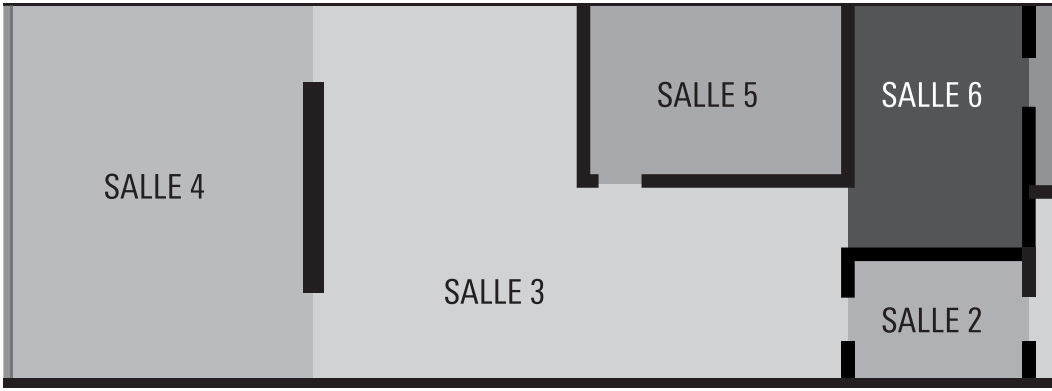
EN

mimèsis un design vivant

Centre Pompidou-Metz

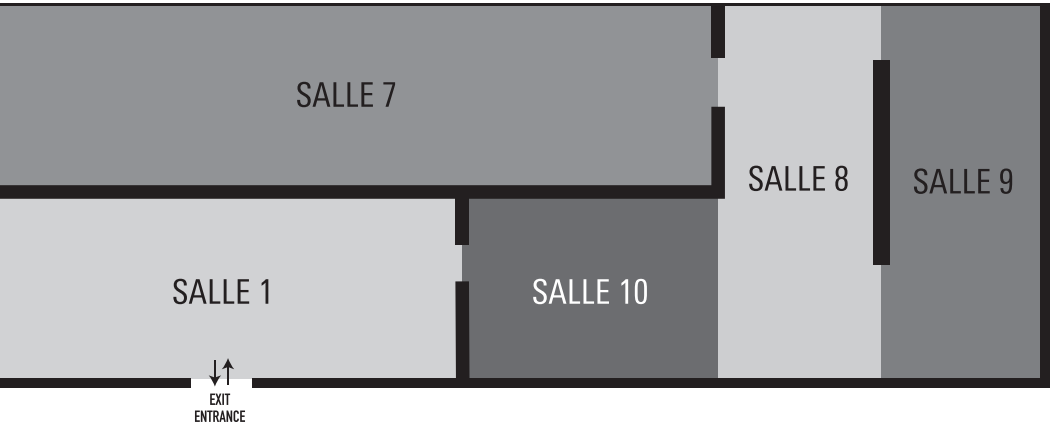
GALERIE 2



The exhibition ‘Mimèsis, un design vivant’ [Mimesis, living design traces] the development of the concept of nature in design, from the biomorphism of modern design to biomimetics, from bio-manufacturing to the re-creation of living things through digital design, in an exploration that is both historical and forward-looking.

From the iconic modernist objects that reinterpreted nature to the most recent designs exploring a new digital naturalness (Ross Lovegrove, Joris Laarman), a profound mutation has taken place in the very concept of nature, which is explored through the most innovative experiments in the field of design.

Nature and its processes were by turns observed, imitated and celebrated, from the great modernist designers (Alvar Aalto, Charlotte Perriand, Sori Yanagi, Charles and Ray Eames, Arne Jacobsen, Carlo Mollino) to the Pop movement of the 1960s, which drew inspiration from nature, with Pierre Paulin and Olivier Mourgue, as well as the biomimetic experiments of Serge Mouille. The 1980s heralded



the inclusion of natural elements into industrial products, notably through the work of Andrea Branzi, the precursor of a new form of 'neo-primitivism'. In the 2000s, with the aid of digital technology, nature was not only represented, it was also re-created digitally in a simulation of its own growth dynamics. Between nature and artifice, the *Rêveries urbaines* of Ronan and Erwan Bouroullec bring fresh enchantment to public spaces. Today, nature has expanded to embrace the concept of 'living' and the most forward-looking design projects make use of 'bio-manufacture', incorporating microorganisms as material and raising the question of new creative ecosystems between nature and human.

