TOMÁS SARACENO IN COLLABORATION:

WEB(S) OF LIFE

SERPENTINE SOUTH
1 JUNE – 10 SEPTEMBER 2023

SERPENTINE
1. Phone Deposit/Retrieval
2. Nggamdu.org
3. Spider/Web
4. Fly with Pacha, Into the Aerocene
5. Cloud Cities: Species of Spaces and Other Pieces
6. Cloud Imagination

* Cloud Cities: Species of Spaces and Other Pieces*, 2023 (on the roof)
INTRODUCTION

For more than two decades, Tomás Saraceno has produced a body of work which draws attention to the complex and interdependent threads that make up an ecosystem, from humans and animals, to plants and all other forms of matter. His Berlin-based studio functions as an experimental environment, bringing together various disciplines including art, architecture, design and social sciences to research and develop projects which culminate in ambitious sculptural installations, participatory events and community-led initiatives.

*Web(s) of Life* brings together new and recent works by Saraceno and collaborators which include, among others, spiders and their webs; a community of spider diviners from Somié, Cameroon; indigenous communities in Salinas Grandes and Laguna de Guayatayoc Basin, Argentina; and those involved in ongoing research projects Aerocene and Arachnophilia. The exhibition draws on situated and embodied forms of knowledge to propose how to take a more responsible, and responsive, approach to being in relation to one another and the climate crisis.

For Serpentine, Saraceno has created a porous environment in which the building and its operations respond to the surrounding park and weather conditions. The gallery’s climate control system used to monitor and maintain temperature and humidity has been switched off and some doorways have been opened to the park to encourage natural ventilation and the movement of living organisms.
Should a heatwave occur, rather than using climate control, areas of the exhibition will close, and visitors will be encouraged to engage with the multispecies and interactive sculptures that populate the exterior of the building and the park. Visitors are invited to pedal the bicycles positioned by the entrance to activate an audio recording of the *Manifesto for an Ecosocial Energy Transition from the Peoples of the South* written by the Ecosocial and Intercultural Pact of the South. Power for the artworks inside the gallery is generated by – and dependent on – solar panels newly installed on the roof as part of the performance titled *Ballad of Weather Dependency*, in which artworks adapt to the energy generated and visitors become active participants. Through these subtle interventions, the working habits of the gallery’s staff, the building’s opening hours and the ways in which visitors can participate will shift daily.

*Web(s) of Life* becomes a “living entity that sleeps and breathes, overheats and quiets down”. As Saraceno says, “It is high time some of us change our habits and not the climate.”

In a time of rapid technological advancement, Saraceno emphasises the value of looking to bioindicators and the predictive behaviours of non-human species that can signal shifts in weather, climate, pollution levels and ecological wellbeing. Taken together, the works on view offer hopeful strategies for survival, encouraging visitors to break away from a reliance on technologies, reflect on human-centric habits and reconnect with the environment.

Collage towards *Web(s) of Life* collaborators, 2023. Courtesy Studio Tomás Saraceno
Community of Salinas Grandes and Laguna de Guayatayoc
Jujuy, Argentina

Lets change habits not the climate!

01 Spotted flycatcher, 02 Monarch butterfly, 03 Robin, 04 Great tit, 05 Common darter, 06 Blue tit, 07 Red squirrel, 08 Hedgehog, 09 Shoveler, 10 Stag beetle, 11 Oak bush-cricket, 12 Vicuña, 13 Red fox, 14 Redstarts, 15 Solitary bees, 16 Araneus diadematus, 17 Pumpkin Spider, 18 Hazel Dormouse, 19 Nuthatch, 20 Heterocrocuta crassipes
### Energy Consumption Modes

**Sunny**  
3.5 kWh per hour  

**Partly Sunny**  
2.1 kWh per hour  

**Cloudy**  
1.2 kWh per hour  

**Heatwave**  
West Gallery and outside remain open!

### Artwork

<table>
<thead>
<tr>
<th>Device</th>
<th>Sunny (W)</th>
<th>Partly Sunny (W)</th>
<th>Cloudy (W)</th>
<th>Heatwave (W)</th>
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### Expected Peak Energy Production

- **5.6 kWh per hour**
Diagram of energy production and consumption at Serpentine South, 2023.
Courtesy Studio Tomás Saraceno
Important information:

Please note that visitors will be invited to leave their mobile phones upon entering the exhibition. In return, you will receive an artwork from the artist. If you require the use of your mobile phone for medical or other reasons, we ask that you do not take photographs and avoid using it in the exhibition.

