

Forgotten Wilderness

Wildlife Conservation, People, Culture and Imagination



Figure 1 : *Ile aux Aigrettes as seen from the jetty of Pointe Jérôme, Mauritius.*

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Introduction

On the plane that is taking me back to London from my home country Mauritius, I am looking through the window. The little screen in front of me indicates that we have just left the coast of Egypt. For the past hour, I had been dozing over the endless stretches of sand of the Sahara desert, and we are now crossing the Mediterranean Sea off the western shores of Greece. In a little less than 12 hours, I would have completed a voyage that many migrant birds take weeks to undertake every year. Only I am sitting, rather uncomfortably, in a vehicle of incredibly complex engineering whereas birds use only the strength of their metabolism, thanks to the wonders of evolution.

The journey of a small passerine such as the Barn Swallow, travelling from the United Kingdom all the way to South Africa and back, is quite an adventure. One must imagine that this elegant little bird, after having nested in a barn in the British countryside, has to undertake an incredible journey of 9500 kilometres south, only to return again, every year. Furthermore, imagine a juvenile bird that has never done the journey before but seems to know his route by instinct. Leaving in late summer, the bird has to cross the English Channel, fly over continental Europe and gain enough weight and strength to restlessly cross the Pyrenees, the Mediterranean, and later Sahara. After that comes the enormous stretch of semi-arid land known as the Sahel, which finally leads to the rainforest of the Congo. By the end of November to early December, the swallow will have finally reached the South African summer before having to head back.¹ On this incredibly dangerous journey full of sand and thunderstorms, the bird would have crossed dozens of countries and encountered billions of people, from avid British birdwatchers to Mediterranean hunters and African bushmen, all having a different name for the same bird, different beliefs, and totally different ways of defining and relating to what we call Nature.

As we are facing the sixth global extinction crisis² and considering that we might have entered a new geological era called the Anthropocene, we need to question our current way of interacting with nature.

Concerns about climate change and species extinction have been on the public agenda since the 1960s. But despite many conservation efforts and the creation of protected areas around the world, conservation is failing. As our society is becoming increasingly urban and our western way of living is spreading worldwide, a change of paradigm is necessary.

Climate change and migratory species defy all human notions of frontiers, cultural and political boundaries. We therefore need to think of practical solutions across both long stretches of distance and time. In a world divided by human conflicts and cultural differences, this represents a challenge.

People tend to have more empathy for what is close and familiar to them, so we can therefore start by investigating how the West has become so disconnected and so careless about the ecosystem upon which we depend. Looking at how other cultures perceive and interact with their environment also challenges our own definition of the wild. By gaining a deeper

¹ Colin Tudge, *Consider the Birds : Who they are and what they do*. (Penguin Books, 2008) p.280.

² Mark Avery, *Fighting for Birds : 25 years in nature conservation*. (Exeter : Pelagic Publishing, 2012), p. 314.

understanding of the relationship between humans and nature, we can start to envision a more sustainable way of cohabiting that doesn't necessarily clash with the need for development

In the framework of Information Experience Design, I will consider how culture and contemporary methods of communication and design can create empathy. Through conversations efforts among different groups of people and knowledge about local ecosystems, I will seek to encourage the creation of communal narratives and help bridge the gap between people and nature.

I

What is the point of Wildlife Conservation ?

1. Ile aux Aigrettes Experience

At the beginning of August 2016, I spent a week in a natural reserve called Ile aux Aigrettes (Figure 1). Ile aux Aigrettes is a small coralline islet located 850 metres off the eastern coast of Mauritius. Like on the mainland, Ile aux Aigrettes' original fauna and flora was almost completely destroyed by human activity and the introduction of exotic animal and plant species during colonisation.³ Like the world-famous Galapagos and other isolated islands around the world, Mauritius developed a unique ecosystem over millions of years prior to the arrival of humans.

Due to isolation and lack of predators, besides a small owl and a kestrel, the creatures of the island evolved to become totally defenceless, just like the emblematic dodo which was flightless, fat and nested on the ground.

With the human came his usual companions; the dog, the cat, the rat, the pigs and in this case, the next biggest predator, the monkey! Very rapidly the dodo, but also the giant Mauritian tortoise, a giant flightless parrot and many other plants and animals became extinct to the point that today, only a handful of endemic birds and reptiles remain. The irony is that nowadays, nearly all species, plants and animals familiar to Mauritian people are in fact exotic to the island.⁴

Ile aux Aigrettes was declared a nature reserve in 1965, and after much conservation effort, the Mauritian Wildlife Foundation restored much of its original vegetation and reintroduced many endemic endangered species that had long disappeared from the islet. Ile aux Aigrettes is therefore a very closely managed environment where, besides a handful of scientists, some of whom I interviewed (see appendix 2), no human is allowed to live. The island, through its very small size, acts as an ideal laboratory which enables scientists to closely monitor the evolution and wellbeing of its endemic population. The only exotic species that have been allowed on the island are the giant Aldabra tortoises from the Seychelles which are the closest living species to the extinct giant Mauritian tortoise. The Aldabra tortoise has been introduced in order to recreate a sustainable ecosystem as the tortoise's presence enables the dispersion of seeds, and helps plants to grow while it grazes much of the weed. The island also acts as a living educational museum for visitors, where tourists or school children, through guided tours, learn about the endemic fauna and flora of Mauritius, and the functioning of its ecosystem.

The experience of being on this island felt very nostalgic, like traveling through time. While species such as the Mauritian fody, the pink pigeon, the giant tortoise and the Telfair skink thrive on Ile aux Aigrettes and live closely with its few inhabitants, one is very conscious that these are barely visible on the mainland. It is obvious that such giant tortoises would never survive freely in the presence of Mauritian society with its roads, cars and over one million

³ <http://www.mauritian-wildlife.org/application/index.php?tpid=1&tcid=3> (accessed 28 September 2016).

⁴ Gerald Durrell, *Golden Bats and Pink Pigeons* (North Yorkshire : House of Stratus, 2003), p. 4.

people. Likewise, the pink pigeon builds very poor nests, can hardly take care of its own offsprings and depends highly on healthy primitive forests of which only 1% still remain on Mauritius.

This kind of artificial environment, isolated from people through both the physical water barrier but also legislations which forbid development, is closely monitored and maintained by culling invasive species for example. This environment raises the question of how we define wildlife and nature. Species such as the pink pigeon are clearly doomed to extinction without the intervention of humans for its survival. We can therefore legitimately ask what is actually the point of saving endangered species, and what kind of future we can envision.

2 . Nature for its own sake.

The model of conservation present on Ile aux Aigrettes still corresponds, in many aspects, to the framework of conservation thinking of the 1960s, which saw nature and wildlife as something that should be protected for its own sake. This perception of nature was inherited from the 19th century Romantic way of thinking that perceived nature as God, nature as a sublime divinity removed from Christian references but still very much inspired by its precepts. The poet John Muir, son of a zealous Christian, travelled through the United States of America and discovered Yosemite on his way through California. In his numerous poems which inspired generations of ecologists, activists and other nature lovers, he worships nature with religious devotion. "I feel like preaching these mountains like an apostle".⁵ This echoes the writings of European Romantic poets such as William Blake's "To see a World in a Grain of Sand, And a Heaven in a Wild Flower."⁶

This very aesthetic perception that praises nature for its beauty and the awe-inspiring feeling it triggers is very seductive and holds the notion that nature should be protected for its own sake, detached from any economic interest. Muir, through his descriptions of Yosemite, succeeded in communicating and transmitting his love for the grandeur of nature to a large number of people including future president Theodore Roosevelt. Muir also cofounded the Sierra Club which brought together nature lovers and scientists who advocate for nature protection, and still defines what environmental activism is today. Muir became friend with a railway baron called E. H. Harriman who convinced the U.S. Congress to designate Yosemite as a national park, initiating what became the most popular framework for conservation. National parks have since flourished around the world.⁷ What we can retain from this event is how an emotional and passionate vision and love for nature transmitted through creative writing, succeeded in inspiring and drawing together different people and resulted in political effectiveness.

The main problem, however, with the 'nature for its own sake' vision is its very distorted perception of nature and wilderness, and its total disregard for the people who initially lived on

⁵ John Muir, quoted in Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection* (Princeton, New Jersey : Princeton University Press, 2005), p. 97.

⁶ http://www.bbc.co.uk/schools/gcsebitesize/english_literature/poetry_ccea/natureandwar/auguriesofinnocence/revision/1/ (accessed September 2016)

⁷ Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 99.

these lands. Yosemite was not pristine and untouched as it had been inhabited and shaped over perhaps thousands of years by the native people and their animal herds. This is also the case for much of the rest of planet. There is hardly any place in the world that hasn't been affected by man however long ago, and this has not always been to the ecosystem's detriment. The creation of Yosemite National Park, in fact, led to the eviction of the Miwok Indians, backed by Muir. Likewise the creation of Yellowstone National Park killed 300 Shoshone through forced eviction in one day. Stories of such 'conservation refugees' have multiplied over the years. It is thought that about 80% of America's protected land used to be inhabited and that between five to tens of millions of people have been displaced by conservation efforts. Some studies estimate that 14 million individuals have been displaced in Africa alone.⁸

The spiritual experience of enjoying the grandeur of nature also seems to mainly appeal to what anthropologist Anna Tsing calls the 'cosmopolitan traveller', generally a very limited demographic of urban intellectuals. The bosses of the Southern Pacific Railroad who helped Muir in his quest to protect Yosemite, had a vested interest in the development of tourism in the region since tourists came to the west of the United States mainly by train.⁹

In the case of Mauritius, most of the little islets around the main island seem to be constantly under pressure to host luxury resorts which often results in the conversion of these islets into natural reserves instead. This is something the hotel industry has started to grasp through new concepts of ecotourism. Some hotels now offer to act as natural reserve wardens, using the money gathered through their business to take care of the environment by restoring the coral reef for instance, for the enjoyment of their clients.¹⁰

All of these scenarios tend to exclude the local population. As the ecologist Alexandre Lautier remarks (see index A) this American model of conservation creates heavens of wildlife splendour that are surrounded by urbanism and development, and have contributed not only to the physical, but also to the intellectual split between people on one side and nature on the other. Meanwhile, despite all these efforts, conservation is failing. Forests keep disappearing at an alarming rate while climate change is affecting ecosystems around the world. We are losing species nearly by the second, many of which have not even been discovered. To protect nature and species for the sake of beauty also leaves out a whole set of creatures that do not attract as much attention as the pandas, tigers and orangutans and landscapes that are not as geologically impressive as Yosemite or the Lake District in the United Kingdom.

In light of the controversies, conservation thinking has moved away from what conservation biologist Georgina Mace from University College London qualifies as 'nature for itself' and 'nature despite people', and towards an ecosystem for the benefit of people, 'nature for people'.¹¹

⁸ Peter Kareiva, Michelle Marvier, Robert Lalsz, *Conservation in the Anthropocene : Beyond Solitude and Fragility*, (2012) <http://thebreakthrough.org/index.php/journal/past-issues/issue-2/conservation-in-the-anthropocene/> (accessed 28 September 2016)

⁹ Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 98.

¹⁰ <http://www.comohotels.com/maalifushi/destination-guide/natural-world> (accessed 28 September 2016)

¹¹ Georgina M. Mace. 'Whose conservation?', *Science*, Vol. 345, Issue 6204, (2014) <https://mahb.stanford.edu/wp-content/uploads/2014/10/Mace-2014-Science.pdf> (accessed 28 September 2016).

