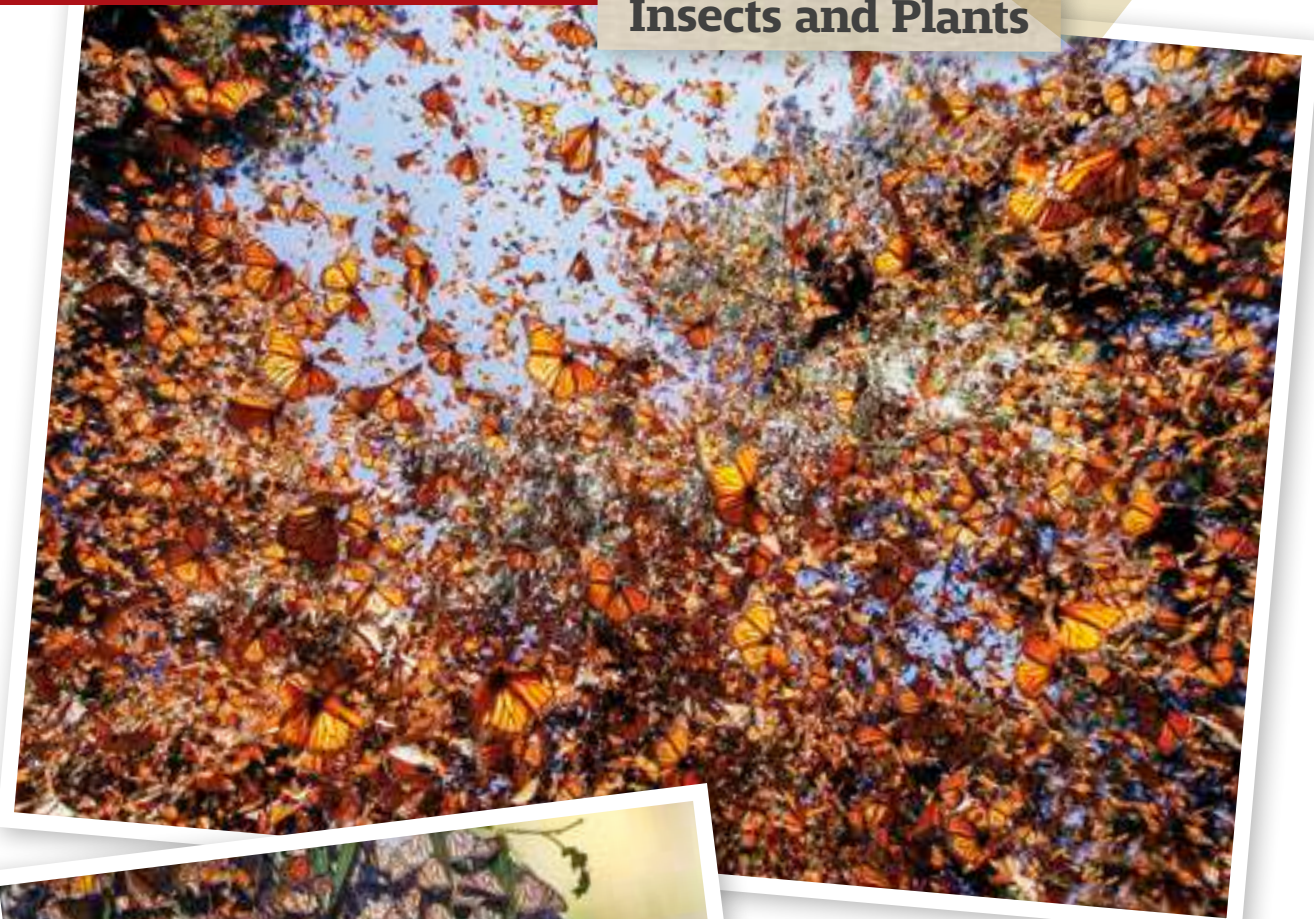
Whether it is ripping off technology from Western countries, driving other businesses out of the marketplace by aggressive and state-backed bidding, or even economically colonising countries around the world, China believes, rightly as it turns out, that the West has become too weak for it to fear. Nothing demonstrates Chinese arrogance or disregard of us better than its handling of coronavirus” (Sir Iain Duncan Smith, The Daily Telegraph 25/4/2020). Increasingly China’s strategy is to infiltrate a country, probably bribe a corrupt politician, providing a generous loan. Chinese teams will build the railway, airport, port, dam, road/motorway, stadium. When the politician(s) move on, they proudly point to their country’s new asset. Then comes that kind of crunch: the Chinese want their loan money back. Instead, they demand it in resources. So they’ve effectively bought out Zambia’s copper, Ecuador’s timber, the rich fishing grounds of parts of the Pacific Ocean. And that goes back to feed the insatiable appetite of the lender – China.

Gallery of Gatherings

Up Nature’s Kingdom – from plants to us

Selected from the wonder-full
Nature Picture Library (NPL)
ascending up the plant and animal
kingdoms – to man.

Insects and Plants



Millions of monarch butterflies hibernate in pine trees in Mexico, migrating to and from North America.

And the diminished countries have lost out to a strategy repeated worldwide, driven, and depleted, because of Chinese greed. But what can they do about it? Is this progress? No, it’s too many people, wanting too much, due to unsustainable lifestyles. Having built that strategic harbour, airport or road, China is already getting a grip where it wants to, a global network that can straddle the Earth. Look no further for their ambitions than the “Silk Railway” route between the city of Xi’an in central China and Izmit, 70 miles from Istanbul in Turkey. The journey takes 12 days, about half of what it took before. It leaves Xi’an every Tuesday and is 4,000 miles long – the rather strangely named “Belt and Road Initiative” (what is the belt bit?). Nothing is beyond Chinese determination or scheming, or skills even. Going upwards, they plan to clean up Mount Everest, the world’s highest mountain – and rubbish dump.

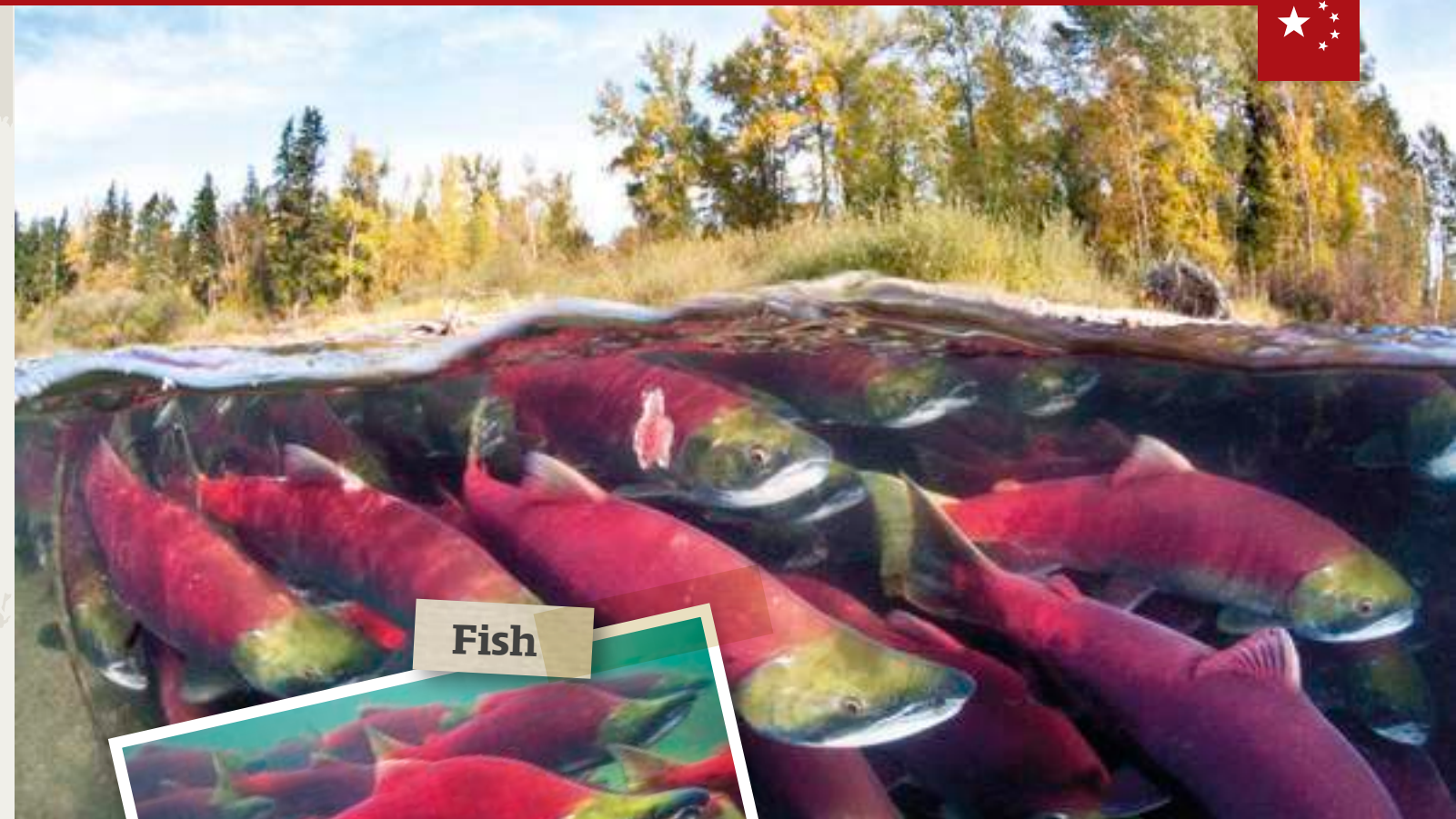


Making an indelible mark, not only in Kenya, but all across the planet



Survey teams will help rescue what were once pristine slopes, enjoyed, but littered by decades of commercial climbers. Certainly income for the business, but much of it dumped, like tents, oxygen bottles and piles of frozen excrement. Lovely job! China is also believed to have removed the bodies of several dead climbers over recent years. And on up and further up. Much further. To the Moon, Mars, Space. China has announced the launch of an advanced rocket in the space race with the United States. (What a waste of space is that? RB). The successful launch comes as China flexes its new military prowess with the unveiling

of several recent weapons, including a 40,000 tonne amphibious assault warship and a new line of nuclear-powered submarines, each with 12 missiles, and a range of 7,000km. It's also preparing to unveil its first stealth bomber, which is a scary idea (the whole lot costing a fortune. RB). These weapons of war (so-called "defensive") can be built very quickly, as have the facilities at which to base them. This whole area is disputed by no less than five countries, not including China, which is the main dominant one. The others are the Philippines, Malaysia, Brunei, Taiwan and Vietnam.



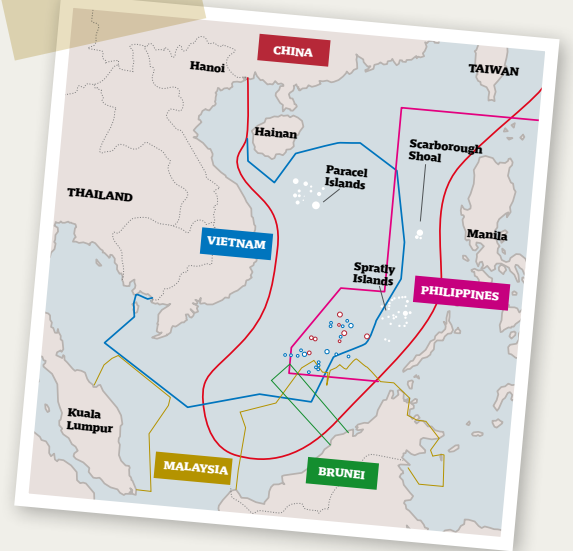
Fish

Sockeye salmon cover the river bed where they've come to breed – and then die.

To add diplomatic insult to injury the Chinese sunk a Vietnamese fishing boat – hardly a defensive act. Beijing has been steadily, and as secretly as possible, strengthening its claim to virtually all of the hundreds of reefs and islands scattered across this part of the South China Sea. It has blasted immaculate coral reefs, covered them in concrete, polluted the sea, all for military airports equipped with radar, missiles and aircraft. New so-called "research stations" on Fiery Cross Reef and Subi Reed have been transformed into stationary aircraft carriers from which it can deploy offensive weapons. Goods worth \$5 trillion are shipped through the South China Sea every year including the oil that fuels the economies of China, Japan, and South Korea. That's a lot of oil, worth a lot of money.

If you were once someone who was fortunate enough to visit the Spratly Islands in the South China Sea you would have enjoyed a paradise underwater with coral reefs and an unpolluted natural tropical world of great biodiversity. Forget it. It's now a complex of military Chinese might. In a powerful strategic bid to control, what was an albeit controversial area, it has been transformed into an obvious, deliberate, military offensive in one of the most important shipping routes in the world. This is not some Chinese whim; it is effectively a version of Chinese war,

conflicting with several other countries. This is clear aggression where once there was none. So how can it be restrained, if at all? The odds are enormous, the results scary, and no one can sort it out. So far.





Amphibians



Frogs crowd together jostling for females amongst masses of spawn.

China's grabbing of this piece of the planet's ocean is another reminder of its global greed and intentions. It is driven by the demands of a burgeoning and massive huge population. Of course, in the past countries invaded and took over others, and those legacies still remain, sometimes comfortably, sometimes not... the British Commonwealth, the French in West Africa, the Germans in Namibia in South Africa, the Portuguese in Brazil, the Spanish in Central America, the Dutch in the Caribbean, and the Americans often where they can build important strategic bases, for example the island of Guam in the Pacific. Can that be compared with what China is up to in the South China Sea? Despite efforts to reduce friction and conflict, and negotiate a peaceful future, it does seem mankind is steadily going in the opposite direction. Millions of refugees are the result - from Africa to Europe, Central America and Mexico into the USA, with huge camps in Myanmar, Kenya, wars in Libya, Syria, Yemen, Congo, Ethiopia... is it human nature? The United Nations does its best, but the nations of the planet are not united and probably never will be, such is the behaviour of the species homo sapiens = wise, which seems to be becoming increasingly unwise. And that is despite repeated warnings from the wild, the ecology of planet Earth. Ecology and economy are inextricably intertwined, and if we get that combination wrong... as they say, cockroaches will inherit the Earth!... the only survivors perhaps? And don't forget Covid-19. What nuclear submarine, missile, rocket, stealth bomber can cope with the dreaded, invisible, unstoppable (?) disease? It brought down the airlines and

aviation business everywhere. In China its three largest airlines recorded their steepest quarterly losses, £1.6 billion up to March 2020. Tourism will be knocked back. The Chinese made 143 million trips abroad in 2017. That's a lot of selfies! And they spent more than a quarter of a trillion dollars - more than any other country. That's a lot of dollars!

But never underestimate the ingenuity (cunning?) of this so-successful vast country, China. In the city of Wuhan, coincidentally, where Covid-19 originated - exactly how has been discussed a lot - there is another plot afoot. At the university there a team have designed a new kind of jet engine that may be able to fly planes halfway round the world without using fossil fuels. The prototype, dreamed up by Chinese engineers, relies on thrusters powered by compressed air and electricity to create a zero-carbon flight. Microwave air plasmas are part of the formula now being worked on. (The i 7/5/2020, Madeleine Cuff, Environment Reporter). Perhaps this will enhance China's reputation about the environment. According to Boris Johnson (The Daily Telegraph)... "may I respectfully suggest to the Extinction Rebellion crew that next Earth Day they look at China, where CO₂ output has not been falling, but rising vertiginously. The Chinese now produce more CO₂ than the EU and US combined - and more than 60% of their power comes

from coal." If it's not the air and climate change, it's water, which is also connected. A US study revealed that China hoarded water in drought conditions on the mighty Mekong River. Dams on China's stretch held back large volumes of water, thus depriving countries downstream of crucial supplies. China disputed the findings of the American study, which complicate discussions between China and other Mekong countries on how to manage the river, a vital lifeline that supports 60 million people in Laos, Myanmar, Thailand, Cambodia and Vietnam. And that's a lot of people!... China not included, whose total population crept past 1.4 billion in 2019. Chinese couples wishing to have more than the two children permitted by law can now do so without the threat of losing their jobs as Beijing, grappling with a growing demographic crisis moves away from its "zero tolerance" stance. And threatened by increasing criticism of its record of human rights and "genocide".

