

# **FORDLANDIA**

Alexander Groves  
Churchill Fellow 2016

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## **Acknowledgements**

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# Glossary

- Bola- A traditional way of preparing rubber, latex is poured over a padel whilst smoked over a fire to preserve against fungus
- Ebonite - A hard material that is a composite of rubber, linseed oil and sulphur. Used as a plastic before the invention of petrochemical plastics.
- Field Coagulated Latex Blocks - Latex coagulated naturally into basic forms of raw rubber.
- Field Coagulated Sheets - Rubber made by adding a coagulating agent and a fungicide to prevent mould. Thin sheets made in the forest and sold directly to manufacturers.
- Hevea brasiliensis- Rubber Tree
- Liquid latex- the milk of the rubber tree
- Pirarucu - Largest freshwater fish in the world, native to the Amazon, caught and farmed for its meat but has a skin that can be made into leather.
- Semi-artefact sheet (Folha Semi-Artefato – FSA) allows the tappers to coagulate the latex into high-quality, thin sheets to make handicrafts within the rainforest. They add dyes to colour the rubber and a vulcanising agent to improve durability and its mechanical properties.
- Seringerou- Rubber Tappers
- Wild rubber - Rubber made from Native Rubber trees growing wild in the Amazon rainforest

## From London Bench to Rainforest Hammock

Whilst living in Sao Paulo in 2013 we had heard of a town that was built by an American motor car company recreating a small version of an American town from early 20th Century. The idea of this place was very intriguing and certainly had a draw for us but we had no reason other than curiosity to travel there and since we never travel for leisure but in order to do projects we didn't pursue this.

A year later we were in St James's London researching for a public seating project, we were in JJ Fox, the world's oldest Tobacconist and the supplier of cigars to Sir Winston Churchill, they have his favourite smoking armchair in the store. We were looking at pipes as inspiration for our *Pipe Bench* and examining the mouthpiece. It was a hard glossy black material that was curiously different from anything we had come across before. It was too smooth and too perfect and too black to be an organic material and yet warm to touch and had a much nicer tactility and quality than plastic. Upon enquiring with the shop manager we learned it was a material called Ebonite.

Some research led us to discover this was a vulcanised natural rubber initially used as an early plastic predating Bakelite and petrochemicals. Ebonite was once used extensively from Bowling balls, car battery housing, telephones, combs. A lot of items now made in plastic. Despite its historic ubiquity it's now become a very niche material.

If we hadn't been visiting the pipe shop I'm doubtful we would have discovered ebonite. It's principally used now for clarinet mouthpieces, fine fountain pens and pipe mouthpieces; the users of all of these valuing the feel and quality of the material. It prompted us to completely rethink the possibilities for natural rubber and what that might mean for the rainforests it's grown in.

Researching wild rubber, its origins in the untouched Amazon forests and its potential for supporting conservation gave us a reason to revisit the intriguing idea of the Amazonian Motor Car town. Reading about Fordlandia through the excellent historical account by Greg Grandin posed many questions about our civilisations relationship with the environment. Is it possible to have a symbiotic relationship between nature and industry? This gets to the heart of what we are interested in as a creative practice and is a question Henry Ford also raised repeatedly.



Pipe Bench St. James's Market

## **A note on Sir Winston Churchill:**

Fordlandia existence can be attributed as a result of Churchill's policies. It involves the history of rubber- Kew Gardens successfully propagated rubber seeds imported from the Amazon Rainforest and established plantations in the British Empire's Southeast Asian colonies. The cheaper more efficient rubber plantations lead to the collapse of the Amazon's rubber industry. The British rubber barons held a monopoly the global supply of rubber. When the supply of rubber began to outstrip demand and the prices began to tumble, Churchill who was Colonial Secretary at the time, supported a plan to regulate its supply to keep the prices high. The arrangement known as 'the rubber trust' infuriated American industrialists and politicians including Henry Ford. Ford formed the rubber-trust busters with friends Harvey Firestone, Herbert Hoover and Thomas Edison. Searching for a way to create his own source of rubber lead Ford to create a plantation in Brazil free from the monopoly Churchill protected.

On a personal note being awarded a Churchill Fellowship is particularly meaningful for me. I've always admired his humour and iconic style but only started reading in depth biographies in the last few years. In particular Martin Gilbert's *'Churchill, A Life'* and Max Hastings's *'Finest Years'* were both great sources of inspiration. The way Churchill used the lessons of history to find perspective in contemporary times, his embracing of both the sciences and the arts. Above all his ability to recognise the most profound threats and tackling them head on without fear and in the face of popular opinion and seemingly insurmountable challenges.

I am of the opinion that the greatest threat we face as a civilisation is our careless neglect for the natural environment at the expense of industrial development and profits. We need a Churchill for the environment; I am not that person and cannot hold a candle to his brilliance but I hope that through the limited skills I have and the opportunity granted by this fellowship, along with the collaborators I have been fortunate to work with, that I can be useful in this monumental task.

## Summary



In the depths of Brazil's Amazon rainforest, on the Tapajós river a 12-hour boat ride upstream of the port city of Santarém, sits the tiny town of Fordlandia. The brainchild of American industrialist Henry Ford, it was founded in the late 1920s to secure a supply of rubber for his automobile empire. But he also had another ambition in creating a ideal American city bringing civilisation to the rainforest. With Fordlandia, he hoped to bring industrial efficiency to the tropical jungle in the same way that he had revolutionised manufacturing in the West.

