



IN CONSIDERATION OF NEIGHBORS

JOYCE HWANG, FAIA NOMA NCARB

ANTS OF THE PRAIRIE

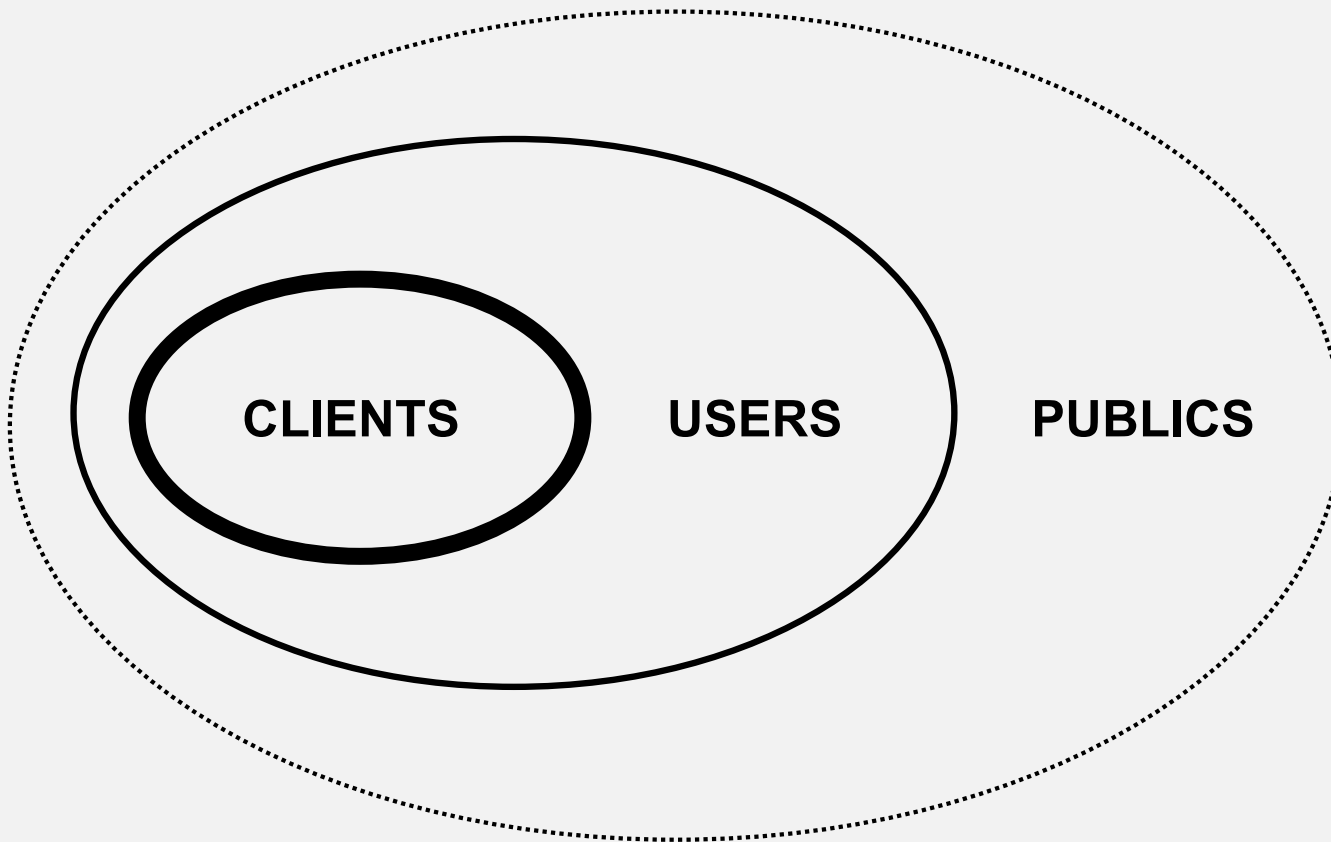
UB SCHOOL OF ARCHITECTURE AND PLANNING

BADGERING ARCHITECTURE SYMPOSIUM

MAY 2024



To Middle Species, With Love, for Exhibit Columbus



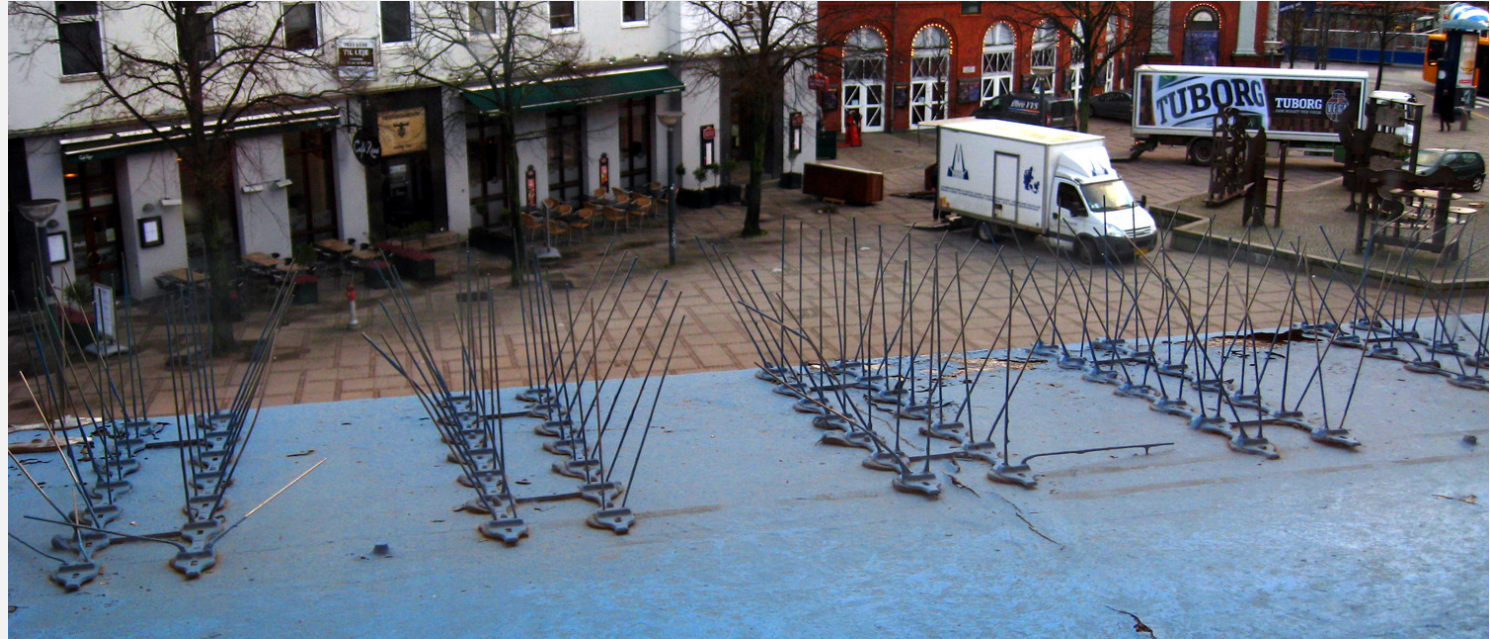
CLIENTS

USERS

PUBLICS

COLLECTIVE



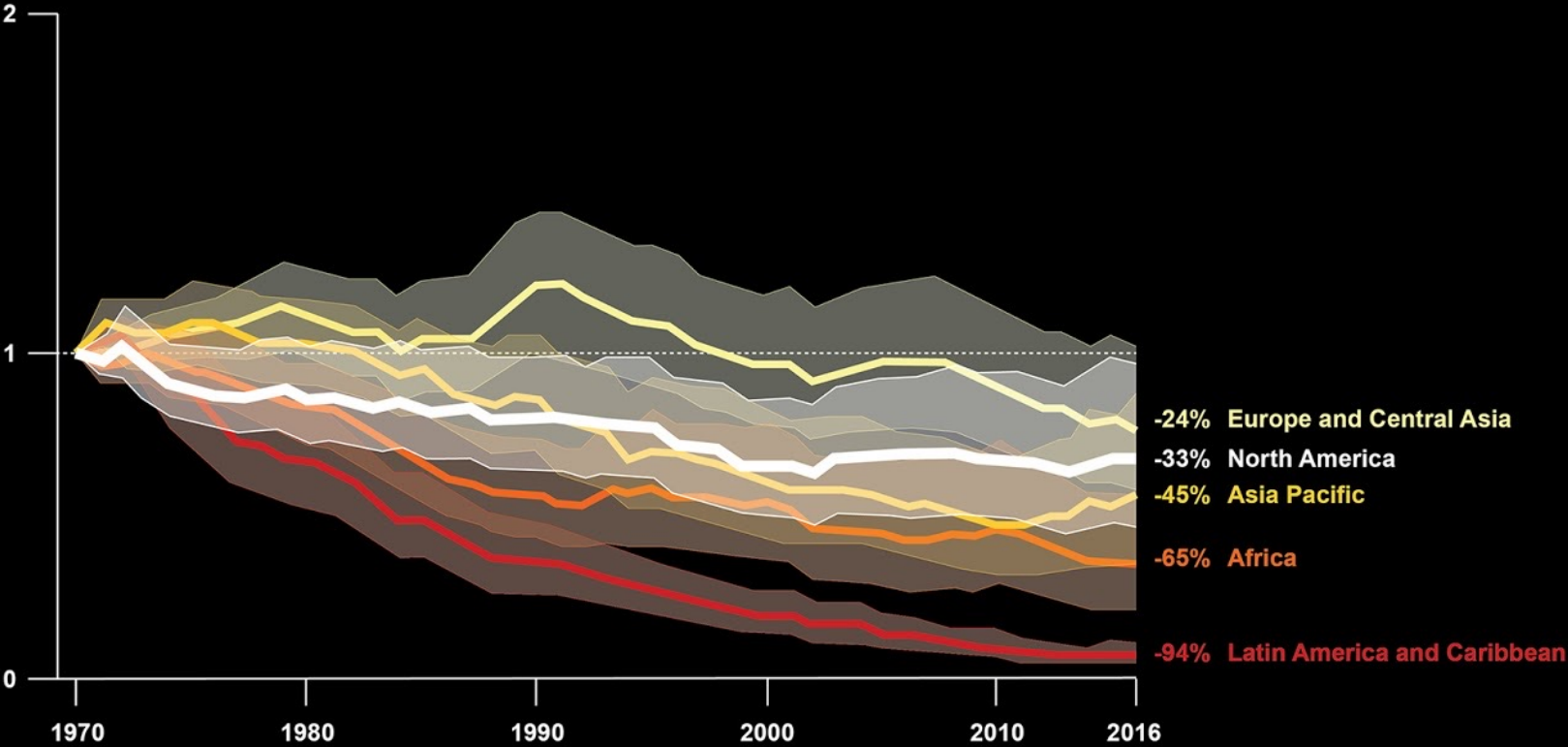