Kenya in East Africa has one of the biggest and fastest birth rates in the world. When Covid-19 arrived it moved quickly through the huge slums of Nairobi where "social distancing" is not an option, and where you may need your children to help in your old age. That's if they survive for long, and you do too. That depends on food, clean water and sanitation - and space (not the sort that rich countries spend a fortune on to the doubtful benefit to anyone).





People and the Planet

Brazil’s leaders must take immediate action to save the country’s indigenous peoples from a Covid-19 “genocide”, a global coalition of artists, celebrities, scientists and intellectuals has said.

In an open letter to the Brazilian president, Jair Bolsonaro, figures including Madonna, Oprah Winfrey, Brad Pitt, David Hockney and Paul McCartney warned the pandemic meant indigenous communities in the Amazon faced “an extreme threat to their very survival”.

“Five centuries ago, these ethnic groups were decimated by diseases brought by European colonisers,” they wrote. “Now... (they) may disappear completely since they have no means of combating Covid-19.”

The organiser of the petition, the Brazilian photojournalist Sebastião Salgado, said trespassers including wildcat gold miners and illegal loggers must be expelled immediately from indigenous lands to stop them importing an illness that has now killed many hundreds of thousands of people all around the world. And may never go away.

“We are on the eve of a genocide,” Salgado, who has spent nearly four decades documenting the Amazon and its inhabitants, told The Guardian.

Even before Covid-19, Brazil’s indigenous peoples were locked in what activists call a historic struggle for survival. Critics accuse Bolsonaro, a far-right populist in power since January 2019, of stimulating the invasion of indigenous reserves and dismantling the government agencies supposed to protect them.

“Indigenous communities have never been so under attack,” Salgado said pointing to crippling budget cuts and the recent sacking of several top environmental officials who had targeted illegal prospectors and loggers.

But the letter said the pandemic had made an already bleak outlook under Bolsonaro even worse by paralysing what protection efforts remained.

“As a result, there is nothing to protect indigenous peoples from the risk of genocide caused by an infection introduced by outsiders who enter their land illegally,” argued the signatories, who also include the artist Ai Weiwei and the actor Meryl Streep.

Salgado warned that the 300,000 indigenous people in the Brazilian Amazon faced annihilation.

“When you endorse or encourage an act that you know will eliminate a population or part of a population, this is the definition of genocide,” he said. “(It will be) genocide because we know this is going to happen, we are facilitating...the entry of coronavirus. It would mean the extinction of Brazil’s indigenous peoples.”

Fears Covid-19 could devastate indigenous communities grew last month when the death of a Yanomami teenager revived horrific memories of epidemics caused by roadbuilders and gold prospectors in the 1970s and 80s.

The Brazilian city so far worst hit by coronavirus is Manaus, the capital of Amazonas state, where part of the Yanomami reserve is located.

Salgado admitted Bolsonaro would not act of his own volition but he believed international pressure could force the government to do so.

“Just in the Brazilian Amazon we have 103 indigenous groups which have never been contacted – they represent humanity’s prehistory,” Salgado said. “We cannot allow all of this to disappear.”

RB: In terms of my surveys of the media of all sorts, nothing, but nothing comes close to the coverage of Covid-19. All TV channels, radio, social media, and the press in its many forms have flooded the UK, and indeed the whole world. The news varies hugely, from dire in the UK and USA, to encouraging in South Korea, New Zealand and Austria. Watch this space. In the meantime, it’s worth looking at the opinions of respected reporters with a look-forward to the future. Such pandemics as Covid-19 have been predicted, and have happened before, and really tested the human race to its limits. But what are those limits today? Surely the main central question is about the human population?

Population is about copulation. “Birds do it, bees do it... human beings do it.” A lot. It’s (usually) enjoyable, and a primary instinct whether you’re a tiny amoeba in a pond or a mountain gorilla in the jungle. There are many types of reproduction, but the result for man-and-women kind is overproduction, which threatens to bring

destruction to the planet. Arguably it is the main threat. Or is it? Much of the damage we see, often via the media is blamed on an excess of people – everywhere. There are very few places left unscathed. But can they be repaired? Can wildlife be brought back from the brink? (see next chapter – 19). Chris Packham, known mainly as a nature-lover, rather than a people-lover, graced the front of Radio Times, an honour indeed, and featuring his *Horizon* special “7.7 Billion People and Counting”... which revealed...slow increase up to 5 million...year 1800 – 1 billion...1960 – 3 billion...today – 7.7 billion...2050 – 10 billion? The last 6 generations saw the biggest population growth of our species. In 1960 Sao Paulo in Brazil had roughly 4 million people. Now it’s 22 million plus. Jair Bolsonaro, president (“a tropical Trump” – help!) is keen to expand into the Amazon savanna, and rainforest for its timber, minerals, cattle and soya, which will displace or infect indigenous people, who have adapted to life in the “lungs of the planet”. The taking of their own resources for not only Brazil, but, for example, timber, cattle and soya, for export, to hungry, greedy China and Europe, shows the connection that, combined with the human population explosion is the other big challenge for the human race. Indeed, “Planet Crunch” is everywhere, and the pressure is increasing all the time. So the basic problem is not sheer human numbers in what appears to be the most crowded places like Lagos in Nigeria – 1.4 million in 1970; estimated 20 million today, (who knows?), average birth rate of five per woman. It’s something else, as The Guardian’s far-sighted, sometimes controversial George Monbiot writes: (5/5/2020) “Yes, population growth does contribute to the pressures on the world. But while the global population is rising by 1% a year, consumption, until the pandemic was rising at a steady 3%. High consumption is concentrated in countries where population growth is low. Where population is highest, consumption tends to be extremely low. For example, an African child may receive nothing at all, except perhaps a bowl of rice, for Christmas, whereas an English child may get another new bicycle, or a socialising toy – that’s until the latest version comes out, then the friends have one, so the parents buy that “new improved” version, pushed

Reptiles



Small person, very big carpet of marine iguanas in the Galapagos.



by the biggest of companies. They can well afford to help in Africa and some do. But many don’t. James Dyke in The i 13/2/2020: “The perennial problem with population solutions to sustainability challenges is that they assume the problem is humanity. But when it comes to climate change, the problem is largely caused by only a fraction of it. Half of all global emissions, of carbon dioxide are produced

by the richest 10%, while it’s the poorest 50% who will be most harmed by climate change. If we were really serious about getting a handle on our climate impacts, then it’s the 10% we should focus on”. Up until now the richer sections of society were those that were flying most, and, as it happens, contributing to emissions which were leading to yet more climate change.

Many, including activists like Greta Thunberg and Extinction Rebellion, protested at airports, even on top of the aircraft parked there. Now the whole aviation industry has crashed, due to Covid-19 and, at least for a while (how long?), the skies will be cleaner. So the pandemic helped achieve what the activists were so active for.





Birds



Letter to Time magazine (14/10/19): “If our climate collapses, no other problem is important. If voters continue to elect men like Trump and Brazil’s Jair Bolsonaro, there is no hope. Not only because those men refuse to see the problem, but because voters apparently don’t see it either. And the chance that all the nations on Earth will get together to solve climate problems is an illusion. I won’t live to see 2050, but I’m not sure I would want to. The painful and costly changes that should be made are not attractive. It’s like the Titanic: we see the iceberg, but it’s too late to change the direction”, William Schaefer, Denzlingen, Germany. (In the meantime, are we just re-arranging the deckchairs on a fated journey, at international conferences? RB). Across the planet, the trends and decisions on climate change, and population, are confusing, not unlike the UK’s handling of Covid-19. Overcrowding, and over here – thousands of displaced, desperate and starving migrants, who swarmed, swam and died trying to reach Europe, embarrassing almost every unwelcoming country... “Yes” – needed financially to pick fruit and veg, become NHS staff, or “No” – to wave upon wave of others. These are not necessarily more people on the planet, rather than, clearly, in the wrong place. That could be the beautiful Mediterranean Greek islands on Lesbos, Chios, Kos, Leros and Samos. There will be five “detention centres” that were already inundated with 50,000 migrants and refugees. Nowhere to go. No hope. Locals don’t want them. But they do want European tourists from Britain and Germany – their main income. But who wants to share what was an idyllic island with fighting police, sick children and filthy plastic slums? There’s a backlog of 90,000 asylum applications, fleeing from war-torn Middle East, Asia and Africa, already hit by drought, floods, famine, and recently worsened by locusts. They breed a lot as well, but are edible! That’s not much consolation to the thousands, hoping desperately to travel on to somewhere, somehow...away from the “people asylum”. But seeking asylum is what they crave.

Is this a licence to mate? For Greeks in their own country their country has introduced a “baby bonus”, offering £1,700 as an incentive to new parents, following projections that the country’s population of 10.7 million will shrink by a third in the next three decades unless declining birth rates are reversed.

By the end of that time, according to Eurostat, 36% of Greeks will be over 65, with severe implications for the workforce

and a social security system already under strain. In 1970 only 7% of the population was in that age bracket.

“People might think this is an issue of national pride but it’s actually one of national preservation,” said Domna Michailidou, the deputy minister of labour and social affairs, who has pushed for the bonus and other benefits including child-linked tax relief. “Given that high productivity rates are associated with young populations and not actively ageing ones, it’s also an economic growth priority.”

Greece is far from alone in facing such demographics – although, at 1.35 births per woman, its fertility rate is among the lowest in Europe. Across the Mediterranean, Spain, Italy and Cyprus face similar issues.

The declining birth rates, and inevitable diminished productivity, have increased fears of Europe’s north-south economic divide deepening. But for Greece, which is slowly emerging from a near decade-long debt crisis, the desperate demographics could also undermine the country’s fragile economic recovery.

More than its EU partners, Greece has been hit by the punishing effects of austerity and a young population in flight. Close to 500,000 people emigrated between 2010 and 2015, when unemployment rates nudged a record 28%. Now settled in more prosperous areas of the continent and America, Canada and Australia, most were young professionals of child-bearing age, likely to consider having families.

“Having 5% of our population, people able to earn high incomes and of reproductive age, leave the country has further compounded everything,” said Michailidou.

Even before Greece’s depression – in which it lost a quarter of its economic output – fertility rates had fallen well below replacement level. When the crisis hit and stringent cuts were imposed in return for international rescue funds to keep the EU member afloat – and in the eurozone – the country’s health budget was slashed by more than 40%.

“The big drop in funding and the effect it had on medical services, especially

on islands and in remote mountain areas, created a lot of insecurity in women,” said Dr Stefanos Chandakas, a gynaecologist whose charity, Hope Genesis, focuses on providing free healthcare to pregnant women. “Stillbirths increased because many women missed out on crucial prenatal tests and a lot decided to postpone having children at all.”

Chandakas said visiting more than 30 islands at the height of the crisis, he and his team had been shocked at the visible lack of pregnant women. Schools, similarly, were bereft of children. In some, school parades took place with a single child.

“In the case of Fourni, which has a population of 1,000 people, there were zero births in 2014 and 2015,” he recalled. “Now that we are offering medical services and have this safety network in place, we are convincing more to have children. Today there are 11 ongoing pregnancies on Fourni.”

Michailidou, who at 34 is the cabinet’s youngest member, has also championed opening more nurseries and crèches so that mothers can return to work. “To increase and ameliorate the country’s human capital potential, we have to ensure that women re-enter the labour force,” she said. “I feel very strongly about this. We have seen how it works in countries like France.”

The policies are the most serious step that Greece has taken to address its demographic problem. The baby bonus alone is expected to cost €180m a year, the equivalent of 0.1% of GDP.

Billed as the first electronic benefit in Greece – applied for by text or online – it will also be available to some non-EU citizens, a decision that has raised eyebrows among more conservative supporters of the centre-right prime minister, Kyriakos Mitsotakis.



White storks in many thousands soar from Africa to Europe and back each year. Just starting to nest in England again after 600 years.



For the good news see page 142



Mammals



Gelada baboons pack in around another primate, a wildlife cameraman with an easy subject for a change.



Question: will the “baby bonuses” be increased because of deaths due to Covid-19? Playing God is always risky and some others seem to be doing just that. In Hungary, prime minister Victor Orbán said fertility was of “strategic importance,” following taking over Hungary’s fertility clinics. Orbán, an anti-immigrant nationalist, has long advocated a “procreation over immigration” approach to deal with demographic decline. The country’s population has been falling steadily for 40 years. In 2019 Mr Orbán

said Hungary would offer mothers who have at least four children lifetime exemption from income tax in a bid to boost birth rates (how does that work with Covid-19?). He said the measures were being introduced to reverse population decline without relying on migrants coming into the country – for example via Greece. Ruthless fences and walls, like Trump’s promise (part of the prototype blew over) to stop immigrants fleeing from starvation, oppression, and the effects of climate change on farming and food, have

now been built over much of Europe. One result is the separation of certain wildlife species that are “trapped” such as foxes, wolves, deer and bears. In other words, Europe has been turned into a group of enclosures, segregating both people and nature. Perhaps to compensate, Victor Orbán, he of the “baby bonus” idea, has vowed to plant 10 trees for every newborn child, which he says “will increase the country’s forest area by 27 per cent by 2030.” So it looks as if there’ll be lots of Hungarian children growing up, and lots

of trees too. Let’s hope they don’t get chopped down for timber, firewood, or the land that they’ve grown up on, because there are too many people!

Not far away in Russia Orbán’s equivalent, president Putin has got the same “problem” for his huge country, but not for the planet as a whole. The prediction was that Russia’s population could fall by up to 12 million people in the next 20 years. The United Nations said that, in the worst case scenario, the country’s population could almost halve to 83 million people by 2100. Dmitry Peskov, the Kremlin spokesman, described the demographic hole as “very unpleasant” (not talking about Putin). So Russia is aiming to allow ten million foreigners to obtain citizenship after its relaxed its laws in an attempt to reverse that long-term population decline (Marc Bennetts, Moscow, The Times 20/4/2020).

There’s no doubt every single birth is a very big moment for the parents, and obviously for the mother. On television, *Call the Midwife* is a hit TV series on BBC-1, plus *One Born Every Minute*. (Who’s counting, how many? Where? Who knows?) Harry and Meghan want to stick at two, so does Alex Jones a familiar presenter on *The One Show* on BBC-1. She’s actually a “two show” girl with no more “for her and husband Charlie”...adamant that for the sake of the planet, two children is enough. That’s good publicity for the planet, though president Maduro of Venezuela also has a large following, and urged women to have more children. On TV he told one woman “May God bless you for having given life to six little girls and boys.” He added: “Every woman should have six children for the good of the country.” Venezuela’s economic crisis has led to food and medical shortages, rising malnutrition and child mortality. (The Times 5/3/2020). Not exactly the best world to be born into. Nigeria is hardly a family-happy homeland, but the intense wish to have children sometimes cannot be denied. Meet Margaret Adenuga, aged all of 68, who became a mother for the first time after giving birth through IVF. She’d been trying for a child since 1974 and is thought to be the oldest first-time mother in Africa. And then two came along at once. Twins! Her husband, Noah, 77, a retired auditor, said they had spent their savings and travelled between West Africa, Britain and elsewhere to conceive. The successful delivery of their son and daughter followed a fourth IVF attempt. “I am a dreamer. I was convinced this dream of ours will come to pass.” Noah told CNN TV, “a single course of IVF at a private clinic in Nigeria costs about £2,000 – a miracle...or rather two.”

Family planning is better for the planet, and in less fortunate countries it’s better for the parents, especially the mother, who in some cases is hardly ever never not pregnant. There are various ways to avoid this of course. Covid-19, apparently, has slowed the British birthrate – dropping anyway. “Sexual distancing probably helps, but maybe, also, variations on themes:

“My wife just agreed to a threesome, Now there’s no one as happy as me, I’ve just got to work out how to tell her, She’s not going to be one of the three”

“Intimate occasions”, so delicately referred to by Durex, may or may not be included in a problem page...”this guy wrote in to say he thought lockdown was a great opportunity to explore a nascent interest in BDSM (*Fifty Shades* stuff), while his girlfriend...well she didn’t think that.”