3. Ecosystem Services

By contrast, the ‘nature for people’ principle highlights how we benefit from biodiversity and therefore raises new arguments for its protection. One of these arguments is called bioprospecting, which argues that the rainforest for instance may contain plants that could, for example, one day cure cancer. This argument again can be controversial when it comes to knowledge appropriation between pharmaceutical laboratories and indigenous populations.¹²

The focus on the benefits we gain from the animals and plants is called ‘ecosystem services’. As Alexandre Lautier explains (appendix A) “there are living species we need to protect as they help us and without them we won't be able to feed ourselves. Birds for instance help us eliminate mosquitoes and viruses. Birds of prey catch mice, rats and other rodents, regulating their population”. In short, without nature we simply cannot survive. Our dependence on other living species initiated the last perceptual shift, in the late 1990s, towards the ‘nature and people’ framework. The irony of this relationship is that, while we depend on organisms such as bees and trees, the rest of the world, indeed the planet itself, would do just fine without us. This fact has been creatively highlighted by the viral youtube channel #Mind Warehouse in a very effective and thought-provoking video “What Would Happen If Humans Disappeared?”¹³

On the other hand, there are many species that do not have such a crucial significance in the human ecosystem as bees. Many species such as the dodo went extinct seemingly without any measurable consequences. The worrying fact about extinction is the rate and the speed at which it is occurring. As for the effects of climate change, it is hard to measure the consequences of these changes. Animals and nature as a whole can be pretty resilient and adaptable. In fact, we are already witnessing some changes in behaviour. Many recent scientific studies have shown evidence of changes in migration patterns among a growing number of species. As a consequence of the rise in temperature, many species seem to leave later and return earlier to their breeding grounds. For example barn swallows seem to leave South Africa on their way back to Europe around nine days earlier than they used to. Other species seem to migrate over shorter distances or even not migrate at all.¹⁴

Contrary to the rapid changes in conservation thinking, from ‘nature for itself’ in the 1960s to ‘nature and people’ in the 2000s, the scientific metrics to measure conservation success have not developed at the same pace. Trying to quantify and analyse the links between nature and human well-being becomes incredibly difficult and requires, not only methodologies proper to conservation science, but also to taps into economics, social science and anthropology.¹⁵

¹² Michael Marshall, ‘What is the point in saving endangered species’ *BBC Earth*, (14 July 2015) <http://www.bbc.com/earth/story/20150715-why-save-an-endangered-species> (accessed 28 September 2016)

¹³ https://www.youtube.com/watch?v=Wy7Q6wazD_E (accessed 28 September 2016)

¹⁴ Altwegg, Res ; Broms, Kristin ; Erni, Birgit ; Barnard, Phoebe ; Midgley, Guy F. 'Novel methods reveal shifts in migration phenology of barn swallows in South Africa' *Proceedings of the Royal Society of London B: Biological Sciences* 279 (1733) (22 April 2012). <http://rspb.royalsocietypublishing.org/content/279/1733/1485> (accessed 28 September 2016).

¹⁵ Georgina M. Mace. 'Whose conservation?', *Science*, Vol. 345, Issue 6204, (2014) <https://mahb.stanford.edu/wp-content/uploads/2014/10/Mace-2014-Science.pdf> (Accessed 28 September 2016).

Not being able to show metric benefits of the richness of biodiversity can then be problematic when it comes to effectively negotiating and advocating for wildlife on political and commercial decisions, such as on infrastructure projects like the construction of a dam or of a highway through a rainforest. Most environmental decisions are made based on monetary value that consider costs and benefits. In 1997, for example a group of ecologists estimated that the services provided by the biosphere were worth around \$33 trillion a year.¹⁶ As mentioned earlier, ecotourism is another recent argument implemented to protect biodiversity and the environment while generating benefits for human economy. For those appreciating nature for its intrinsic value, there is reluctance to put a price on biodiversity and wildlife by commodifying nature. Although assigning a value would seem to be an obvious solution, it often does not solve any problem. What makes a difference is political will, it is matter of power. Assigning a market value to the environment means that businesses and politicians can easily wash their hands of responsibility. Monetary justifications have empowered highly polluting projects such as airports and coal mines which would have otherwise not been allowed.¹⁷ It is often not a case of how much profit a project can generate, but to whom. For example a coastal area that numerous fishing families would live off and enjoy in their free time, for example becomes the property of, and generates profit to a wealthy hotel investors. If the biosphere has a price, it means it can be owned, which is thus a prelude to privatization.¹⁸ On the other hand, to completely reject this way of thinking creates the risk that conservation is not on the negotiation table at all, “if the benefits provided by nature are assigned no value, they are treated as having none, and current trends in the decline and deterioration of natural systems will continue.”¹⁹

This is why, in order to justify the need for biodiversity protection, over 600 scientific experiments have been conducted in the past 20 years in all sorts of different milieus (oceans, freshwater, forests, etc.) as a means to confront and answer a certain number of controversies and disagreements, and show better evidence of these ecosystem services.²⁰

A rich biodiversity means an ecosystem that contains a large variety of life, including variation among genes, species and functional traits. Recurring evidence shows that a diverse ecosystem is more stable, more resilient and provides more essential resources such as food and

¹⁶ Michael Marshall, ‘What is the point in saving endangered species’ *BBC Earth*, (14 July 2015) <http://www.bbc.com/earth/story/20150715-why-save-an-endangered-species> (accessed 28 September 2016)

¹⁷ George Monbiot, ‘Pricing the Priceless’, (September 2013) <http://www.monbiot.com/2013/09/18/pricing-the-priceless/> (accessed 28 September 2016)

¹⁸ George Monbiot, ‘Pricing the Priceless’ (September 2013) <http://www.monbiot.com/2013/09/18/pricing-the-priceless/> (accessed 28 September 2016)

¹⁹ <http://www.bbc.com/earth/story/20150715-why-save-an-endangered-species> (accessed 28 September 2016).

²⁰ Bradley J. Cardinale, J. Emmett Duffy, Andrew Gonzalez, David U. Hooper, Charles Perrings, Patrick Venail, Anita Narwani, Georgina M. Mace, David Tilman, David A. Wardle, Ann P. Kinzing, Gretchen C. Daily, Michel Loreau, James B. Grace, Anne Larigauderie, Diane S. Srivastava, Sahid Naeem, ‘Biodiversity loss and its impact on humanity’, *Nature* 486 (06 June 2012), 59–67 http://www.nature.com/articles/nature11148.epdf?referrer_access_token=sPG85Ri0DmfjWqHhfKi3A9RgN0jAjWel9jnR3ZoTv0NnNZPuzTk9QF0l6YvZynF4Rs_TSwUVU7wU5QtWmdcf_dVg5Vm3LcqpZThTAXUQd50jfWsvaO0EAqJm-k9tCC-54q9arFc1WbM0v11oL7YsBz139GaQcQfLunU7FvKIXSTS0XGHZdf_RYu6TvN4Rt3Ttf41XxzG5cqEJr_SZEIMPdQcU3qE_gCFrDWcsAR9u8%3D&tracking_referrer=www.bbc.com (accessed 28 September 2016)

water. The type of species that inhabit an environment is as important as its variety. So much concern has been raised on the loss of pollinating species such as bees, while the extinction of a certain frog attracts less attention. Whereas if the loss of a single species can have a great impact, likewise the accumulated loss of diversity in an ecosystem should be equally worrying.

Evidence has also shown the importance of predators and preys in the ecosystem. Predators such as wolves are essential elements in the food chain and play a substantial role in keeping their ecosystems diverse. This means, from top to bottom, that a decrease in large predators has consequences on the decrease of its herbivorous preys and the supply of plants. This relationship is called trophic cascade and has been largely observed through the example of Yellowstone, where the reintroduction of wolves enabled the rest of the ecosystem to flourish. This is why, in the case of Mauritius, saving the kestrel which is the only bird of prey of the island is important. The loss of predators can be as important as the transformation of a rich ecosystem into an agricultural monoculture. Hence the disappearance of lions, for example, on a territory can cause famine among the population due to shortage in resources like vegetation and animals to feed on. This, in turn, can lead to human displacement and migration, which can lead to political tension and disputes. Trees, and thus healthy and rich forests, on top of storing our CO₂ and diminishing the effects of climate change, help regulate the water supply of a region. This is why organizations like the web search engine ecosia.org is replanting trees in places where there is shortage of water and food. In the face of these evidences, the destruction of rainforests for agricultural monocultures seems totally illogical.

However, many of these consensus still need more evidence. Moreover, data sets from different parts of the world do not always match. A higher number of species in an area might also mean a higher risk of diseases. Diversity benefits grow stronger with time and increase at larger spatial scales. Therefore, a stable ecology needs time to build up its resilience, thus the risk of rapid demographic changes in species population and the need to preserve large areas of wildlife.²¹

To summarise, Ile aux Aigrettes and the Mauritian Wildlife Foundation investing money and effort into saving endangered species unique to the world such as the pink pigeon, help to enhance the pride of the local people for their unique heritage, and also encourages interest in conservation. The abundance of endangered endemic species on Ile aux Aigrettes, through the extra food provided by the scientists, now largely exceeds the natural capacity of the island. This encourages tourism which generates income for all the Mauritian Wildlife Foundation projects, and highlights their work to the public. Ile aux Aigrettes, while being clearly separated from human civilization, is part of a wider conservation program connected to the mainland whereby most species raised and fed on Ile aux Aigrettes are expected to be reintroduced on Mauritius. In turn, reintroducing pigeons and fodies also means taking care and preserving the tiny remaining

²¹ Brad J. Cardinale, J. Emmett Duffy, Andrew Gonzalez, David U. Hooper, Charles Perrings, Patrick Venail, Anita Narwani, Georgina M. Mace, David Tilman, David A. Wardle, Ann P. Kinzing, Gretchen C. Daily, Michel Loreau, James B. Grace, Anne Larigauderie, Diane S. Srivastava, Sahid Naeem, *Nature* 486 (06 June 2012), 59–67
http://www.nature.com/articles/nature11148.epdf?referrer_access_token=sPG85Ri0DmfjWqHhfKi3A9RgN0jAjWel9jnR3ZoTv0NnNZPuzTk9QF0l6YvZynF4Rs_TSwUVU7wU5QtWmdcf_dVg5Vm3LcqpZThTAXUQd50jfWsvaO0EAqJm-k9tCC-54q9arFc1WbM0v11oL7YsBz139GaQcQfLunU7FvKIXSTS0XGHZdf_RYu6TvN4Rt3Ttf41XxzG5cqEJr_SZEIMPdQcU3qE_gCFrDWcsAR9u8%3D&tracking_referrer=www.bbc.com (accessed 28 September 2016)

areas of forest left in Mauritius, forests which contribute to the air quality, water supply, well-being and tourist activity, for the benefit of both people and the ecosystem.

The connections between humans and the rest of the natural world are complex. These links are often indirect and nonlinear and have unpredicted or distant consequences, both in time and distance. In the face of the current failure to confront the alarming situation we are in, we need to review the way we currently interact with the rest of our living environment. This in order to envision a more sustainable way of cohabiting to secure our and the future generation's survival. It doesn't mean closing all natural reserves or changing the system completely, but we have to face the following facts : cities are unlikely to stop growing, human need for food and shelter will remain and the demand in superficial material goods is currently expanding with many third world countries rapidly adopting a western way of living.