The experiment was doomed from the start, Henry Ford suspicious of experts didn't get advice from botanists and cleared 8,000 square Km of jungle to plant rubber trees in monoculture plantations. The Amazon is where the rubber tree originates, in its native environment it's vulnerable to all the pests and diseases that inhabit the rainforest. The valley Fordlandia's rubber crop was situated within acted like a giant petri dish for breeding the natural predators and after years of failed attempts the plantation never yielded a supply of rubber.

## Summary



Local workers were vexed by the strict restrictions imposed and enforced by inspectors – alcohol, tobacco, women and even football were forbidden within the town. Then there was the infamous Breaking Pans revolt of 1930, after labourers grew tired of being fed American-style hamburgers and canned food. Six years after its creation and \$20 million later, Fordlandia was abandoned along with its ideals and sold back to the Brazilian government for \$244,200.

What was left was a recreation of mainstream USA complete with Cape Cod style housing in neat rows with sidewalks and fire hydrants, a hospital, school, ballroom and golf club, surrounded by the vast Amazon Rainforest that would over the years creep back to reclaim much of the ruins.



## Summary



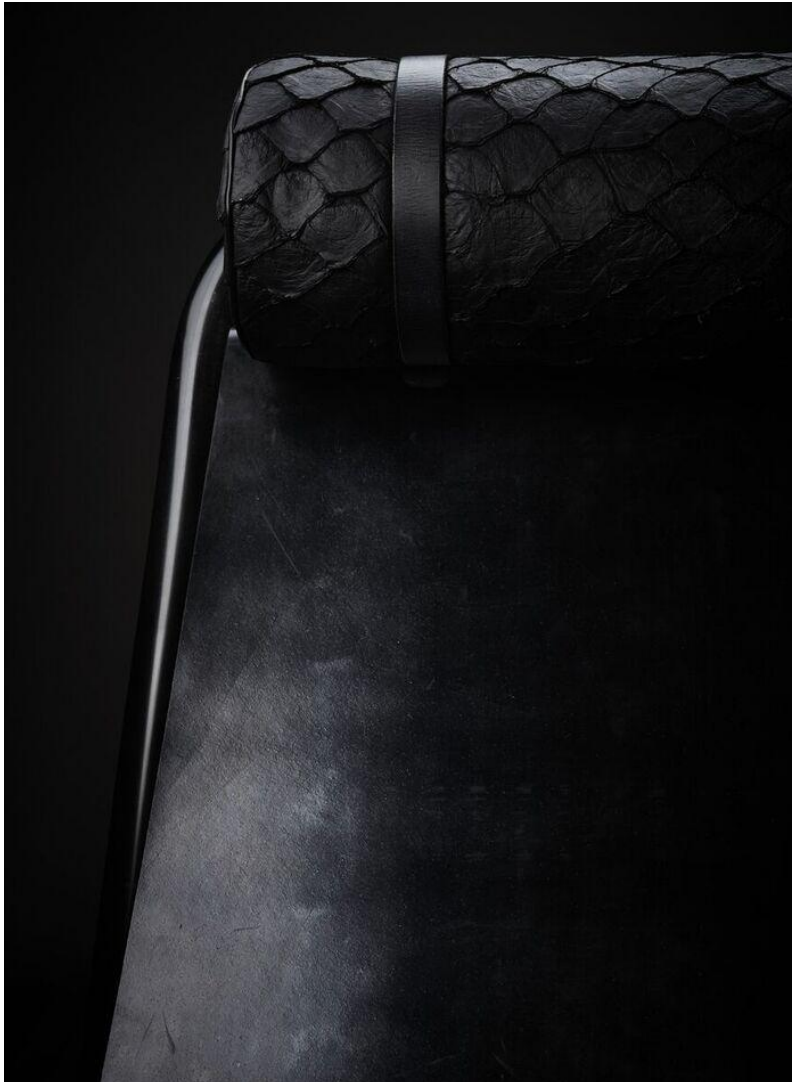
We had first heard about the city when living in Sao Paulo in 2013, we heard rumours about Fordlandia and had always dreamt of visiting one day but it wasn't until our discovery of wild rubber through WWF and Lily Cole did we create a project that would take us there.

In August this year we travelled to Fordlandia and Western Amazon to research wild rubber, the harvesting of which has not changed for thousands of years. Despite the invention of synthetic rubbers in the early-20th century, natural rubber is unsurpassed for elasticity and grip. As global demand increases, the more primary forests in Asia are being cleared for industrial plantations.

With wild rubber the trees are naturally integrated into a forest where the biodiversity creates a healthy balance and protects the tree. The tappers walk the forest trails starting at 4am to avoid the hottest part of the day, visiting around 100 trees from which latex can be extracted, a kilo of latex is worth more than a kilo of beef so buying wild rubber supports a community protecting the forest.

The issue with rubber is that as essential as it still is to the global economy its applications are utilitarian for humble items where the providence of the natural rubber isn't valued, wild rubber goes into making condoms and car tyres and so it's extremely challenging for tappers of wild rubber to compete with the large mono plantations in South East Asia which can produce a cheaper product.