Left: Bird House, Yard Envy Fine Patio and Garden Decor: http://www.yardenvy.com/p/Loretta_Bird_House_Contemporary_Birdhouses--16733--266.htm

Right: Bird-prevention spikes, Photograph by Tomasz Sienicki



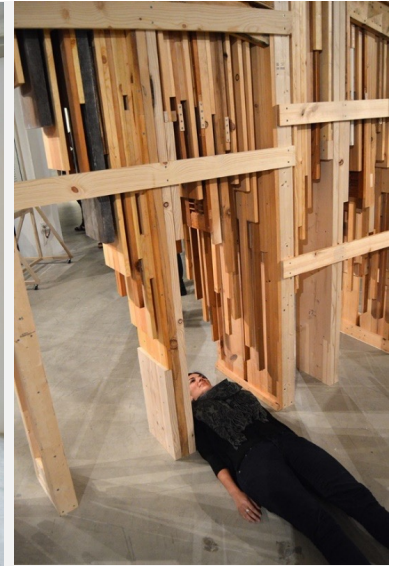
LIVING PLANET INDEX – global decline by 68% from 1970 to 2016



WWF (2020) Living Planet Report 2020 - Bending the curve of biodiversity loss. Adapted from Williams, B et al. (2020). Change in terrestrial human footprint drives continued loss of intact ecosystems. OneEarth



Pest Wall



Ants of the Prairie:
Pest Wall, 2009 (upper left)
Habitat Wall, 2015 (upper mid to right)
Bat Cloud, 2012 (lower left)
Bat Tower, 2010 (lower right)



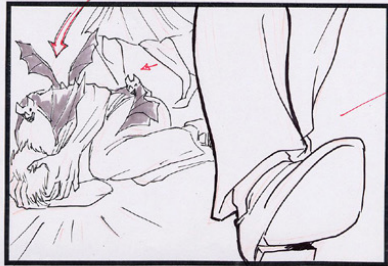
Bat Cloud (Photo by Sharon Li-Bain)