II Humans and Nature

1. Disconnect of the West

Besides the more indirect impacts of climate change, various sources have established that the main reason for species decline and extinction is due to the loss of habitat.²² Natural environments are being destroyed for mainly agriculture and livestock purposes, and urbanization, thus the urgency to find a more harmonious and mutually beneficial way of living. To try and understand how humanity interacts with its environment and integrates itself within the ecosystem, I detail how we, as the people currently living in Western Europe, perceive what we call nature. In the urban context of a metropolis such as London, I experience a recurrent challenge to communicate what wildlife represents to people who have grown up in a city, in an environment so absolutely controlled and constructed by humans. It seems that the loss of respect and consideration for nature goes hand in hand with the loss of interaction between men and other living species. We have split the world in two, both mentally and physically, drawing a clear line between nature on one side and civilization on the other. The question is when and how did this split occur? We have put nature in well-constructed and designed gardens and urban parks, and built a collective mental image of the wild. But as discussed previously, this notion of wilderness itself is full of flaws. The Oxford English dictionary defines as wild an animal or plant, living in a natural environment that hasn't been domesticated by man.²³ Hyde Park to us is clearly not wild, although it contains nature in the form of trees, grass and many animals. Land is purchased to build coastal marshland reserves that are closely managed and designed with freshwater pipes and barriers to prevent sea water infiltrating, and they become 'heavens of wildlife'.²⁴ On a small territory such as the United Kingdom, the differentiation between what is called wilderness and what is not is difficult to grasp, and seems to be based on how much control and input by man is perceived. In fact it can be safe to say that there isn't, ecologically speaking, any wilderness left.²⁵

Western culture has long been obsessed with discovering the 'true nature' of humanity by trying to understand what it is that separates us from the rest of the natural world. The truth is that there is no scientific evidence of any significant separation of any kind.²⁶ Other cultures and religions still behold a much more holistic perception of men within the ecosystem. One

²² Peter Kareiva, Michelle Marvier, Robert Lalsz, *Conservation in the Anthropocene : Beyond Solitude and Fragility*, (2012) <http://thebreakthrough.org/index.php/journal/past-issues/issue-2/conservation-in-the-anthropocene/>

²³ <https://en.oxforddictionaries.com/definition/wild> (accessed 28 September 2016)

²⁴ <http://www.rspb.org.uk/news/details.aspx?id=418658> (accessed 28 September 2016)

²⁵ <http://www.ccg.leeds.ac.uk/teaching/wilderness/> (accessed 28 September 2016)

²⁶ Andrew Gosler, Deborah Buehler, Alberto Castillo, 'The broader Significance of Ethno-ornithology' *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 36.

explanation of why western culture has become so destructive toward its environment can be found in our perception of the wild as being non-social and therefore a fearful place.²⁷ Fear is often triggered by the unknown. Forests for example are seen as non-social human deprived places full of danger. Surely this has not always been the case. It is therefore interesting to question how we have come to detach ourselves from perceiving the forest as a home.

The Mbuti Pygmies live in the Ituri Rainforest in what we now know as the Democratic Republic of Congo. They refer to the forest as 'Mother' or 'Father'. The forest is perceived as a nurturing shelter that provides protection and food and therefore inspires and deserves respect. This perception of unconditional love contrasts with other neighbouring cultivator communities for which the forest will “yield its bounty only reciprocally, in return for favours rendered”.²⁸ The leap from hunter-gatherer to cultivator has led to a shift in people's perception of their relationship to the land. Cultivation involves greater risk and therefore can trigger fear of the different weather patterns and the natural environment. This relation of fear triggers beliefs of “payment for services”²⁹ as seen in the numerous superstitions and religious rituals that have been developed by peasants and farmers in the world in order, for example, to encourage the gods to bring rain to the crops. The environment as provider of gifts or even a gift itself is a condition that prompts empathy and inspires respect.³⁰

In Europe, the loss of connection to nature has been blamed on the creation of national borders and hierarchies of power and control. Before “It seems likely that people all over the world must have come to know forests as social, historical, biographical spaces.”³¹ In order for European elites to claim custody of a territory, this territory had to be empty and wild and therefore emptied of the peasants who inhabited those lands. This is how European forests became non-social places. Forests have a very special place in European folklore and tales, and are often infused with mystery, magic and taboo that can be related to the trauma of past events.³² In the face of this analysis, one can start to understand how leaving the forest to exist in increasingly human controlled and constructed environments led to the enduring separation between what we call society and what we call nature.

²⁷ Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 201.

²⁸ Tim Ingold quoted in Tideman, Sonia and Gosler, Andrew. *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. (London : Earthscan, 2010), p. 38.

²⁹ Andrew Gosler, Deborah Buehler, Alberto Castillo, ‘The broader Significance of Ethno-ornithology’ *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 37.

³⁰ Andrew Gosler, Deborah Buehler, Alberto Castillo, ‘The broader Significance of Ethno-ornithology’ *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 37.

³¹ Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 201.

³² Robert Pogue Harrison, *Forests : the shadow of civilization* (London : University Chicago Press, Ltd, 1992).

2. Challenging our perception of the wild

On Ile aux Aigrettes, the scientists have to go through the forest every morning in order to take food to the bird feeders hidden all over the island. Besides the one tourist path cleared along the coast, there is no clear route through the dense vegetation. In order not to get lost (which admittedly given of the small size of Ile aux Aigrettes would not last too long), the newly arrived biologist follows an older resident staff through the forest until, after a few days of repeating the exercise, he or she comes to know the direction by heart. It was interesting to witness the way these invisible routes are explained. With a rather approximate hand-drawn map and the presence of tags through the territory, finding the way most times meant recognizing particular trees, roots or rocks. The scientists know, without looking at the colour tags, the names and habits of a good number of the animals they look after, and each have their favourite. Likewise the inhabitants of the Meratus forest in Indonesia visited by Anna Tsing have names for particular parts of the forest and even individual trees. For those who know their environment intimately, the forest is neither frightening nor wild.³³

In the Meratus rainforest, the notion of what is wild and what is cultivated also becomes blurry. The seeds of fruits eaten by people living in those forests get dispersed by accident and contribute to the regrowth and propagation of these same fruit trees throughout the forest. The Meratus people also create swidden through the forest for their crops, then abandon these places to let the forest regrow and move to another part of the territory. The presence of primary and secondary types of forest allow a larger variety of species to inhabit these woods. Likewise, the Hewa people of New Guinea create 'gardens' through the forest which increase the number of species. Therefore they are inextricably linked to the biological diversity of their homeland.³⁴ These people know their environment and are conscious of their impact, and help us deconstruct our mental perception of the wild, the cultivated, the farm and the forest.

3. Local stories for global connections

As Europe became more and more urban, many people lost their connection to nature, and with it the mythologies, superstitions and religious beliefs attached to the natural world.³⁵ Folktales and traditional cultural attachments to a species are important in shaping

³³ Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 201.

³⁴ Andrew Gosler, Deborah Buehler, Alberto Castillo, 'The broader Significance of Ethno-ornithology' *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 32.

³⁵ Andrew Gosler, Deborah Buehler, Alberto Castillo, 'The broader Significance of Ethno-ornithology' *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 32.

conservation.³⁶ The connection people feel toward certain species is profoundly emotional and cultural as opposed to rational or intellectual.

Birds for example, through their ability to fly have captured humans imagination for centuries. In every part of the globe we are used to their presence and their songs and have developed different mythologies to explain their behaviours. Aristotle used to think that birds magically transformed themselves into another species during winter, that redstarts for example turned into robins.³⁷ Another scientist suggested the birds were travelling to the moon. The arrival and gathering in early March and April of birds such as the barn swallow cultivated the belief that swallows were responsible for the arrival of spring. Animal migration has always been one of the most fascinating mysteries of nature. As Giuseppe Pitre quite impressively recorded in his book *The Swallow Book; the story of the swallow told in legends, fables, folk songs, proverbs, omens and riddles of many lands*.³⁸ Migrant species like the swallows seem to be part of popular folklore in nearly every part of the world. The poet, artist and naturalist of the Victorian Era John Ruskin, in his essay on ornithology *Love's Meinie* expresses his fascination and curiosity for birds and their trajectory.

“Herald of our summer, she glances through our days of gladness;—, I can tell you nothing of her life—nothing of her journeying, nor how she traces the path of her return.”³⁹

We seem to have come a long way since and so have the stories we used to behold upon the wild. We know now that many of our European species spend their winter months in Africa, As observed throughout this dissertation, conservation efforts are not a matter of isolated targets but incorporate themselves into a wider network of problems and consequences affecting the planet as a whole. Climate change is the major result of these connections and exposes the need to consider environmental policies across political borders. Likewise, many animals, especially migrant birds defy all notions of human borders. More than any other species, birds ability to fly, foils any attempts to protect them inside enclosed national parks. Birds fly over fences and over oceans and deserts alike. Thus to protect migrant birds requires a collaborative network of conservation efforts. This began to happen at the beginning of the new millennium with the creation of European Union conservation programs such as Natura 2000. As ecologist Alexandre Lautier highlights through the alarming decline of the Egyptian Vulture (from 60 breeding pairs to only 5 in less than 10 years) major gaps in ground research exist and data collection is still lacking in Africa. Scientists are confronted with the inability to determine the exact cause and reverse this dramatic extinction rate due to the lack of information about the birds wintering

³⁶ Maan Barua and Paul Jepson, “The Bull of the Bog : Bittern Conservation Practice in a Western Bio-cultural Setting *Ethno-ornithology : birds, Indigenous Peoples, Culture and Society*. Edited by Sonia Tideman, Andrew Gosler, (London : Earthscan, 2010), p. 301.

³⁷ <http://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/funfactsandarticles/migration/understanding-migration.aspx> (accessed 28 September 2016)

³⁸ Giuseppe Pitre, *The swallow book; the story of the swallow told in legends, fables, folk songs, proverbs, omens and riddles of many lands* (New York : The American Book Company, 1912) <https://archive.org/stream/swallowbookstory001841#page/n3/mode/2up> (Accessed 3 June 2016)

³⁹ John Ruskin, *Love's Meinie*, (April 18, 2007 [EBook #21138].80 <http://www.gutenberg.org/files/21138/21138-h/21138-h.htm#II> (accessed 28 September 2016)

months in Africa (appendix A). Challenges in collaborative conservation efforts are due to cultural, economical and political differences between the two continents.

Preserving biodiversity requires engaging with people and local populations. Which means learning about their perception of nature and their way of interacting with the wild. Currently, migrant birds are literally being exterminated all around the Mediterranean by hunters. Historically a cultural hobby in the region but recent political and economical distress have escalated the problem. While northern European governments have invested multi-millions of euros into raptor conservation, southern countries around the Mediterranean slaughter migrant birds without any control. With a climate that is still fraught with post colonial resentment, old imperialist notions of imposing limits and control beyond borders makes for a tricky situation.⁴⁰ This is why conservation scientists and all those willing to communicate and advocate for biodiversity protection need to start by understanding the language and beliefs people hold towards wildlife.

4. What connects people to nature?

In order to understand people's private motivations to act and devote their lives to the protection and care of species and individuals other than themselves, I interviewed ecologist Alexandre Lautier (appendix A) and some of the conservation biologists I met on Ile aux Aigrettes (appendix B). It seemed to me essential to grasp this relationship in order to be able to envision how we could foster empathy and a closer connection to our environment.