MÉDIATEUR

A question to ask or the desire to chat?
Our facilitators are at your disposal.

GROTESQUES

In the 2000s, use of new technology in the form of digital design and manufacture transformed the practices of designers and architects, enabling them to create objects whose forms were calculated with the aid of CAD (computer-aided design). 3D printing and simulation software opened up the possibility of organic forms in a dynamic of growth. Between decorative exuberance and wonder, *Grotto II* (2016) by Michel Hansmeyer refers to Renaissance grottos while being a product of algorithms, thereby opening onto an invisible dimension. Designers like Ross Lovegrove and Joris Laarman who are digital pioneers fuse nature and structure through the growth of organic forms. At the nexus of computer science and biology, Neri Oxman recreates the processes of living things and appropriates nature like a new piece of 'software'. As for the works of the artist and designer Tokujin Yoshioka, they have been produced with the aid of the natural process of crystal growing, initiating another relationship to time.

CABINET OF CURIOSITIES

Conceived along the lines of the cabinets of curiosities that appeared in the Renaissance, in which artefacts, scientific objects and natural objects rubbed shoulders with each other (*mirabilia*, *naturalia*, *artificialia*), this room contains an ensemble of objects, naturalist photographs and works produced in the 20th and 21st centuries. With his *Kunstformen der Natur* ('The artistic forms of nature', 1904), which studied radiolaria, the biologist Ernst Haeckel narrowed the gap between the disciplines of art and science. Exploiting the capacity of scientific imagery to transfigure nature, Man Ray, Brassaï and Albert Renger-Patzsch photographed the self-organising structures of living things. At the beginning of the 21st century, nature's generative processes were recreated digitally. With the series *Orbita* (2006), a modular furniture project of 'flower-seats' based on a Voronoi diagram, the architect Alisa Andrasek gave birth to new forms inspired by the cells of living things. Juxtaposed, these different approaches weave an entire world of associations at the intersection of nature and artifice.

BIOMORPHISM

In Scandinavia, in the early 1920s, the work of Alvar and Aino Aalto laid the foundations for organic design in a humanist approach that was inspired by the relationship between human beings and nature. Their many experiments with bending and laminating wood were at odds with the work of European modernists, who focused on the use of industrial materials like steel tubing and new manufacturing techniques.
In France, in the 1930s, Charlotte Perriand developed an intimate relationship with nature and its interconnection with raw materials. The designer and architect collected and photographed objects she found in nature: bones, rocks, pieces of wood and any 'object of poetic reaction'. In the 1940s, in the United States, following on from Aalto, Charles and Ray Eames, George Nelson and Harry Bertoia reinvented the language of organic design. The Eames' research led to key technical innovations (glass fibre, moulded and curved plywood) that could be applied to large-scale production.

Carlo Mollino, *Bureau*, 1950. Paris, Centre Pompidou, Musée national d'art moderne

POP

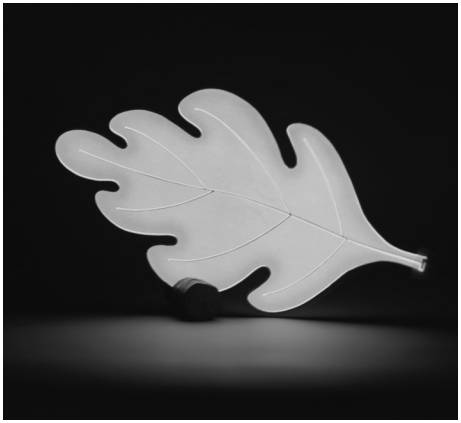
The 1960s were marked by the Pop movement, which was openly hedonistic in its literal references to nature, playfully evoking floral forms. Following on from Eero Saarinen, who designed the 'tulip' leg in the mid 1950s, designers from Verner Panton to Pierre Paulin recreated an artificial nature. The possibilities offered by new materials such as foam gave free rein to shapes, which were transformed by stretchy upholstery in bright colours and psychedelic patterns. Loungers, pouffes and recliners heralded a change in the perception of posture; the transition from a seated position to a reclining one introduced the idea of closer proximity to the floor. In a new vision of usage, the domestic space became a modular environment. In Italy, in the 1960s, Pop culture was scrutinised in a critical and irreverent way. From the Italian radicals of the 1960s to the Memphis group of the early 1980s, consumer society was questioned in an ironic explosion of colours and shapes and an unconventional use of materials.

