

‘We are experiencing the greatest wave of extinctions since the disappearance of the dinosaurs. The cause: human activities.’

Ahmed Djoghlaf, Executive Secretary of the UN Convention on Biological Diversity (b. 1953)

## Amazonia Expedition Sketchbook

These eight drawings collate the artists' first impressions of and responses to their journey. They recorded what they saw and experienced, and these works on paper illustrate how they developed their ideas for this exhibition. Back in their Paris studios, using their methodical process of drawing and computer graphics, the artists also invented new species and transformed their sketches and photographs into ideas for two- and three-dimensional artworks.

Lucy + Jorge Orta assisted scientists at the Manú Biosphere Reserve with their plant collecting and data recording, while photographing the flora and fauna. These data will show what species were found and how climate change and deforestation contribute to the decline of species diversity. Finding solutions to these local and global problems are embedded in issues of governance, land use and land rights.

## Madre de Dios – Fluvial Intervention Unit

Hundreds of tiny animals are kept afloat on the long pirogue, a boat from Indonesia carved by hand from a single tree.

It is a floating support for the rescue of the creatures here, which are reflected into infinity by the mirrored surfaces, referencing the global species list and millions of years of evolution on Earth.

The Madre de Dios is an Andean tributary that feeds into the Amazon River, and Madre de Dios means mother of God, a reference to the Virgin Mary. The artists navigated the river for several days, through a 350-kilometre stretch of Amazon forest. They stopped overnight at the jungle lodges and research stations dotted along the banks.

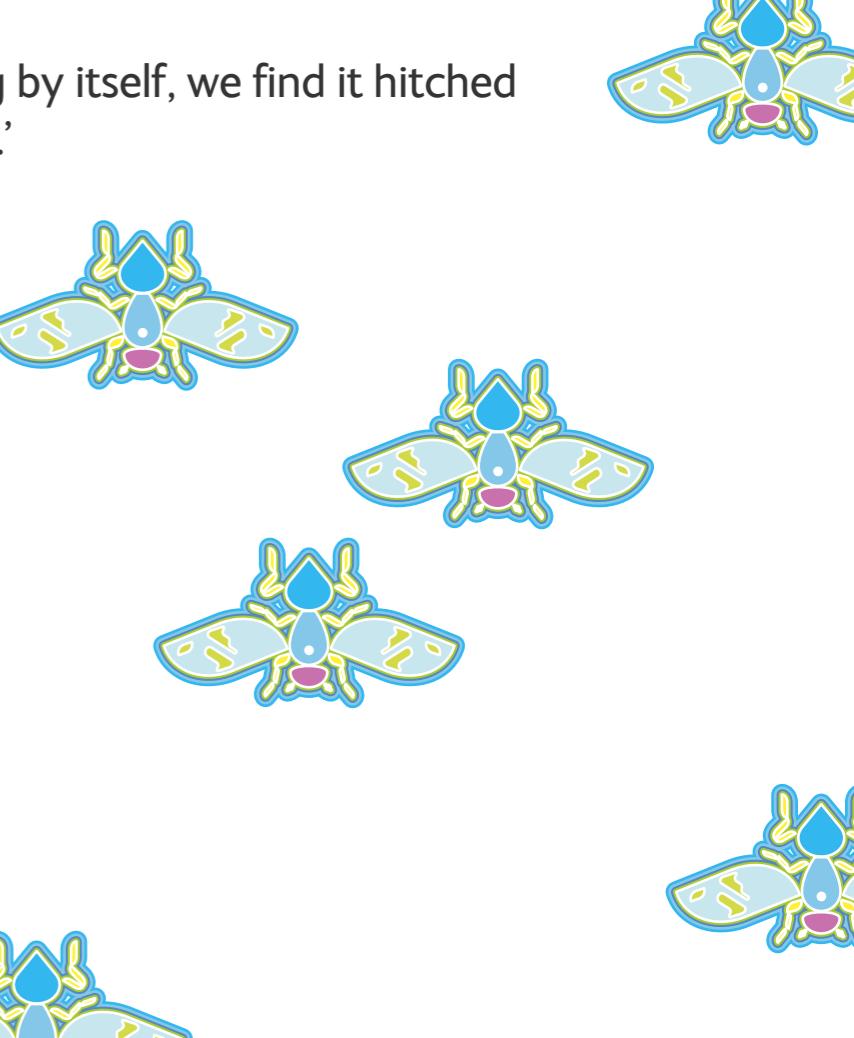
‘When we try to pick out anything by itself, we find it hitched to everything else in the Universe.’

John Muir, naturalist and conservationist (1838–1914)

## Bone Variation

The larger-than-life aluminium sculptures are modelled on fossilised dinosaur bones from the Museum's palaeontology collection. Despite the colourful, iridescent finish, they remain relics of death, a reminder of the many forms of life that have been shaped through evolution, giving us a tangible sense of the contemporary and of times past.

There has been life on Earth for 3.5 billion years, since the first living organisms are estimated to have emerged. Since then there have been five mass extinctions, which caused changes on Earth. Extinctions are a natural part of life, but the current rate of loss is about 100 to 1,000 times what it should be. This decline in plants, insects, birds, amphibians, sea-life and other living organisms has become known as the sixth mass extinction, and has one distinguishing characteristic: it is caused by humans.



# 'The Amazon is a canary in a coal mine for the Earth.'

Daniel Nepstad, tropical forest ecologist (in 2005)



**Scientific collaborators:**  
Yadvinder Malhi (ECI), Kathryn Clark (ECI),  
Mireya Natividad Raurau Quisiyupanqui,  
Javier Eduardo Silva Espejo, Josh Fisher  
(ECI), Joel Scriven (ECI), Marlene Mamani  
Solorzano and Angie Dávila.