The people working on Ile aux Aigrettes live on the island five days a week in relatively poor shelter. The staff is composed of foreign volunteers and low-paid local employees who earn only 10 000 Mauritian rupees (about 216 British pounds) a month. In a fairly developed country such as Mauritius, an island where nearly everything is imported, the cost of goods often equals or exceeds those in Europe. Besides the warden of the island who lives permanently and separately on Ile aux Aigrettes, all the inhabitants are young, under 30, and have been staying on the island for an average period of 6 to 12 months. The only exception was Stephan (appendix B. 5) who had been working for the Mauritius Wildlife Foundation for six years and earns a higher salary than the others. In the current circumstances, it is easily understandable that this isolated lifestyle combined with the very low income cannot be sustained in the long term. I thus questioned them on their motivations to work in conservation, in such close contact with the vegetation and the animals they foster, and on the origin of their love for wildlife.

Among the eight interviewees, half (appendix A, B.1, B.2, B.6) related their love and interest for nature to close family members who had transmitted their interest, knowledge and curiosity about the natural world to them. Half of the people also grew up in or close to natural environments and therefore experienced a sort of intimacy with nature as children (Appendix A, B.3, B.6, B.7). Two of the Mauritian interviewees related their interest in conservation to wildlife documentaries, drawing inspiration from the close and direct contact between the scientists and the animals (Appendix B.1, B.5). These images nurtured their own love for animals into a professional engagement. In the case of Stella Babooram (appendix B.4), she got into conservation through her more broader empathetic nature. "I wanted to help others, I wanted to

⁴⁰ Jonathan Franzen, 'Last Song for Migrating Birds', *National Geographic*, (June 2013) <http://ngm.nationalgeographic.com/2013/07/songbird-migration/franzen-text> (accessed 28 September 2016).

be a doctor and take care of people. I'm not that smart, so instead of taking care of people I just take care of birds.” Likewise Jordon from Australia states that he decided to “follow his heart rather than his head” despite being very academic.

As a last minute impulse, I also interviewed my English flatmate Katie Thomas (appendix C). Katie writes a blog called eco-vintage where she dresses up in second-hand clothes and takes styling pictures of herself.⁴¹ She has also been investigating and blogging on various sustainable brands as an attempt to confront her own consumerist nature with her environmental consciousness. What had always puzzled me about her was that, despite being such an environmental advocate through both her blog and her own lifestyle, she never really seemed to be particularly close to nature herself. Katie perfectly fits the young cosmopolitan urban environmental activist profile. Her interest in the environment did not come from a close connection to other species but rather through an awakened curiosity, encouraged by her geography teacher, to understand the underlying mechanisms of our consumerist society and well-being. Anthropologist Anna Tsing highlights in her study of the ethnology of environmental activism in Indonesia, “Nature loving is not the same as environmental activism.”⁴² The motivations and different methods to operate toward a common goal are multiple and complex.

Through these conversations, as well as the biography of nature conservationist and former Conservation Director of the Royal Society for the Protection of Birds (RSPB) Mark Avery⁴³, and his interviews of acclaimed birdwatchers⁴⁴, I discovered the main motivations for people to get involved with conservation and advocate for the environment. What seemed to connect people to the natural world was a physical and affectionate closeness to nature from childhood, often transmitted through family members and an inherent capacity to empathize for other people or animals. The appreciation of nature is not always something given. In fact it seems to be something that often needs to be transmitted. Mark Avery relates his beginning as an avid ornithologist to his school’s natural history society. Through this Field Club, he made friends and went on excursions, learning and sharing knowledge about birds and other forms of wildlife collectively.⁴⁵ Likewise, many environmental activists in Indonesia got their interest through nature-loving clubs which are very popular in local universities and enable social integration among students. Education and the pleasure to share experiences and feel part of a community impacts on people’s interest in nature.

⁴¹ <http://eco-vintage.com/> (accessed 28 September 2016).

⁴² Anna Lowenhaupt Tsing, *Friction : An Ethnography of Global Connection*. (Princeton, New Jersey : Princeton University Press, 2005), p. 153.

⁴³ Mark Avery, *Fighting for Birds : 25 years in nature conservation*. (Exeter : Pelagic Publishing, 2012)

⁴⁴ Mark Avery and Keith Betton, *Behind the Binoculars : Interviews with acclaimed birdwatchers*. (Exeter : Pelagic Publishing, 2015)

⁴⁵ Mark Avery, *Fighting for Birds : 25 years in nature conservation*. (Exeter : Pelagic Publishing, 2012), p. 4.

III

Creative solutions towards change

1. Empathy

In a liberal democratic system, public mobilization remains the most efficient way to force policymakers to intervene and businesses to confront themselves.⁴⁶ Putting pressure towards environmental thinking and biodiversity protection can operate on different levels; a personal change of lifestyle as a consumer or through more active interventions (petitions, protests, etc.). When it comes to wildlife conservation, much of the field work includes scientific research and land management, coupled with advocacy and education. Many NGOs only do one or the other. The importance of putting wildlife conservation back to the forefront is crucial to me, since the topic appears to have recently suffered a loss of attention in both the media and in research funding.⁴⁷ From my observation, topics such as bird conservation appeal either to the very young or elderly sections of the population, leaving a large gap in between.

In order to feel concerned about an issue, people must first become aware of it. In the age of Google, Wikipedia and the internet, information has become more accessible than ever. Through environmental campaigns on public transport for instance, we are informed about deforestation and mass extinction in a very dramatic way.⁴⁸ Striking images of baby orangutans with catchy marketing phrases succeed in catching the busy commuter's attention for a short amount of time, but at most create an emotional response of 'sympathy'. This emotion is not a shared one and often takes the form of pity.

While telling us for example that the rainforest is being destroyed or that we are losing species, these campaigns rarely inform us about this actually matters, which is why understanding the necessity of conservation was detailed in the first chapter of this dissertation. The tone of these campaigns is often very alarming, frightening and negative. Spreading depressing emotions is not, in my opinion, the best way to encourage people to be curious and to inform themselves more extensively. Our society has become so detached from their forests and wildlife that the loss of biodiversity does not seem to have any significant impact on people's daily routine.

In 2013, the RSPB did a three year in-depth research on English children's connection to nature. The results estimated that only one in five children were having a connection to their natural environment⁴⁹. The lack of knowledge and relationship to the wild makes it difficult for people to really connect with these issues on a deeper emotional and cognitive level. While big exotic animals are impressive and beautiful, thus inducing sympathy, it is difficult to truly

⁴⁶ George Monbiot, *Pricing the Priceless* (September 2013) <http://www.monbiot.com/2013/09/18/pricing-the-priceless/> (accessed 28 September 2016)

⁴⁷ Mark Avery, *Fighting for Birds : 25 years in nature conservation*. (Exeter : Pelagic Publishing, 2012), p. 302.

⁴⁸ <https://www.pinterest.com/gpslovenija/forests-animal-life/> (accessed September 2016)

⁴⁹ RSPB, *Connecting with nature : finding out how connected to nature UK's children are*. (2013), p.8 http://www.rspb.org.uk/Images/connecting-with-nature_tcm9-354603.pdf (accessed 28 September 2016)

empathise with distant species we are not familiar with, and environments we have not experienced.

Empathy “is the imaginative act of stepping into the shoes of another person, understanding their feelings and perspective.”⁵⁰ While putting ourselves in the position of another person who is not culturally, geographically or socially similar to us is difficult, empathizing for animals, plants or insects is even harder. In fact, strictly speaking, it is impossible to envision for example, what it is like to be a bat⁵¹ or any other form of life, besides probably ours individual self. It also seems quite irrelevant and maybe we do not need to. But what we can do is generate emotions that we can experience within ourselves. We know what it is like to feel pain, or loss, or joy. If we consider the forest as our home, we will have memories related to these spaces and their inhabitants. If people learn to know and appreciate the birds in their garden or the frogs in their nearby pond, they will be more likely to empathise and feel the pain of losing these species and their habitats. .

In his research on how to use empathy as a tool for successful social and environmental change, Roman Krznaric highlights three major approaches to enhance affective and cognitive empathy among target groups: experience, conversation and culture⁵². Here we can finally begin to identify how art and design can contribute to conservation. The examples I am going to highlight are not definitive solutions but contemporary initiatives in the United Kingdom, developed in order to reconnect and sensitize the public to local wildlife. Locality and focus are important when it comes to reaching a large public. While keeping in mind a more global and international concern about wildlife and humanity as a whole, trying to affect people on the ground means starting with sparking an interest toward their directly experienced environment, spaces they can relate to and experience in their daily lives. Using contemporary tools of communication. The following projects aim to reach a large part of the population, as opposed to other creative initiatives that are often directed only to a small demographic inside the creative industry.

2. Naturebytes – digital making for wildlife

Naturebytes is a trio of digital makers and wildlife enthusiasts who aim to bring together conservationists, educators, engineers, digital makers and designers. Launched in 2016 through a Kickstarter campaign, the Naturebytes Wildlife Cam kit is a digital camera anyone can build to take high-definition images of wildlife by following the instructions available on their clear and well-designed website.⁵³ The kit contains a high resolution digital camera, a Raspberry Pi computer, an infrared motion sensor and a rechargeable battery, all enclosed in a 3D printed waterproof case that people can hang in their garden or anywhere outside where there is wildlife

⁵⁰ Roman Krznaric, 'The Empathy Effect', 2015, <https://www.foe.co.uk/sites/default/files/downloads/empathy-effect-roman-krznaric-76075.pdf> (Accessed 28 September 2016)

⁵¹ Thomas Nagel 'What it is Like to be a Bat', in *Nature : Documents of Contemporary Art.*, edited by Jeffrey Kastner (Cambridge, Massachusetts : Whitechapel Gallery and The MIT Press, 2012), p. 144.

⁵² Roman Krznaric, 'The Empathy Effect', 2015, <https://www.foe.co.uk/sites/default/files/downloads/empathy-effect-roman-krznaric-76075.pdf> (Accessed 28 September 2016)

⁵³ <http://naturebytes.org/> (accessed 28 September 2016)

to be found. The sensor detects body heat, taking a pictures or a video every time it detects warm-blooded animals. This allows people to capture animals that are usually shy and this can be facilitated by positioning the camera next to a feeding station.

In the United Kingdom, where four in five children lack an understanding and appreciation of nature⁵⁴, the Wildlife Cam kit could be a useful educational tool. The designers also offer workshops and have been promoting their project at festivals and among various communities. In addition, children develop skills in coding, 3D design and printing. Through curiosity, creativity and digital making, they get to know and learn about their local wildlife. Discovering the species captured at the end the day is exciting, and encourages further exploration of the natural environment by seeking new places to position the camera.

The Naturebytes website will support an online community platform where people can post their pictures. Conservation scientists can access this precious data which enables them to survey species, understand and monitor their behaviour for better protection. The project is also open source. For a low price, skilled makers can purchase the specialist electronics and design files necessary to 3D print the Cam kit on their own. Hackers can also change the components and the code in order to enhance the camera's capabilities, while sharing their progress online. People have already started with replacing the embedded battery by solar panels. My one concern about the project is its use of unsustainable materials like plastic and electronic components. However the small scale of the company and 3D printing techniques enables the case to be locally made and assures a lower carbon footprint.

4. Creating meaningful spaces

Finally, I highlight the work of two designers, Tabitha Pope⁵⁵ and Jony Easterby⁵⁶ whose entire body of work represents what sustainable, meaningful and inspiring design is to me.