## Summary



We needed to create something that would raise the value of the Wild Rubber and it was the discovery of an extraordinary material called Ebonite made from hardened Natural Rubber- a jet black polished material that was widely used before the invention of plastics for everything from early gramophone records, car battery casing, hair combs and bowling balls to name a few. It's still made in the last two remaining Ebonite factories in the world creating items of niche products where Ebonite is still valued such as mouthpieces for saxophones and smoking pipes.

We saw a huge potential in the material to be a luxury forest product that had the qualities of exotic hardwoods and yet actually protected the forest rather than cause its destruction. We created the first Ebonite furniture collection merges influences from Ford's motorcars of the period with natural forms in the forest and tropical modernist Brazilian furniture design.

What resulted from the trip is a furniture collection that uses Amazonian wild rubber ebonite and other forest materials including reclaimed Brazilian walnut, leather from Pirarucu (a large Amazonian fish) and woven cane. The collection is on display at London's Fashion Space Gallery.

Our Fordlandia project presents an alternate future where the town continued to produce products from natural wild rubber, synthesising nature and industry, proposing a sustainable future for the rainforest, an environment that is under constant pressure to yield a value in the global economy.

# Travel itinerary

Acre state, Brazil  
Fordlandia, Brazil  
Brasilia, Brazil



Ebonite Factory, Japan  
Rubber museum, Japan



# Amazon Rainforest



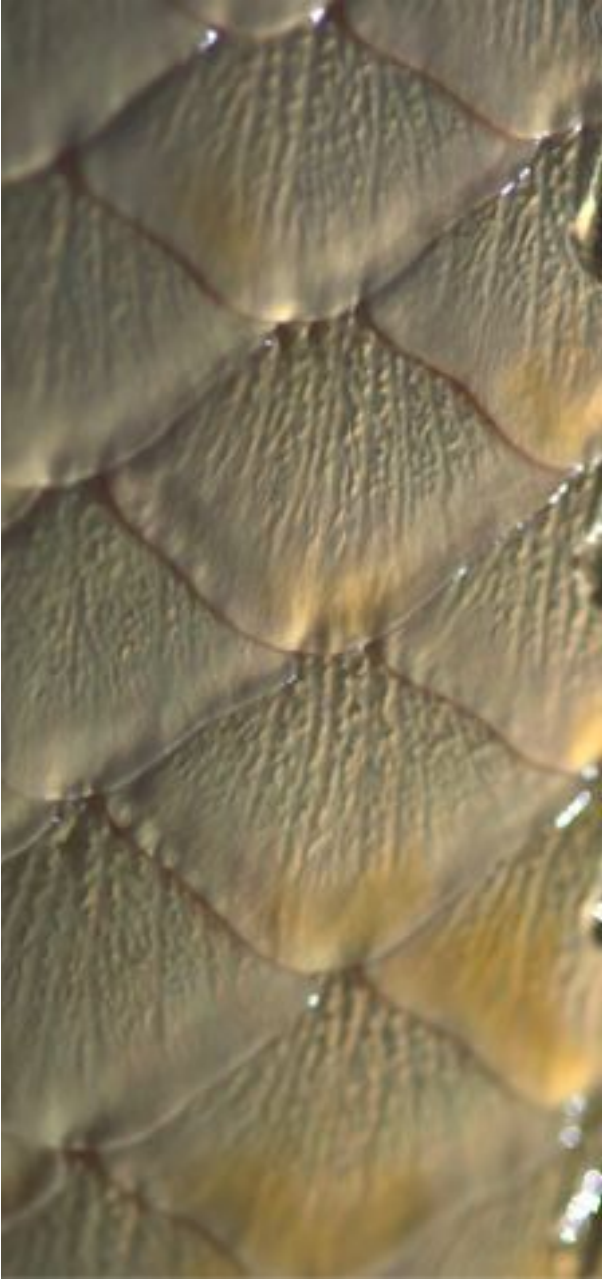
Road to the rubber tappers in the forest which had been unpassable in the rain season reopened just in time for our visit

## Amazon Rainforest



During the rain season the only access to markets for the rubber tappers living deep in the forest is by boat.

Amazon Rainforest



## Amazon Rainforest



We visited a fish farm, this is a baby Pirarucu, the largest freshwater fish species in the world. Adults can grow to 3m in length and are caught for food, referred to as bacalao del Amazonas (Amazon cod). The skin can be used to make a beautiful leather, their armoured scales are used for nail files, and their tongues, which hold their teeth, can be dried and used as graters.

## Amazon Rainforest



We stopped at this landfill site near the town of Feijó to film this otherworldly scene, it was sunset and amongst the smouldering piles of rubbish, piles of ash where a gathering of thousands of vultures.

As we drove on toward Feijó we stopped to film forest fires that had been lit to clear scrubland for cattle pasture. The most striking thing was the strange cacophony of sounds, the hissing and popping of the damp forest alight with red fly ash drifting up into the night.





**Acre : Rubber Tappers**

## Acre : Rubber



Rubber is considered as one of 'the big three', without which our industrialised world couldn't have happened: oil, steel and rubber.

Rubber is the most unsung and unseen of these, but we rely on it every day, and even in this age of synthetics, natural rubber is the most valued polymer. Despite the advance of synthetic rubbers since the Second World War, which now make up over half the global market, natural rubber remains unsurpassed for superior quality, grip and elasticity. These inherent properties mean global demand for plantation rubber from Asia increases year by year, leading to the destruction of more wild forest to clear land for rubber plantations. Eighty percent of a high-performance Formula 1 tyre and the same percentage of an airplane tyre are composed of natural rubber.