60-4a



Chaos

60-4b



Mar. Balls

Chaos

Sc 60-5a



Dr. K observes Bats

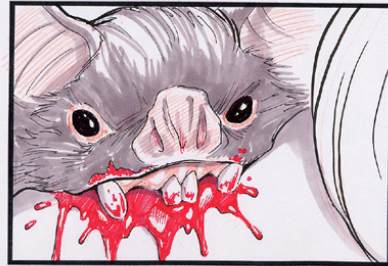
60-5b

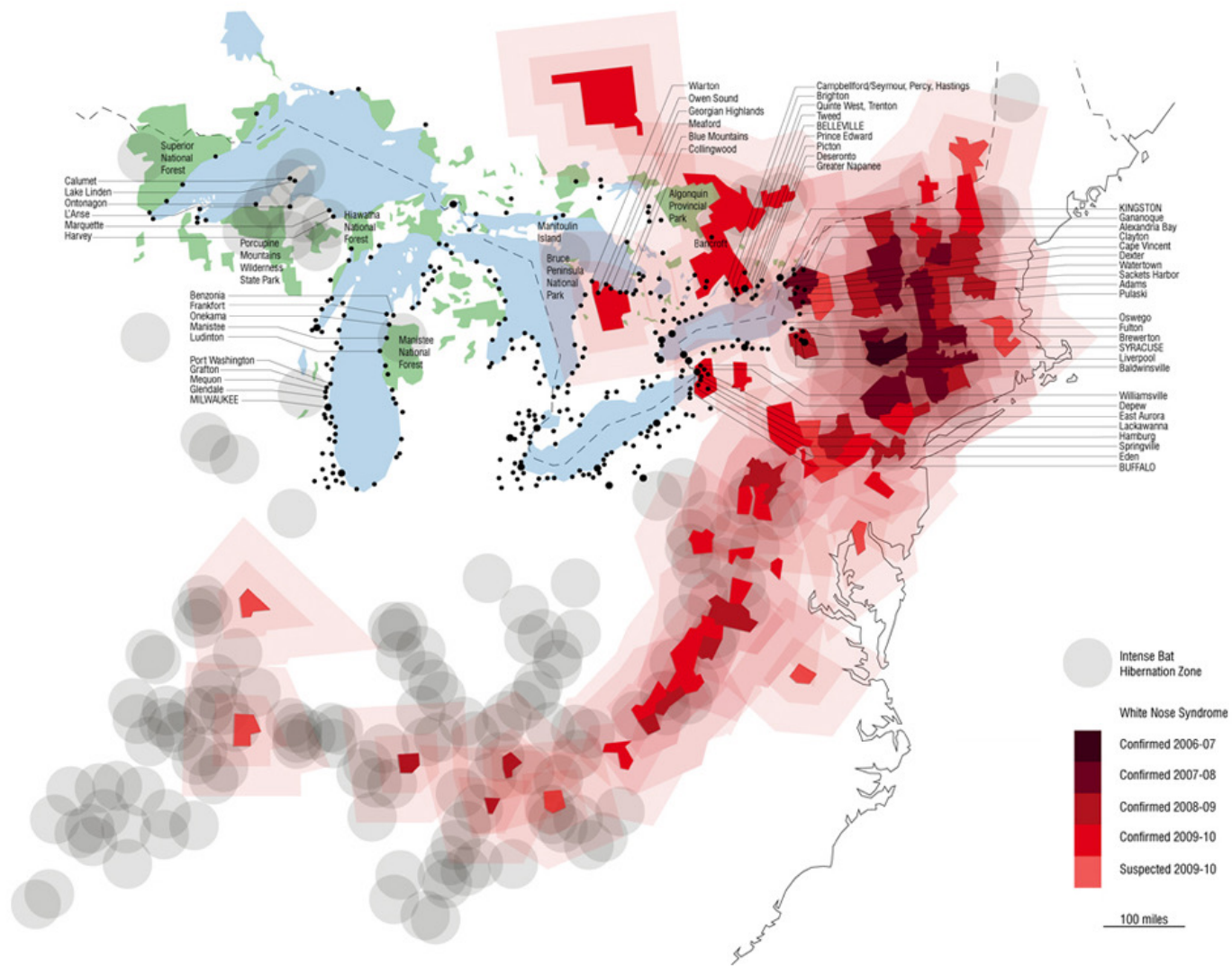


60-20a



60-20b





White Nose Syndrome + Bat Hibernation Zone Mapping, 2010: Joyce Hwang



- WHY BIRDS HIT GLASS
- BIRD-FRIENDLY DESIGN
- BIRD-FRIENDLY WINDOW SOLUTIONS
- ABC BIRDTAPE
- LEARN MORE

AN END TO BIRDS DYING AT WINDOWS

Up to a billion birds die in collisions with glass each year in the United States. Although most people have seen or heard a bird hit a window, they often believe it is an unusual event. Add up all those deaths and the number is staggering.



Steven Hager, Augustana College



Abi Reimold – Temple University News

BIRD-FRIENDLY BUILDING DESIGN

OUR WORK | CONSERVATION | PROJECT SAFE FLIGHT | BIRD-FRIENDLY BUILDING DESIGN

EXPLORE

- COLLISION MONITORING
- BIRD-FRIENDLY BUILDING DESIGN**
- ARTIFICIAL LIGHT
- TRIBUTE IN LIGHT MONITORING
- BIRD-FRIENDLY ACTORS
- ← BACK TO PROJECT SAFE FLIGHT

BIRD-FRIENDLY BUILDING DESIGN

Select Language

Powered by Google Translate

Because of research programs like our own Project Safe Flight, we now understand that up to one billion birds are killed in collisions with glass across the U.S. each year. As the conservation community has come to grasp the gravity of this threat to birds over recent decades, architects and design professionals have responded to the growing call for bird-friendly design.

Today there are solutions available that make glass visible to birds, options for bird-friendly construction

BIRD-FRIENDLY BUILDING DESIGN

AMERICAN BIRD CONSERVANCY

Audubon

Our Work - About Us - Explore Birds - Get Involved - Membership & Giving - Take Action - Donate

Reducing collisions with glass

BIRD-FRIENDLY COMMUNITIES

Creating Visual Cues

Vinyl dots arranged in dense patterns help deter bird collisions on these residential glass doors. Photo: Mike Fernandez/Audubon

WHAT BIRDS SEE

WHAT WE SEE

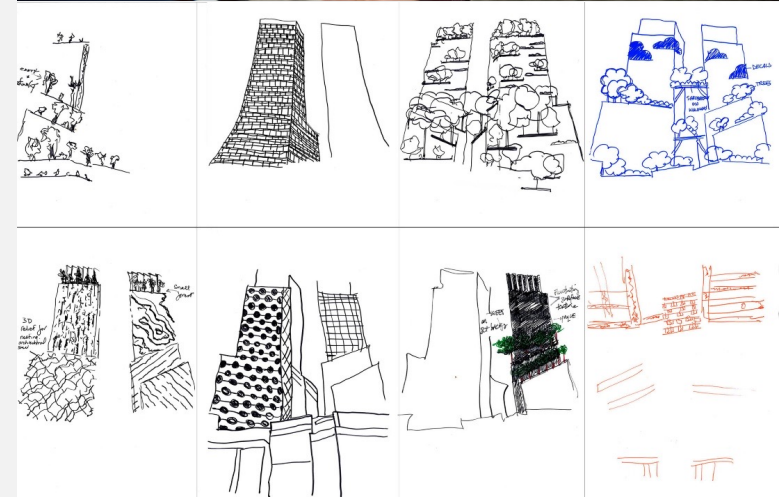
Upper left: NYC Audubon, Lower left: National Audubon, Upper right: American Bird Conservancy Bird-Friendly Building Design Guide; Lower right: Ornilux Bird Protection Glass by ArnoldGlas