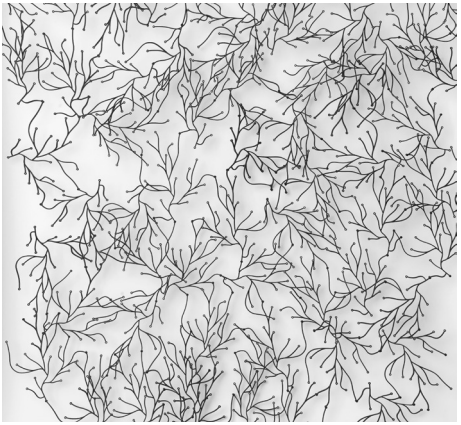
SERGE MOUILLE

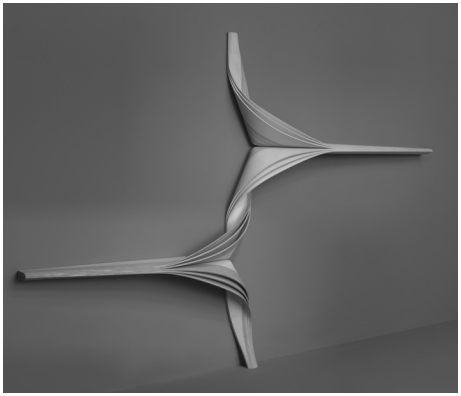
In his lighting fixture designs, the earliest of which date back to the 1950s, French designer Serge Mouille, who trained in silversmithing and metalwork, created a veritable grammar of forms that was derived from a biomimetic approach. From 1951 to 1956, he designed monotype-stabiles-mobiles, cut-out shapes conceived as dynamic, non-abstract objects, coiling and twisting organic forms, referring to the forms of natural structures. At the same time, in 1952 he began designing his first prototypes for aluminium lamps, combining several different manufacturing and metal-cutting techniques. His approach, which generated a complete range of objects, was based on the combination of a small number of basic generative figures which metamorphosed into different forms: the cone in the *Moule* became the *Escargot*, the *Saturne* and the *Conque*, while *l'Ogive* turned into the *Cocotte* and the *Coquille* into the *Demi-Sphère* and the *Torchère*.

NATURE AT WORK

The 1980s were marked by the start of a more direct dialogue between design and nature, in an approach that renewed industrial manufacturing processes. The designer and theorist Andrea Branzi proposed a form of 'neo-primitivism', in which natural elements (birch branches, logs, etc.) and elements of industrial production were combined in a single object. For him, natural materials were structural as well as decorative. Today this dialectic between natural and industrial production has been embraced by designers such as YMER&MALTA and Benjamin Graindorge, with the *Fallen Tree* (2011) bench. With the tripod chair *W.W.*, Philippe Starck drew inspiration from the life force of plants. An adept of 'slow design', Joseph Walsh, who advocates respect for nature and manual skills, sourced the dynamic force of *Enignum XV Shelf* (2014) from nature.