Tabitha Pope designed the Greenpeace field at Glastonbury for the past four years. I volunteered there in 2014 and again this year. What struck me both times was how beautiful and innovative the installations were, while exposing issues of climate change⁵⁷, ocean degradation⁵⁸ and promoting sustainable energy⁵⁹. The installations are made mostly of sustainable or reused materials while incorporating new technologies such as Virtual Reality projections and interactive light installations. One of the installations struck me in particular. A long chain of LED strip lights hanging above the field would change their color pattern if people hold hands in order to connect the two extremities of the line. By building a human chain, the bodies would enable electricity to flow through their hands and affect the code manipulating the lights. This meant

⁵⁴RSPB, *Connecting with nature : finding out how connected to nature UK's children are.* (2013), p.8 http://www.rspb.org.uk/Images/connecting-with-nature_tcm9-354603.pdf (accessed 28 September 2016)

⁵⁵ <http://www.tabithapope.com/> (accessed 28 September 2016)

⁵⁶ <http://www.jonyeasterby.co.uk/> (accessed 28 September 2016)

⁵⁷ <http://www.tabithapope.com/project/greenpeace-at-glastonbury-2014/>

⁵⁸ <http://recycledvenues.org.uk/projects/the-cd-fish/> (accessed 28 September 2016)

⁵⁹ <http://www.glastonburyfestivals.co.uk/areas/the-green-fields/the-greenpeace-field-2/> (accessed 28 September 2016)

that at least 20 strangers had to hold hands to activate change. To me this was a strong and symbolic metaphor. Glastonbury is among the biggest festivals in the world, with thousands of people going through the field every year. While Greenpeace is rarely directly involved in matters of local conservation and the festival goers probably do not think much about the destruction of the ocean while for example gliding down a big slide, the ability to address a large amount of people, while still delivering drops of information in a playful and happy atmosphere is what impressed me. Tabitha Pope's work aims to create what she calls meaningful space. "Spaces that help connect people to nature and to each other." Tabitha Pope and Jony Easterby have a background in architecture and landscape architecture respectively, hence their ability to create spaces for humans to experience. Their projects are primarily based in natural landscapes and encourage people to rebuild stories and share memories associated to these lands.

Tabitha Pope's installations focus on the use of natural and recycled materials and often involve children or various communities in the building process. The act of sourcing and reusing materials available in both the natural and man-made environment is close to the way the Meratus people source their wood in the forest to build their houses. Her installations often resemble theatrical set designs, triggering people's imagination and creating spaces they can physically experience.⁶⁰ Other projects have a more contemplative purpose, like building a cloud and star-gazing seat in the woods to enhance the appreciation of nature.⁶¹

Jony Easterby's body of work takes an even more poetic and artistic direction. Easterby often collaborates with other artists and producers in order to put in place collective exhibitions involving sculptures, audio visual installations, architectural constructions and performances. Many of these exhibitions take place at night within a natural reserve or urban wilderness^{62,63}, encouraging people to leave their houses and explore these places to see the artworks.

One of his projects, 'For the Birds'⁶⁴, was located in the RSPB Ynys-hir natural reserve in Wales. During four consecutive nights, the public was invited into a multi-sensory, meditative and immersive guided journey through the reserve. Along the path, different sound and light installations were placed; electro-acoustic performances, projections and kinetic sculptures that subtly incorporated themselves into the landscape. The installations used low-cost and low-power equipment suitable for remote places. The experience encouraged the public to witness the bird's and wildlife's physical and ecological reality. 'For the Birds' also benefited the reserve by showcasing their conservation efforts, and united a wide and diverse audience. Most of Jony Easterby's other projects follow the same model in different locations. Through his work he encourages a wide public to come experience and immerse themselves into nature in order to create empathy and connection, but more importantly to encourage people to dream and create collective memories of wonder.

⁶⁰ <http://www.tabithapope.com/project/recycled-venues/> (accessed 28 September 2016)

⁶¹ <http://www.tabithapope.com/project/woodland-design-lab/> (accessed 28 September 2016)

⁶² <http://www.jonyeasterby.co.uk/StR%20Front%20page.html> (accessed 28 September 2016)

⁶³ <http://www.powerplant.org.uk/gallery.php> (accessed 28 September 2016)

⁶⁴ <http://www.forthebirds.org.uk/About.html> (accessed 28 September 2016)

Conclusion

Konrad Lorenz was an Austrian zoologist and founder of ethology, which is the study of animal behaviour under 'natural conditions'; conditions where they live and interact freely, as opposed to laboratory environments. He hosted a number of animals on his estate, including a colony of jackdaws, of which he came to know every single one by heart, recognizing them even in a distance. His observations and discoveries on animal behaviour earned him the Nobel Prize in Physiology or Medicine in 1973, which he shared with Nikolaas Tinbergen and Karl von Frisch. Being a recognized scientist, and warning against anthropomorphisms, Lorenz clearly identifies with his animals. Empathy, he writes, is an essential prerequisite to understanding.⁶⁵ It seems to me that this statement can work both ways, understanding through knowledge and experience is what enables us to empathize. Lorenz also praises the writings of poets such as Rudyard Kipling's *Jungle book* and Selma Lagerlof's *Nils Holgersson* which, detached from the burden of scientific accuracy, still succeed to convey "a true impression of what a wild animal is."⁶⁶ In fact he writes in the introduction of one of his major work *King Solomon's Ring* that the whole purpose of writing this book was to be able to share the stories and anecdotes he encountered while studying and living with the animals.

It is precisely through these stories that we can make sense of the world around us. It is, to me, the task of the designer to find a language to communicate the wonders of nature, its mechanisms and its importance to the public. It is necessary to create bridges and enable conversation among scientists, anthropologists, activists, people of different ages and cultures and anyone willing to make a change. Creativity and technology to me are tools to encourage people to be curious, playful and imaginative, to learn through observation, seek knowledge and be amazed by the multitude of life around them. As Konrad Lorenz says "Our fellow creatures can tell the most beautiful stories, and that means true stories, because the truth about nature is always far more beautiful even than what our great poets sing of it, and they are the only real magicians that exist."

This perception of nature isn't without reminding us of the 'nature for itself' framework uncovered in the first part of this dissertation. The best paradigm seems to be one that would combine the 'nature for itself' with the 'nature and people' way of thinking. This perception is currently happening, we are finally realizing that we are an integral part of nature and that protecting nature for its own sake includes protecting us and our future alike. By encouraging people to reconnect and reengage with nature, by communicating the wonders and the necessity of the living world, culture can help change people's perception to reconsider nature as a home. A that is home full of stories and memories to be transmitted to the next generation.

⁶⁵ Konrad Lorenz in Colin Tudge, *Consider the Birds : Who they are and what they do.* (London : Penguin Group, 2008)

⁶⁶ Konrad R. Lorenz, *King Solomon's Ring.* (Northampton : University Paperback, 1961)

Appendix A

Extract of interview of **Alexandre Lautier, Environmental Engineer, Natura 2000 Agglopoie Provence Communauté d'Agglomération Natural Environments and Agriculture, France**

Interviewed at his office in Salon de Provence in France. Translated from French.

Natura 2000 :

In a nutshell

Stretching over 18 % of the EU's land area and almost 6 % of its marine territory, it is the largest coordinated network of protected areas in the world. It offers a haven to Europe's most valuable and threatened species and habitats.

In practice

Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 28 EU countries, both on land and at sea. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the [Birds Directive](#) and the [Habitats Directive](#).

Natura 2000 is not a system of strict nature reserves from which all human activities would be excluded. While it includes strictly protected nature reserves, most of the land remains privately owned. The approach to conservation and sustainable use of the Natura 2000 areas is much wider, largely centered on people working with nature rather than against it. However, Member States must ensure that the sites are managed in a sustainable manner, both ecologically and economically.⁶⁷

Hello Alexandre, can you please explain what Natura 2000 is and what is your function within the organization ?

Natura 2000 is a European program so it also exist in the UK. The program got create around the end of the 90's beginning of 2000s in order to create a cross european program of natural areas protection, that englobes the environment and the species inhabiting it, so the European Biodiversity.

It is the first and largest coordinated network of protected areas in the world.

Each country directs its sites in its own way and every Natura 2000 site is managed differently. Natura 2000 is a tool not a reserve in itself. I am responsible of one of the Natura 2000 sites, that stretches between the Durance River and l'Etang de Berre in the PACA Region (Alpes Provence Côte d'Azur). It is a living space that contains a number of activities so we are ought to protect both the environmental friendly activities as well as the species and ecosystem. I work for the Aix-Marseille-Provence area. It is the French government that allocates the sites that are directed by the public domain in order to avoid competition.

I got recruited to write the management plan that diagnoses all the species and habitats and then offers an action plan that stretches over 10 years. My work is also to put the plan into action , so every year we do an assessment of the situation.

⁶⁷ http://ec.europa.eu/environment/nature/natura2000/index_en.htm (accessed 28 September 2016)

I passed by the Etang de Berre on my way here and saw all petrochemical factories around. I heard there were many pollution issues related to the pond, is that true ?

It used to be the case, now things are better. There have been actions put in place, European programs where money has been put in internationally to take care of the Etang de Berre pond. There is a union dedicated to it. There is still a lot of work to do but it is now safe to swim in it. People can fish, there is a mussel activity that came back, same for the eels. The main issue is the water quality, for us it is safe but the water is very poor in nutrients in order to support the aquatic fauna. There is a big hydraulic system, the Durance river and the Verdon are our local reservoirs, therefore all the water comes down from the Alps to bring water to the whole Provence region which is dry and has no water. The whole water that enables the factories around to operate flows into the pond. It is freshwater which damages the Etang de Berre which is a lagoon, therefore made of marine water. The water is brackish but should be more marine. The river also bring lots of alluvial deposits into the pond which is why the whole northern part of it is very poor in marine biodiversity. This is why we say that there is still is a lot of work to be done.



Figure 2 : *The Etang de Berre, facing Marseille Provence Airport.*

Therefore your work then is to apply the action plans that have been established ?

Yes, last year we worked a lot with the local farmers Here we are in a Mediterranean Environment, therefore there is an important risk of fire which is a big problem encountered in the management of the Garrigue. In order to avoid these forest fires we collaborate a lot with the local sheep farmers. We work a lot with them in order to help them as their industry is knowing a crisis as well. It is a give and take relationship and they help us maintain our hills. It allows us to open the environment and bring in many species of birds in as there are many birds coming from Africa to nest here.

On the scientific level we just equipped a Bonelli's Eagle with a GPS tag which allows us to know where each couple goes. We just contracted feeding platforms for the Vultures so the sheep farmers come deposit their carcasses which helps feed the birds. Then there are several scientific researches on different species, there's a big study on the Bonelli's Eagle as it is our main local Mediterranean species. It is the rarest Eagle in France as there are only 30 pairs left. They mainly get executed on the other side of the Mediterranean basin. Through hunting, poaching, poisoning and electrocution we lost about 60 % of our Eagle population in less than 50 years. Poisoning is forbidden now, but it used to be common practice for the hunters as the Eagle is a competitor on the prey. They also had a bad reputation and some people seemed to enjoy the prestige of killing an Eagle. This is how we nearly lost them in the 80s when there were only about 10 to 15 pairs left, but we now managed to double their population.

What kind of species migrate through France ? I looked closely at the Barn Swallow although this species doesn't seem to be Endangered.