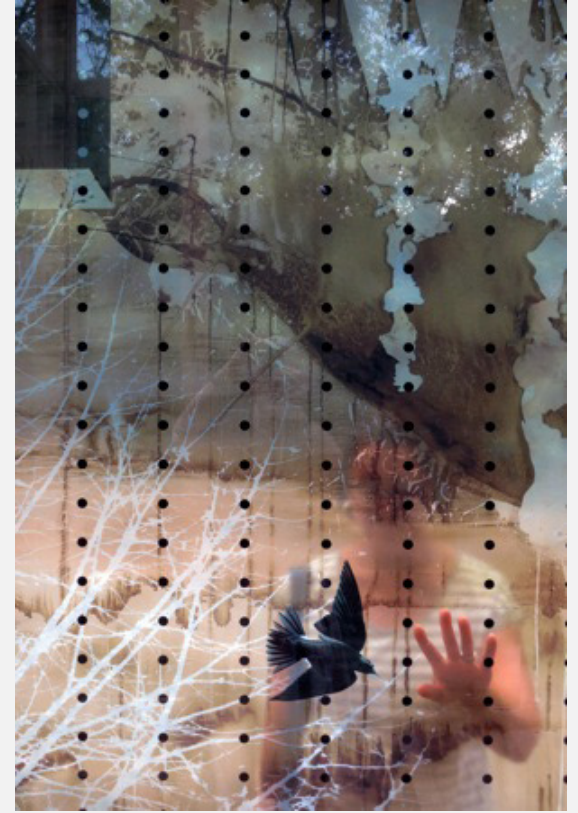
No Crash Zone: Outside Design Exhibition, SAIC



No Crash Zone: Outside Design Exhibition, SAIC



WALKS organized by Mary Miss/City as Living Lab — with Gabriel Willow (upper) and Prathap Ramamurthy (lower left). Photos credit: City as Living Laboratory



Bower, in partnership with Ellen Driscoll, in collaboration with Matt Hume, curated by Mary Miss/City as Living Lab, at Artpark
Right photo by Ellen Driscoll



Bower, in partnership with Ellen Driscoll, in collaboration with Matt Hume, curated by Mary Miss/City as Living Lab, at Artpark



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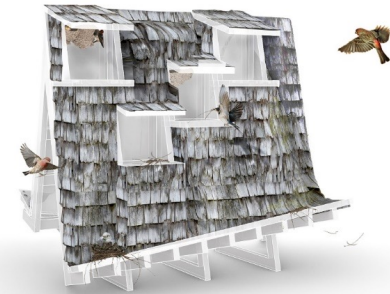


FOR THE BIRDS



Garden-wide Exhibition
June 11–October 23, 2022
bbg.org/forthebirds

BROOKLYN BOTANIC GARDEN



For Our Neighbors, in For the Birds exhibition at Brooklyn Botanic Garden (Brooklyn, NY, USA)

collaboration

JOYCE HWANG (UB) + DARREN LEROUX (ACT PARKS) + MITCHELL WHITELAW (ANU)

[interdisciplinary researchers + government agency + academic institutions>>> Buffalo, USA + Canberra, Australia]





Collaborators: Darren LeRoux (ACT Parks and Conservation), Mitchell Whitelaw (ANU School of Art and Design)