“Happy news at last amid the gloom and doom. Experts predict a baby boom in 2021 as couples seek “solace and distraction” during the virus lockdown... or as we call it in our plain-speaking household, (“partaking of horizontal refreshment”). The theory is strengthened by the fact that there is a global condom shortage after the coronavirus halted production at the world’s biggest manufacturer...back to work but with a shortfall of 100 million condoms – so do the maths, people. You do the maths.”

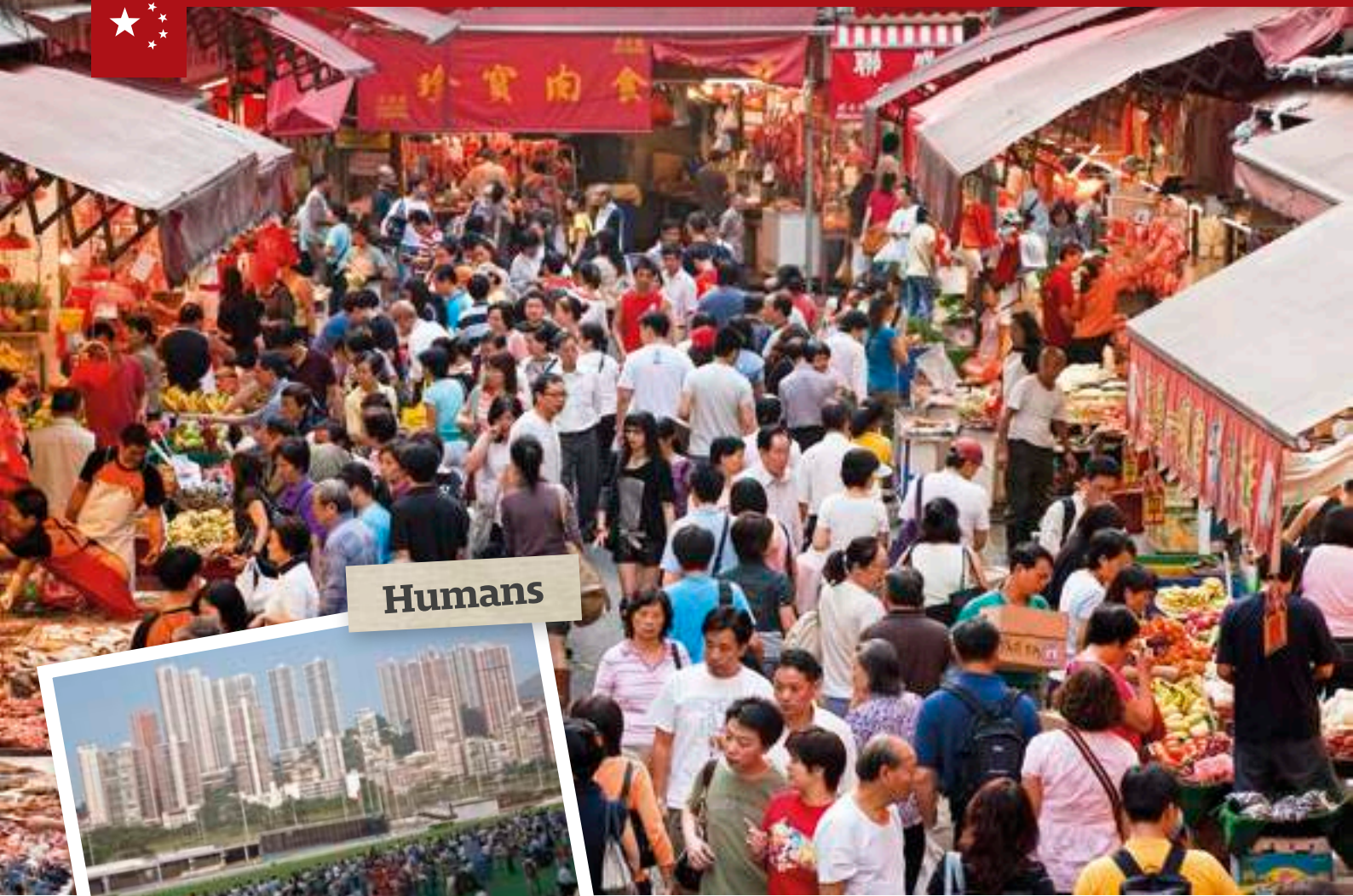
(Carol Midgely, The Times 1/4/2020)

And talking of maths, do we really know how many children Boris Johnson has? That may not be relevant in the light of his very public dilemmas about locking down the country. As we’ve seen, population pressure and consumerism are fatally connected. And so is climate change and biodiversity. As David Attenborough told Radio Times in 2013, “Either we limit our population growth, or the natural world will do it for us.” Because we entirely depend on it. Everyone of us. So how can we get back from the brink?

It can be very tricky. If you like lemurs very much, as David Attenborough does, having filmed with them in Madagascar, it’s pretty clear what the problems are. An impoverished woman there may have up to ten children. To feed them, she must clear the land to plant rice. Many, much richer, people elsewhere want to help lemurs, unique to Madagascar. Money may be donated but, in the end, human birth control is probably the answer

China. It’s the planet’s biggest mouth with an insatiable appetite which requires feeding – on the world’s natural resources. To achieve this it has reached out everywhere it can. Its ambitions are awesome, its impacts sometimes devastating.





Humans



**The Chinese. No social distancing at this time.
And their buildings grow up and ever upwards.**

China's a perfect example of a short-sighted attitude for political and natural resources reasons again. You can see similar examples around the world as humans increase and resources dwindle. Can we fix it? China, as a country of 1.4 billion, is hardly restricting itself to the region. Its reach is remarkable, an exceedingly ambitious plan which combines sea, rail, road, including a pipeline to Siberia (\$400 billion), the so-called Belt (?) and Road scheme (\$1.3 trillion), a claim of £40 billion to mine gold and silver in the Himalayas (look out for pandas?), to the Antarctic for, as ever, mysterious perhaps sinister reasons. They also tried to do a deal to take drinking water from Russia's Lake Baikal, the world's largest freshwater lake by volume, known as the Pearl of Siberia. It's home to some 1,500 endemic (local) species including the world's only

true freshwater seal, the nerpa. More than one million people signed an online petition which said: "let us stop this travesty regarding our sacred lake". The plant was expected to process 530,000 litres of water per day by completion in 2021 with 80 per cent of production being exported, mainly to China, South Korea and Mongolia. It was ruled illegal but yet another greedy grab for resources that belong to the planet, don't they?

Not that long ago China's image was of a huge distant, rather strange, very crowded country, with the few only outlets being Chinese takeaways in our towns. Now China is taking away the planet, and its millions appearing everywhere, mostly on selfies, whilst consuming more and more, and wanting more and more beyond that. The cost, not just to the Chinese customer, but to the planet is unsustainable.

Though travel may be restricted because of what Donald Trump jokingly (?) called "Klung Flu", was born there. Wealthy Chinese middle classes like trophy-hunting. There's been an increasing flow in tiger bodies, skins and trophies from South Africa to China for both commercial trade and "personal" consumption. South Africa's big cat "factory farms" are breeding tigers as well as lions for Chinese "hunters" to shoot in fenced enclosures. In China bone wine is very popular, produced after a bone is steeped in alcohol and blended with herbs and spices, an example of "traditional" medicine, curing arthritis and it can be used as an aphrodisiac (unlikely). We may have our own strange tastes like snails, tripe, liver and octopus, but most people would settle for a blue pill called Viagra for sex, not needing to kill a tiger, a lion or a jaguar in the process.

**Wishes it could
change its spots**



**Jaws in reverse.
Grotesque greed**



It's certainly better for the big cats which are in jeopardy worldwide, where they are in conflict with man (in fact, "leopard jeopardy"). The fast-growing Chinese middle class is the main threat. For example their demand for donkey skins to make traditional medicine could wipe out more than half of the animals' global population in the next five years. In Kenya more than a thousand are being slaughtered daily in Kenya for their hides and meat. Nearly five million skins are used every year to make *ejiao*, a gel sold in China as a remedy for everything for colds and ageing (not presumably, Covid-19).

As Chinese investments, a major strategy (so-called "debt traps") increases in Central and South America another fine big cat, the jaguar, is threatened by illegal poaching and deforestation. Money chains across the world, from Beijing to Zimbabwe, 32 baby elephants were taken ("snatched") from their mothers for zoos - for a price, angering animal rights supporters: Joanna Lumley, Brigitte Bardot, Judi Dench, Ricky Gervais, Pamela Anderson, Bryan Adams and Virginia McKenna.

Donkey "medicine" may (probably not) make a person feel better, but it certainly doesn't help the previous owners of the family's helpful companion. The loss of a donkey often pushes families into poverty and leaves the arduous task of fetching water to women and children, putting them at risk of attack or forcing them to drop out of school. Kasima, a widowed mother of nine children (compare China) lost one of her donkeys to smugglers in Kenya. She was eventually able to save

up the money to replace the animal (still at risk), but her daughter had to spend an entire term out of school. "My whole life I have relied on the donkey; it feeds me and my family and educates my family too" said Kasima. Other countries such as Pakistan, Senegal, Botswana and Uganda have all banned exports. If you have a fancy wedding, you'll be wanting shark-fin soup won't you?...to prove your status. The status of that banquet ingredient is to be deplored. 73 million of these crucial apex predators in the ecosystem are killed a year, fuelling a practice labelled the marine "gold rush". More than a quarter of the world's shark species are threatened with extinction. After finning, sharks are often alive as they are discarded overboard and they die of suffocation, bleeding or by being eaten by other predators. The soup can cost up to £180 a bowl. I hope you enjoy it! What did it taste like? Probably like chicken - with a glutinous texture. RB writes: "After filming with

David Attenborough in Borneo's famous caves, where the tiny swiftlets make their saliva cup nests reached by (almost) impossibly high, fragile bamboo ladders, and apparently suicidal "harvesters" we went for a (well earned?) meal. So, of course, not fish and chips, but bird saliva. With chicken. And what, David, did it taste of? Answer: chicken, actually. As with the shark fin concoction, it seems that it was only the glutinous ingredient that added anything at all. So, what a waste of a shark, that most ancient of creatures. Fortunately the swiftlet harvest is controlled. I can't remember what the cost of our film crew's outing was, but it made a nice little sequence. And I'm sure that the ever-vigilant expenses office in the BBC understood the claim. A new one, perhaps, though probably not as intriguing as when we claimed for a new tyre when a rhino (charged £10) at our travelling vehicle. The rhino didn't remember the incident, except the headache."

**Valued
beasts of
burden.
But by
whom?**



**Donkey
wash!**





Assuaging the appetite of China, as a whole, is probably impossible. Such is the increasing demand (needs?) of an increasing population, it's doubtful if the planet, that's all of us, can cope. But we can try. One problem is, as with China, the "second hand" connections. Have you got a nice new smart phone, tablet or electric car? If so, you've also got something that you've wanted (needed?) that is driving a child down a mine in DRC in Africa (Democratic Republic of Congo); or in Canada and Australia. That's the true cost, via Glencore, the world's biggest producer of cobalt in your wanted (needed?) items, for batteries, Tesla cars, and our favourite social media novelties. There'll be a new model any day soon, so keep the kids down the mine, whilst Glencore makes its millions. Maybe they could spend that money on helping the planet, rather than exploiting it. Increasingly, shareholders, and the public seem to agree. Just ask Shell and BP. But the take goes on, around the world. Chinese demand for the very stinky durian fruit is turning into the next big threat to Malaysia's depleted rainforest, already ransacked for oil palm for our lipstick, ice cream, shampoo and other essentials (alternatives are available). As the forests of Malaysia and Borneo go, the human-like orangutans, with a new species recently discovered in Sumatra, with only 800 probably left, will also go. China's state-owned Sinhydro will (?) build a dam in the latest project of the grandiose "Belt and Road" plan to extend China's economic and political influence. Money talks, oranges don't, at least to us. If they could what would they say? "Go away please, leave us alone. It's our place. We like it like this. In any case, we were here first". But, probably, no one's listening in Beijing or Sumatra. Such "progress" is not necessarily bad, but there's usually a way of compromising, but big money and bad politics are a deadly combination, or, you could say, the fatal weakness we all face. Particularly China. A solution, everywhere, is less people, less growth – in fact sustainability. Is that reality though? With a population of some 1.4 billion, including 400 million middle-income earners it's a source of tremendous spending power. Until Covid-19.

It's ironic that China's growth increased towards the end of 2020, partly because of sales of masks and protective equipment – against Covid-19, which they started in China. A neat circle!

Meanwhile China charges on. "For years it's been able to grab what it wants, whenever it wants. It has perpetrated

grotesque human rights abuses in Tibet, Xinjiang and Hong Kong with no more than faint hand-wringing from the West. Its carbon emissions are greater than the USA, EU and India combined. Beijing and Xi Jinping has learnt that the planet is its for the taking" (letter; Robert Frazer, The Daily Telegraph 9/4/2020). What exactly does "our" planet mean? Is it for everyone to take what they want? Even if it's unsustainable? China has long been a major importer of wood and that just keeps increasing, including illegally sourced wood products from the world's forests, potentially sustainable, but only if treated with care, replanted and protected. Mostly they're not, but more people everywhere now understand this, and also now know who the greedy villains are. As the climate warms, due to those immense emissions, shipping routes in the Arctic open up more, and for longer. New ports handle bigger ships, move more wood as the forests fall on their way to China. Or, as the tundra dries out, methane is released, fires spread in record heat and more trees go. At the Equator, in Malaysia, the tropical forest there is being re-arranged to accommodate Forest City, where a rich ecosystem once thrived. It's a Chinese dream, an ecology, for rich Chinese people, hopefully not a nightmare if a pandemic arrives, started in an animal market back home. All the signs are in Mandarin. Wealthy Chinese are looking for a safe haven for their cash, and air they can breathe without the help of a mask (unless Covid-19 shows up). Then come the enablers who provide health and education, also Chinese. The British may be hired to run a posh prep school. Security guards are Nepalese mainly. And finally, the Bangladeshis and Indians who build, repair and clean – the invisibles.

Is there any limit to these global tentacles? Apparently not. Beyond Forest City are 16 countries in China's sights, vulnerable to "debt book diplomacy", including Vanuatu, the Philippines, Cambodia, Laos, Thailand, Malaysia, Sri Lanka, even as far away as Tonga and Micronesia. The total sum of their potential, already raided somewhat, is vast. Timber, fish, tourism, minerals, oil and gas – you name it, they've got it. But risk losing it, according to the US State Department, who warn that Chinese investment and "support", like useful ports (for military and fisheries to use later?) roads and other infrastructure to move, and ship timber out, and airports to fly (Chinese) tourists in – Covid-19 plus vaccines permitting. These tricks are familiar and many countries are now being effectively blackmailed – Chinese style – to get their "loans" back, "prioritising itself

to capitalise on the fiscal distress of Pacific Island countries". And many other places too...like the Moon for example. Not just any old part of the Moon, but the dark side of the Moon – also known as the far side. It's all part of a very expensive race for space between China, Russia and America. Of course money, big money, is behind it and, inevitably behind that was Trump, that (ace?) property dealer. He signed up for starting mining in space with no internationally agreed treaty. There's always talk about living on the Moon, and Mars too, but when you compare the Earth's biodiversity, and potential, and threats to it all, you wonder why anyone would ever want to live on those lifeless specks in space. Or could money be spent repairing the one we've got? And which we seem to be overwhelming.

Famous for its birth control laws – keeping to two, China is now easing that policy, which will mean, maybe later, less consumption, less aspirations to buy bigger and, possibly, better. From nappies, and everything else in, or made of plastic (=oil) to the grave, it's difficult to predict China's, that's the Earth's future. We've seen how an invisible virus can shatter us. Some say it's revenge because of the way we mistreat animals in markets, and produce our food, and mismanage whole ecosystems. More pandemics may be coming, as they have before. In the meantime, as the human birth rate in China continues to fall, which sounds like good news, it turns out more humans are having cats and dogs instead (as it were). They make good company and don't need those nappies. Last year China overtook the US to become home to the world's largest population of cats and dogs at 188 million (who counted?) with numbers projected to grow to 2024 (keep on counting). For a change, how about a giant panda – not just for Christmas, mind. Of course, it's the Chinese symbol, an icon for world wildlife conservation. So for another piece of good news, more big numbers. The Bank of China has pledged at least 10 billion yuan (\$1.6 bn) to create a vast panda park in south-west Sichuan province by 2023, the Chinese forestry ministry has said, measuring 2 million hectares, making it more than twice the size of Yellowstone Park in the US. Great park for the local people, great place for the pandas – now up to 2,000 in the wild. And a great boost for China. Because, in its way, nature can save the planet – and us.