They are threatened although they seem to do better now. There have been many studies on Swallows which give us good indications on the evolution of climate change. As a migrant it is a good biodiversity indicator. Other migrant birds that we have here englobe raptors such as the Circaète Jean le blanc who nests in the Sub-Saharan region as well as here, then we have the Egyptian Vulture. This small Vulture is very rare and there is a lot to do as this species is very unknown as opposed to other Vultures. It is therefore very difficult to get fundings to save the species and in this case if we don't do something very quickly the Egyptian Vulture will disappear. In the Balkans there were at least 60 pairs not even 10 years ago and nowadays there are only 5 left so we lost 90 % of its population. Here the situation is about the same.

Do we know what causes this critical decline ?

No not really. It is a species that has a slow reproduction cycle which makes it difficult, but mainly we would need to know what is happening in Africa on their wintering ground. It is a species that comes here in Summer so they arrive here in March to breed and the last youngsters leave here around September and October. We then have a lot less data on their winter activities. The aim would be to have a cross African-european program to be able to understand the reason for its disappearance.

That's for the big raptors, there are many other summer migrants that also breed in the UK such as the much smaller Woodchat Shrike, the European Bee-eater which is beautiful, the blue European roller, another raptor the Black Kite, the Hoopoe, the Flamingoes etc.

The issue is the connection with Africa as we don't have the same resources. In Europe it's been 40 to 50 years since we've started to talk about biodiversity and created national and regional parks and natural reserves for which we have shareholders and that we have been managing for a long time now. We've been able to collect and analyse data and get results. We have had action plans and have been sensitizing people to the environment for a while, in Africa things are very different. There are big missions currently undertaken by organizations such as Tour du Valat which is a scientific centre very focused on climate change and migration and does many projects involved with African countries across the Mediterranean. They work a lot done on seabirds and on hunting issues.

Talking about hunting, how is the situation here in France, it seems to be a common problem around the Mediterranean ?

Yes, there are about 5 million hunters in France, it is a big leisure activity in the Provence, Cote d'Azur region. Saying that they also do good things, as in everything there are good and bad hunters. They reintroduce some species of rabbit and take care of the land, they mainly monitor the species which for us is very important and look out for forest fires. The problem is now that more and more people use nature for other sports and outdoor activities such as hiking etc. What makes it great to work on and at the same time difficult with the Bouches-du-Rhône department, is that we have very important urban areas, Marseille and Aix-en-Provence. On a very small territory we have over 2 millions inhabitants and at the same time we also need space for these people to 'have fun'. Therefore the leisure areas we have are protected and very important worldwide. Whether it is the Calanques, the Camargue, the Crau steppe, which is the only steppe in France, the big Canions, the Alps, we have national parks everywhere. It is the most protected area in France and contains the largest amount of species and variety of environments. We have 3 types of landscape, Alpine, Mediterranean and Continental, the sea and the mountains.

Hunting and poaching isn't that much of a problem anymore because there are less and less hunters and we've been working with hunters for many years now although there are still issues like people hunting with glue or nets. It is a sort of folklore in the region.

Do you think Brexit will have an impact on environmental regulations and European collaboration regarding Conservation ? What impact can such political decision have ?

It is the loss of all the policies regarding the environment put in place by the EU which will be problematic for the UK. The relationships between scientists and technicians themselves won't be affected, but it will be difficult for the UK as that is where the fundings come from. I, myself am paid by Europe, all the work we do here, all the measures we put in place are thanks to the EU, even if it is the region that manages and takes decisions, it all relies on European fundings. It is the same for the UK and all the other 28 countries. Natura 2000 is very important in England and the laws are much more strict than here as we already had many existing structures and lobbies.

Natura 2000 was first seen in a very bad way by the local hunters, we therefore have collaborated a lot with them and have associated them to our projects so we now have very good relationships but it was very difficult at the beginning. I was one of the last members of the team to arrive here to witness it but at the beginning it was very difficult. They thought we would put even more barriers in front of them and reserves, but that wasn't the case. Regarding the UK it will probably be difficult in terms of funding and in maintaining a global, European vision of the Environment. We will see...

On a more personal note, where did your interest in nature come from ? Can you tell me a bit more about your trajectory and how a person ends up working in a structure such as Natura 2000 ?

I always lived in the Verdon gorges in the Alps, I always worked with animals. Back then I was passionate about horses and that's how it started. With my parents back then we also travelled a lot. In middle school I did an internship at the Luberon National Park and really enjoyed it. A friend of my dad was also specialized in raptors, another was a geographer specialized in mountain environments and an agronomy engineer. I followed them. I then did a Bachelor in Geography where I worked in parks near Avignon. The revelation was when I went back to my roots, I did my Masters in Gap in Mountain Environment Management and worked at the Verdon Natural Park where I met all the people passionate about Nature. I reconnected with a friend who is a warden at the Ecrins National Park whom I followed to monitor the mountain owls, the Ibex etc. In Verdon park I worked on invasive species, I then did another Masters in Ecology in Marseille where I worked in another park on birds of prey such as Golden Eagles, I did fauna surveys on big mammals such as deers and mountain goats, on small carnivorous like martens and genets, I worked on wolves as well and then ended up here. I applied for the job and got accepted. I am now an ecologist and am responsible for Natural Environments and Agriculture.

On a daily basis what do you do ?

On a daily basis it varies, it can be scientific data collection on the field, sometimes at night, following the birds of prey with the binoculars, how the pairs are doing, going into the field counting the species etc. Sadly that is not the main activity. Then it can be pure administrative work such as setting up projects, gathering informations, meeting farmers and breeders on the field. We also have regional networks with whom we regularly meet up, taking part in conferences, meetings etc.

In terms of new technology has there been recent innovations ?

Yes it all evolves very quickly. There has been a big progress recently in geographic information, cartography, map making, the use of GPS tracking devices we put on Birds. We evolve with the technology, before we didn't have solar powered GPS, now we do. Before we could have one data point per day now it is per second, the devices have become lighter, the information we are capable of gathering becomes more and more precise. We are also working on Bats and are now capable of analysing their ultrasounds.

How do you communicate about all these issues and research to the wider public ? Would you have any advice on how to reach people who didn't grow up in natural environments in order to care about wildlife ?

Yes there is the whole community outreach and environmental education actions we haven't talked about. This mainly concerns schools, we go to talk to school kids. Tomorrow morning I'm going on a trip with children from difficult social backgrounds, from the cités, to show and teach them about the biodiversity that is just behind where they live. That there are living species we need to protect and that without them we won't be able to feed ourselves. Birds help us eliminating mosquitoes and viruses, birds of prey catch mice, rats and other rodents, regulating their population. Other birds help the agriculture again by chasing insects and rodents which is why it is important to protect these species and their living environment. Today we are lucky to have extraordinary landscapes here that people from around the world travel to see. We are one of the countries receiving the most tourists every year, the first tourist department after Paris. If these people come it is to see our ecosystems which are unique. We host one of the most rich biodiversity spots in the world. There are many habitats and species we need to protect as it is also our living force. Many people here live from tourism.

What is the main challenge for the environment here ?

It is urbanism. We are on a land that is limited in size and our cities, Marseille, Aix are growing and we need to host people, people need to be able to go to work therefore the natural and agricultural lands are diminishing little by little. We lose thousands of hectares dedicated to nature every year which is why we try to protect them. We need to combine urbanism and preservation of natural habitats and agricultural land. We need to feed these 2 million people and therefore keep our agriculture. We are one of the main food sources in France. Everyone wants his Villa with his swimming pool and no one around. We started hosting more and more people. Since we have the TGV, Paris is only 2 to 3 hours away from Marseille. People can nearly work in Paris and commute to Marseille every day, therefore more and more people to host. It is also a holiday destination with a growing number of tourists, people looking for holiday houses, prices going up in value.

It is a challenge but we're not at the point anymore where we try to block everything by putting nature on one side, through reserves no one can touch but build what they want all around. We can't do things the American way by creating natural parks which are wildlife sanctuaries but where everything around is fully urbanized. We're also not operating on the same scale. The US are much bigger than France. The main aim is to enable cities and wildlife to coexist which another big question mark which is climate change, as we will be strongly affected. It hasn't rained here since 2 or 3 month (the interview was in July 2016), we are facing droughts since over a month which poses dangers of fire and mainly of scarcity of water. With all the water supply infrastructures we possess, we do have water, but the question is till when ? The whole region is watered by our mountains and our rivers.

Thank you very much for your time.



Figure 3 : *Alexandre Lautier in his office in Salon de Provence, France.*

Appendix B

Interviews of employees and volunteers of the Mauritius Wildlife Foundation

B.1 Virginie Azor, Employee

Interviewed on the field during a nest watch.

Hello Virginie, can you please introduce yourself and explain what you are doing on Ile aux Aigrettes with the Mauritian Wildlife Foundation?

Hello I'm Virginie, I'm 20, I live in Port Louis in Mauritius. I am studying biology pure with a minor in marine biology. I therefore do both marine and terrestrial biology, because Mauritius is an Island therefore it seemed natural to have at least a backup knowledge in marine ecosystems. I am here because I wanted to have my work experience in something I love which is conservation, but I wanted to do it before finishing university. I took a year off and decided to apply for a job as a conservation biologist at the Mauritian Wildlife Foundation. Luckily I got accepted the day after my interview. I've been here for 5 weeks now and have moved from the pink pigeon project to the passerine project.

Can you remember your first memory of nature ?

The first memory with nature I have was from when I was 5, my father loved hiking so he took me with him to climb Le Pouce Mountain. I remember it being really hard, because at five you don't want to do these sort of things, but when we reached the plateau, not the top, just the plateau I found the view really amazing. Something I will never forget is that a Monkey tried to steal my food. It was traumatizing but it marked me. I always loved animals and I wanted to continue on this path.

Where did your interest for wildlife conservation come from ?

My interest didn't come from seeing the forest but mainly from watching documentaries on TV. I saw scientists going near animals and interacting with them as if it was nothing and they were enjoying it and I thought why can't I do this ? Then I thought, actually I can do it, I thought I could do it if I studied in the field itself. So since my childhood it was my dream. I went on to study science in college, choosing biology as a main subject. I initially wanted to do zoology but then thought that studying biology would open me more paths in life and enable me to achieve my dream to become an ecologist.

What is your favourite animal in general and within the MWF projects ?

My favourite animal within the MWF is the kestrel, actually I love predators, I don't know why. I find kestrels really gracious and at the same time really dangerous. It is actually really exceptional that from the small population of 4 or 5 remaining individuals they managed to

conserve the species and make the entire population boom and recover. I think there are about a hundred kestrels right now and they are surviving pretty well.

My favourite species in the world is the bald eagle because I love birds of prey ! I find the way bald eagles live and hunt really amazing ! They wait for the prey to come and when they see it, they fly down in a swift move, capture the prey and bring it back to their nest. I think they keep the same mate and own territory all their life, just like humans.

Thank you very much !



Figure 4 : *Virginie chasing a Fody nest.*

B.2 Sophie Elliott, Volunteer from England

Interviewed in the bunk house.

Hello Sophie, can you please introduce yourself, explain what you do in general and what you are doing at the Mauritian Wildlife Foundation (MWF) ?

Hello! I'm Sophie, I am 27 and I work in conservation. I've done lots of different jobs within the field. I've done community outreach, fundraising, scientific research in the field and some zoo keeping at ZSL Whipsnade Zoo. Here at the MWF I am going to work on the seabird translocation project.

Why did you decide to come here to Mauritius ?

I think my first real foray into conservation was at the Durrell Wildlife Conservation Trust in Jersey, so it's always been quite a pull to come to Mauritius and I never thought I'll be able to! Then I saw this position advertised on the Durrell website and thought oh! This is amazing! This is perfect! And then somehow got it! So that's how I'm here, because Mauritius is obviously so famous in all the Durrell studies about all the amazing things that have happened here with the Mauritius kestrel and the pink pigeon!

