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#DESIGNTRIENNIAL

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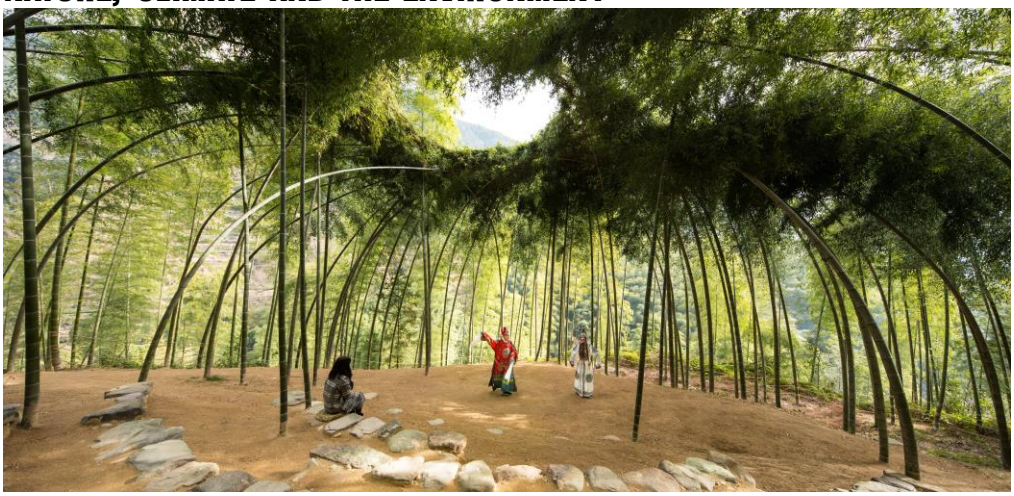
COOPER HEWITT AND CUBE ANNOUNCE PROJECTS FOR THE 2019 DESIGN TRIENNIAL

"NATURE—COOPER HEWITT DESIGN TRIENNIAL" WILL EXPLORE DESIGN'S ABILITY TO ADDRESS CRITICAL ISSUES SURROUNDING NATURE, CLIMATE AND THE ENVIRONMENT



JAN. 31, 2019

Designers are striving to transform people's relationship with the natural world. "Nature—Cooper Hewitt Design Triennial," co-organized by Cooper Hewitt, Smithsonian Design Museum and Cube design museum in Kerkrade, Netherlands, will feature over 60 projects to demonstrate how designers are collaborating with scientists, engineers, environmentalists, academics and other stakeholders to find inventive and promising solutions to the environmental and social challenges confronting humanity today. On view May 10–Jan. 20, 2020, the Design Triennial will be presented at both Cooper Hewitt and Cube, allowing audiences in both the U.S. and Europe to experience the works simultaneously.

"With 2018 the Earth's fourth-warmest year on record and global carbon emissions at an all-time high, the crisis of human-caused climate change has never been more dire," said Caroline Baumann, director of Cooper Hewitt. "Solutions will not emerge without radical new thinking and alliances. 'Nature' brings together some of the most creative and intelligent designers whose works address our complex relationship to nature and its precious resources and advocate for greater empathy for our planet."

"Co-operation is crucial in addressing the human-inflicted situation in which nature currently finds itself," said Hans Gubbels, director of Cube. "The projects in 'Nature,'

which we have brought together with Cooper Hewitt over the past three years, show great inventiveness. This carries the promise that we can bring human behavior back in line with nature again. Co-operation between design, science and technology thus can turn the tide for our planet."

The exhibition is organized into seven sections, which describe designers' strategies in working with nature: **Understand, Simulate, Salvage, Facilitate, Augment, Remediate** and **Nurture.**

Understand focuses on how designers mediate scientific knowledge to enhance humanity's understanding of nature. Highlights include:

- **Curiosity Cloud** by Austrian design duo Mischer'Traxler, which celebrates biodiversity while inviting meditation on nature's fragility. The installation is composed of glass bulbs, each containing a handmade insect species that is native to New York. When visitors walk through the installation, the insects flutter.
- National Design Award-winner Stamen Design's **Metagenomic Data Visualization**, a software that accelerates the pace of scientific discoveries by generating user-friendly genome summaries from data gathered from any given microbial sample. The tool is currently used by scientists at the Banfield Lab at University of California, Berkeley.