Nature and Us



Stork reflecting competition?



Owner checking Damage? Insurance?



Man's best friend

For the good news read on...



Could anything be as cute as a giant panda? Perhaps a little baby one.

If you list its best bits: rounded; furry; cuddly; harmless; sits upright; uses its paws; vegetarian – eats bamboo; has big eyes – actually it doesn't, they're eye patches – real eyes are small; high forehead; reluctantly sexy; rare; endangered; lives in remote parts of China. The perfect toy, the perfect mascot. Walt Disney got it, hence Mickey Mouse, Bambi and Co., money-spinners born in Hollywood. We all love all animals, don't we? Or do we? And do they love us? Why?...when we hunt them, torture them, imprison them, kill them?

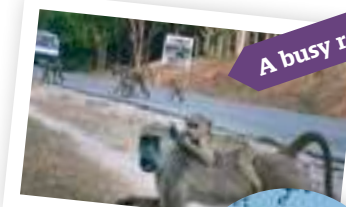
Do they deserve it? Do we deserve it when they respond? It's a can of worms – how do they feel?...never made it to Hollywood. Don't give up!

In this last chapter we'll examine the wide-ranging relationships between us and them. But, remember we are part of nature – in fact, without it, we are as nothing – from microbes in the soil to our nearest relatives the great apes, we collide with them all the time, and everywhere. We raise money to save orangutans, whilst destroying their forest home in Indonesia to grow palm oil for our shampoo, lipstick, and ice cream. How will this relationship

between animals, plants and us, and planet Earth, in the year of "Planet Crunch", work out? Take that classic dilemma, the wolf, that dog. Wolves have had a bad press ever since the Little Red Riding Hood story broke. "Man's best friends" come in all shapes and sizes, but the original wolf has problems living next to man, but who's invading who's territory? And wolves killing humans is almost, truly, non-existent. Dogs kill and injure many more. So do viruses, which you can't even see. That's called a pandemic and it's not friendly to us at all.



A busy road for animals



But a ladder helps...



...get to the figs

We often forget that the best protectors of places are local communities, who often live on the frontlines of poaching wars. Samburu warriors had never seen a rhino before; some had never even seen a photo of one (imagine their surprise, finding out it lives where you live – a dinosaur on your doorstep!) And why might they get involved in learning how to cut its horn off?

Actually not one rhino, but 400 of them. That's the scale of the problem because of the now-familiar greed of the notorious Chinese animal-lovers – to eat as powder or similar.

Ben Webster in The i 15/5/2020 "Four hundred rhino are having their horns removed in the biggest such operation to protect the animals from a surge in poaching on a South African game reserve.

Poachers were taking advantage of the absence of tourists during the coronavirus pandemic to shoot rhino and cut off their horns with chainsaws while they are still alive to sell for use in Chinese medicine. Fifteen rhino have been killed in the past few weeks, including one on Wednesday night near an empty game lodge, according to the Aspinall Foundation, the British conservation charity that is underwriting the £100,000 cost of the operation.

All the rhino are being tranquillized and dehorned by vets in order to make them unattractive to poachers.

Damian Aspinall, the casino and zoo heir and chairman of the foundation, said it was the biggest rhino dehorning operation ever undertaken and he was supporting it with "a very heavy heart". Truly, horns of a dilemma.

He said: "We should be able to leave these animals alone in peace to live their lives naturally. I find it depressing that humans behave so barbarically that we have to do this. It's also stupid because it's keratin and there's no medical value. But if it means their survival, I think (dehorning) is a necessary evil."

Mr Aspinall said the process was painless and the horns would regrow at a rate of four to six inches a year, but the dehorning had potential psychological consequences for rhino. They use their horns to defend themselves so the foundation is dehorning them all on the reserve so none is left vulnerable to another rhino with an intact horn.

The foundation said tourists helped to deter poachers because there were normally thousands watching the animals but there had been a sudden drop in the past few weeks. It said many local people had lost their jobs because of the lack of tourists and this may also have contributed to the rise in poaching as an alternative source of income.

Those who have lost their jobs in ecotourism, like local guides, rangers, staff in safari lodges and all sorts of other services affected by the pandemic may be forced to turn to poaching from their previous livelihood. And, of course, some of them know which animals are where, and those animals have come to trust those people and their vehicles. This bush meat provides an income, depletes the nature reserve which then suffers from questions about its value as a tourist attraction, and is at risk from losing legal protection, which is unlikely to be restored. For rhinos, worryingly, already under pressure, its horn is being touted in parts of Asia as a cure for the coronavirus. And who's doing that touting? Well, our friends in China, no doubt, they who brought us the wonderful surprise (a global pandemic as actually predicted) in the animal market in Wuhan. The positive outcome from a near cessation of aviation, and a fall in shipping is that the skies have become cleaner and illegal wildlife and ivory traders have fewer routes out, with greater scrutiny of outbound cargo. There was also more good news – antique ivory dealers lost a challenge to Britain's strict ban on sales. This antiquated business had been rumbling on for years but was eventually killed off, like the thousands of elephants in the past, to earn money and prestige to a sad and sorry market. Poaching was part of that supply, but eventually the threat was reduced in some surprising ways. President Putin of Russia, for example, not your most obvious supporter of friendly fire.

Truly, horns of a dilemma!





Good friends

Her, him
and a turtle



(Marc Bennetts, Moscow. The Times 30/11/2019). Russia has provided small arms to Gabon to help it fight against elephant poachers in a move that comes as the Kremlin steps up its bid for influence and resources in Africa.

The delivery is thought to be the first time in either Soviet or Russian history that Moscow has supplied weapons to the central African country. Russian state media described the firearms as a “gift” to Gabon. The Russian defence ministry did not specify the exact number or type of firearms involved.

Gabon is home to Africa’s largest population of forest elephants, the smaller, much rarer relations of the savanna elephant, but poaching has devastated their numbers. In the past 15 years, 25,000 elephants have been killed by heavily armed poachers, who hunt them for their ivory tusks.

Julien Nkoghe Bekale, the prime minister of Gabon, was among more than 40 African leaders to attend a two-day summit and economic forum hosted by President Putin in Sochi last month.

Moscow has \$14 billion of arms on order from Africa and the event included displays of Russian weaponry. Dmitry Kurakov, Russia’s ambassador to Gabon, said Moscow hope that the delivery would “enhance co-operation” in environmental protection between the two countries.

Parts of Africa are, effectively, war zones not about territory, resources, politics, religion – the usual ones – but nature. Is this shooting in the right direction? It can be fatal, not just for the wildlife, but people too.

Not that far from Gabon in west Africa, is the huge protected area in central Africa, the Virunga National Park, a world heritage site. Protected, yes, but safe? No. Not if you’re a mountain gorilla, who made David Attenborough famous in ‘Life on Earth’ on TV 30 years ago, ...or even people desperately keen to help them.

Five rangers and a driver guarding critically endangered mountain gorillas have been ambushed and killed by bandits at Africa’s oldest national park.

The Virunga National Park, a world heritage site in the Democratic Republic of Congo (DRC), had only recently reopened to visitors after a closure forced by the kidnapping of British tourists and the murders of several staff.

Attacks by bandits at the 3,000 sq m park have claimed the lives of more than 180 park rangers. A sixth ranger was shot in the head in the latest incident, on April 9, but survived. Virunga’s authorities have attributed the killings to the Mai-Mai, an umbrella term for the disparate armed militia in the DRC’s lawless eastern provinces near its border with Rwanda. More than 2,000 bandits are thought to have over-run the area, fighting for control of natural resources, poaching rights and, recently, oil-prospecting concessions.

The park, established in 1925 by the Belgian colonial authorities, is patrolled by 800 rangers recruited from impoverished local communities.

“Virunga has lost some extraordinarily brave rangers who were deeply committed

to working in service of their communities,” Emmanuel de Merode, the park’s chief warden, said.

Last May a gang attacked a vehicle carrying tourists to their park accommodation. A female ranger aged 25 was shot dead, a Congolese driver wounded and two British visitors, Robert Jesty and Bethan Davies, were kidnapped. They were freed the next day.

Home to hundreds of rare birds and animals as well as its famous gorillas, Virunga has recorded some conservation successes, including boosting the mountain gorilla population to more than 1,000 from the 300 recorded in the late 1990s. The population of rare forest elephant is also rising.

So the big sexy species get lots of attention and media coverage, but it’s those unseen little workers that run the planet, and, if we lose them, we will lose ourselves too. How can our “best friend” help? With the big photogenic animals like rhinos and elephants, dogs have come to the rescue. In Africa, the trade in illegal horns and tusks is estimated to be worth approximately £16 million a year, with the demand driven mostly by Asia, where imported animal products are prized as status symbols and as supposed remedies. More than 1,000 rangers have been killed around the world in the effort to protect, helped by vital dogs, of course. Trained from puppies, with a sense of smell estimated to be between 1,000 and 10 million times better than humans, and

they can hear four times further. Ready to go at 18 months old they’re a force to be reckoned with, teamed up with handlers and helicopters. This is the challenge – the team is a solution, which costs £11 million a year to run. The right breed for the job. “Foxhounds and beagles are naturally equipped to track poachers, detect weapons and find poached horns. Belgian Matinois, agile dogs, similar to German Shepherds, are also adept at “bite work” (sounds painful – RB), and detaining intruders” (Jane Flanagan. The Times 16/5/2020). In Europe special dogs protect sheep from wolves, a rather different rôle from your average “sheepdog” (see later). Yes, we owe it to the dogs. Their mood varies hugely, from one end to the other, from wagging tail (happy?) to snarling teeth (angry?). Same animal, different messages. Give the wolf a chance. Now increasing in many countries, it turns out Little Red Riding Hood read it wrong perhaps!

From dogs to cats. They’re all lovely – and cuddly – aren’t they? 13.5 million of them in Europe. And they love us too – in fact, for many people, they’re a vital part of their lives, as their only companion.

But friend? Really? A happy cat is a fed cat – and often on its own terms, some would say. But when you go from small domestic (or ex-domestic = feral) the trouble starts. The same vibes and signals sent by your adorable (one or two way?) pet are replaced by a killer instinct inherited from skilful ancestors in the distant past. Skills now utilised for attention, being stroked and, mainly, getting fed. And a massive industry has grown up around pleasing cats – and, in turn, it seems they please us. But, despite enough different cat foods to justify (=earn) a whole big aisle in an American mega-supermarket, you still end up with a bird-killer. Yes, a natural hunter, equipped with sharp senses and claws to destroy or maim your garden birds, that you also love. No wonder “SOS Save Our Songbirds” has many supporters, but not nearly as many as the RSPB, the Royal Society for the Protection of Birds, with over a million members. We know the Queen likes her Corgi dogs, but what about cats? Can one love both pet cats and wild birds? That’s a tricky question, but because of the decline of many small bird species, the vote should be for them, the birds, and against the killer cats. We don’t

really need them, but they seem to want to need us – if only for food. Perhaps its better they eat supermarket (+ “tuna”, “chicken”, “lamb” flavours) than your favourite robin. Next? “Robin, blackbird, field mouse” flavours. At the other end of the feline scale is the “King of the Beasts”. Buffalo, antelope, zebra flavour is his preferred taste. Lacking in any sort of taste (not because of Covid-19) was a Netflix movie called *Tiger King*, a smash hit.

Such “lion exploitation” movies are hugely popular and hugely ridiculed, indeed hated. If you care about cats (and probably have a little one at home) you will sympathise with that pleading look, plus purr. Also, in South Africa, when you find out about some 70 emaciated big cats, mainly lions with some tigers – bones for the Asian trade – you will despair. Also, there’s sort-of “hunting” – shooting in enclosures for so-called “trophies”. How sad is that. There are about 200 farms with a total of 12,000 lions in captivity. “King of the Beasts” should read “Beasts” when applied to humans involved in this vile business.



Dogs and cats come in all shapes and sizes.

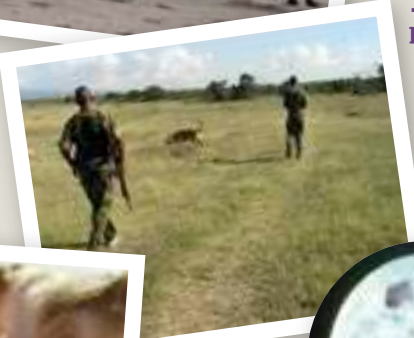
Wolf pups – a snack for the Chinese



Chase the ball...



...or a poacher



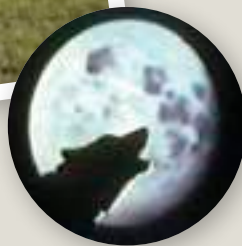
Spot the dogs amongst the action



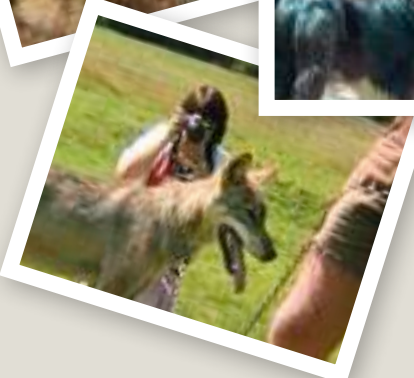
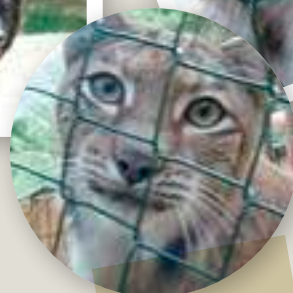
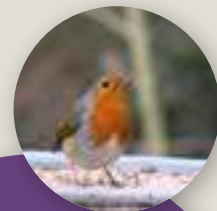
Dog's eye-view



...or talk to the Moon



Small cats kill small robins. Big lions kill big buffalo, and we kill lions. For fun?"



Much kinder business in Los Angeles, California, where, like many urban singles the mountain lion, or puma, romantically called P-22 lives a solitary life in a too-small habitat. And he has a hard time finding a mate in the big city. (Perhaps he should change his name to be more Hollywood – Walt, Brad, Leonardo? – not so much P-22 – although he's probably not too aware of the disadvantage.) His main problem is crossing two fatal freeways, stuck in an LA park with no chance of spreading his genes, which is what is usually what happens around there (they say). So being the city of big spenders, transport officials and conservationists will build a \$87m (£71.5m) wildlife crossing giving the big cats and other creatures a safe route to open space and better access to food and potential mates (so P-22 won't need to change his name). "For those of us in LA having a romance prospect quashed by traffic is something we can all relate to" said Beth Pratt of the National Wildlife Federation. Leonardo DiCaprio chipped in: "We're doing this in LA, a city of four million people. If LA can do it, it can work anywhere". (The Guardian 22/8/2019 – four months before Covid-19.) How much of a luxury is this bridge for a few mountain lions, compared with dying Americans? A crunch.

You could also be asking about deaths of people because of mountain lions. Always, anywhere, in a shrinking wild world, predators are up against humans – literally. There are many examples of this – some solvable, others probably not. We'll see. Many people love nature but only on their terms. Animals usually lose. And you can see why. Further north, in much wilder Vancouver Island, Canada, a mountain lion was fought off by Chelsea Bromley's bare hands, as it attacked her son, Zack (7), grabbing him by his arm. Minor injuries. It seems two mountain lions were possibly starving, because they'd lost their mother for some time. And a human mother could have lost her son. Result: conservation officers found both animals in the area, their home, and killed both. Humans: 2 Mountain Lions: 0. Whose home was it? The mountain lions were there first. Tigers, too, are tough customers, especially if they're next-door, or, rather next to you, as part of an expanding human population, moving



closer to their squeezed home. Quickly labelled as "man-eaters" in northern India, villagers crushed a tiger with a tractor after it was accused of mauling a farmer. Two days earlier, the hunt for a tigress ended in outcry after she was shot dead. You might think your cuddly cat at home is naughty, killing nice little birds and mice. But when it's that much bigger and can eat you, it's a very different perspective. Tigers, if only commercially, are one of the biggest tourist attractions on the planet. They're probably one of the largest land predators we must try to learn to live with. Rich, selective tourists helped the economy but, as India, the tiger's last main refuge expands, not only its human numbers, aspiring maybe to those tourists' life-styles, people of the planet must try to find room for the most photogenic, charismatic, iconic, magnificent creatures ever to have graced planet Earth. (You can tell I like tigers a bit – RB). And the great news that their numbers are increasing under protection.