## Acre : Rubber



The seringerou starts at 4am to avoid trekking through the forest during the hottest part of the day. He walks for six hours through forest trails, visiting over 100 trees in which he cuts away a small channel of bark. The latex flows into a cup for up to six hours which the tapper returns to collect in a pail before it coagulates. Each tree produces around five litres of latex a year.

The *Hevea Brasiliensis* is native to the Amazon, where it grows wild and can be tapped without harm. A kilo of latex is worth more than a kilo of beef, and buying wild rubber is one way value can be found in the forest remaining wild and untouched.



The Amazon had a monopoly on rubber until the British exported seeds to be cultivated in Southeast Asian countries of its Empire, causing the Amazon rubber economy to collapse overnight.

## Acre : Rubber



A tapper smoking wild rubber on a paddle in the Brazilian forest. A typical scene during the rubber boom of 1879-1912: liquid latex was collected and made into big rubber balls called bolas, which were smoked as a preservative against fungicide prior to being exported. Today, rubber can be processed in the forest with alternative methods, which don't expose the tappers to smoke inhalation.

**Acre : Rubber**



Mr Antonio demonstrates for us the traditional method for making a bola.

## Acre : Rubber



Bola, otherwise known as a Field Coagulated Latex Block- Latex coagulated naturally into basic forms of raw rubber.



Acre : Rubber



The smoked Bola on displayed in our Fordlandia exhibition.

## Acre : Rubber



The processing of the rubber into Field Coagulated Sheets and Semi-artefact sheet involves the whole family. The latex is coagulated in trays and past through a mangle to extract the water.



This is then hung to dry ready for selling to companies to process.



Field Coagulated Sheets - Rubber made by adding a coagulating agent and a fungicide to prevent mould. Thin sheets made in the forest and sold directly to manufacturers. The tappers can create and store a quantity of these sheets until they make a sufficient quantity to sell in a bulk order which is more convenient for logistics given their remoteness.



Field Coagulated Sheet in our Fordlandia Exhibition

**Fordlandia**

# Fordlandia



The old rubber processing factory at the heart of Fordlandia

## Fordlandia



A view of the water tower, when it was first erected it was for many years the tallest structure in the Amazon. The painted Ford logo has long since weathered away but it still functions and provides water for the few remaining inhabitants..



Many artifacts from the Ford era can be found in the town, these key tags were provided for workers.

**Fordlandia**



Plantation manager John Rogge with young rubber trees in Fordlandia Terraces, Brazil, 1931 © Collections of Henry Ford



# Fordlandia



We spent three days exploring Fordlandia, filming the factory and the town and interviewing residents.



# Fordlandia



Employee Housing  
Fordlandia, Brazil  
1930-1931  
© Collections of Henry Ford



Car stuck in the mud,  
Fordlandia Brazil  
1930-1931  
© Collections of Henry Ford

## Fordlandia



Graveyard in Fordlandia, the red soil is eroded in the torrential rains and the many displaced markers stacked against the trees. The death rate had been high amongst residence despite the state-of-the- art hospital Ford had built and the free healthcare for the town.

## Fordlandia



The Amazon we encountered projected a much darker mood than we anticipated, the apocalyptic scenes of forest fires along the road in the far western Amazon, the deserted factory with its hospital beds and bats, white river boats filled with swaying hammocks toing and froing on the river silent in the midday heat, vultures circling above the village church. This gothic ruin inspired the mood of the collection. With the abundant verdant nature comes hand in hand with more death and decay. The tropics have a higher metabolism.

## Fordlandia



We explored the factory at night, curiously it's still used for different purposes, for junk storage, as a ad hoc garage for the school bus, a place to dry shea nuts.

## Fordlandia : The Last Worker



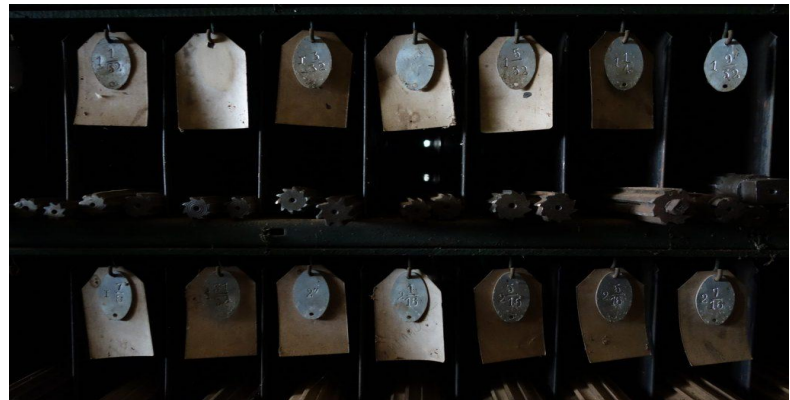
We had been in Fordlandia for a few days exploring the old factory, overgrown with plants and strewn with wrecked cars and even a metal coffin used for repatriating American workers for burial in the US, when we noticed some huge machinery, weighing tens of tons apiece, from Henry Ford's era. We have visited many factories around the world but we had never seen a metal lathe of this size.

On returning to the factory for the third time we discovered someone working there: an old machinist, who uses the factory to do small mechanical jobs xing the boats passing by Fordlandia's small dock. He has keys to the locked cage in the centre of the factory, where there are rows of shelves of neatly labelled tools sent from America in the 1930s.