Canberra, Australia ACT, 2017



Barrer Hill, Molongolo Valley -- Canberra, Australia ACT, 2017

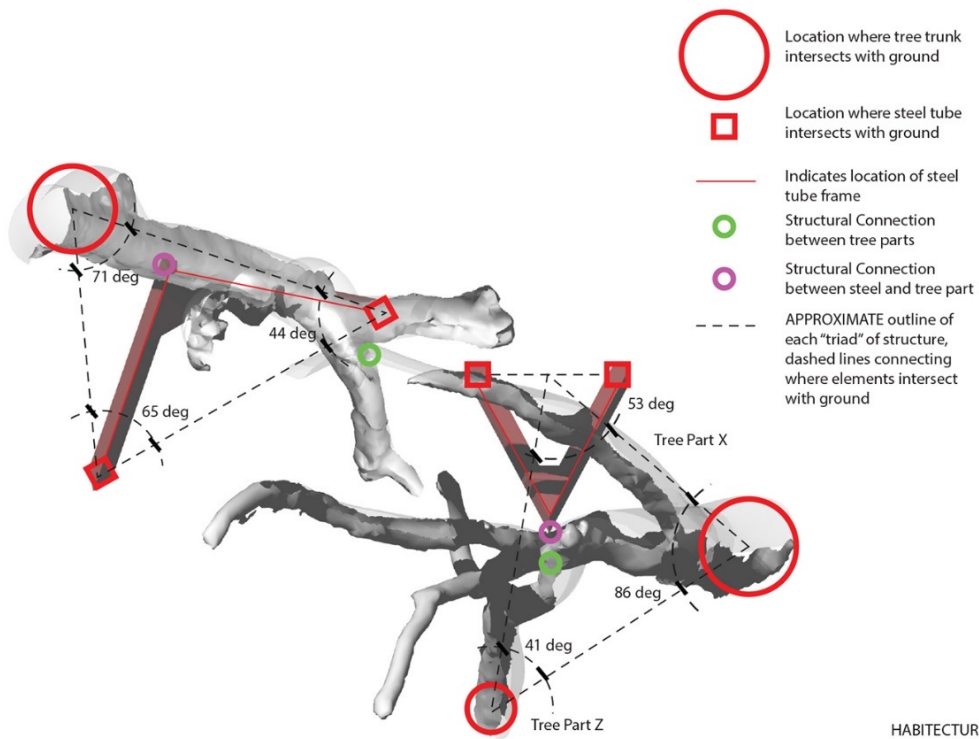


Life Support: Joyce Hwang in collaboration with Mitchell Whitelaw and Darren LeRoux

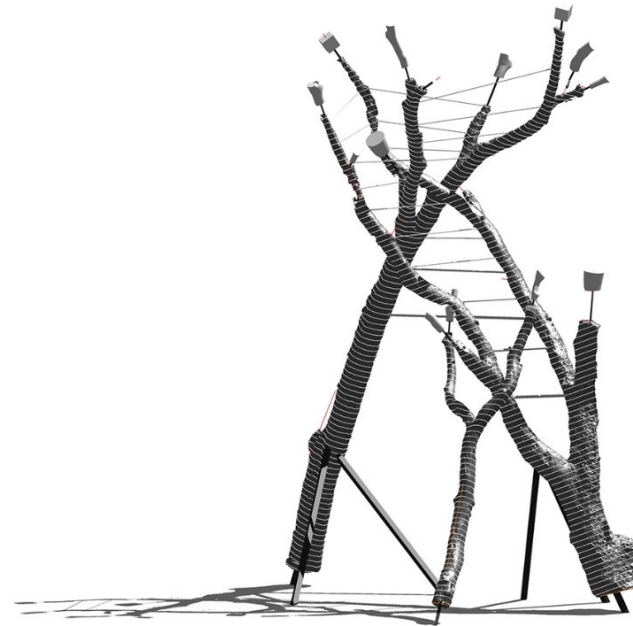


Life Support: Photogrammetry in progress





HABITECTURE
 Scheme A-Revision 1: Plan Diagram
 August 12, 2017
 Drawn by: Joyce Hwang

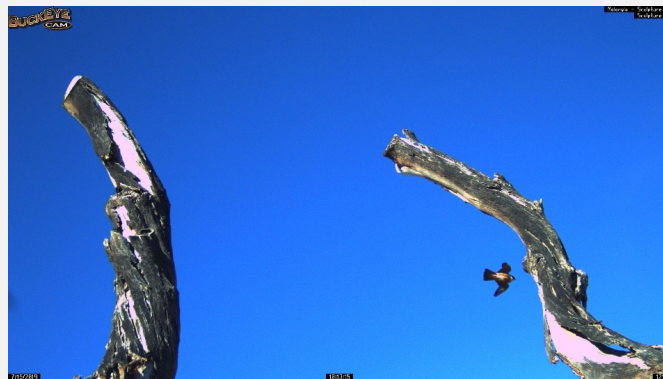
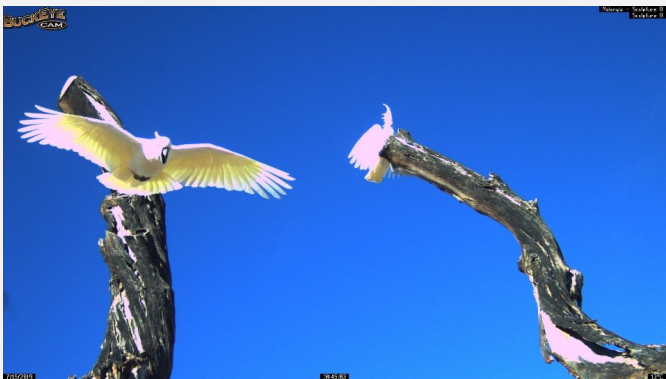