Simulate offers advances in scientific understanding and technology that enable designers to simulate nature. Highlights include:

- **Resurrecting the Sublime** by artists Alexandra Daisy Ginsberg and Sissel Tolaas, and synthetic biologist Christina Agapakis of Ginkgo Bioworks, the smell of extinct flowers using DNA from specimens preserved at the Harvard University Herbaria.
- Dresses from the **Biomimicry and Quantum Vibration collections** designed by threeASFOUR (Gabriel Asfour, Angela Donhauser, Adi Gil) and Travis Fitch that exemplify how 3-D printing allows designers to mimic complex organic structures.

Salvage explores how humanity's impact on the planet is galvanizing designers to reclaim and repurpose raw materials. Highlights include:

- Shahar Livne's **Metamorphism** vessel series, which envisions a future in which craftspeople will harvest the petroleum-based plastics that pollute the oceans and kill sea life as a new, abundant natural resource. To create the series, Livne mined discarded plastics and other materials to create a new material named Lithoplast.
- **AIR-INK**—a project spearheaded by Anirudh Sharma, co-founder of Graviky Labs—collects CO2 emissions from fossil-fuel powered cars and diesel engines and purifies the emissions into a carbon pigment. The pigment is manufactured into an ink, with one bottle equaling 45 minutes of air pollution

caused by a car.

In **Facilitate**, designers embrace nature's dynamic forces to promote biological growth in architecture and products. Highlights include:

- **Eco-Engineered Hexagonal Seawall Tiles** designed by Reef Design Labs, which are made from marine concrete formed with grooves, textures and ridges that foster marine life. Once installed on existing sea walls, which are too smooth to be habitable to most organisms, the tiles promote biodiversity in the natural ecosystem.
- **Bamboo Theater** by Xu Tiantian, founder of the Beijing-based firm DnA_Design and Architecture, is a living structure located in a rural village in China that treats nature like a partner rather than a resource. The open-air theater has walls of living bamboo that villagers bend and weave inward to form a vaulted space.

Augment features projects that harness nature's capabilities to enhance objects, buildings and the human body. Highlights include:

- **Fantasma** by AnotherFarm probes the intersection of fashion and biotechnology. In collaboration with Japanese scientists and weavers from the 300-year-old Hosoo textile manufactory, the team creates garments from transgenic glowing silk, made by injecting silkworm eggs with jellyfish or coral DNA.
- Neri Oxman's **Aguahoja**, which exemplifies the National Design Award winner's advancement of material ecology, a design approach that seeks to unify nature's material intelligence with engineering, computation and digital fabrication. The project culminates in a pavilion made from 3-D printed panels of plant cellulose and chitosan, a material made from the chitin present in invertebrate shells.

In **Remediate**, designers present works that attempt to slow, stop and reverse the negative impacts of humanity's footprint on the planet. Highlights include:

- Terreform ONE's **Monarch Sanctuary** will propose new urban habitats for monarch butterflies, whose wild populations are being decimated by climate change.
- Designer Jae Rhim Lee's **Infinity Burial Suit**, which offers a sustainable alternative to burials. The organic cotton suit contains natural, biodegradable materials that assist in breaking down toxins present in the human body.

Projects in **Nurture** seek a broader realignment with the planet and challenge us to respect nature rather than dismiss it. Highlights include:

- **Nanobionic Plant Project: Ambient Illumination** developed by chemical engineer Michael Strano and architect Sheila Kennedy, who seek to illuminate the world with plants. Through a combination of nanotechnology, plant biology

and gardening, these bioluminescent plants may one day provide lighting for homes.

- **The Substitute**, an installation by Alexandra Daisy Ginsberg that digitally resurrects the extinct male Northern white rhino using artificial intelligence and state-of-the-art visual effects. Scientists are seeking to resurrect the species from the brink of extinction using genetic engineering and surrogate gestation. But as Ginsberg points out, the survival of the species will depend on social, not genetic, engineering. The project is a commentary on the human preoccupation with creating new life forms while neglecting existing ones.