## Fordlandia : The Last Worker



These machines were top of the range, imported from Detroit and installed with large cranes. They were used to build the city's infrastructure, from the now vanished railway line to the water tower, and later handling the massive felled trees from the 4,000m<sup>2</sup> of cleared jungle. After the failure of Fordlandia, the machines would have been worth a considerable amount in metal value alone, but their sheer size and immobility prevented them from being sold on or salvaged.





## Fordlandia : The Last Worker



The 78 year-old man making small motor parts on these giant machines for local boats can't be the legacy that Ford or any of the founders who toiled to build Fordlandia envisaged. But where such incredible resources lay waste it was heartening to find someone able to turn them to help the small population that remains in the town.

Mr. Branco told us that there used to be compressed air lines running throughout the factory, which he used to jet everything down with, but now that they are gone too and he has to use a small brush made from dried palm leaves. He keeps the corner of the factory pristine and shipshape, greasing the machines to stave of the corrosion in the unrelenting tropical climate. He is the only person using these machines and there's no one with the skills to take them over a after him.

One can't help but think of the beginnings of the Ford Empire, the young Henry Ford working alone on his lathe with scrap metal making his first car in 1896, in a little brick shed in his garden. Methodical and practical, typical of mechanics the world over. Mr Branco says he gets pleasure from these machines working metal as they were designed to do, even if it is not in the service of industrialising the Amazon.

Edyjansen Branco, Born 06/06/1938  
Profession: Mechanic

## **Brasilia : Tropical Modernism**

# Brasilia

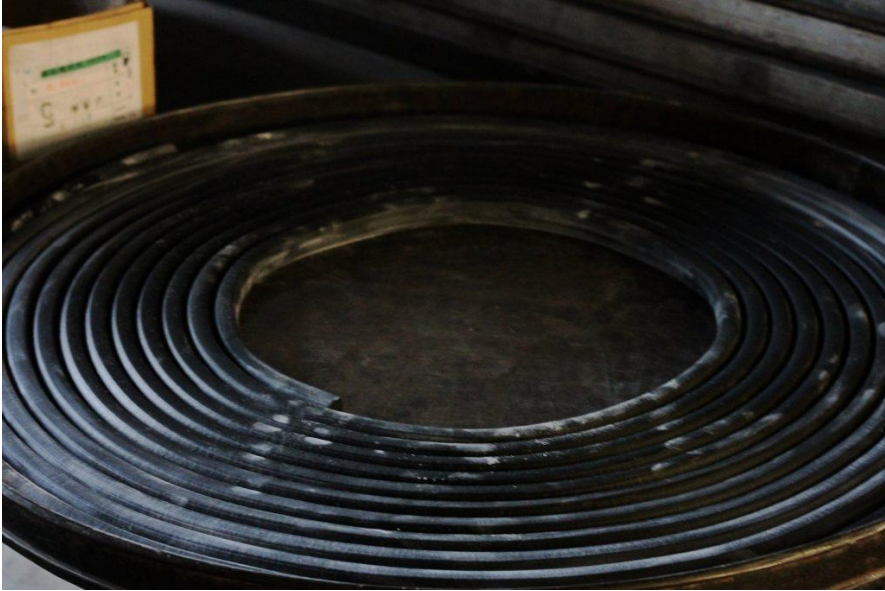


We visited Brasilia to research the iconic architecture of Oscar Niemeyer who was responsible for the design of the new capital. We also researched the designs of the Tropical Modern masters such as Tenreiro, Rodrigues, Lina Bo Bardi, and who used exotic woods from Brazil's rich rainforests. The density and strength of the material allow for extreme curves and thin support sections, pushing the potential of the form-making in wooden furniture. Drawing influences from the European Modernism, as well as vernacular and colonial traditions, these designers drove the iconic aesthetics of Tropical Modernism, creating a Brazilian identity that still retains an elegance and boldness some 70 years later. It also spectacularly embodies the ideas of the Manifesto Antropofagico (Cannibal Manifesto): that Brazil's great strength is in 'cannibalizing' other cultures, digesting them and producing something entirely new.



**Tokyo : Ebonite Factory**

Tokyo : Ebonite Factory



Ebonite factory in Tokyo Japan, one of the last remaining producers of Ebonite in the world.

## Tokyo : Ebonite Factory



Japan has a significant role in the history of rubber. During the Second World War the Japanese Empire conquered territories from the British in Southeast Asia, holding the control of the worlds rubber supply.

This led to a brief resurgence of the Amazonian Rubber production with people from the poor Northeast states of Brazil brought in to tap the wild trees. Known as 'Rubber Soldiers'. The Japanese economic recovery after the war and their industrialisation led to companies specialising in the production of rubber goods. The tyre industry was based mainly in Yokohama which still has one of the biggest companies in the world buying Bridgestone tyres.

We were mostly interested in Nikko Ebonite, one of the only remaining ebonite factories in the world. We worked with Nikko to produce ebonite rods and sheets for the production of our chairs.

## **Fordlandia Collection**



### **Practical Applications:**

As artists we learn through making, with the Fordlandia project we wanted to use wild rubber in a new way and understand the challenges and potential of the material as well as other sustainable forest materials. So we made a collection exhibited at London College of Fashion during London Design Festival.