The works presented in the East Gallery contain spider/webs and references to spiders. Please ask a member of the Visitor Experience team if you would like more information.

Discover more on the exhibition through the dedicated portal websof.life
Collage towards Bi-cycles for life-cycles (go as fast as you can, as slow as you must*), 2023. Courtesy the Ecosocial and Intercultural Pact of the South with Aerocene

*Title taken from a quote by American educator and psychologist Anna Gillingham
Bi-cycles for life-cycles (go as fast as you can, as slow as you must*) invites visitors to generate the energy required to listen to an audio recording of the Manifesto for an Ecosocial Energy Transition from the Peoples of the South by the Ecosocial and Intercultural Pact of the South, which “rejects false solutions that come with new forms of energy colonialism, now in the name of a green transition”. The recording is read by renowned Malian writer, filmmaker, cultural theorist, scholar and art historian, Manthia Diawara.

For those pedalling, the cost of energy and water regimes is made immediate and physical, as their pedal power will also help to stream the reading of the manifesto to an online audience (via websof.life) through the integrated cycle-powered web server. Without enough pedal power, the manifesto will not be audible.

While a leisurely cycle produces 60W of energy, an intense one creates upwards of 300W. These amounts are insignificant compared to the hundreds of terawatts required to serve today’s ‘gigabit generation’ of users. Instead, this artwork encourages listeners to accept a ‘slower’ connection with the internet and question our dependency.
“Hello. I am a Cameroonian citizen. I live in Somié. I divine together with the ñgam dù, the spider that lives in the ground, using leaves cut out with a series of symbols. So, if you have a problem... you call me! I'll consult the spider, and I'll ask her your question. I work with my friend [Iréné Nguea], who films what I do with the spider. He can send you the result of the consultation as a film. So, if you want to know more, check out our website: nggamdu.org”
- Bollo Pierre ‘Tadios’

Nggamdu.org is a web portal by the spiders and diviners of Somié, Cameroon, made at the request of Bollo Pierre ‘Tadios’ following a visit to Somié in 2019 by Tomás Saraceno and Maximiliano Laina, led by the guidance of anthropologist David Zeitlyn, with contributions by the filmmaker Iréné Nguea, Ollie George, Penny Fraser and Denis Ndeloh.

Request your consultation with the spider via nggamdu.org in exchange for a set fee that goes towards the spider diviners’ practice and their community needs.

From arachnophobia to arachnophilia

Long before this exhibition, spiders have been living and weaving at the Serpentine Gallery. Look for more webs.

A spider in the morning brings happiness. A spider seen in the evening brings hope.

Common Spiders around Kentigton Gardens
01 Araneus cucurbitina, 02 Pisaura mirabilis, 03 Pachygnatha clavata, 04 Amaurobius similis, 05 Salticus scenicus, 06 Centromerus bicolor, 07 Ergone atra, 08 Misumena vatia, 09 Steatoda grossa, 10 Xysticus cristatus, 11 Philodromus albipes, 12 Tetragnatha extensa, 13 Platnickina tincta, 14 Xysticus cristatus, 15 Araneus diadematus

Collage towards Spider Stroll, 2023. Courtesy the Pumpkin Spider, Nursery Web Spider, Common Mesh-Web Weaver... with Tomás Saraceno

Nggâm dù
Somie, Cameroon
Any questions?
Consult the spider diviners
at www.nggamdu.org
World(ing)WideWeb(s).Life is an installation of delicate spiderwebs. Contained within rectangular frames and suspended between tree branches, these works were woven in Saraceno’s studio in Berlin, some by a single spider and others by spiders of different species forming new and mesmerising configurations over time. Some webs are still in progress, as spiders in the gallery and from the park continue to contribute.

Saraceno calls for a close observation of spiders as a source of wonder and inspiration, encouraging those who experience a fear of spiders (arachnophobia) to move towards a love of them (arachnophilia). These works acknowledge the essential connection between human and non-human organisms that make up an ecosystem.

Since 2006, Saraceno has been examining the extraordinary nature of invertebrate architectures and behaviours. This work has developed into an interdisciplinary network, titled Arachnophilia. Functioning as a research archive, the platform seeks to make connections between scientific, philosophical and cultural perceptions of spiders and find ways to “connect and converse with arachnid kin.”