What is your first memory of nature ?

My first memory, I... don't know, I really don't know. We've always been a very outdoors family, so we've always had hikes and walks and took picnics out even if it was freezing so I actually don't know.

I've got pictures from when I was five and I was given my first little camera. So I've got pictures of holidays by the beach of walks and deer in a wildlife park, I think it was Marwell Wildlife. I don't know I remember bits from Whipsnade, Whipsnade Zoo from when I was really young. That's not a very clear answer but I have no idea of what my first memory was !

Where did your interest for wildlife conservation come from ?

I think it probably came from my Mom, because she's always been really interested in wildlife. She did her Phd when she was younger on marmoset behaviours, so in primatology. She was looking at the social structure of marmosets and the female's bonds with their babies and looking at how these could be affected. She's obviously always been into wildlife and research, science and nature, so I guess it came from her. She would encourage us to be interested and draw pictures of nature, we used to do that together. She encouraged us to do that from a really young age.

What happened next, did you then straight went on to study conservation ?

No, it was more of a personal interest. In school you do the normal subjects and then for A levels you have to specialize a bit more but in a rather broad way and I went a bit more arty, because I didn't really enjoy the science subjects. I was really good in science but it wasn't very

enjoyable so I pick the more arty subjects, I picked art, English literature and drama just because they were more interesting, you could have more free rein. Then I studied film and theatre at university but quickly realized that wasn't what I wanted to go into and then asked myself what do I actually really like doing ? I thought oh yeah, I really like wildlife, how can I do this ? Then it took me a while, I finished my degree in 2010 and then it took till 2013 before I could get things going and really go back to wildlife and conservation.

I started volunteering at Whipsnade Zoo and in the same year went back to Jersey, back to Durrell where I did the Endangered Species course and it all went from there onwards. (Sophie then did an MA in Conservation Science at Imperial College).

What is your favourite animal in general and within the MWF projects in Mauritius ?

My favourite animal is the elephant which we obviously don't have here. Which is one of the animals which pose a big moral issue about captivity, it's always really lovely to see them as they are my favourite animal but I always think that they shouldn't be here.

I've just arrived in Mauritius so for now I don't think i've seen enough, but I find it really interesting because here on IAA we've got the Museum of all the species that went extinct and it nearly is as if some of my favourite animals from Mauritius are the ones that died out and it's just so sad! All these animals that I would have loved to see, I would have loved to see some of the massive parrots they had here or some of the huge geckos, that would have been amazing! So far my favourite animals here are the extinct ones, so I'm waiting to see more and to see the seabirds for instance! Just to be difficult !



Figure 5 : *Sophie holding a skink !*

B.3 Jordon Traill, Volunteer from Australia and New Zealand.

Interviewed on the terrasse in the evening before dinner.

Hello Jordon, can you please introduce yourself and explain what you are doing at the Mauritian Wildlife Foundation (MWF) ?

Hello, my name is Jordon I'm from Australia and New Zealand. I am volunteering here for 6 months on the Mauritius Fody project. Being here is part of my Masters degree to earn credits. My Master is in Environment, I was looking at people and the environment from a land manager perspective.

Can you remember your first memory of nature ?

I've got a terrible memory but I grew up on a farm so I guess my first memory of nature was before my memories ! I got connected with nature before I could remember it! I grew up on a farm in a really rural area, so nature was always a big part of my childhood.

What brought you into Wildlife Conservation ?

I think it was following your heart more than your head. I knew that I was indulgent and I knew that I was academic, I thought I want to have a good job and a good career. I tried to do that, but I found out earlier on that if my heart is not in it my head's not in it. So out of school I wasn't doing very well because I was following the steps of what I was told, so I decided to follow my heart which was full in conservation of nature, and here I am !

Do you have any aim or hopes for the future ?

Yes I really want to see people and Nature coexisting and deconstruct the binary view of Nature and Humans. Humans are part of Nature and Nature is part of the human experience. So I'd like to work doing this in my life in some aspect, either in Australia and New Zealand or in a foreign country.

What is your favourite animal in general and here in Mauritius ?

A favourite animal ? Actually yeah I do, I have the Giraffe, I love the Giraffe. I don't know why but every time I see a Giraffe I'm always blown away. I've seen lots of Giraffes, especially in Zoos, it's always in Zoos and I go to many Zoos and yeah I love Giraffes. In Mauritius ? Oh that's hard because there are so few animals left. I think the Dodo still would be my favourite animal of Mauritius even though I have never seen a trace of a Dodo it would still be my favourite.

And within the MWF projects ?

I'd say the Fody, they're charismatic little things, even though they're small and mostly brown they're still charismatic. Yeah they're pretty cool !

Thank you very much Jordon !



Figure 6 : Jordon putting food into the Bird Feeder.

B.4 Stella Babooram, Employee

Interviewed during mid-day by the Telfair skink nursery

Hello Stella, can you please introduce yourself and explain what you are doing at the Mauritian Wildlife Foundation (MWF) ?

I'm Stella Babooram, I'm 25 years old and I've been a Pink Pigeon Conservation Biologist for the past year at the MWF. I studied Biology at the university of Mauritius. That's how I heard about the MWF and about they do. I always wanted to come and see what they do so that's how I ended up here now and I love it !
I'm here to look after the Pink Pigeons on IAA. I walk around looking out for them, see what they are doing, if they are nesting or not. I register their attendance at the aviaries where we feed them. I do screenings and healthcare and look after them.

What is your first memory of Nature ?

My first memory of Nature ? I would say that is was at the University of Mauritius we had practicals where we had to go for walks in the Black River National Park in Petrin and I remember loving to walking along the path all the way to the location where we had to do our data collection on Orchids. I loved it and chose to do my thesis on forests and had to go on mountain hikes.

How did you get interested in Wildlife Conservation ?

It didn't start when I was younger. Back then I wanted to help others, I wanted to be a doctor and take care of people. I'm not that smart, so instead of taking care of people I just take care of birds and other animals. I genuinely love it because since I'm here I have been handling birds and take care of them and really want to continue this way. My love for wildlife developed through my work I would say. I don't have pets at home so I didn't always love nature or pets or plants or whatever. My mom loves plants, I like plants but I don't really do gardening. It all developed through experience and through my work, the people I met, the more and more knowledge I gained.

What pushed you do study Biology then ?

Why did I chose Biology ? It's weird, at school I always followed my heart, so if I'd love something I would do it. The subjects I loved where biology, chemistry, mathematics and accounting but I couldn't see myself working in a bank. So I decided to move away from offices and biology seemed to be the logical choice. When I got to university I chose biology because of forensic science because my degree is a BSc in Biology with minor in forensic science. I love forensic sciences, then I understood that it was mainly about biology, I learned about conservation biology and ecology and understood that this was the part of biology I enjoyed. Ecology and conservation work is really interesting and I could understand all my notes on these topics, so I thought, that's what I want to do ! The MWF is a place where many Mauritian people can find a job. Many foreigners want to volunteer here and they can't but as a Mauritian I

can work here, so I thought, why do I not try and see how it goes ? So right now I'm just living my passion and following my heart. I don't know where this will lead me but I hope it will be ok ! (smile)

What is your favourite animal in general and within the MWF projects in Mauritius ?

I have always liked puppies ! Not dogs, adult dogs, just puppies ! I love small things so I love puppies ! I always wanted to have a puppy but then when I started working at the MWF I understood that I don't like animals in cages, that's why I like wild animals. Then out of all the Mauritian Wildlife projects, Pink Pigeon, Echo Parakeet, the reptiles, tortoises, skinks and others, I really like the Seabirds. I have been collecting their attendance here, even if I don't work on the Seabird project, we have been helping each other a lot as we are all on IAA. So I have been hand-feeding them and taking care of them. They are big birds and they are really pretty and they are amazing so I really like Seabirds. In particular the Tropicbirds.

Thank you very much Stella !



Figure 7 : *Stella Babooram by the Telfair skink nursery.*

B.5 Stephan Meller, Employee

Interviewed on the terrasse in the evening before dinner.

Hello Stephan, can you please introduce yourself and explain what you are doing at the Mauritian Wildlife Foundation (MWF) ?

My name is Stephan Mellier, I've been working for the MWF for over 6 years now and I'm working on the Reptiles project here on Ile aux Aigrettes.

What brought you here ?

I heard about the MWF at school through my teacher.

What is your first memory of Nature ?

It was when I was young, I always loved watching documentaries. That's how I got interested in Nature and Conservation.

Is that's how you got involved into Conservation ?

Yes, because I wanted to work with animals.

What is your favourite animal in general and within the MWF projects in Mauritius ?

Oh there are loads ! It's hard to choose ! Because I worked on different projects here, I worked on Pink Pigeons, the Kestrel Project and also got involved with Round Island where I saw many Reptiles and Seabirds. So a lot of animals !

Do you have any aim or hopes for the future ? Something you would like to achieve or see happening ?

I want to see people getting interested in Wildlife, I want people to become conscious about Conservation and the Ecosystem. I notice that some people look for species on the mainland in Mauritius, but you have to come here to Ile aux Aigrettes to be able to see the Olive White-Eyes or the skinks for instance. They don't exist on the mainland anymore and I would like them to be seen and living there too.

Thank you very much Stephan !



Figure 8 : *Stephan on his way to Ile aux Aigrettes*

B.6 Rio Heriniaina, Volunteer from Madagascar

Interviewed at sunset on the Jetty.

Hello Rio, can you please introduce yourself, explain what you do in general and what you are doing on IAA with the Mauritian Wildlife Foundation (MWF) ?

My name is Rio Heriniaina, I'm from Madagascar. I've studied lemurs and I've been involved in lemurs conservation, social sciences and Conservation Education. I've been here since April because I'm participating in the Postgraduate Diploma (PGDip) in Endangered Species Recovery with Durrell Conservation trust and Kent University. We spent a couple of months on learning theory but mainly gaining practical experience on the field which is why I am here on IAA to practice on the field, what we have learned during the classes.

What is your first memory of Nature ?

Ok, when you talk about Nature, my first memory is of Forest. The Forest and the animals inside of it, that is the first picture that comes to my mind.

So did you grow up in a Forest Environment ?

Hmm, because I'm from Madagascar, especially from the East Coast of Madagascar that is covered by the Rainforest, so I grew up in this Rainforest Environment with green leaves everywhere. This is why when you ask about Nature for me that means the Forest and the animals inhabiting the Forest.

What brought you into Wildlife Conservation ?

For me it's kind of Family you know, because my Grandfather worked in the National Park. As a Kid when I was with him we would go in the Forest and he taught us about trees, names of trees etc. If you have this experience as a child, when you grow up that increases you level of interest in the Forest and the Environment and Nature in general. I also grew up on the countryside of Madagascar and that also helped me to getting my degree from High School to University because I chose Natural Sciences because I knew that I already had inside of me this experience with my surrounding environment.

Do you have a favourite animal in general and within the MWF projects in Mauritius ?

My favourite animal is the lemur because lemurs are from Madagascar and actually when you talk about Madagascar, many people think, oh! Madagascar! Island of lemurs ! Because they are endemic to Madagascar of course !

In Mauritius, this week I'm working on skinks, before I didn't know much about them, about what is a skink. But when I got the opportunity to handle a skink and take some measurements I got more interested and thought ok this is my favourite animal. I am interested in skinks in Mauritius, So that is my favourite animal in Mauritius.