SPECIAL INSTALLATIONS

Cooper Hewitt's Arthur Ross Terrace and Garden will feature two large-scale, site-specific installations unique to the U.S. presentation of the Design Triennial. **The Tree of 40 Fruit** by artist Sam Van Aken will blossom with apples, pears, plums, peaches, cherries and apricots. The tree is like a beautiful bouquet, created using centuries-old grafting techniques to preserve dozens of heirloom and rare fruit varieties threatened by industrial fruit production. **Petrified River** by the architects of Ensamble Studio is a 40-foot-long concrete "river" bookended by a "lake" and "mountain" that represent the transformation process of Manhattan from wild nature to an urbanized flattened landscape. It is a petrified metaphor for the rich landscape that was once Mannahatta or "island of many hills."

Complementing the Design Triennial, Cooper Hewitt's second-floor galleries will be devoted to a rotating presentation of objects from the museum's expansive holdings of over 210,000 objects. "**Nature by Design: Selections from the Permanent Collection**" opens this spring and celebrates nature as perhaps the longest-continuing and most global sources of design inspiration. Spanning from the 16th century to the present, "Nature by Design" features extraordinary textiles, furniture, pattern books, jewelry and more to show how designers have interpreted nature's rich beauty and complex science.

PUBLICATION

A 240-page book, *Nature: Collaborations in Design*, will be published by Cooper Hewitt and Cube, and distributed in the U.S. by Artbook | D.A.P. and worldwide by Thames & Hudson UK. Designed by Neil Donnelly, more than 300 photographs, illustrations and content from data visualizations will illustrate seven essays, which explain and explore designers' strategies around understanding, simulating, salvaging, facilitating, augmenting, remediating and nurturing nature. Four conversations between scientists and designers—including George Church with Alexandra Daisy Ginsberg, and Michael John Gorman with Koert van Mensvoort—delve into topics related to synthetic biology, scientific versus design lexicon and recent shifts in the meaning of nature. Retail: $35. Available from SHOP Cooper Hewitt.

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PUBLIC PROGRAMS AND SPECIAL EVENTS

Cooper Hewitt's educational programs will engage audiences of all ages in conversations and workshops that amplify the themes of the Design Triennial. Programs include curator-led tours, an intergenerational Morning at the Museum, evening panel discussions and the 2019 High School Design Competition with Target, which challenges students around the country to design (or redesign) a nature-based solution to a global program. Cooper Hewitt's friends and supporters will gather June 6 for a Garden Party in honor of "Nature," and the popular outdoor summer concert series Cocktails at Cooper Hewitt will activate the Arthur Ross Terrace and Garden with music and performance inspired by the Design Triennial.

ABOUT THE DESIGN TRIENNIAL

"Nature—Cooper Hewitt Design Triennial" is the sixth installment of the series inaugurated in 2000 that looks at new developments in design as they surface in studios, fairs, shops, galleries and media around the world. "Nature" was developed by a cross-institutional curatorial team that includes Cooper Hewitt's Caitlin Condell, associate curator and head of Drawings, Prints & Graphic Design; Andrea Lipps, assistant curator of contemporary design; Matilda McQuaid, deputy director of curatorial and head of Textiles; and Cube's Gene Bertrand, program and development director, and Hans Gubbels, director of Cube. In organizing "Nature," the curators engaged a panel of international advisors: Aric Chen, Professor, College of Design & Innovation, Tongji University, and Curator-at-Large, M+ (Hong Kong); Michael John Gorman, founder, BIOTOPIA Museum (Munich); Suzanne Lee, chief creative officer, Modern Meadow (New York); Ravi Naidoo, founder, Interactive Africa (Cape Town); Simone Rothman, founder and CEO, FutureAir (New York); and Barbara Stauffer, chief of community programs, National Museum of Natural History (Washington, D.C.).

"Nature—Cooper Hewitt Design Triennial" is made possible by support from The Ainslie Foundation. Funding is also provided by Amita and Purnendu Chatterjee, the August Heckscher Exhibition Fund, the Esme Usdan Exhibition Endowment Fund, the Creative Industries Fund NL, and the New York State Council on the Arts with the support of Governor Andrew M. Cuomo and the New York State Legislature.