For further information visit arachnophilia.net
Particulate matter (PM) describes microscopic solid or liquid particles found in the atmosphere. Consisting of various chemical compounds and materials, some PM – such as PM2.5, which measures 2.5 microns or less in diameter – are particularly toxic. Produced largely from the burning of fossil fuels that also generates greenhouse gas emissions, PM2.5 reduces visibility in the air, making it appear hazy. The particles can easily find their way into the bloodstream and cause damage to the brain, heart, lungs, and other organs of humans and various beings. The American writer Rebecca Solnit has described the pervasiveness of PM2.5 as another pandemic, one that kills over 8.7 million people a year.

In *Particular Matter(s)*, a beam of light illuminates the dust particles of earthly and cosmic origin that float through the air, while a live video recording translates the continuously shifting composition of matter into sound. Gas and dust particles, the movements of human participants, and the interplay of heat, electrostatics and air currents become visible and audible.
ARACHNOANACRÓARCANO

Spiders communicate and sense the world through vibratory stimulations. In this new work, Saraceno builds on Arachnophilia’s research into this phenomenon, known as biotremology (the vibrational behaviour of organisms), a field in which the community has made significant contributions in recent years.

*ArachnoAnacróArcano* repurposes a confessional stall, traditionally a place for people to repent their sins to a priest, as a space for communing with the vibrations of a spider. Using custom-made microphones, the vibrations of spiders and their webs are transmitted through a series of shakers installed in the stall’s floor, offering new possibilities for interspecies communication. Spiders inhabiting the gallery may take up residence in place of the priest, offering alternative wisdoms to the cycle of sin and redemption.

A maximum of two visitors at a time are invited to enter the stall. Please be sensitive to how you move. Take your time. Give in to arachnophilia.
FLY WITH PACHA,
INTO THE AEROCENE

This audiovisual project is an ongoing dialogue with the communities of the Salinas Grandes and Laguna de Guayatayoc Basin, Aerocene and other groups and includes footage shot between 2006 and 2023. It also documents the flight of an aerosolar balloon over the vast salt flats of Salinas Grandes, Argentina in January 2020. Lifted only by the power of the sun and carried by the winds, this was the first ever fossil fuel-free human flight without burners, solar panels and batteries, helium or hydrogen. It was recognised as the most sustainable flight in human history by the Fédération Aéronautique Internationale (FAI) and set 32 world records. The flight was the result of collaborative research carried out by Aerocene – an interdisciplinary group founded by Saraceno in 2012 which investigates planetary mobility and ethics.

This aerosolar sculpture, titled Aerocene Pacha, rose with the message ‘Water and Life are Worth More than Lithium’, a phrase selected by communities fighting for the preservation of land threatened by the extensive mining of lithium, an alkali metal used predominantly in mobile phone batteries and electric cars driving the ‘green’ energy transition in the Global North. This extractive technology uses as much as 2 million litres of water per tonne of lithium mined, leading to drought, destroying biodiversity and robbing local populations of access to water.

In January 2023, the communities of Salinas Grandes and Laguna de Guayatayoc Basin with Aerocene gathered again as national and
international geopolitical and commercial interests continue to threaten the territories. This time, the sculpture featured the message 'In Complementarity We Take Care of Water'. Highlighting the environmental inequalities faced by indigenous communities, the work intends to amplify the fight for a just ecosocial energy transition and for the Rights of Nature. As a result of this action, the communities declared the Salinas Grandes and Laguna de Guayatayoc Basin as a subject of rights. This legal framework enables ecosystems and non-human species to have the same protection and rights as people and corporations.

*Fly with Pacha, Into the Aerocene* is directed by Maximiliano Laina and Tomás Saraceno with Aerocene in collaboration with the communities of Salinas Grandes and Laguna de Guayatayoc Basin and other communities who co-organised, hosted and participated in Tata Inti (2017), *Fly with Aerocene Pacha* (2020) and the Alfarcito Gathering (2023).

Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc Basin with Aerocene, January 2020. Photography: Aerocene, Creative Commons BY-SA 4.0. Courtesy the artist and Aerocene
The final gallery opens its doors to the park, encouraging the free movement of humans, animals, insects and air.

*Cloud Cities: Species of Spaces and Other Pieces*, is a series of new sculptures installed inside the gallery, on the roof of the building and within the park. Developed in consultation with ornithologists and wildlife organisations, the sculptures provide specially-designed habitats for a range of animals, both native species and visitors to the park, some of which are in decline or in danger of extinction. The sculptures stand as meditations on biodiversity that imagine alternative models for interspecies encounters: nests and water baths for birds, houses for hedgehogs, objects conceived for dogs, nooks for invertebrates and steps for squirrels to climb.