Cats can be adaptable, though cat-owners will tell you which their favourite chair always is. For bigger wild versions this adaptability can lead to problems – as ever for both sides. Take leopards, for example. A very versatile species, can climb, swim, run and grab - in many countries. And, as ever, again, it's not always welcome. For example, in a remote Indian village, not a tiger this time, but a leopard, which attacked five people before occupying a house, after a 12-hour stand-off. It had left its forest home, perhaps hungry for a dog (a favourite), or a cat? It was tranquillized, taken to the zoo, checked out, and released back into its forest after a couple of days. But it might just come back for a dog, especially if there's human pressure on its home. Can we share?

Possibly the worst thing that can happen to that beautiful speedster, the cheetah, is to become a pet. Your domestic moggy is, literally, at home and, mostly, happy there. But cheetahs are particularly fashionable as exotic pets, for selfies, bought by rich people in the Middle East, who have much more money than sense. Any sense. More than 300 cubs, at up to £15,000 each, are shipped from Africa each year to feed an "insatiable demand". Three in four cubs, stolen from their mother, never reach the homes of the wealthy prospective buyers,

dying along the way. A tragic waste of an endangered species, traded to be posed blatantly by sheikhs, pathetically thinking they look good. Only the sad cheetah looks good and the man, or woman, looks stupid. 3,000 of the beautiful cats are kept domestically in the UAE. In Kuwait City they are kept most of the day in cages in an apartment. That's a far cry (maybe?) from the open plans of the Serengeti, or Masai Mara in Kenya. Other friends own lions, and gave the stupid woman tips on caring for a big cat. She said: "I had cats and dogs before, but I wanted something taller and bigger." (Tip from RB: Send her a hungry man/woman-eating tiger.)

And now for two happy cheetahs. They were born in captivity, but will be the first to be "rewilded" in South Africa. Saba, and Nairo were hand-reared by Damian and Victoria Aspinall at Howletts Wild Animal Park, near Canterbury. A glimmer of hope in a world of excess and stupidity. There is still time, particularly if we don't try to revert everything to the original "normal". Because that kind of normal was the problem, and it's taken a microscopic, invisible, deadly organism to give us a chance to do better. Let's take it – to repair and rescue our damaged planet. Not just two cheetahs to South Africa, but

more to India, also home of the tiger and leopard, truly a potential hub for big cats. Cheetahs will be released back into India's forests 70 years after they were hunted to extinction there. African cheetahs will be transported, which is controversial, but at least it's better than nothing, ie no cheetahs at all. There are only 7,100 wild cheetahs left in the world, and only 50 of these are Asiatic cheetahs, which are found in Iran. That's pandemic-prone, unstable, and cheetah scientists have been arrested there, accused of spying (they were – on the rare cheetahs), and imprisoned. Cheetahs are mild, cool cats. Leopards and tigers are a lot less so. But what happens when the less lovely animals (to some) turn up? We're talking crocodiles, alligators, snakes, lizards and all sorts of predatory cold-blooded characters. Our relationship with them is often put to the test, though some people do love them! They've survived for millions of years, since the age of the long-dead dinosaurs, in fact. They are still around. It's impossible to predict whether they'll continue to survive in our changing world. But some would say it is humans that will disappear.



Those new words for many people: “pandemic”, “furlough”, “testing”, “tracking” and “tracing” can involve dogs too. Dogs with, or without, jobs that is. An out-of-work bloodhound is an unhappy bloodhound, but he’ll be back in the tracking and tracing business soon. Maybe. There are dog-jobs elsewhere, as in Essex, England where they can help

find water voles, for a study into this endangered mammal. Much further afield, and much more risky is saving koalas in the terrible Australian bushfires. Rather oddly named “Bear”, a five-year-old border collie cross, is trained to sniff out animals’ fur (another good reason for stupid people not to wear fur – see “fashion” later). Bear himself wears some cool booties to protect his paws. When he detects a koala he promptly sits below the tree and waits for his human friends. Three billion animals are estimated to have died, including at least 6,300 koalas in New South Wales alone. Those rescued are plumped up and released where there is still food to eat. Bear is hardly a perfect pet due to his “obsessive compulsive nature” (whatever that is, but probably not a good look). But those qualities make him a perfect detection dog, passing the interview with ease. “He’s gone from zero to hero” was the verdict. But he’s not quite in the class of another collie sheepdog across the world in Wales. Not just any old sheepdog but a “Megan” sheepdog, 2 ½ years old and worth £18,900. Emma Gray, 34, sold her to an American beef cattle owner Brian Stamps who’s into serious trading. He bought a Wagyu heifer for a record £216,000, producing steak up to £150 a lb. Meanwhile Emma back in Wales, winning sheepdog trials, writing a book “One Girl and Her Dogs” about the difficulty of finding a husband but gaining the label of Britain’s loneliest shepherdess. Well she got the husband, Ewan Irvine (41), a sheepdog fan and a fireman (as you do).

Now they’re all together, with Megan, the star. And don’t forget, dogs are descended from wolves, often seen as man’s worst enemy, ironically leading to, famously, “man’s best friend”.

Cattle, sheep and goats are now part of our culture worldwide, though our enthusiasm for meat and dairy has diminished greatly, if only because of the food chain impact of burning the Amazon rainforest for cattle and soya. Veganism, plant burgers are now the order of the day. Goats can turn rubbish into human food, and in some places live permanently on waste dumps. Not sure about the flavour but if you’re desperately hungry, in say Indonesia, that’s

the least of your problems. Goats will eat that scary invasive species, Japanese knotweed. They do that on the polite cliffs of Bournemouth, Dorset. But when they hit towns, they can munch up gardens, floral tributes in cemeteries, adding their own particular scent to the proceedings. In Wales, Llandudno, empty because of Covid-19, it was just like Christmas, as they strolled past the shops, snacking hither and thither as only goats can. They’re both good and bad news – in some countries they have eaten every single thing and turned landscapes into desert, ruining the livelihoods of nomadic tribes who once depended on them. Ecosuicide. Both human and goat family planning would help a lot. But some people love them – as pets. Trouble and Mabel (the goats not the owners) often escape and even tried to get on a bus (a number 72 by the way, to Rhondda in Wales). “They’re so naughty... the things they get up to, you wouldn’t believe”, said possibly amused owner Fay Wilson-Yeates. Then they went up on a neighbour’s roof, before being taken back to their pen – return bus ticket?

Yes, we see our pets from a single goldfish or budgie, to flocks of sheep or herds of horses. We give them names, we pay fortunes to vets and can be inconsolable when they die or have to be put to sleep, with cremation as emotional as the human equivalent. That’s partly because they don’t argue, and we simply like them and thank them for their companionship. Even a goldfish for a lonely person! And they make friends with each other. A little dog (no name) joins a 25-year-old horse called Jenny on their daily walk in Fechenheim, near Frankfurt. Jenny has done this for the past 14 years, leaving her stable each morning to stroll through the streets. Locals know her and the dog certainly does, but what’s the connection? Will we ever know? Backpackers in Australia are familiar with the famous “fridge dog”, called Oi – a call to attention “we couldn’t agree on a name, so we had to call him something”, said owner Anne Steinbach. Because of the 40-degree heat, Oi, likes to nuzzle up to very cold “stubby” beers in the fridge. He also barks for ice tubes, good for business.

Dogs were once wolves, but crocodiles have, pretty much always, been crocodiles – very ancient reptiles, cold-blooded, and probably difficult to live with, like snakes. But are they?

We are really mixed up and confused in our attitude to the bigger carnivores. “Carnivore” means “meat-eater” and many people think that it could also mean eating them. That’s not a great thought if they live near you. But don’t forget they were probably there first, and it’s you that’s encroached on their territory, and the conflict’s happen, not so much because of the wolf, bear or fox attacking us, but rather our impact on them. In some countries farmers shoot or poison the competition, in others they receive compensation for sheep killed, or support for fencing, or special guard dogs, as in Portugal, where dozens of Sierra da Estrela mountain dog puppies are being trained as sheepdogs to help farmers ward off attacks from wolves as the species makes a comeback. The puppies grow up as friends of the sheep, and therefore will protect them. We have caused the problem in the first place by introducing the domestic, semi-tame sheep into the original carnivores’ natural home. Now there’s an ambitious project (100 dogs) for rewilding Portugal and Europe, including boosting the number of roe deer in the wolves’ area. If they have a choice, they always go for wild animals rather than the domestic flavour. That’s venison, rather than lamb. But old attitudes die, like lamb, hard. In super-civilised Norway, where they’re rich enough to know better, some still harbour an almost genetic hatred of that dog-ancestor. In fact they use domestic dogs to hunt them. Thousands of sheep die every winter in the wilds of Norway, but if one wolf kills one sheep, that wolf is doomed, and its corpse laid out on the steps of parliament to show the success of the brave hunter. An official film was made showing children running from the school bus, as if being pursued by a terrifying wolf. The whole thing was staged apparently. A lie. Next door, in equally civilised and accessible Sweden wolves are tolerated, though when they

started reaching the capital, Stockholm, people were rather less tolerant. “Culls” (polite word for “kills”) were allowed. In the meantime wolves are winning right across Europe from Portugal to Russia.

Now, how would you feel with a cuddly, furry friend in bed with you? No, not a glamorous film star, but a bear – a teddy bear. How is it one of the most widespread, potentially dangerous animals (not just to us – but to their wild prey) has become such a favourite children’s toy? Is teddy so terrible? How dangerous is the real thing? That depends on who you talk to, and how they behave. The trick seems to be: “I knew I had to avoid scaring the bear, and I just had to move away from it. You know what the secret was? I didn’t look it in the eye, so it understood I was not his enemy. It was the best day of my life, a dream come true.” Such was the extraordinary experience of 12-year-old Alessandro Franzoi in the Italian alps. It went viral, he was famous and it was good PR for bears, proving that they’re (mostly) not “terrible”. Credit for the “It’s behind you” incident must go to the cameraman. Back in 2017 a bear clawed chunks out of a man’s arm, and another attacked a mushroom hunter in 2014...don’t go down in the woods today, just might turn out to be no picnic, like Alessandro’s. It seems the bear was just inquisitive, stood up (to 3 metres), got a bit bored, and wandered off... Back to bed perhaps? Also up in those mountains of Europe a nudist was with his laptop. Until he wasn’t. A female wild boar, with piglets, snatched it and ran off, pursued by unclad person – famous there and then, such is the reach of the media.

Adele Brand: “We have built our world over the wildwood, and yet seem perpetually surprised that wild animals are in it. It’s a whimsy of the human race that we love wild animals that collapse towards extinction in our presence and resent those that survive us. Wildlife that endures civilisation is seldom loved for it.”

That applies to wolves, bears, and foxes (see hunting later “the unspeakable in pursuit of the inedible”).

Well, we may be mixed-up about wolves, bears, even foxes, but surely (“don’t call me Shirley”– *Airplane*) but would you call a crocodile cuddly or even lovable? Well, even the cereal killer in the supermarket battle, Lidl, made an executive decision to use a crocodile in its rice snaps (get it?), which provides the competition with “snap, crackle and pop” for other’s rice krispies. Indeed, a nasty way to go. Cynically, the croc is being used to sell stuff via cartoons aimed at children. Lions, pandas, monkeys and penguins are to be expected predictable classics in the cereal hall of fame. By the way, do they get a commission? But crocodiles? For kids, “awesome”, “gross”, apply. “Deadly” would do as well to a fisherman in northern Australia in May 2020. Back in 1970 there were 3,000 salt water crocs in Northern Territory. They are now a protected (yes, protected?) species with some 100,000 up there. That’s a lot of crocs, and a lot of teeth, all the better to grab you with. But toasters kill more people than those living dinosaurs, the world’s largest living reptile, growing to 7 metres and weighing a tonne. A cull is called for before the killing continues. But it’s humans into the crocodiles primeval home that’s the reason. Our fault, you could say. They can be a tourist attraction, partly because of their notorious snatching reputation, either selling rice snaps to kids or leaping to grab meat in a show next to a boat. By the way, if you are unfortunate enough to end up in a crocodile’s jaws, use your fingers to block its nose – a handy tip. Using her fingers, Maurina Musisinyana, 30, in Zimbabwe did just that to save her 3-year-old, Gideon’s, life. The boy was injured but survived. The rather similar alligator, has also greatly increased under protection, in the USA, especially Florida. They come into people’s pools for a cooling

swim – a surprise guest. Or on to the many golf courses where they could be more of a hazard than a bunker. They’re formidable reptiles and it’s just possible, as it’s Donald Trump’s favourite golfing territory, a hungry alligator might do the world a favour.

A wheel of ill-fortune. I’m a crocodile, get me out of this! For three years (MOT not checked – for obvious reasons) a car tyre has been a kind of potentially suffocating collar around the neck of this 13-foot crocodile in Indonesia. It’s a country not known for its kindness to wild animals, though not as bad as China, where the Wuhan market was believed to have started the coronavirus pandemic Covid-19. But in Indonesia the word went out: “A reward will be given to anyone who can release the hapless reptile. The presence of other crocodiles make any attempt to capture it with a rope very dangerous. But we will rescue it somehow”, said Panji the Adventurer, he of the great name. Adventurous, yes, but successful so far? No. A trap failed. Tranquilliser darts were ruled out because of the danger that the croc would swim away before the drug took effect causing it to fall unconscious in the water and drown. “We could attract it with meat as bait,” he said “But...we are afraid that we will injure the croc’s mouth if we use a hook. We don’t want to end up in a situation where people have to save me instead,” the Adventurer added. They tried their counterparts in Australia, who tried, but failed. The reward remained on offer but “We will never give up”. Hopefully the croc won’t either, before it gets strangled by its own growth. It was later released. What this story does show is unexpected sympathy for a big crocodile in trouble, an ancient creature demeaned by National Geographic, an allegedly conservation outfit, who wreck its own, plus the predators’ reputations by inflammatory, incorrect references. In a word – crap. The truth is much fairer than fiction.





Despite being relentlessly, and inaccurately, labelled by the National Geographic Wild TV channel as “fearsome predators” and “merciless, ruthless assassins, deadly killers”, the alligators’ increase in Florida is a success story, as is the protection of their home, the Everglades National Park. But, sadly, that’s not true for another mega-reptile, ie snake, the python. In the past they’ve been killed for their skins for vain customers who don’t know what they’re wearing. Python-lovers (there are some) released them in the Everglades, where they then ate what’s always been there, and bred like hell. And can they breed! Nat Geo should refer to them as the world’s sexiest snakes. Being able to feed easily in that aquatic paradise they just got bigger and bigger, producing more and more “pythonettes”/mini pythons. A clever trick led to a record female. Instead of tracking females to lead them to males, Big Cypress Swamp scientists put transmitters on randy males hoping that they’d lead them to females – a kind of reverse “honey-trap” tactic. And it worked! Spectacularly. Nearby was the honey, python-style. Vital statistics: over 17ft (5.2m) long, weight 140lb (64kg) and carrying 173 developing eggs. Enough for a giant snake omelette. Not to everyone’s taste perhaps. Sadly this invasive pest must be controlled for the sake of the unique ecosystem. Wrong snake in the wrong place, so even if you like reptiles and even keep them as pets, your job is a sad one. But essential. A beagle puppy, Python Pete, was trained to sniff out the snakes but had to abandon the plan because he couldn’t take the heat of the Florida summer, and he wilted on the job. You simply can’t get the staff these days – probably due to global warming? However, regular public python hunts, in 2018 recorded their 1,000th kill. That’s a very long lot of Burmese pythons, capable of squeezing bobcats, deer and alligators – and, no doubt, Python Pete, if he hadn’t been beaten already by the heat. Back in colder England, no doubt in a comfortable, centrally-heated house, the world’s biggest Burmese python, Hexxie’s fed a diet of rabbits, calves, goats and pigs by owner Marcus Hobbs. Hexxie is more than 18ft long, weighs 110kg (The Guardian 13/11/2019). Marcus bought her 8 years ago when she was just 8in long.