ABOUT COOPER HEWITT, SMITHSONIAN DESIGN MUSEUM

Cooper Hewitt is America's design museum. Inclusive, innovative and experimental, the museum's dynamic exhibitions, education programs, master's program, publications and online resources inspire, educate and empower people through design. An integral part of the Smithsonian Institution—the world's largest museum and research complex—Cooper Hewitt is located on New York City's Museum Mile in the historic, landmark Carnegie Mansion. Steward of one of the world's most diverse and comprehensive design collections—over 210,000 objects that range from an ancient Egyptian faience cup dating to about 1100 BCE to contemporary 3D-printed objects and digital code—Cooper Hewitt welcomes everyone to discover the importance of design and its power to change the world. Cooper Hewitt knits digital

into experiences to enhance ideas, extend reach beyond museum walls, and enable greater access, personalization, experimentation and connection.

Cooper Hewitt is located at 2 East 91st Street at Fifth Avenue in New York City. Hours are Sunday through Friday, 10 a.m. to 6 p.m., and Saturday, 10 a.m. to 9 p.m. The Arthur Ross Terrace and Garden, accessible without an admissions ticket, opens at 8 a.m., Monday through Friday. The Tarallucci e Vino café is open Monday through Friday, 8 a.m. to 5 p.m., Saturday, 10 a.m. to 7 p.m., and Sunday, 10 a.m. to 6 p.m. The museum is closed on Thanksgiving Day and Christmas Day. Public transit routes include the Lexington Avenue 4, 5 and 6 subways (86th or 96th Street stations), the Second Avenue Q subway (96th Street station), and the Fifth and Madison Avenue buses. Adult admission, $16 in advance via tickets.cooperhewitt.org, $18 at door; seniors, $10 in advance via tickets.cooperhewitt.org, $12 at door; students, $7 in advance via tickets.cooperhewitt.org, $9 at door; visitors with disabilities, $10. Cooper Hewitt members and children younger than age 18 are admitted free. Pay What You Wish every Saturday, 6 to 9 p.m. The museum is fully accessible.

For further information, call (212) 849-8400, visit Cooper Hewitt's website at www.cooperhewitt.org and follow the museum on www.twitter.com/cooperhewitt, www.facebook.com/cooperhewitt and www.instagram.com/cooperhewitt.

ABOUT CUBE DESIGN MUSEUM

Cube is Holland's first museum entirely dedicated to design. Cube displays meaningful design that has an impact on the world. A visit to Cube will provide an insight into the design process and it will inspire visitors to take an active part in thinking about shaping the world. Cube does not only stage exhibitions of trend-setting international and European design, it also functions as a multidisciplinary laboratory where visitors can join students and designers working on innovative product design. For further information, visit Cube's website at www.cubedesignmuseum.nl/en.

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SI-13-2019

FACT SHEET

PROJECTS FEATURED IN "NATURE—COOPER HEWITT DESIGN TRIENNIAL" CO-ORGANIZED WITH CUBE DESIGN MUSEUM

UNDERSTAND

- Kim Albrecht and Barabási Lab, Northeastern University (Germany and United States) | **VISUALIZING THE COSMIC WEB, 2016**
- Stella Mutegi and Kabage Karanja, Cave (Kenya) | **ANTHROPOCENE MUSEUM, 2017–19**
- Antón García-Abril and Débora Mesa, Ensamble Studio (Spain and United States) | **PETRIFIED RIVER, 2019**
- Tracy Fullerton, Game Innovation Lab, University of Southern California (United States) | **WALDEN, A GAME, 2017**
- Aliki van der Kruijs (The Netherlands) | **MADE BY RAIN, 2012–ONGOING**
- Giorgia Lupi, Accurat and Kaki King (Italy and United States) | **BRUISES: THE DATA WE DON'T SEE, 2018**
- Katharina Mischer and Thomas Traxler, Mischer'Traxler Studio (Austria) | **CURIOSITY CLOUD, 2015–19**
- Eric Rodenbeck, Stamen Design for Banfield Laboratory, University of California, Berkeley (United States) | **METAGENOMIC DATA VISUALIZATION, 2016**
- Thomas Thwaites (United Kingdom) | **GOATMAN, 2014–16**
- Charles Reilly, Wyss Institute for Biologically Inspired Engineering, Harvard University (United States) | **CHOREOGRAPHY OF LIFE, 2019**
- James C. Weaver, Wyss Institute for Biologically Inspired Engineering, Harvard University (United States) | **ELECTRON MICROGRAPHS, 2019**