**The Conservation Research and Environmental Education towards Sustainability Foundation (CREEs)** is the region's leading organisation working in conservation research, environmental education and sustainable community development.  
[www.crees-foundation.org](http://www.crees-foundation.org)

**The Environmental Change Institute (ECI)** undertakes research on environmental issues, and answers questions about how and why the environment is changing and how we can respond through public policy, private enterprise and social initiatives.  
[www.eci.ox.ac.uk](http://www.eci.ox.ac.uk)

## Perpetual Amazonia (one-metre-square S12 48 21.6 W71 24 17.6)

The 18 photographs are the first set of an ongoing series, each representing a single square metre within a single hectare (10,000sqm) of the Amazon's Manú Biosphere Reserve. Each photograph is marked with the Universal Transverse Mercator (UTM) co-ordinates and the number of the plot. They are an explosion of colour and form, referencing the diversity of flora found in the Amazon.

### Perpetual Amazonia (poster ed. 10,000)

You are invited to take a poster and in exchange make a contribution to preserve in perpetuity the metre-square plot it represents. By doing so, you become a steward of the Amazon rainforest.



## Amazonia

The double projection video draws the viewer in through imagery and sounds recorded during the expedition. Its poetic narrative starts with the voice of Gaia, the Greek goddess of Earth. The poem unfolds through a conversation between a man and a woman, a story that shapes and prompts us to reflect on the plight of nature. It begins:

**My centre is everywhere  
Everything – huge and hung together**

The viewer travels in the Amazon Basin from its glacial sources at 4,800 metres through the Andes, passing through the grassland above the treeline through the elfin forest and mountain cloud forest, descending several thousand metres to the Amazon rainforest. The story ends with the future – how can we shape it?



### The action

The posters are free, but the loss of nature comes at a price. How can we value a hectare of forest, by how it makes us feel emotionally? By how much wealth it produces or the well-being it brings to indigenous people? By its influence on global climate?

### What price are you willing to pay?

Please make a contribution in the box. All contributions go to research programmes in the Amazon rainforest.

### The method

The artists worked with scientists from the Environmental Change Institute at Oxford University. Trees and plants were measured and tagged for ongoing monitoring and animals and fungi were recorded. This land should be conserved into perpetuity, dedicated to scientific research and for the benefits we receive from long-term forest conservation.



## Collection: Aepyornis, Gallimimus, Allosaurus, Palaeomastodon

The porcelain fragments of life are tender and precious, recording the wonders of shapes and forms of bygone times and the present. They are casts from specimens in the Museum collection: the egg from the elephant bird *Aepyornis*, the limb bones from dinosaurs *Gallimimus* and *Allosaurus* and the elephant ancestor *Palaeomastodon*. Bones are *memento mori*, reminders of death. But the egg is birth, the start of life.

The flowers, butterflies and insects that populate these works point to the cycle of life and the beauty and wealth of our planet. The act of drawing can be seen as the activity of life itself. There is an underlying melancholy of the end of time, and the hot breath of extinction. Seeing ourselves as occupying a moment in time, through the reflection of the mirrored surface, makes us question our arrogance over nature and the need to work with it rather than against it.

### The plot

The research plot is in the Manú Biosphere Reserve, a UNESCO World Heritage site managed by the CREEs Foundation. It is home to a huge variety of critical flora and fauna: more than 402 species of birds, 11 primates and several endangered or vulnerable species such as the blue headed macaw, giant armadillo and black spider monkey. Research activities in the area focus on birds, mammals, insects and forest regeneration. Data feeds into a worldwide knowledge base, which in turn helps to provide effective measures to protect species in disturbed habitats.

### The conservation

The Amazon is a fragile system – one scientists believe, under the pressure of climate change and other human impacts, may reach a tipping point. If the forest system collapsed, it would have dramatic and unpredictable consequences. Modern conservation efforts are increasingly guided by the 'value' of nature, in ways that economists,



politicians and financial markets understand. This means placing a monetary or tradable value on the public services the environment provides, such as clean air, fresh water, fertile soil, provision of nursery grounds, drought and flood prevention, resistance to erosion and so on. This language of economic currency may be the way to prevent or slow the decline of natural assets or species.

Understanding the value of forests is the first step, but there is also a need for sustainable ways for people to live in harmony with their environment. To achieve this, the CREEs Foundation established Peru's first voluntary carbon offsetting scheme, in partnership with the local communities of Aguano and Gamitana. By planting trees and crops in degraded forests, income is generated. By teaching sustainable land management, new jobs are created and the benefits from destroying valuable virgin forests are reduced.



**'In the last 8,000 years about 45% of Earth's original forest cover has disappeared, cleared mostly during the past century.'**

Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change

## Amazon Flora (Interpretations)

This playful mural of sculptural, handcrafted flowers is inspired by plants photographed during the journey to the rainforest. Back in their studios, Lucy + Jorge Orta created a subjective and personalised florilegium, a collection of floral interpretations.

Flowers are central to our well-being through medicinal and culinary uses, their beauty and their poetic and cultural values. Scientists examine their underlying genetic diversity and explore them for human technological development.

The urge to fathom nature and its wealth of plants has inspired countless variations of floral elements in architecture and the visual arts across cultures. Plants have been lovingly studied and depicted through traditional draughtsmanship or innovative techniques such as Mary Delany's paper cuts in the eighteenth century or the nineteenth-century glass flowers by father and son team Leopold and Rudolf Blaschka.