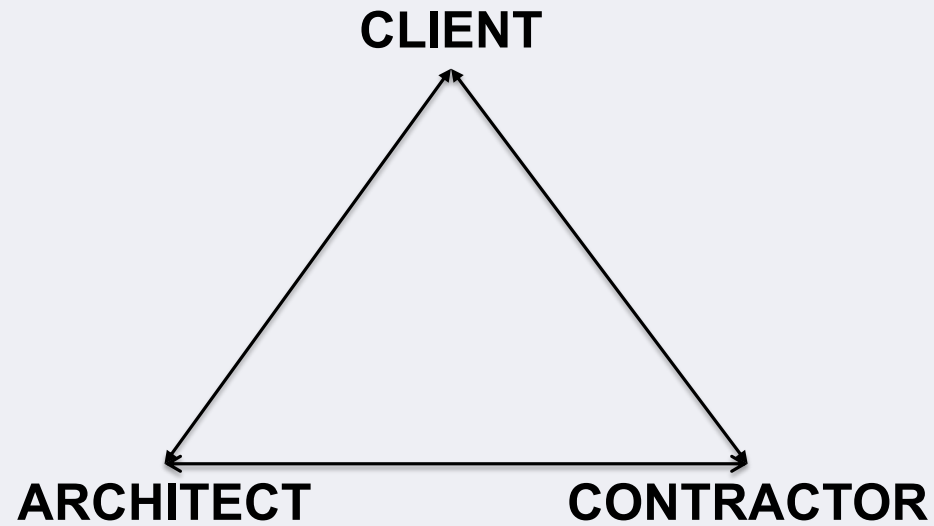


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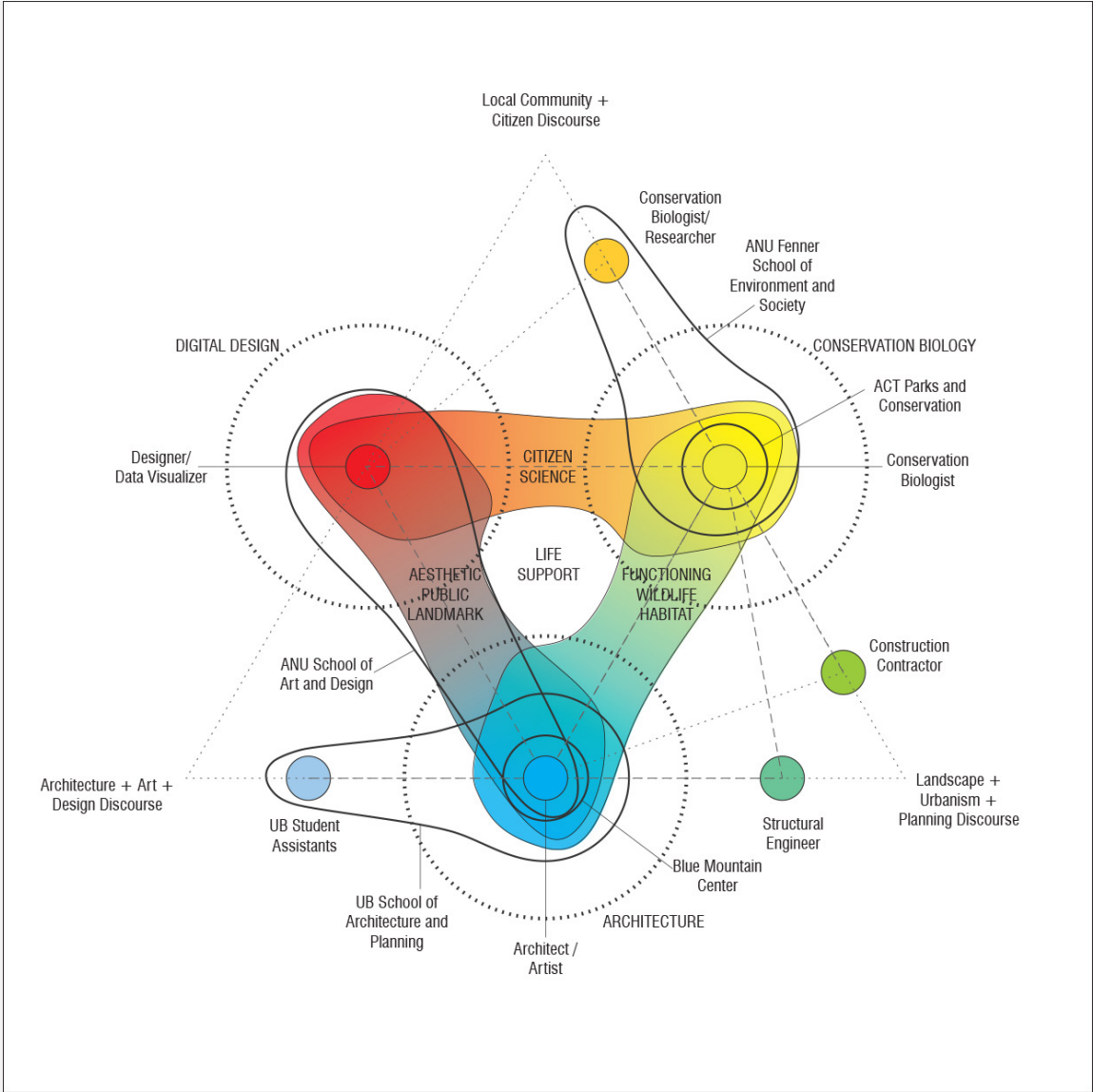