Andrea Branzi,
Lampe *Foglia*, 1988.
Paris, Centre Pompidou,
Musée national d'art moderne

Ronan et Erwan Bouroullec,
Panneau décoratif *Algues*, 2004.
Paris, Centre Pompidou,
Musée national d'art moderne

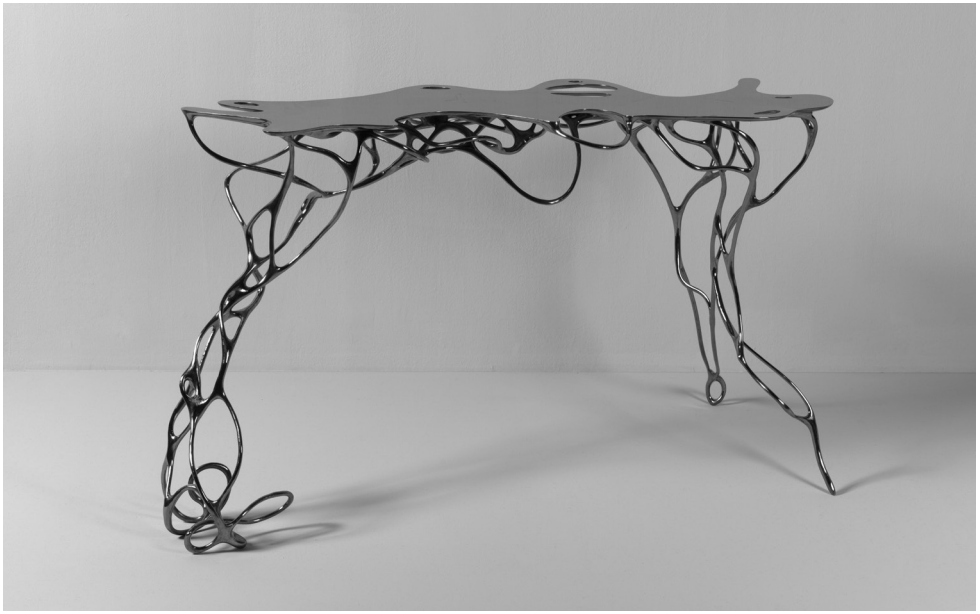
Joseph Walsh,
Enignum XV Shelf, 2004.
Paris, Centre Pompidou,
Musée national d'art moderne

RONAN ET ERWAN BOUROULLEC, *RÊVERIES URBAINES*

Between nature and artifice, the *Rêveries urbaines* of Ronan and Erwan Bouroullec recreate an atmospheric sense of wonder. Displayed for the first time in 2016, in Rennes, these study models are reflections on the urban development of the city, public spaces and micro-architecture. Around twenty 'principles' in the form of drawings, films and photographs, research models and full-scale prototypes reinvent 'urban motifs' through furniture, pergolas, fountains, a stream, a kiosk and a 'luminous tent'. The *Rêveries urbaines* were conceived as a vast study bringing together a repertoire of forms in which, according to the designers, each model is a poetic element in an unfolding urban fiction, a way of bringing enchantment to places for walking, meeting and exchanging in the city, as well as marking a return to living forms: plants, water, fire, and animals. Several of these 'urban reveries' led to creations in urban spaces, in Paris, at the Vitra Campus in Germany, in Miami (United States) and in Aarhus (Denmark).

DIGITAL RE-CREATION

In the 2000s, the use of digital technology introduced a new dimension to nature. Design was seen as a dynamic process of transforming forms, in the manner of living organisms. British designer Ross Lovegrove, a pioneer in the use of digital tools, makes use of the most advanced technologies to design objects whose decorative forms are inspired by natural processes of growth. Mathia Bengtsson designed a table in 3D-printed titanium, whose algorithmic design was inspired by the fluid movement of intertwining creepers. Joris Laarman merges structure and ornament in the plant-like efflorescence of his forms. 3D printing offers designers new decorative possibilities derived from the self-generating development of forms calculated digitally, like the digitally-designed clay *Sediment Vases* (2015–2016) of Olivier van Herpt, which were 3D-printed layer by layer and whose shapes are diffracted in a multitude of scales.