SIMULATE

- Bastian Schafer, Airbus, David Benjamin, The Living, Autodesk and AP Works (The Netherlands, United States, and Germany) | **BIONIC PARTITION, 2016–ONGOING**
- Adam E. Jakus and Ramille Shah, Dimension Inx LLC and Adam Jakus Technology as Art (United States) | **3D-PAINTED HYPERELASTIC BONE, 2015–ONGOING**
- Festo AG & Co. KG (Germany) **| BIONICANT, 2018**
- Christina Agapakis, Alexandra Daisy Ginsberg, Sissel Tolaas (United States, United Kingdom, and Norway) with support from IFF Inc. and Ginko Bioworks, Inc. **| RESURRECTING THE SUBLIME, 2018–19**
- Alexandra Kehayoglou (Argentina) | **SANTA CRUZ RIVER, 2017**
- Mathieu Lehanneur (France) | **CIRCULAR LOW TABLE XXL, OCEAN MEMORIES, 2017**
- Jifei Ou and Hiroshi Ishii, Tangible Media Group, MIT Media Lab, Massachusetts Institute of Technology (United States) | **CILLLIA, 2017–19**
- Michelin (France) | **VISIONARY CONCEPT TIRE, 2016–19**
- Modern Meadow (United States) | **ZOA BIOFABRICATED WALL PANELS, 2019**

- Gabriel Asfour, Angela Donhauser, and Adi Gil, threeASFOUR and Travis Fitch (United States) | **OSCILLATION DRESS, QUANTUM VIBRATION COLLECTION, 2017 and VORONOI DRESS, BIOMIMICRY COLLECTION, 2016**
- David Mooney, Ben Freedman, and Jianyu Li, Mooney Lab for Cell and Tissue Engineering, John A. Paulson School of Engineering and Applied Sciences and Wyss Institute for Biologically Inspired Engineering, Harvard University (United States) | **SEA SLUG BANDAGES, 2017–ONGOING**

SALVAGE

- Adidas and Parley for the Oceans (Germany and United States) | **ULTRABOOST SHOE, 2016–ONGOING**
- Studio Klarenbeek & Dros with Atelier Luma (The Netherlands and France) | **ALGAE LAB, 2018**
- Nadine Sterk and Lonny van Ryswyck, Atelier NL (The Netherlands) | **A WORLD OF SAND, 2010–ONGOING**
- Anirudh Sharma, Graviky Labs (India) | **AIR-INK, 2013–ONGOING**
- Shahar Livne (The Netherlands) | **METAMORPHISM, 2017–ONGOING**
- Julia Lohmann, Violaine Buet, and Jon Lister (Finland, France, and New Zealand) | **DEPARTMENT OF SEAWEED: LIVING ARCHIVE, 2018–ONGOING**
- Kirstie Van Noort (The Netherlands) | **LATITUDE FOR UNIQUENESS SERIES, 2014–ONGOING**
- Nienke Hoogvliet, Studio Nienke Hoogvliet (The Netherlands) | **SEA ME, 2017–ONGOING**

FACILITATE

- Ginger Krieg Dosier, bioMASON (United States) | **BIOCEMENT BRICKS, 2017–ONGOING**
- Amy Congdon (United States) | **TISSUE ENGINEERED TEXTILES, 2015–ONGOING**
- Natsai Audrey Chieza, Faber Futures (United Kingdom) | **PROJECT COELICOLOR: TERROIR 001 and ASSEMBLAGE 002, 2019**
- Alex Goad, Reef Design Lab (Australia) | **ECO-ENGINEERED HEXAGONAL SEAWALL TILES, 2017–ONGOING**
- Open Agriculture Initiative (OpenAg), MIT Media Lab, Massachusetts Institute of Technology (United States) | **PERSONAL FOOD COMPUTER, 2018–ONGOING**
- Erez Nevi Pana (Austria) | **BLEACHED (II), 2018**
- Arturo Vittori, Architecture and Vision and Warka Water Inc. (Italy and United States) | **WARKA WATER TOWER, 2013–ONGOING**
- Xu Tiantian, DnA_Design and Architecture (China) | **BAMBOO THEATRE, 2015–ONGOING**