The sculptures’ forms are inspired by cumulonimbus clouds, more commonly known as thunderclouds, which forewarn of stormy weather and occur more frequently as a result of climate change. These works are a part of Saraceno’s long-standing project *Cloud Cities*. This proposal for an alternative form of urbanism brings together constellations of geodesic modules and is inspired by principles within the universe that affect the groupings of cosmic clouds and soap bubbles. Saraceno asks what forms of assembly and urban architecture might emerge when large cities are not only built from a human perspective. Along one wall of the gallery is a series of works hung at various heights to accommodate the different sensitivities and perceptions of four-legged visitors.
Collage towards *Cloud Cities: Species of Spaces and Other Pieces*, 2023. One cloud with cohabitational spaces for twenty-four species and... Courtesy the Swift, House Sparrow, Kestrel, Tawny Owl, Two Coloured Sheet Web Spider, Red Squirrel... with Tomás Saraceno

*Title taken from French novelist Georges Perec’s collection of writing *Species of Spaces and Other Pieces* (1974).
**CLOUD IMAGINATION**

This installation is specially conceived for children. In this room, children can create their own cloud drawings on the provided printouts, which include fragments from the cloudscape photographed in Salinas Grandes, Jujuy, Argentina, the location of the film *Fly with Pacha, Into the Aerocene*. During the Alfarcito gathering in January 2023, cloud drawing workshops were held with local children as an inspiration for a new collective artwork. You may contribute your children’s drawings to this artwork by following the instructions on the back of the drawing sheet which you are welcome to take away.

This evolving artwork links the imaginations of children of Salinas Grandes and London. It’s also an experiment of a new economic approach called Partial Common Ownership. This piece will not be traditionally owned by anyone but will instead be stewarded by various parties to advance the Salinas Grandes community’s efforts to preserve their local ecosystem. Partial Common Ownership binds the campaign for environmental justice with the interests of young people who interact with the work wherever it appears, highlighting their shared purpose.

For further information, please visit [websof.life](http://websof.life)

Collage towards *Cloud Imagination*, 2023. Courtesy Studio Tomás Sarceno
ARTIST BIOGRAPHY

Argentina-born, Berlin-based artist and researcher Tomás Saraceno has activated projects aimed towards rethinking the co-creation of the atmosphere. These include Museo Aero Solar (2007–) and the Aerocene Foundation (2015–), towards a society free from carbon emissions, for ecosocial justice. Arachnophilia, an interdisciplinary, research-driven community, emerged from the artist’s more than 10 years of collaboration with humans, spiders and their webs.

Saraceno’s work with local communities, scientific researchers, and institutions around the world, aims to seek out a more equal balance of human, techno and biodiversity, with the understanding that knowledge belongs to specific situations. He has held numerous residencies including Exhibition Road Cultural Group, London, UK (2016); MIT Center for Art, Science & Technology, Massachusetts, USA (2012–); Atelier Calder, Saché, France (2010) following the Calder Prize (2009); published in *Nature* and *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*; presented a TED talk; staged artistic interventions with COP20, COP21, and COP26; has lectured at Princeton University, Princeton, USA; Columbia University, New York, USA; Centre Pompidou, Paris, France; WEF, Davos, Switzerland; Hirshhorn Museum, Washington D.C., USA; Centro Cultural Kirchner (CCK); Buenos Aires, Argentina; among other locations; and received recognitions such as the Konex Platinum Award in Art and Technology (2022).
EXHIBITION CREDITS

Tomás Saraceno in Collaboration: Web(s) of Life is curated by Lizzie Carey-Thomas, Chief Curator and Chris Bayley, Associate Exhibitions Curator

Production team:
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Special thanks to Tomás Saraceno and his studio, as well as the participating communities of Salinas Grandes and Laguna de Guayatayoc Basin, Jujuy, Argentina with the participation of the Action Collective for Ecosocial Justice, the Mirá Socio-environmental Collective, the Geopolitics and Commons Study Group, the Environment and Natural Resources Foundation, the Argentine Association of Environmental Lawyers, the Ecosocial and Intercultural Pact of the South; spider diviners of Somié, Cameroon; Aerocene; Arachnophilia; the interspecies web of life of Kensington Gardens; ornithologists; wildlife organisations; dog cognition researchers; biotremologists; sustainability experts; solar technologists and associated teams who have made this project possible.
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