We also wanted to explore the potential for the Amazon and Fordlandia as a place and its history could do for positive engagement with issues of deforestation.





The Armchair we created references organic serpentine bends of a river as well as the Tropical Modern style.





We used cane for the chair seat which is a natural material historically used originally in colonial furniture and later adopted by some of the tropical modern masters. Favoured for its cool ventilation in the tropical climate.



Lounge Chair - Low reclining chairs are a staple of Brazilian design suited for their more casual social gatherings in spacious domestic interiors.



Lounge Chair - The headrest is made from Amazonian Pirarucu fish leather.



We created this lounge chair using rubber in two forms, as a hard material for the ebonite frame and as a soft material for the sling hammock seat.





We created this knife inspired by the handmade knives used by rubber tappers for scouring the channels in the tree's bark. The metal is a tough bronze alloy made from a foundry casting car parts. The handle is ebonite.





Ebonite Record - Prior to the invention of Vinyl some records were made with Ebonite. We created this one for the Fordlandia show recording the sounds of the Rainforest.

The record sleeve is made from Palm Leather.

We created a coffee table using reclaimed hardwood (Ipe a Amazonian species) from salvaged floorboards. The boards are grouted with black rubber expansion gaps to allow movement of the wood and to give a graphic effect.

Standing light. Created with sustainable and repurposed materials. The light is inspired by the industrial side of Fordlandia, the rubber processing factory lying at the centre of the town with its metal frame and factory lights imported from Detroit. The light also references the Brazilian modernist lighting of Oscar Niemeyer with its sweeping curves and all black pallet.



## Collection

Details of standing light. The base is made from I beam off cut from our local scrap yard. The lampshade is a repurposed factory shade from Sao Paulo. The foot is made of ebonite and stabilises the light.



**Outcome**

# Outcome

## Exhibition

The collection was exhibited at Fashion Space Gallery.  
Curated by Ligaya Salazar

The show ran from 22 September – 10 December 2016

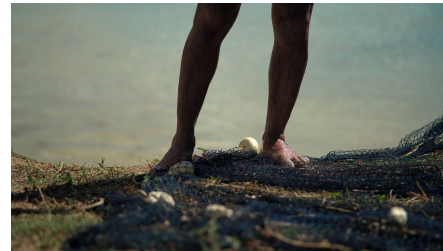
London College of Fashion  
20 John Princes Street, W1G 0BJ

<http://www.fashionspacegallery.com/exhibition/fordlandia/>



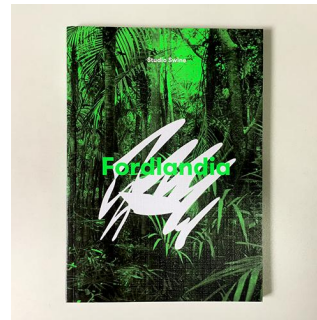
## Film

We created a film with longtime collaborator Juriaan Booij. The film documents the Ebonite factories the abandoned town in the Brazilian rainforest, and the pieces created within the imagined domestic environment.



## Publication

The exhibition was accompanied by a publication designed by Czech graphics and design collective OKOLO, it includes contributions by Kristen Gallerneaux, Hans Ulrich Obrist, Lily Cole, Ligaya Salazar, Karel Veselý and Studio Swine.



## Outcome

### Press about the Fordlandia Project:

#### Fordlândia

<https://www.disegnodaily.com/article/studio-swine-fortlandia-photoessay>

Words by Alexander Groves & Azusa Murakami

Monthly Unique Users: 40,000

#### Fordlandia — Proposing a Sustainable Future for the Rainforest

<http://www.billionaire.com/arts-craftsmanship/art-fairs-exhibitions/2635/fordlandia-proposing-a-sustainable-future-for-the-rainforest>

Words by Alexander Groves & Azusa Murakami

Monthly Unique Users: 33,700

#### Studio Swine's Latest Project in London Revives Fordlandia, Henry Ford's Failed Amazonian Town

<https://www.artsy.net/article/artsy-editorial-two-designers-revive-fordlandia-henry-ford-s-failed-amazonian-town>

Artsy, Words by Abigail Cain

Monthly Unique Users: 939,540

#### Studio Swine resurrects Fordlandia, Henry Ford's lost Amazon utopia

<http://www.wallpaper.com/design/studio-swine-resurrect-fordlandia-henry-fords-lost-amazon-utopia>