AUGMENT

- Sam Van Aken (United States) | **TREE OF 40 FRUIT, 2008–ONGOING**
- AnotherFarm (Japan) | **FANTASMA, 2015–19**

- Guillermo Parada, Tamara Pérez, Sebastián Rozas and Victor Imperiale, gt2P (great things to People) (Chile) | **REMOLTEN N°1: REVOLUTION SERIES, 2017 and WALL-MOUNTED LIGHTS FROM THE SERIES LESS CPP N°2: WALL MURAL 15C, 2018**
- Josiah Zayner, The Open Dictionary Institute (The ODIN) (United States) | **DIY BACTERIAL GENE ENGINEERING CRISPR KIT, 2015–ONGOING**
- Neri Oxman and The Mediated Matter Group, MIT Media Lab, Massachusetts Institute of Technology (United States) | **AGUAHOJA, 2017–19**
- Living Materials Silklab, Tufts University Biomedical Engineering (United States) | **CATALOGUE OF 10 SILK-PROTEIN DERIVED DEVICES AT THE INTERFACE BETWEEN TECHNOLOGY AND LIFE SCIENCES, 2019**
- Oron Catts and Ionat Zurr, The Tissue Culture and Art Project (Australia) | **BIOMESS, 2019**
- Chuck Hoberman, Richard Novak, Elizabeth Calamari, Sauveur Jeanty, and Donald Ingber, Wyss Institute for Biologically Inspired Engineering, Harvard University (United States) | **ORIGAMI MEMBRANE FOR 3D ORGAN ENGINEERING, 2018–ONGOING**

REMEDIATE

- Jae Rhim Lee, Coeio (United States) | **INFINITY BURIAL SUIT, 2008–ONGOING**
- Ulrika K. Stigsdotter, University of Copenhagen (Denmark) | **NACADIA THERAPY FOREST GARDEN, 2011–ONGOING**
- Harvard Biodesign Lab (United States) | **SOFT ROBOTIC GRIP GLOVE, 2015–ONGOING**
- Nienke Hoogvliet, Studio Nienke Hoogvliet (The Netherlands) | **MOURN, 2017–ONGOING**
- Fernando Laposse (Mexico and United Kingdom) | **TOTOMOXLE, 2017–ONGOING**
- Sheng-Hung Lee (Taiwan) | **TETRAPOT 2.0 – THE EVOLUTION OF GREENER SEA DEFENSE, 2015–18**
- Max Liboiron, CLEAR (Civic Laboratory for Environmental Action Research) (Canada) | **BABYLEGS, 2017–19**
- Charlotte McCurdy (United States) | **AFTER ANCIENT SUNLIGHT, 2018**
- Mitchell Joachim and Vivian Kuan, Terreform ONE (United States) | **MONARCH SANCTUARY, 2018–ONGOING**

NURTURE

- Marcos Cruz, Richard Beckett and Javier Ruiz (United Kingdom) | **BIORECEPTIVE CONCRETE PANELS, LONDON, UK, 2017–19**
- Teresa van Dongen (The Netherlands) | **ELECTRIC LIFE, 2018**
- Alexandra Daisy Ginsberg (United Kingdom) | **THE SUBSTITUTE, 2019**
- Jorge Gamboa (Mexico) | **PLASTICEBERG, 2017**
- MASS Design Group (United States) | **RWANDA INSTITUTE FOR CONSERVATION AGRICULTURE, 2018–ONGOING**

- Michael Strano, MIT Chemical Engineering and Sheila Kennedy, MIT Architecture, Massachusetts Institute of Technology and KVA Studio (United States) | **NANOBIONIC PLANT PROJECT: AMBIENT ILLUMINATION, 2016–ONGOING**
- Hiroshi Sambuichi (Japan) | **THE WATER AT CISTERNERNE OF FREDERIKSBERG, 2017**
- VTN (Vo Trong Nghia) Architects (Vietnam) | **FPT UNIVERSITY HO CHI MINH CITY, 2016–ONGOING**

* LOCATIONS IN PARENTHESES INDICATE WHERE DESIGNER/FIRM IS ACTIVE