You may or may not like snakes. But since the Garden of Eden, (two) people have shared their place with them. Today, that’s particularly true in South Africa, home of the Garden Route and millions of people. That’s not always an easy combination, and you may need a “rescuer” to help out. A problem is the highly venomous Cape

cobra. It had been living under a fridge (as you do). Not there anymore, and thus not happy, to be caught up by Mr Van Zyl, 36, and released somewhere safer – for both people and reptile. The reason for this collision, possibly fatal to humans, is the rapid urbanisation of this area of Cape Town. As always, sheer numbers of people are at the bottom of it, invading and displacing wildlife, but, in this case, the human cost can be high. Mr Van Zyl operates from a van, discreetly warning “DANGER: VENOMOUS SNAKES”. “It’s really quite handy”, he says. “If we go somewhere that’s a bit dodgy (Garden of Eden?), my wife just puts her handbag in one of the snake buckets. I’ve never had my van broken into” (Graeme Barker, The Times, 20/1/2020). Now for the even better news. Rats. Snakes eat them and can be skilful vermin exterminators (like the sign “Night, Night, Termite”). As with the wolf, the bear, the fox, the crocodile, the snake, they all have their supporters and detractors. No side is right or wrong. But what is consistently correct is we must all share an increasingly crowded planet as best we can. And to do that we have to breed less and consume less... not necessarily back to the Garden of Eden! There’s a place for rats – in Banksy’s bathroom, and its excruciating detail. Disney made a mouse a star forever, and TV in the UK even made Roland Rat, a symbol of a channel. In Tanzania Peter Parker is an African giant pouched rat (not related to Python Pete over there in over-heated Florida). He and his mates are trained to detect landmines, and diagnose tuberculosis (Covid-19 next?), saving thousands of lives a year with their sense of smell. Faster workers than man, too light to get blown up, they’re a life changer, and saver. One snag: they’re night workers, and in the day they get sunburnt, so need sunscreen. Tell Peter the Python in sunny Florida. Who’d have thought rats could help us!

Whales and dolphins grouped together as cetaceans, this group of sea mammals is right at the top of the loveable stakes for most people. But, sadly, for certain “traditional” reasons they are still butchered or caught for zoos and animal parks. In the past a large whaling fleet from Britain went to the distant Antarctic, harpooning thousands of blue whales, the largest animals that have ever lived. Other species of great whales were killed too and, at one time, it seemed they might be rendered extinct by being rendered down for their huge bodies. So much so that Sir Peter Scott, who helped start the World Wildlife Fund and created the famous

panda logo announced, “If we can’t save the whale we can’t save anything.” Just in time the world came to its senses and the slaughter slowed and finally stopped by global agreement. Except in the Farø Islands in the north Atlantic where pilot whales are driven ashore and killed for their meat which the local people have always enjoyed, though they could equally eat other, domestic, produce. However, they regard the hunt, known as the “grind” as being similar to fishing the seas bounty on their islands’ doorstep. Pilot whales are not endangered in the scientific sense of the word, rather the Faeroese consider the stopping of the “harvesting” as a threat to their own traditions. Over in Norway, they also continue to fish small whales. These are minke, part of a food chain from fish to whale to people. There are fixed quotas and, in the Lofoten islands there, you can eat a whale steak (and get a certificate for it), the same day as going whale-watching as a tourist, part of what is now a huge business worldwide wherever there are whales and dolphins of all shapes and sizes. Show them and the tourists will come - in their hundreds of thousands. But the virus has hit the trade hard.

Iceland stopped whaling quite recently, but the Japanese re-started having ceased for a while. Activists had used the media to reveal the Japanese whaling fleet operating in a supposed sanctuary in the Antarctic, the place where the British fleet were killing so many great whales in the past. A harpoon is fired from the catcher ship and a grenade explodes in the highly intelligent animal which can take up to 20 minutes to die. These days there’s really almost no market for whale meat – it’s given away to schools which may prove equally deadly to the Japanese children because of poisons ingested by the whale in its food of krill shrimps and fish. Previously, in Iceland, a huge backlog of similarly toxic whale meat from fin whales, the world’s second largest after the blue, had built up and had to be frozen and kept there for sale to, say, Japan. There was no market there. Japan has had some disastrous experiences with chemicals in the past, and their reputation has been harpooned, like the unfortunate great creatures they prey on. That still continues, claimed to be an important way of life for certain small communities. It would seem that that will eventually dwindle to nothing. Seafood (think sushi) is basic to the Japanese but sometimes they don’t seem to appreciate it. At one of the annual International Whaling Commission meetings, a Japanese delegate apparently referred to the little minke whales as “the cockroaches of the sea”.



The bad old days



Shoot to harpoon thousands of whales



Eventually... the International Whaling Commission (IWC) ...helps protect whales



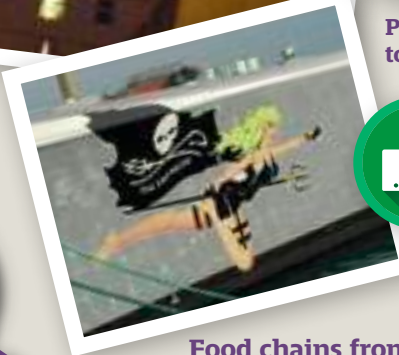
Sea Shepherd



Trying to stop it



Paul Watson top activist



Food chains from shrimps to whales



Unlikely inland delegate



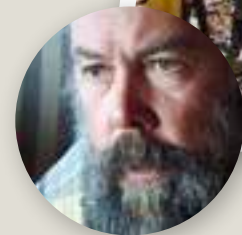
On the menu... a whale steak



But food chain may be poisoned



Scientists prove it Ken Balcomb



Captivity and stunts are bad



But are whales winning? Yes. Just.



With that attitude to nature, perhaps his country’s people will become “cockroaches of the land” when only real cockroaches will be left and only exist on planet Earth. Meanwhile public opinion is, increasingly, pro-whale, almost to an evangelical extent. Their intelligence, their sensitivity, their size... What other animal would you be so moved by when you only see its spout, (and hear it), nose and fins? As a tourist you wouldn’t be turned on by just glimpses of a lion, elephant or rhino.



The Japanese don't hate whales. They just hate losing face. But they're up against powerful forces these days. The whales themselves are facing tough times, not from whaling fleets, but pollution, including poisons in their prey, excreted originally by us; noise pollution too, from ships which can damage their "language"; and collisions with those same ships, travelling faster than speed limits established to protect them. The wider perspective is the commercial world and our needs for more stuff as quickly as possible. The result: more ships, faster, less care, with entrapments in fishing gear increasing all the time as man hunts the oceans to feed himself. Thus are species interconnected, and to recognize that is to help others, who may be struggling in a world we are changing almost everywhere from pole to pole and all around the Equator, and now we seem to want to do that on the Moon and Mars. What a waste in space when we could, first, try and repair our only home. It's 70% ocean, much of it unexplored and overfished, as we nearly did with whaling to zero. Those Japanese not only kill whales, and become most unpopular as a result, but terrify dolphins driven into nets by the demand for zoos and the big theme park entertainment business. But in the USA, SeaWorld got it badly wrong, cutting 350 jobs after visitor numbers dropped by 350,000 in the first half of 2017. If you buy wild dolphins or orcas (killer whales), and imprison them, force them to do tricks, for an insensitive mass public you will suffer, though only financially, not nearly as much as Shamu or the other "stars" whose light in the wild ocean dimmed long ago. Such cruelty still continues where the paying public don't seem to connect the degrading show, with the magnificent creatures so often shown in their vast natural habitat on television. Hopefully change is coming, with *Blackfish* a captive killer whale story killing off SeaWorld's and other's reputations, bringing them crashing down, with British Airways Holidays and Virgin cutting ties. The good news for some Russian whales was the release, some say "the dumping" of a captive group, back into the ocean, which is where they belong. But is there any point in captive animals at all when wild dolphins will come to visit you for free?

Welcome to Queensland's Cooloolool Coast in Australia. It's certainly a cool place for dolphins, though perhaps not for the temperature. Less human visitors visit than usual, when the tourist feeding centre was closed. So the lonely dolphins,

especially a 20-year-old humpback (dolphin not whale!) called "Mystique" tried to attract people with gifts. In fact the dolphins have trained people, not the usual, much criticized, other way round. Presents include timber, shells, rope and bottles – not full of Fosters by the way. They also bring sponges, always useful, and that for Mystique is kind of

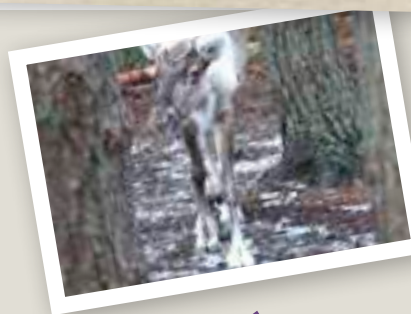


romantic because scientists have recorded adult male humpback dolphins giving marine sponges to females. "He brings in objects on his rostrum, or beak, and then he carefully presents them. Here we have some of the most socially complex animals on the planet using sponges not as a foraging tool, which they do, but as a gift." You wonder what happens at Christmas. Feeding wild dolphins is a big tourist attraction down the coast at the Tangalooma Island Resort, ironically sharing the beautiful beach with the grisly remains of a whaling station. It opened in 1952, but was closed a decade later, largely due to the lack of humpbacks (whales not dolphins) left. Dolphin feeding is carefully regulated, and the great whales are back again. But for the dolphins elsewhere it was bad news. Not because they suddenly became unpopular (impossible in this day and age) but they became too popular! Tourists massed to swim with them from boats "loving them into extinction", deflecting them from domestic duties like feeding, nursing their young and sleeping (human parallels here). Boat tours to swim with the distracted dolphins have been banned, so that business has been hit, hard. Calf numbers had been dropping by 75% mortality, an alarming decrease. And the local population of those bottlenose dolphins fell from 270 to about 30 – almost 90% in just 20 years. However, with a 95% success rate of finding them, or rather them finding you, you can meet them elsewhere, for example swim with

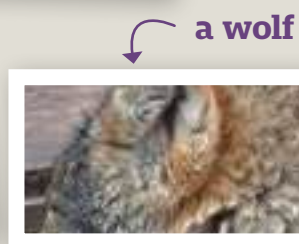
common or dusky dolphins off South Island in New Zealand. What we really should not, repeat not, do is attend/support captive dolphin shows, as in Dubai. The animals may look as if they're smiling, but only the human really is. Not the way to treat such a sensitive creature. It simply shows how insensitive we can be.

Don't get born cute. Like a baby otter. Because of the craze for Instagram, and the selfish social media greed for selfies, your fate, at least whilst you're still small, is to be kept in a Japanese (that country with a highly criticized whaling reputation) café where the owners hope to attract customers to have selfies taken. And lots of them. How vain and stupid is that! The tourists may never know that the cute furry otter cub was taken from its den of birth, smuggled to Japan, where they are shown off as "fun and cool pets", said World Animal Protection, who are trying to reduce the threat of extinction of the smooth-coated otters. "Poachers have been caught with baskets full of dozens of pups, while the parents, which are fiercely protective, are often shot after being smoked out of their dens. For every pet baby otter, there's likely to be a dead adult", added Cassandra Koenen. Investigators found otters whimpering, shrieking and making distress calls as café customers played with them, taking selfies all the time. They were obviously oblivious to the otters' messages, just interested in self-interest. The pups grow up to become highly unsuitable as pets and will be "disposed of," possibly eaten, a rotten reward for entertaining the unfeeling, ruthless audiences day after day. Some had been kept with no natural light or even without water – torture for the very aquatic otter. Such examples of animal exploitation exist around the world whether it's dancing bears, performing dolphins, or "funny" chimps. Don't forget the message "A dog is not just for Christmas". Nor is an otter, or even a reindeer, whose busy time arrives with Santa Claus in grottos across the land. Insensitive big stores use them to attract customers, despite the stress of being kept inside, in said grotto. Says Elisa Allen of People for the Ethical Treatment of Animals: "Reindeers are intelligent gentle animals, meant to roam free over vast arctic ranges – not to be carted up and down the country as if they were props to be paraded about and gawped at under bright lights in busy shopping centres, filled with noise and strangers. And those "strangers" could be you and I.

The value of its fur to...



a reindeer



a wolf



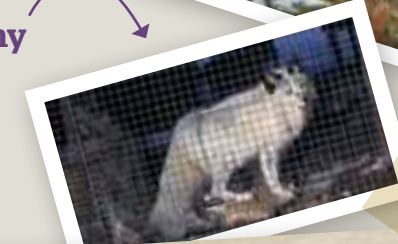
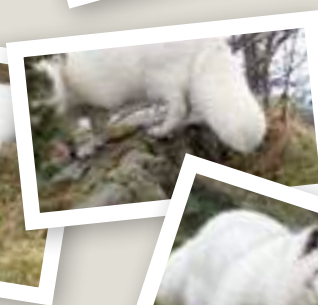
a wolverine



a wild cat

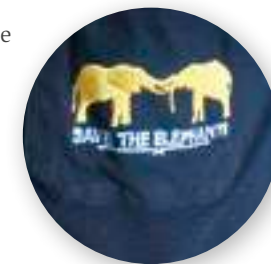


an Arctic fox, bred for the purpose in tiny cages



Looks better on the real owner than on a stupid vain human or at a profligate, grotesque, fashion show in New York, London, Paris, Milan, Dubai, etc...

Nature is not a commodity, the world is not a zoo. A zoo is what it is, sometimes more explicitly called "zoological and botanical gardens", not forgetting the plants on which all the animals and, us, ultimately depend. But do visitors on a relaxed day out, with the family, learn much, except for a small child who will be amazed to see how tall a giraffe is? And, by the way, if it has a calf how did that happen? Plus a chance to talk about how many giraffes there are left in the world, and why – because of humans killing them, and invading their home. A sign with a map can help, and TV at home, can reinforce that education. You could also argue that taking selfies, whilst playing with, and feeding great apes, bears, crocodiles, killer whales/orcas, and sloths also helps. Walking with a lion, or riding an elephant is an everlasting memory for some, and probably helps the conservation of that species in the future. But not everyone thinks like that and now elephant-riding has been banned by some major tour operators. There have been reports of baby elephants being "snatched" from the family herd in Africa, and so prominent animal rights supporters have attacked the EU for not taking action. When celebrities including Joanna Lumley, Brigitte Bardot, Judi Dench, Ricky Gervais, Pamela Anderson, Bryan Adams, Jenny Seagrove and Virginia McKenna sign up maybe the situation will change. It already has, for other reasons. Because of the pandemic's impact on travel, and a fall in tourist numbers, elephant sanctuaries have run out of money for their upkeep. Some of these elephants were previously working in the forests of Thailand (sadly, shifting deforested timber) and were enjoying a well-earned rest – sort of, if carrying around fat Germans and Americans for selfies, is restful. Then the jumbos had to move on, back home. More than 100 of them walked north, up to 95 miles to their original homelands, where they were welcomed by the local Karen villagers, who traditionally cared for their elephants. Some of them had stayed back at the tourist park with funding from the Save Elephant Foundation.





A great history of conservation



Any more Dodos?
Hope not



Mauritius Kestrel

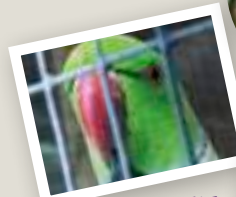
Back from
the very brink

Dedicated staff rearing chicks

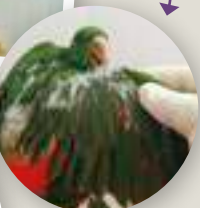


In good
hands

Parrot
chicks
grow up



Saved in captivity



Out
there



Carl Jones
"Mastermind"

Who's a happy
boy then!