Wallpaper\* Magazine, Words by Jessica Klingelfuss

Monthly Unique Users: 790,591

#### Cover Story, Photo of Fordlandia Chair: Studio Swine's Experimental Design Changes Perceptions – and Tells Stories

<https://www.pressreader.com/canada/azure/20171001/281547996040489>

Monthly Unique Users: 80,000

#### Cover Story, Photo of Fordlandia artwork: Journey

<https://www.holeandcorner.com/shop/issue-12-journey>

#### Studio Swine Gives Us a Glimpse of Design's Future

<https://www.departures.com/lifestyle/home-design/studio-swine-new-spring>

Circulation: 1,237,880

#### STUDIO SWINE Re-Imagining The Possibility of Uncommon Materials

<https://champ-magazine.com/design/studio-swine/>

Champ, Words by Monique Kawecki, June 2017

Monthly Unique Users: 11,300

## Outcome

### **Meet the Designers of the Future**

<https://www.architecturaldigest.com/story/meet-the-designers-of-the-future>

Architectural Digest, Words by Hannah Martin, 12/09/2017

Monthly Unique Users: 1.5m

### **Cover Story, Icon 164**

<https://www.iconeye.com/opinion/comment/item/12587-icon-164-studio-swine>

Monthly Unique Users: 50,000

### **Cover Story, Studio Swine**

<http://icondesign.it/news/icon-design-luglio-agosto-2017/>

Icon Design, Words by Marco Morello, 01.08.2017

### **NOMADIC BY DESIGN**

<http://www.culturedmag.com/studio-swine/>

Cultured Mag, Words BY JANELLE ZARA, MAR 2017

Monthly Unique Users: 33,489

### **The Best of the London Design Festival 2016**

<https://www.wmagazine.com/gallery/the-best-of-the-london-design-festival-2016/all>

W Magazine, Words by Pilar Viladas , 27.09.2016

Monthly Unique Users: 1.5m

### **FORDLANDIA | A RETROSPECTIVE EXHIBITION BY STUDIO SWINE**

<http://hausmag.hausie.com/fordlandia-retrospective-exhibition-studio-swine/>

HausMag, Words by Amber Weaver, 05.12.2016

### **Fordlândia - an exhibition by Studio Swine**

<http://m.londondesignfestival.com/events/fordl%C3%A2ndia-exhibition-studio-swine>

LDF, Sept 2016

### **The Best of 2016's London Design Festival**

<http://www.sightunseen.com/2016/09/best-2016-london-design-festival/>

Sight Unseen, Words by Jill Singer, 23.09.2016

### **London Design Festival 2016: The Top Ten Best in Show**

<https://www.wmagazine.com/story/the-10-best-in-show-from-the-2016-london-design-festival>

W Magazine, Words by Pilar Viladas , 27.09.2016

Monthly Unique Users: 1.5m

## Outcome

### **London Design Festival Preview**

<https://www.luxurytraveladvisor.com/london-design-festival-preview>

by The Daily Telegraph, Henrietta Thompson, 15.09.2016

Monthly Unique Users: 98,588,714

### **STUDIO SWINE DESIGNS Mapping the future**

<http://nuvomagazine.com/magazine/winter-2015/studio-swine-designs>

NUVO, by Helen Chislett - 22 May 2016

### **Studio Swine designs furniture for Henry Ford's failed Amazon city**

<https://www.dezeen.com/2016/10/09/studio-swine-fordlandia-design-furniture-exhibition-london-design-festival-2016-fashion-space-gallery/>

Monthly Unique Users: 2.6m

### **SUSTAINABLE BUT BEAUTIFUL—STUDIO SWINE TRANSFORMS UNUSUAL MATERIALS INTO OBJECTS OF DESIRE**

<http://www.newsweek.com/2017/03/24/sustainable-beautiful-studio-swine-design-571030.html>

Newsweek, Words by Tom Morris

Monthly Unique Users: 2m

### **Studio Swine: Fordlandia Exhibition**

<http://www.stylus.com/jlfgwz>

### **Studio SWINE, Designing for a sustainable future**

<https://www.qicgre.com/stories/studio-swine>

Monthly Unique Users: 108,800

### **FORDLANDIA EXHIBITION**

<https://www.justopenedlondon.com/fordlandia-exhibition-oxford-street-london/>

### **RESOURCE Interview by HANS ULRICH OBRIST**

<https://www.cosstores.com/gb/Magazine/AW16/Resource>

### **Design at the end of the world; Climate change, drought, pollution, overpopulation: how does design relate?**

<https://www.domusweb.it/en/design/2017/11/24/design-at-the-end-of-the-world.html>

### **Studio Swine, Art is Alive**

<https://artislive.co.uk/2017/02/19/studio-swine/>

### **Fordlandia**

<https://www.list.co.uk/event/642119-fordlandia/>



### Talks we have given about the Fordlandia project:

#### London Fashion Space, UK 2016

<https://fordlandiagallery.tumblr.com/post/153137048610/studio-swine-talk>

#### Iceland Design March, 2016

<https://vimeo.com/247995844>

<http://ha-mag.is/2016/04/05/designtalks-follow-up-studio-swine/?lang=en>

#### U and I Think, London, July 2016

[https://www.designingbuildings.co.uk/wiki/U\\_and\\_I\\_Think\\_event\\_with\\_Studio\\_SWINE](https://www.designingbuildings.co.uk/wiki/U_and_I_Think_event_with_Studio_SWINE)

#### Berlin, Designtransfer, Dec 2016

[http://www.designtransfer.udk-berlin.de/en/projekt/material-changes\\_studioswine/](http://www.designtransfer.udk-berlin.de/en/projekt/material-changes_studioswine/)

#### Chicago School of Art, SAIC, USA 2016

<http://www.saic.edu/academics/departments/aiado/events/studio-swine>

#### Think with Google UK, London, June, 2017

#### Helsinki Design Week, Finland 2017

<https://www.dezeen.com/2017/08/09/design-commons-event-helsinki-aims-find-solutions-to-world-issues/>

#### Domus Academy, Milan, Italy 2017

<http://www.domusacademy.com/en/domus-academy-presents-prototyping-ideas-uto pia/>

#### IED, Turin, Italy 2017

<https://zh-cn.facebook.com/iedtorino/photos/pcb.1321109124602810/1321108481269541/?type=3>