Rio on the Jetty!

B.7 Yoshita Khooneesing, Trainee

Interviewed by the fody aviary.

Hello, can you please introduce yourself, a bit of your background and what you are doing on IAA with the Mauritian Wildlife Foundation ?

Hello, I'm Yoshita Khooneesing, I have been a teacher for the past 2 months and now I just joined the MWF for a training, after which they will decide whether they keep me or not. So I am on a trial, they will test my capacities, my limits and if I can adapt to the conditions here. I think the first week happened so fast, I was a nice experience having to learn to identify the Fodies, the Olive White-Eyes and here we have Tortoises as well, so I think it was a nice experience to be here this week and I hope the next week will be likewise. We have currently a lot of work to do as the breeding season is coming soon so we will have to count the nests, analyse their breeding behaviors and count the White Olives by the feeding stations. The most interesting part of the job is to do searches as we have to run like fools after the birds to find their nests. I think it is nice to be here and if anyone likes Nature and wants to contribute at least a little bit, I think this is the right place to be and listen to the call of Nature.

What pushed you into this experience at the MWF ?

I wanted to learn a little bit more about the conservation being done here because in Mauritius there isn't that much information delivered about it. The MWF is the most famous organization (and only) so it is good to know what is being done to conserve the Olive White-Eyes and the Fodies. I also heard there is a Reptile team here, so It is good to know what is being done to protect them and what are their predators. As I am a teacher it will be a good experience to share with my students when I go back to work and this will really motivate them to be concerned about Nature and the Environment. This is the main reason I am here.

Can you remember your first memory of Nature ?

I live in Bois Chéri, an area of Mauritius which is known for its Tea and Sugarcane plantations and also the Hindu sacred lake of Grand Bassin. I think my most memorable moment when was I from home to Grand Bassin, having all the trees and the dense vegetation around me along the road. It's so calm as well. That would be the first thing I remember, I was nice to be there. If you go there in the morning it's so calm, you can hear the birds chirping and even see the Monkeys. That was my most memorable memory, going to Grand Bassin as a Kid. I thought wow how can Nature be so beautiful and we don't even realize it in our daily lives. But if we take a break we can realize that really we have the most beautiful things here and that we can explore them. I want to push everyone to do so, to take a break, even if it's just a 5 min walk through the Forest, just to step a bit away of their routine lives it would be nice !

What pushed you to study Biology, go into Wildlife Conservation and make Nature an active part of your life ?

As for Biology I just love it, the concept of Human being, how Plants grow, their function and how they are important in our lives. If there are no Plants there will be no humans as there would be no oxygen to breathe. Biology at the University of Mauritius is very diverse. I've been doing pure Biology, so learning about the Human body, the food industry and Conservation. The fact is that doing Conservation in theory is not that fun, we just learn how to protect endangered species by doing this and that but when you get into the field, into action, it is very different and differs so much from your usual lifestyle. It really pushes us to think whether what we do is good or not for the environment and does every action we do count or not? That's the main reason I got into Conservation. I think everyone should have at least a little knowledge about Conservation because if parents know about it they will be able to educate their children and it is very important to know that the environment has a main role in our lives. Therefore I think everyone should get to know a little bit about Wildlife Conservation.

Do you therefore have any vision for the future, something you would like to achieve?

Yes I want to be a Biology educator and being here will boost my confidence as well to boost my confidence as well to tell my children how really things are done to preserve their endemic species of Mauritius. Especially here on Ile aux Aigrettes. I will encourage them to come here at least for a day to see what is done. How simple things we can do can help to preserve the Environment. I think it is good for them to know which are our endemic birds, their names, their functions etc. Children are generally very curious about things, so just to make them even more curious and encourage them even more.

Do you have a favourite animal in general and within the MWF projects in Mauritius?

My favourite animal here is the Olive White-Eye. They are very discrete and the fact that they remain together for the rest of their lives really shows how birds and other animals get attached emotionally. I got told that some couples here have been together for 10 years unless one of them die, then they divorce and find another partner. I think animals and birds show us a lot about life. How they help each other to make their nests, it's just like a husband and wife making their home. So yes I would say the White Olives are my favourite, they fly very fast and then I have to look for them, asking where the hell are they! I really like them and when they feed on their sugar water, they are so cute. They just quietly come forward and sip drop by drop and enjoy it, it is very nice to see. I also enjoy the big tortoise, I just yesterday met a tortoise, you just go and put your hand on his neck and he stretches so you can caress him. They get emotionally attached to people and I think we should respect them as they are doing with us as some of them have gone through sufferings in their lives as well. (Many of the bigger tortoises came from private owner, some of them having been mistreated in the past) Just give them their space and enjoy, that's my main motto in life, give space to everyone, let everyone be on their own and so you enjoy life, they enjoy life and everyone be happy!

Thank you Yoshita!



Yoshita by the Fody Aviary.

Appendix C

Katie Thomas, Flatmate from Birmingham (UK)

Interviewed in her room at home.

Hello Katie, you've got a blog called Eco-Vintage, can you tell what motivated you in creating this blog ?

The industry I feel is in need of a revamp because of the current unsustainable rate of use of resources, use of labour and holistic cycle into the future without becoming increasingly more expensive for both businesses and consumers. I feel like the future of the fashion industry but also industries across the boards is in sustainability. I was interested in exploring the different ways in which different businesses are beginning to tackle issues of sustainability under the myriad of problems that arise. From services all the way to production of material goods, because it's going to be a big part of the future to start addressing these issues and there is not one answer, as everyone begins to tackle these issues in different ways through different methods and have positive and negative effects. Therefore it's trying to find the best compromise to reduce human's consumption and impact upon our globe.

What encouraged you to care about these issues, how did you become sensitive ?

It's a mix of a few things, probably the first thing is the environment having such a big impact on social culture. For example, in the case of most people in the world who struggle either for money, for food or for mental wellbeing or health, the environment plays a big impact upon these factors. For example if you are happy in your environment it can make you happy as a person. Also if your environment is damaged it can impact on the economy and your personal lifestyle. So I was interested in a way to find how to improve people's lifestyle across the board and not just in the interest of one group of people. The world is such a large space where everything has a knock on effect, so for instance if you buy something in the UK, you're actually contributing to someone's bad environment and work life in China and so forth. I wanted to explore the whole process in order to help people.

So for you the lack of wellbeing of people is linked to damages in the environment ?

Yes, for instance India is a prime example. Hundreds of thousands of farmers every year kill themselves because there isn't enough water and they can't feed their families. So the environmental has a direct effect because they kill themselves. That's on a magnified scale but nowadays the 1% have so much money and the 99 % don't have any money and this trickle down effect on not being able to provide for your family is all sprinkled by things like the environment and other people taking advantage of the environment as the only way to earn money and have a successful life. Because through abusing the environment you'll be able to sell and earn lots of money but that doesn't mean that you are doing something right.

So your interest in the environment arises from caring for people first and social issues rather than from a close connection to nature ?

Yes I think so.

What kind of future would you envision ? What would be the way forward ?

I think to spread education in the world. People are so uneducated and you won't be able to take rational decisions if you don't understand the holistic process of everything. For instance if I want to buy some grapes, if I don't understand where they come from, who grew them, who did all the factory work, I won't value the fact that I can buy these grapes. You won't value the process and the end results because you won't have any attachment to them, because why would you ? Why would you care for the 57 people within the supply chain that allowed you to have your grapes. That in itself makes people feel fulfilled when they understand the process and are able to appreciate things and are capable to have solid judgements on things. People feel mentally sound if they are confident in their choices and decisions. If your not happy with the choices you're making then you're never going to be satisfied with them.

How do you describe your own relationship to nature ?

I would say that I am definitely an environmentalist, I do appreciate nature and I do appreciate animals in general. Although I would class myself within the generation detached from it, even though I grew up on the countryside. The thing about material culture which has affected my life so much, is that buying creates that spark of endorphin release, like when you turn on your phone and play games. These sort of feelings don't happen the same way when you interact with nature. That has always distracted me from being that bothered about nature. Being able to appreciate a nice landscape is good but it's more difficult to appreciate relaxation than it is to appreciate a sudden hit, an immediate satisfaction coming from something. I think that is just something you learn with age as well. When you're young it is very easy to get sucked in, especially nowadays with all the technology. I do enjoy and appreciate the environment but I always felt like I should appreciate it more, but in the current age you always feel like you don't have time to appreciate them, because there are better things to worry about, like making money, looking good or focusing on your career, doing what you should be doing in life.

What informed you of the issues about the environment, was it the media ?

First of all I was sparked from doing geography in A levels, because I was always interested in social geography. Although I did find the physical side of geography really amazing as well, obviously everyone is amazed by things like the formation of waterfalls, of volcanos and all these crazy things that are unexplainable until you actually sit down and learn about it. Although it was more the social side of it that interested me. From there I was able to critically analyse industries and that was always interesting to me to see how a brand portrays itself as doing so well but actually is so flawed and I found that so interesting because it is so difficult to find these flaws. Once you actually look into them it is suddenly so apparent and it is so easy to easily brush over these things that are happening in the world although it is so obvious when you

spend two days reading about an issue. Then you feel like Oh my god I can't believe people don't know about this and don't care about it either.

I think my old geography teacher just inspired me to learn and explore and understand the social functioning of the world.

Can you remember your first memory of nature ?

Well not my first memory but my first memory of appreciation of nature was when I was in the Seychelles and obviously it's just the most amazing place in the world! Then you are on this beach for two weeks and there is so much talk about climate change, the rising of the water and there is only so many years before everything is going to be flooded. In an almost partially selfish way I wanted to preserve these places for myself and future generations to be able to appreciate them as much as I can appreciate them now. Because without them it's this hole vision of the end of the world, what's the world without these places to take you away from life as we know it ? You know what I mean ?

Last question, what is your favourite animal ?

That's a good question, in what respect ? What animal I like the most or what animal I admire the most ? There are a few answers. One is obviously dogs because dogs have always been a big part of my life. They have always been the loyal dog, like when you can't count on people you can always count on your dog. It's more of a respectful relationship whereas something like an elephant when you get to see them in real life, in the wild, like an old bull that is like 50 to 60 years old, that makes you step back and realize shit animals are amazing, they're just so, so... It's almost like with people, how have you made something so well! For instance when elephants walk, if you watch them, they're the most delicate thing you would ever see ! It's as if they're almost not touching the ground and they're the most heavy animal on the planet but yet one of the most elegant. That makes you think shit, animals are crazy ! There's so much you don't know about them !

Thank you Katie.



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Interviews :

Appendix A : Author interview with **Alexandre Lautier**, Environmental Engineer, Natura 2000, 7 July 2016.

Appendix B :

B.1 : Author interview with **Virginie Azor**, MWF Employee, 17 August 2016

B.2 : Author interview with **Sophie Elliott**, MWF Volunteer, 17 August 2016

B.3 : Author interview with **Jordon Traill**, MWF Volunteer, 19 August 2016

B.4 : Author interview with **Stella Babooram**, MWF Employee, 18 August 2016

B.5 : Author interview with **Stephan Mellier**, MWF Employee, 19 August 2016

B.6 : Author interview with **Rio Heriniaina**, MWF Volunteer, 18 August 2016

B.7 : Author interview with **Yoshita Khooneesing**, MWF Trainee, 20 August, 2016

Appendix C : Author interview with **Katie Thomas**, Environmental Activist, 22 September, 2016