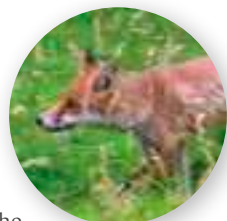


Slowly, but slowly, the situation is changing. France, perhaps surprisingly, has banned the use of non-domestic animals in circuses, an entertainment tradition whose time seems to be over. It all started with a performing bear called Mischa who could hardly breathe because of a chain around his neck (not the Elvis song) forced to wear a frilly collar to hide the marks. He froze in the winter and sweltered in the summer. No one seemed to care until all of France did...It just goes to show what one "martyr" can do. This kind of exposure is beyond price, and all of us can help, especially with the social media available to everyone, everywhere. Feelings run high...murder threats show these issues starkly. Human-like chimps made a mint for PG (=pretty grim) Tips tea and were from a zoo, dressed up as humans and also appeared on "cruel" pictures of a greeting card company. All that stopped. Since then public opinion has changed, and you could say those chimps were out of "work". That might be the sequence in Europe, but in many other countries, people still see wild animals as "funny", "cute" which, if they could speak, they would surely ("I told you don't call me Shirley" - *Airplane*) not be using those words about us, as we have confined, exploited and often destroyed our wild neighbours on the planet.

What are zoos really for? Is it time to shut them down? Bad zoos, stealing wildlife from the wild, often illegally, is one-way traffic, and can hardly justify that depletion of the habitat, often under threat already. But, more and more, zoos publicize their conservation credentials. It's an important message and they can refer to successful projects where animals have been returned to the wild - that's if there is any "wild" left, and the natives don't eat it on arrival as "bush meat". That aspect is probably traditional, but, as human numbers increase, appetites increase too, so the gorilla bred in a zoo and later released in the wild could become some impoverished family's supper. Hopefully not, if the project is well planned. Yes, many people are trying to help rare species, and zoos are doing their best in difficult times, needing to feed the animals, but with no visitors' income. A UK government fund of £14m could make all the difference. Many thanks.

Hunting, Shooting or Fishing? Equals killing, whether the victim is a lion, a pheasant or a salmon. It can be a huge business. Globally, these activities

expose some very controversial truths. Rich American shoots big game for trophies to impress (who?), a whole pheasant rearing and killing industry is fraught with arguments mainly based on class - the backbone of Britain. That's not unlike some of the fishing fraternity whose traditional prey of salmon has become big money, with inevitable disease and dangers of overcrowding in farms, that now produce cheap food, with the main price being the adulteration of a fine species - and that's not the salmon. Plenty of food for thought there around a subject that goes back to the age of the mammoth, and then brings us up-to-date with the ways humans now hunt, shoot and fish. Some of it is not a pretty story, revealing the least attractive aspects of mankind. First, hunting - from trapping mammoths in ancient Mexico to chasing foxes today with hounds - "the unmentionable in pursuit of the inedible". The subject has simmered on in British politics, a confusing combination of pest control, animal rights, cruelty, landowners, and farmers, all this with underlying class differences between red-coated gentlemen on fine horses, plus a pack of well-bred, well-cared-for foxhounds. The opposition is just the opposite. It so happens Carrie Symonds, Boris Johnson's partner is anti-hunting and the nearest she gets to a foxhound is her dear dog Dilyn, the terrier - hardly terrifying to the local fox around Number 10. Hunting also takes on a very different dimension in very different Africa. Instead of a green and pleasant land of fields, woods and hedgerows, (and now, increasingly, towns which foxes really like), now to the classic big game country of bush and wide savannas. Trophy hunting attracts big money to big animals...as tall as a giraffe, fierce as a lion and as bulky as a buffalo. This kind of hunting is highly controversial and the newspapers have often published "hate" stories showing, for example, the proud construction boss from Michigan, Chris Peyerck, 53, who paid \$400,000 to kill a rare black rhino in Namibia in 2018. He needed to get approval from the Trump administration to import the skin, skull and horns. No laws would be broken. Donald Trump himself once called trophy hunting a "horror show", but his sons Donald Jr and Eric Trump have made numerous trips to Africa to hunt big game and have posed for photos including a leopard, a buffalo and the tail of an elephant, which must look nice on the



White House wall. Approval for import was approved, as Obama-era restrictions were rolled back, as well as on hunting bear and wolf cubs and swimming caribou in Alaska's national preserves. The first interior secretary, Ryan Zinke, was an avid hunter who had benefitted from generous campaign contributions from the hunting lobby (The Times 10/9/2019 Ben Hoyle, Los Angeles). Say no more...only to add the response in poor African countries is that the large licence fees, plus payments for guides and services can benefit the local people, and create business. Therefore, in theory, the potential value of the wildlife will be recognized not just the prime trophy individuals, but also, the whole habitat which may be protected. Taking out the big individuals as trophies can weaken the stock. On the other hand an alternative argument is that those individuals may be past good breeding age, effectively sterile (not unlike the dentists, businessmen and others who are attracted to this expensive addiction). Britain is among the top 12 countries, the so-called "deadly dozen". According to The Times of 9/4/2019 "one of the most prolific hunters is Malcolm King, 74, a wealthy British businessman who has slaughtered hundreds of animals on five continents. He's a director of a property managing company based in the British Virgin Islands in the Caribbean, and is considered to be among the world's hunting elite with many awards from Safari Club International (SCI)". To some his house must look more like a morgue. But for Malcolm King, killing each one may bring back happy memories. It takes all sorts...But his big game may be over.

As The People paper put it powerfully (26/1/2020) "public outrage" has led to the UK banning the imports of trophies. Apparently 86% of the British public support the ban. More than 70,000 animals are killed by hunters every year, including thousands bred in captivity for that purpose. "Blood sports" are hardly that. As Carrie Symonds has said, no doubt, following a wide discussion with Boris, "A trophy is meant to be a prize, something you're awarded if you've achieved something of merit that requires great skill and talent. Trophy hunting is... the opposite of that". But, no doubt, the killers would claim to have lots of skill and talent to be proud of. And money too. Which brings us to another kind of hunting, from breeding, to beating, to blasting...pheasants and grouse out of the sky. Again, big money from those who can afford it. Boris could, but now, perhaps, he'll put his gun away (because

of Carrie?), and do something more useful like fix Brexit, a virus, even really help our wildlife and countryside. At present, "southern Britain is the pamperslands for pheasants, little more there than free-range livestock. The weight of pheasants raised and released in the UK is greater than the total of all wild bird species put together (interesting arithmetic! RB). Numbers set free locally last year were more than double the humans of the nearby town" (Derek Niemann, The Guardian 27/11/2019). But the fact is that the "nearby town" may derive some income from the pheasant rearing/killing industry. It's a single-minded process of birth to death. As with any factory-farming the "product" may suffer; trampling, in-fighting, getting stuck in machinery. Newly hatched chicks may be thrown into a meat grinder, treated like "inanimate objects" says Animal Aid, who filmed older chicks with protective coverings to their beaks and backs because of aggression in the crowded conditions. Those that survive the process i.e. the "product" will be "released" - sort of.

They are semi-tame, and not yet strong fliers, so, driven by a line of beaters, they end up in front of the line of guns and dogs. Little chance. Some may "escape", injured, and the rest sometimes massacred to reach a surplus, from the beater to Boris and upwards this process is claimed to be importantly traditional. As it can earn fortunes for many concerned, it seems a sad reflection on human behaviour, so it may eventually die off, like the exploited creatures that suffer from this so-called sport(?) Life, and death, is important for shooting at Sandringham, one of the Queen's several castles. On Boxing Day (December 26th) Her Majesty acts as a picker-upper of pheasants with her gun dog. As one guest said, "It slightly concentrates your mind when you're shooting and you know Her Majesty is standing behind you seeing how good, or bad, a shot you are", (Harry Mount's book: "How England Made the English".)

Seven months later, on traditional August 12th (in 2020? Virus?) might be the so-called "Glorious Twelfth", hardly so if you're a red grouse, a subspecies unique to the UK. Even before the beating and blasting began the numbers of grouse was so low that the Glorious 12th wasn't - cancelled due to a shortage of birds, the weather and an outbreak of heather beetle which had decimated grouse food supplies. You

could say a beetle beat the Royal Family in 2019! And in 2020 too. Despite his conservation commitments Prince Charles likes to shoot and fish, and Boris may join in, probably not with Carrie and her dog. Wrong sort of dog. Reportedly, last year the Queen and Duke and Duchess of Cambridge took Prince George to his first grouse shoot. (Harry Yorke, The Daily Telegraph 13/8/2019) Is that called "education"? Ecologically connected on the large landowners' grouse moors is a big, beautiful, flying threat. Or, in fact, several of them - birds of prey - all protected by law. Because they live there, and have to feed there, sometimes on grouse chicks, the fate of hen harriers, buzzards and merlins is on the line; in fact any raptor is in the sights, or trap, or poisoned, all in the name of the grouse game. It's powerful pressure, because rich guests expect results, so it's some, only some, gamekeepers playing a game that ruthlessly, secretly, eliminates the competition, indirectly urging them towards illegal persecution, which could be linked back to people of power, including royalty.

From hunting and shooting to the third popular predatory pastime, not, as in the nature of hen harriers and buzzards, but rather more like the osprey, the famous "fish hawk" which is so successfully colonising Scotland, home of the beleaguered grouse, which get shot whenever allowed. Perhaps young George could try a little family fishing on the River Spey at Balmoral.





The fact is that if we allow the economy to be put before the environment and ecology, then the economy will fail anyway. Consumerism, human populations, China are all bound up in all three – money, the climate, nature. During the coronavirus pandemic it turned out that the natural world was proving a great benefit, especially with the lockdown. Wildlife emerged to join us – to peer in through the window? Simple pleasures, green spaces, birdsong, wild flowers helped alleviate mental problems, a welcome release from having to be incarcerated, because of a deadly organism we can't see, all started in a market in China where wild animals were being cruelly mistreated...their "revenge" perhaps? As Covid-19 diminishes (maybe?) around the world, there's a great opportunity to not go back to the original normal, which was actually the problem. The so-called "new normal", still to be identified, provides the chance to learn from the pandemic what's now best for us, nature and the planet. To help that work, climate change must be fixed, otherwise Covid-19 will simply look like a rehearsal.

This is a story of winners and losers, up and down, with the ultimate mega-question: Can we, and planet Earth, survive in 2021 onwards? Today the future looks even more uncertain than ever, with disease and climate change crucial factors. By studying the trends it's possible to make some not-so-wild guesses about wildlife and wild places to assess which way it's all going. Science is vital here, not just working out what's happening now but advising on action that should be taken, and that's becoming increasingly urgent. One species, the humble canary has become a global figure-of-speech, as it used to be valued as an indicator of the conditions in a coalmine – a tough job for a little canary with the human lives of miners depending on its survival – or not. Today the canary-in-the-coalmine rôle can be applied to thousands of species of wildlife that indicate what is happening to them, often because of us. That can be vital if we read the signs provided by some of the so-called "keystone species". Not only important, practically and scientifically too, but also, from the ethical point of view, we have no right to extinguish species, which share the planet with us, and have done so for thousands of years. In fact, if we make that irreversible mistake, extinction may come back to haunt us. In a global attempt to avert extinctions the International Union for the Conservation of Nature (IUCN) was set up, based near Geneva in Switzerland. It does what it says: S.O.S.

Save Our Species, for example, helping the Indian government to increase tigers by a third in just four years, to almost 3,000 individuals. This has meant protecting habitat plus a source of prey. That's a big challenge in a very human-populated country. Tigers are a tremendous asset to tourism, though the pandemic may affect that raising difficult questions about priorities. The very special fauna and flora of Madagascar, the large Indian Ocean island, off East Africa, had lost 40% of its original forest cover between the 1950s and 2000, thus depriving the unique species of lemurs a home. Since 2017 more than 2.7 million native trees have been planted across the island. Tigers and lemurs are famous on TV, but equally notable, and less photogenic, are the many other special creatures and plants that IUCN S.O.S. tries to help. (see #SpeciesActionNow). But it's a race against time. Is it possible to turn losers into winners? If so, how, in this age of pandemics and climate change? Back in 2015 scientists from Stanford University in the US declared that a sixth mass extinction was under way causing irreversible damage to ecosystems around the world. And now, for one of our updates – June 2020, five years later... the same scientists have now warned this extinction is happening faster than they first predicted. The Earth is set to lose more than 500 species of vertebrates (backboned animals) in the next 20 years, they warned, the same number that was lost in the entire 20th century. Paul Ehrlich from Stanford University, and one author of the study published in Proceedings of the National Academy of Sciences said: "When humanity exterminates populations, it is like sawing off the limb on which it is sitting, destroying parts of our own life-support system. The conservation of species should be elevated to a national and global emergency, equal to climate disruption to which it is linked. Twice as many plants have become extinct over the past 250 years than all the birds, mammals and amphibians combined, a 30-year research project has found. Though experts from the Royal Botanic Gardens at Kew, London, also found that more species were alive than had been reported extinct." Some good news. Originally, more than 1,000 plants were believed to have perished forever, but when scientists looked for them, they found they were still present. Plants underpin all life on Earth, they provide the oxygen we breathe and the food we eat, as well as making up the backbone of the world's ecosystems, so plant extinction is bad news for all species.

Let's start with seagrass, not your average lawn obviously. Actually it's a vital basis for a multitude of marine species. Endangered seahorses have returned to one of their most important breeding grounds because of the absence of boats, anchors and noise during lockdown, according to a marine conservation charity.

The Seahorse Trust found 16 spiny seahorses, including pregnant males, (yes!) during a dive in mid-May at Studland Bay, Dorset. It was the most since it began monitoring the site in 2008 and the first spotted in annual surveys since one seahorse, nicknamed Hope, was seen in 2018.

Studland Bay was designated as a marine conservation zone partly because the seagrass which grows there is a valuable habitat for seahorses.

Up to 350 leisure boats moor in the bay daily in the summer and their anchors and chains drag across the seagrass, destroying it and preventing seahorses from breeding. The Seahorse Trust has been lobbying for the introduction of fixed moorings with buoys on elasticated tethers which would protect the seagrass. It said that the recent absence of visitors had shown what could be achieved.

Food webs in the seas include us, as major predators, alongside gannets, puffins and whales. Some species are winning, some are losing. And what about the human ingredient? The oceans cover a vast area and we've looked at most of the other main habitats on planet Earth, as to how we affect, and connect with a huge variety of species – wildlife, and wild places. With most examples, there is an impact one way or another, adjustments or not, as that dominating species, man continues to increase everywhere. To compensate, some individuals, either separately, or as part of organisations, try to help with conservation. And action – a "little less conversation", some say (as Elvis once sang "A little more action please"). And that's exactly what happened to the avocet, moving about from marine to fresh water, and estuaries. It was brought back from near extinction in Britain by the Royal Society for the Protection of Birds (RSPB). It's their symbol, and now has more than a million members – a force to be reckoned with. Other groups include The National Trust (5 ½ million members), Friends of the Earth, the Wildlife and Wetland Trust, and Butterfly Conservation for whom Sir David Attenborough is a great supporter... another force to reckon with.

A floral carpet

Bees amongst us

In amongst them

A classic.
Can we save the monk seal in the Mediterranean?
We can try.

Avocet

What a comeback!

Trying to keep cool

In the garden

By the roadside

Flying jewels

The nearly 60 species of butterfly show their great diversity in Britain, dependent on the location, and the vegetation growing there. Many nature reserves help them, from the south coast of England with the Glanville fritillary to the cold-loving mountain ringlet in the cool mountains of Scotland, where it's being pushed higher and higher as the climate warms down below. Swallowtails in the fens, blues on downland, purple emperors in the treetops, browns in meadows, whites in your garden, alongside the brilliant peacocks, red admirals, small tortoiseshells, and painted ladies. What a line-up!