### Upcoming Talks in 2018:

Design Indaba, Cape Town, South Africa, February 19th

British Council, Design Museum, London, May 1st

IED Madrid, Spain, May 22nd

Icon Design, Milan, April 18th

A/D/O, New York, June

### The biggest challenges we discovered using natural rubber:

1. **How to make a humble, beige material desirable? It's currently used for very industrial, anonymous objects such as rubber bands, shoe soles, condoms, tyres, what else could it be used for?** Our solution was to create a design collection using wild rubber transformed into an ebonite design collection.
2. **How do you create a supply chain out of the remote wilderness of the Amazon Rainforest to the ebonite factories in Germany or Japan and then to the consumer?** We went in person to collect the rubber and make connections for future orders. Going forward the logistics remain complicated and expensive, a challenge that we haven't resolved.
3. **How do you engage the public with the providence of the material? Will they care or pay more for Wild Rubber over plantation rubber?** We created a 'world' which was our vision inspired by Fordlandia. This world would be presented in the film and manifest in the collection exhibited. There is a book which contextualised the project and we made a exhibition and film. To increase engagement we designed the collection with a style inspired by Brazilian Modernism and connected to the evocative story of Fordlandia.

## Learnings

- **Why is this topic important?**

As creatives that are bringing more stuff in a world with finite natural resources we are really interested in how to balance the need to create and ways to produce for modern times without causing more harm to the natural environment where the pressures of a growing human population are increasingly great.

We are also really interested in materials, where they come from and the history of how they have found relevance to our times. Rubber has been known about for thousands of years and had some uses but it wasn't until the 19th and 20th century with the invention of the motor car that rubber became one of the three key materials (along with iron and oil) that made our modern age. Even with the development of synthetic rubber since their invention in World War II, natural rubber still accounts for 40% of the rubber produced today. Where it originates and how it's produced has profound impacts on the World's Rainforests.

- **What were the key questions of your project?**

Three key questions we posed ourselves with our project:

1. What natural resources can be sustainable harvested from the rainforest, will we find them before they are lost forever?
2. Are there lessons to learned from history of rubber production and Fordlandia that can help us forge a path for the future?
3. Is there a way to produce new items which actively helps the rainforest?

- **What was the value overall of this experience?**

We wanted to learn about rubber first hand at the beginning of the supply chain, to understand where it comes from and the process, community and forest from which it originates. We also wanted to learn about historic techniques before the knowledge was lost and with the potential for a new found relevance in our contemporary times.

- **How did you address these key questions?**

The method we employed started with research online, in publications and meeting experts in the UK.

We met with various experts:

Professor Mark Nesbitt a curator at the The Kew Gardens Economic Botany Archives.

Sarah Hutchinson of the WWF, Wild Rubber project.

Lily Cole, founder of Wildrubber.com

John Leadsman, author of the seminal book on the history of Rubber.

We decided we needed to understand where rubber comes from and then make something with it to explore its potential.

To see rubber production first hand in the Amazon Rainforest we enlisted Anya Teixeira, a Brazilian friend and collaborator to help with arrangements ahead of our visit.

After the trip we explored the practical application of our findings and created a wild rubber collection, a film and a publication.

## Conclusion

The production of Wild Rubber in the Amazon is currently operating at less than 2% of its potential capacity, encouraging this business to grow would have two extremely positive sustainable outcomes. Firstly growing the demand for wild rubber creates a value in the untouched forest that saves it from being logged for its valuable hardwood and cleared for grazing cattle or growing soya. The tappers live in the forest, trek the forests each day tapping the rubber trees and acting as guardians of the forest.

The second sustainable benefit to Wild Rubber if the industry could be grown to a greater scale is the possibility of supplying industry currently relying on plantation grown rubber from Southeast Asia where as a non-native species, without the disease and pests that prey on rubber in the Amazon, the trees are cultivated in vast monoculture plantations that are a major cause of deforestation. 40% of global rubber comes from natural trees (60% is from synthetic) if Wild Rubber could provide some of that demand the protection for both the Amazon rainforest and the rainforests of Southeast Asia would bring great environmental returns. During our research in the Amazon we also learnt about other materials from the wild forest to be sustainably sourced and to support the forest economy. Materials such as fish leather, palm leather, natural fibers and resins. Back in the UK we explored reclaimed hardwoods from architectural salvage and scrap metals from automotive and construction industry.

The difficulty of growing the demand for Wild Rubber seems to me to be the lack of a established supply chain. Companies that use wild rubber such as Veja for trainer soles have created their own chain direct with the rubber tappers and this isn't realistic for most people. Getting raw rubber from small scale producers via cooperatives to the global market is essential for this to grow. The challenges both logistically and navigating the bureaucracy of Brazilian exports are not insignificant, however the excellent work done by WWF's Rainforest Rescue program offers hope for this supply chain to develop.

There are additional costs in working with wild rubber and in particular ebonite, which means that the material needs to be valued and it's provenance promoted. Normally rubber is a material that is completely functional and utilitarian, rubber bands, car tyres, surgeons gloves, shoe soles. We chose to make high end items to make the economics work and to make something that was to last a long time, be collectable and made with craft and with a story behind the product. It was therefore important to create something with innovative aesthetics to make it unique and desired. The importance of the story surrounding rubber and Fordlandia was crucial to make it engaging for press and the public.

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