Mathias Bengtsson, *Growth Table Titanium*, 2016.
Paris, Centre Pompidou, Musée national d'art moderne

CHAISELONGUES

Created in 1948 by Charles and Ray Eames for the International Competition for Low-Cost Furniture Design organised by the Museum of Modern Art in New York, *La Chaise* is an iconic example of organic design. Made out of fibreglass, a material that grew out of research carried out for the American army, *La Chaise* was freed from the rigid forms of the dominant Bauhaus in favour of the simple curves of biomorphism. Joris Laarman's *Bone Chair Prototype* (2006) was designed in collaboration with scientists. Inspired by the growth of the human skeleton, this chaise longue's structure pushes back the boundaries between living things and digital design. More recently, the works of Aurélie Hoegy reveal a return to artisan craft. This artist uses rattan fibres from a variety of creeper that is found in the forests of Indonesia and is known for its strength and malleability: *Wild Fiber Duchess* (2020) is the result of research into the material's flexibility as it moulds itself to the body's forms and reflects an environmentally responsible approach that respects the rattan's natural life cycle.

BIO-MANUFACTURE

Today, design can combine 'bio-manufacturing' and digital process. In an attempt to move away from the logic of industrial production, designers are embracing bio-materials derived from biological organisms, such as algae and fungal mycelium, as alternatives that respect life. They are making innovative use of salvaged organic waste, as demonstrated by Samuel Tomatis with the series *Algae* (2017–2021), and the Dutch studio Klarenbeek & Dros, which created a recyclable bioplastic for its *Algae Lab* (2018). With their *Mycelium Chair* (2018–2019), a seat made with 3D-printed fungal mycelium, the designers created an object with a negative carbon footprint. The urban space is also a field for experimentation: *Pele* (2021), a large sculptural installation by Humberto and Fernando Campana, is permeable to the environment, providing an organic terrain for new forms of vegetation. Nature's transformative processes are celebrated through objects that are created with a reflective and respectful approach to living things, such as Marlène Huissoud's *Cocoon Cabinet #6* (2018).

Jean-Luc Hervé, who studied musical aesthetics, sound engineering and the natural sciences, explores the relationship between sound, the organic world and public spaces. Born in 1960, he was a student at the Conservatoire National Supérieur de Paris. His residency at the Villa Kujoyama in Kyoto, in 2001, was a pivotal moment in his work, the striking discovery of the complex architecture of Japanese gardens leading him to focus on natural environments. In 2004, after an artistic residency at the DAAD in Berlin, he founded the 'Biotop(e)' initiative with Thierry Blondeau and Oliver Schneller. His current work includes concert-installations conceived for unusual sites, exemplified by his sound gardens and compositions inspired by examples from nature (*Carré magique, Germination*), and *Biotope*, mischievously presented here in Metz.

PROGRAMMATION ASSOCIÉE

Jean-Luc Hervé
(Saint-Maur-des-Fossés, 1960)
***Biotope*, 2019**

Fearful acoustic system

Ircam computer-assisted music design: Thomas Goepfer, Étienne Démoulin

Scientific collaboration: Jean-Philippe Lambert, Benjamin Matuszewski (Sound, Music, Movement Interaction team, Ircam-STMS)

Prototyping and creation of sound elements: Yann Bouloiseau, Djellal Chalabi and Emmanuel Flety

Sound engineering: Quentin Bonnard

Ircam / Musée National d'Art Moderne-Centre Pompidou co-production

For the artist and composer Jean-Luc Hervé (born in 1960), the large conical structures of interweaving timbers that support the roof of the Centre Pompidou-Metz evoke giant trees under their canopy. As visitors draw near to them, they discover a population of small 'sonic animals', which are hidden in the roof structure and are revealed only by their song. The 'tulip feet' become sources of polyphony: the system is fearful, reacting to human presence like living organisms, which panic or fall silent if visitors are too intrusive, numerous or noisy and only resume their singing when it is quiet again.

Emitted by numerous loudspeakers, these sounds are not derived from recordings of the cries and songs of existing species, but are recorded samples, concrete or instrumental, made with the aid of bird lures, flutes, small percussion instruments and cup sounds. We are invited to listen closely, to pay attention to the living things around us, and to change how we interact with the environment. We should take our time, sit down, stay calm and make the most of this sonic nature!

VISITOR INFORMATION

OPENING HOURS
Every day, except Tuesdays and 1st May

1st April to 31 October
Monday → Thursday : 10-18:00
Friday → Sunday: 10-19:00

1st November to 31 March
Monday → Sunday: 10-18:00

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and centrepompidou-metz.fr, Digitick,
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