Not forgetting the hummingbird-like, hummingbird hawk moth, a day-flyer sharing the flowers in your garden. It's now been found that moths are important pollinators under

the cover of darkness, the "night shift" compared with other famous, vital pollinators the busy bees and bumblebees. Without these, mankind would really be struggling with his crops, and food. More good news – the weather has helped many insects, and in recent years the aquatic species have done very well – perhaps an indication of cleaner fresh water in rivers, streams and ponds. Perhaps a pond in your garden if you have one – dragonflies, damselflies and mayflies. These days there's a growing interest in how to make your garden grow well, with plants that attract insects, which in turn attract birds, hedgehogs, maybe badgers, foxes, bats, squirrels (greys not preferred? – red instead, increasing in some places). Bird (and squirrel?) feeders are all the rage, with more and more sophisticated menus on offer. The BTO, the British Trust for Ornithology estimates there are 4.7 million nest boxes in gardens across the British Isles. There's even an annual National Nestbox Week!

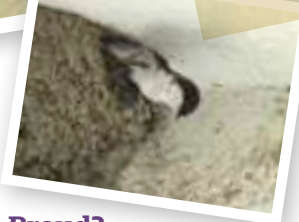
Our homes are their homes

Swallows and house martins come back every spring from Africa for 6 months

Swallow



House Martin and self built nest of mud



Proud?

And talking of homes, a housing developer has pledged almost half a million pounds to re-home a colony of rare cirr buntings.

Torbay council planners approved a proposed 187-home estate on the edge of Paignton, Devon, which requires the developer to pay £437,500 to create a habitat for the little birds.

Barratt Homes will pay to provide an alternative breeding ground for five pairs of cirr buntings, now found almost exclusively in south Devon.

A 2½-hectare area of open land to the south of the housing site will provide habitat for another breeding pair, it is anticipated. The developer will need to contribute towards monitoring the land for 25 years.

Hatched from the river



All sorts of visitors



An unlikely couple



Tit and field mouse too



Nutters



A tough woodpecker



Everyone's friend



Tony Whitehead, of the The RSPB, said: "We are in an ecological emergency and it's vital that developers do whatever they can to provide equally good homes for our buntings and other wildlife." (The Daily Telegraph 30/4/2020)

Only some other wildlife is generally doing pretty well in the UK – or, at least, concern and interest in it is increasing. But there's a lot of pressure caused, by human expansion and development, though reduced somewhat by the pandemic. "Return to normal" is what many people aspire to, but others point out that the previous "normal" was the problem in the first place. It's just possible that the reduction of pressure can be maintained and any gains be maintained into the future. But people can be fickle. There are encouraging signs. Numbers of most birds of prey, despite some persecution on grouse shooting moors, are soaring, and spreading, like red kites, ospreys and sea eagles into England and peregrine falcons (live on TV/webcams!). There are restoration projects for corncrakes, they of the harsh "crek, crek", and cranes, into marshlands.

When you consider the traditional, deep-seated dislike of birds of prey that some gamekeepers inherited, it is remarkable that they've come back so strongly. Their hooked beaks and sharp talons didn't help and they were considered "vermin", to be trapped, shot or poisoned on behalf of the shooting fraternity. Now they're protected by law, and the RSPB keeps a close eye on them, though some people regret their impact on small birds that are their natural prey, their necessary food. "S.O.S." is the "Save Our Songbirds" group.

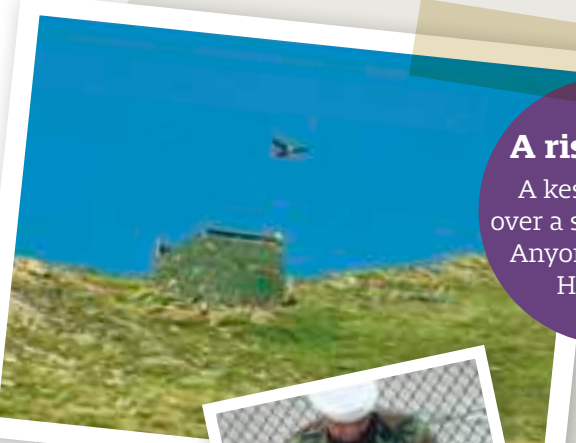
As we make a trip downwards through layers of life to reveal the diversity of species adapted to each one. Such biodiversity is wonderful, uniquely, on planet Earth. But it's increasingly facing changes, usually man-made. Here are some solutions, down from the sky over Africa, a giraffe tackles the tree top of a thorny acacia, lower down a parrot feasts on the fruits of a forest giant. Chimps are there too. Some bits of food may fall into the dense, green world of the mountain bongo antelope. Out on the great open grasslands is the home of the big game, both herbivores like rhinos and elephants, with their predators, carnivores, such as cheetahs, leopards and lions. All the species in our African descent are subjects of conservation action. But will it be enough – in time? The Giraffe Conservation Foundation is translocating



A risky spot?

A kestrel hovers over a shooting hide. Anyone at home? Hope not.

Saved sea eagle



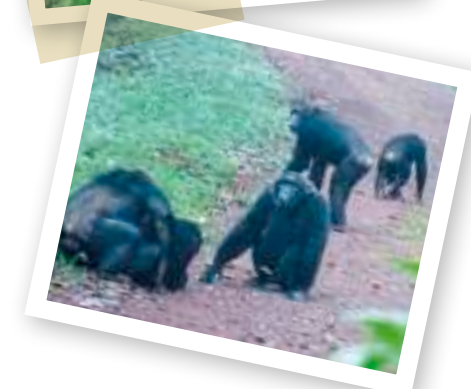
Red kite

A huge success story. Back from the brink in Wales to being seen almost everywhere in the UK



giraffes to safer locations, protecting them better. Parrots around the world suffer from habitat destruction, and chicks being taken from nests for the pet trade. Captive breeding and release helps compensate for these losses, but only in some places. Jane Goodall's studies of chimps has publicized their problems, so has television worldwide. Hopefully, knowledge will lead to action to ensure the future for our nearest relative. Do we have the foresight and the will to make a difference – to save chimps? And much else? Like their bigger relatives, some of whom became TV stars across the world – gorillas.

Food of various birds of prey can include insects, birds, frogs, snakes, fish, mice, rabbits, up to deer and foxes. Carrion is the speciality of the vultures, especially in Africa, thus completing the sequence of finishing off the weakest individuals – "the unsurvival of the unfittest". Such links are crucial in the web of life, which can also be seen if we descend through an African forest.





A Gorilla Conversation



Whatever happened about those nice guys who paid us a visit? And that bloke who joined in?

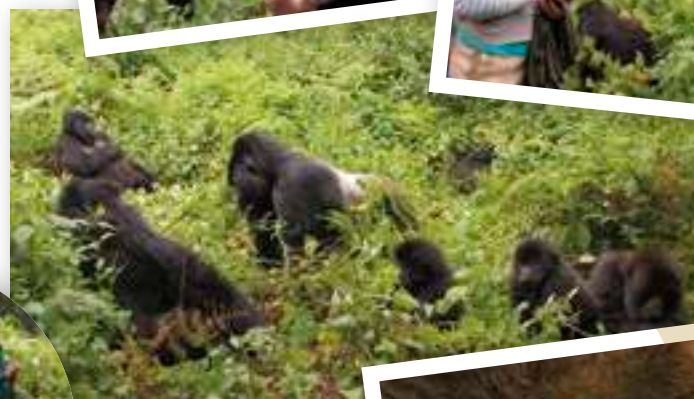
...And the appearance fee?
...Plus repeats?

It would be nice if they paid us something else too. Let's check with our agent.

Joking apart, the story about the gorillas in Africa is both good and bad news.

Tourism has been a great success, bringing money from tourism and jobs for local guides. The population of mountain gorillas has increased, and in another part of Africa, a new group there has been discovered, a subspecies thought to be extinct. On the other hand wildlife tourism has been badly affected by the coronavirus pandemic. There's been talk of the gorillas getting it.

A gorilla or spokesman said: "It's been a good time for gorillas – in fact because of the lack of tourists and even all those film crews, there have been more babies born. The star attractions have been busier than usual, well, just being gorillas, undisturbed at home, (with similar results with us to lockdown?). So, ultimately, there may be more tourists meeting more gorillas and therefore helping business in the future. Question: "Where does a big silverback sit?" Answer: "Anywhere he wants."



Meet the Harvest Mouse

From a super-sized mammal to a tiny-sized one, showing the huge diversity of the group.



Human Population



That stork again, doing what storks do best (they say). But how many more babies does the planet need? And the consumption that goes with it? That's the crunch in 2020/2021. But for just our pair this is really good news.

Meet the harvest mouse, Britain's smallest rodent. They like to build their round tennis-ball-shaped nests in tall vegetation. The species is considered "Vulnerable" in the UK, mainly because of changing farming practices. To help in the other direction I (RB) have bred many of these charming and prolific, very little mice with a view of releasing them in suitable places where they can nest, and climb about, using their unique prehensile tails and balancing on blades of grass.

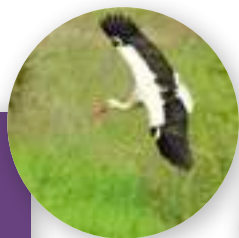


Knepp Storks

So, where has our splendid very versatile white stork brought us?



600 years ago white storks nested on St Giles cathedral in Edinburgh Scotland. But now they're back much further south in West Sussex England and have made headline news by nesting at the Knepp Wildland Project. Here the plan is to allow, indeed encourage what was a failing farm to be "rewilded". Exciting species have also arrived, increased and spread – a kind of reservoir for what used to be. It's become a classic example of what can be done to bring nature back. And what species could be better than our iconic white stork. Nature's come-back. Yes it has. Here and there. There and here. So let's keep it coming back! Watch it on "Kneppflix"!



Hopefully scenes like this will decorate, and grace, the British countryside for many years to come – with no 600 years gap this time.

But are we, and nature, winning or losing?

Well, both. But there's no question that it's the young amongst us that will/can make the difference. And it's happening all over the planet. Crunch! Take Kenya for example, in East Africa.





Spotted a big bird



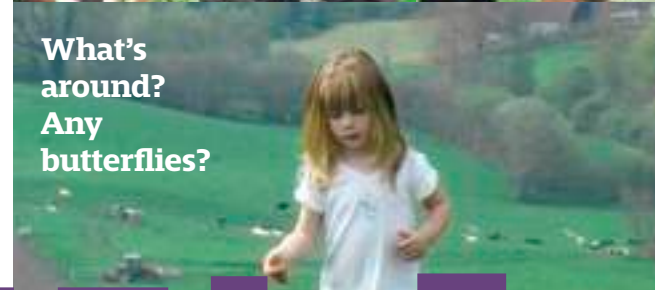
How does it fly?



Riding a camel



What's around?
Any butterflies?



Touching a snake in a Swiss zoo



Kids



Pointing out Spanish cart horses



Close up to young bearded vulture in a conservation project in the Swiss alps



Dancing and singing... at a party for trees in Kenya



Touching a lovely rhino... so friendly



Donkey wash!



We're not underwater, but in an aquarium in France



Flowers for my mother

What's that? A lamprey "weird" "Amazing" Why?



Greta

She keeps on watching. And so do millions of others.



Sharks are awesome!



Save the Bongo. Kids can!



Bongo team

Bongo Woodley

And listen out about the bongo at school. Local children and teachers run projects in the forest and it seems this very elusive antelope may be surviving OK, even increasing, encouraged as well by Bongo Woodley (his real name!). Is it a comeback? Or did the shy creatures merely hide and slip away? Elusivity. In Gabon, west Africa, with its huge rainforests, determined efforts and big funding go towards wildlife conservation to tackle poaching and logging. The trade to the Far East is a serious threat, especially with elephant tusks and rhino horn. This fight has been going on for many years, but progress has been made recently, and hopefully, Japanese and Vietnamese children will come to understand how everyone, everywhere is connected. Even in stubborn, secret China there's a Greta version, striking against climate change.

A mere 16, like her equivalent from easy Sweden, Greta Thunberg, who took on Trump and beat him, Howey Ou travels 12 miles from her home each morning, rain or shine, to sit outside the building with placards: "We are faced with the greatest survival crisis in the history of mankind, we need to act globally." Howey is prepared for anything, always armed with a copy of National Geographic magazine and an anthology of interviews from female campaigners from around the world in case she is arrested and needs something to read in prison. Obviously she doesn't want that to happen, but it would add to the global force that Greta Thunberg and Extinction Rebellion have started and drive forward with such surprising success. Greenpeace and other powerful voices take full pages in the prominent press. Politically this is green dynamite. After (what? when?)

Covid-19, will there be a better, greener future for people, for wildlife, and wild places? There seems to be a great opportunity to achieve a "better new normal". Up to now, human DNA does not look a promising ingredient. We've had wars, pandemics, and extinguished much of the natural world for our own selfish gain. Now is the time to assess what really needs to be done in a concerted effort by, especially, politicians and corporations. And, urgently, beyond that, determination by the planet's consuming and increasing people. So it really is "Planet Crunch" now, and into the next few years. Can we do it? There's still time. Maybe.



A film show in the bush



Up close to an orca (model)



School in Kenya "Education"



Acknowledgements

In particular I would like to thank the small team that made this project possible: Ellen, Gareth, Jason, Karen, Moira, Penny. You can see what can be achieved with the right skills, determination and enthusiasm. That’s very different to the big budget shows. Let’s hope that both ends of the spectrum, and between, will reach enough people to save planet Earth in these crucial years of crunch.

I would also like to thank Mark and Cherry Aitken, Sir David Attenborough, Geoff and Anne Bell, Tony Bevir and Marilyn du Mars, Ross Birnie, Gillie Brock, Fran Brookes, John Burton, Suzanne Chapman, Mark and Lucy Davies, Peter Garson, Louise Heren, Mish Kennaway, Miranda Krestovnikoff, Al Lethbridge, Mike Linley, Rosemary Low, Hugh and Cathy Maynard, Andrew and Rojeanne Molyneux, Keith and James Montgomery, Alice Owen, Elizabeth Parker, Sophie Pierce, Michael Pitts, Mike and Penny Richards, Daphne and Alexander Saunders, Tony and Hilary Soper, John and Sally Sparks, Kimberly Stewart, David and Kath Wall, Piers Warren, Lily Vinizelos.

Picture Credits

Nearly all the pictures in the book are from my footage taken over several years (see also in the 3 x 25-minute films on YouTube and Vimeo which accompany the book, also entitled “Planet Crunch”). I am also very grateful for extra images from Gareth Trezise – David Attenborough = front cover, plus pages 11, 65, 83, 137 and mountain ringlet, green-veined white. Harvest mice: pages 16, 141. Shrimps: pages 39, 131. Richard Brock, large blue page 82. Mountain gorillas: page 140. David Poore – Greta rally page 8. Sue Parker – orchids page 11. Jason Peters – white stork project pages 142 – 143. Moira Sage – Richard with Living Planet Book page 73. The Seahorse Trust – pages 66, 67, 137. Drawings: Ellen Bradley – back and front covers; elephant and lion, frog page 13, monkey-faced prickleback page 42. Cartoon: Pete Smith Illustration – pages 95 – 97.

I apologise for any omissions in the picture credits and would like to thank everyone who has contributed time and donations to charities on behalf of “Planet Crunch” and “Wildlife Winners and Losers – How to turn losers into Winners”.



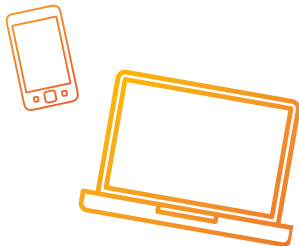
Accompanying Films

If you have found this book interesting and relevant to the world we are trying to live in, alongside nature, there are three accompanying 25-minute films you can watch for free, on YouTube and Vimeo. They’re also called “Planet Crunch”. I hope they will be useful to yourself, and anyone else you know, concerned (or not?) about the future of planet Earth, now in our hands. It could just make a difference. That’s my hope.



Richard Brock

Scan this code to watch the films!



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2021

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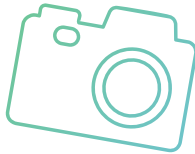
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The backside

Is there any more room for another book on climate change and the future of the planet beyond Covid-19? Yes, there is, and this is it. Refreshing, original, positive and amusing here and there. This book is particularly about nature and biodiversity, in fact it's a unique combination!

Give it a go!



Tick birds



More food chains

"A bigger job than usual, Dave."

Two dung beetles



**Unique
Political
Challenging
Cheeky**

**Up-to-date
Down-to-earth
Into your library?**

**Provocative
Significant
Educational
Rude!**