Life Support: Joyce Hwang in collaboration with Mitchell Whitelaw and Darren LeRoux





PROFESSIONAL PRACTICE TRIANGLE



Life Support Collaboration Diagram

collaboration

ANTS OF THE PRAIRIE + PRATT SCHOOL OF ARCHITECTURE, MLA PROGRAM + PIAULE CATSKILL

[architect/professor + academic/higher ed + private business >>> Buffalo/NYC/Catskill, USA]



Piaule Multispecies Habitats. Joyce Hwang in collaboration with Pratt.MLA (Photo by Enmi Yang)



Piaule Multispecies Habitats: Joyce Hwang in collaboration with Pratt MLA

PIAULE MULTISPECIES INSTALLATION

HABITAT TYPE S (small)



Use this 'building envelope' for:
-Nest box - Carolina Wren
-Solitary bee/insect box

HABITAT TYPE M (medium)



Use this 'building envelope' for:
-Nest box - various
-Nest shelf - various
-Solitary bee/insect box

HABITAT TYPE L (large)



Use this 'building envelope' for:
-Bat house

Notes:
The angled side is the 'back' and will be facing the 'roof' of the structure. Back side should be closed.
Each habitat box should leave enough space for at least 2 screws/bolts to attach from the back.



Piaule Multispecies Habitats: Joyce Hwang in collaboration with Pratt MLA (Right side photo by Enmi Yang)



Piaule Multispecies Habitats: Joyce Hwang in collaboration with Pratt MLA (Photos by Enmi Yang)



Piaule Multispecies Habitats: Joyce Hwang in collaboration with Pratt MLA

collaboration

ANTS OF THE PRAIRIE + UB ARCHITECTURE + EXHIBIT COLUMBUS/LANDMARK COLUMBUS +++

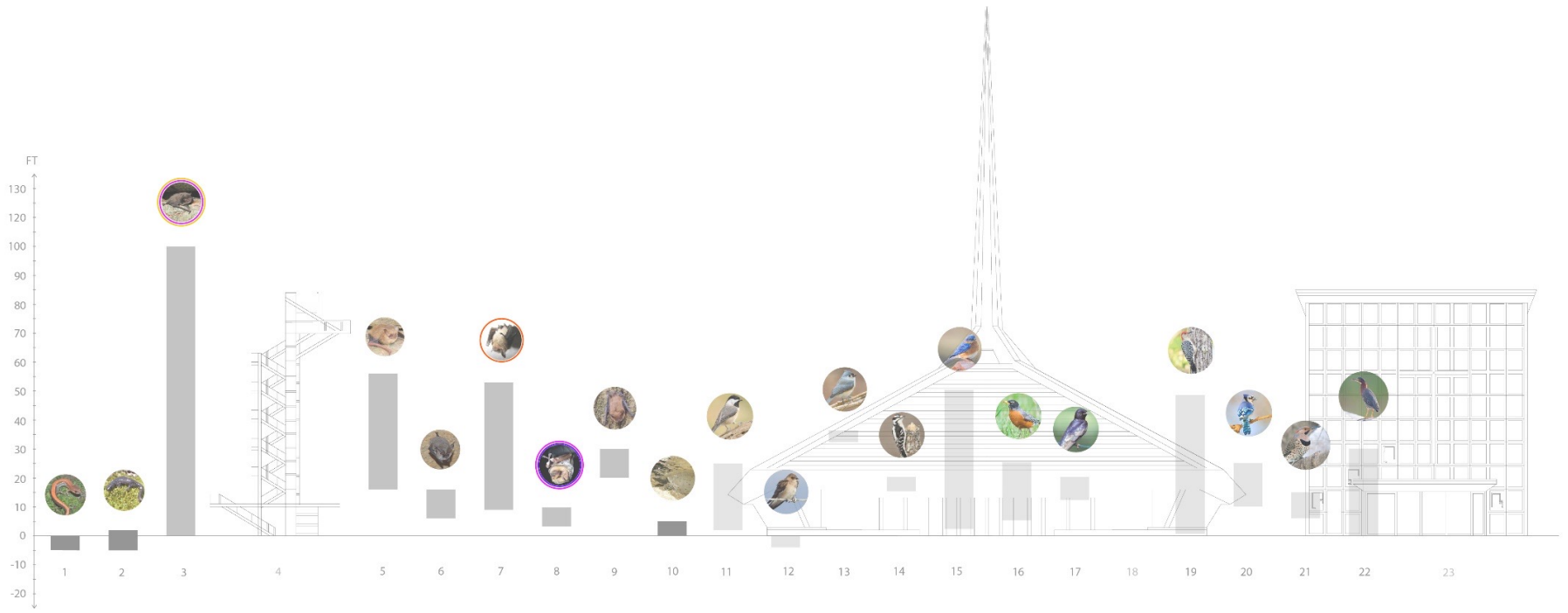
[architect/professor + academic/higher ed + arts organization]



Graphic by Jeremiah Chiu for Exhibit Columbus



To Middle Species, With Love: Exhibit Columbus 2021. Photo: Hadley Fruits



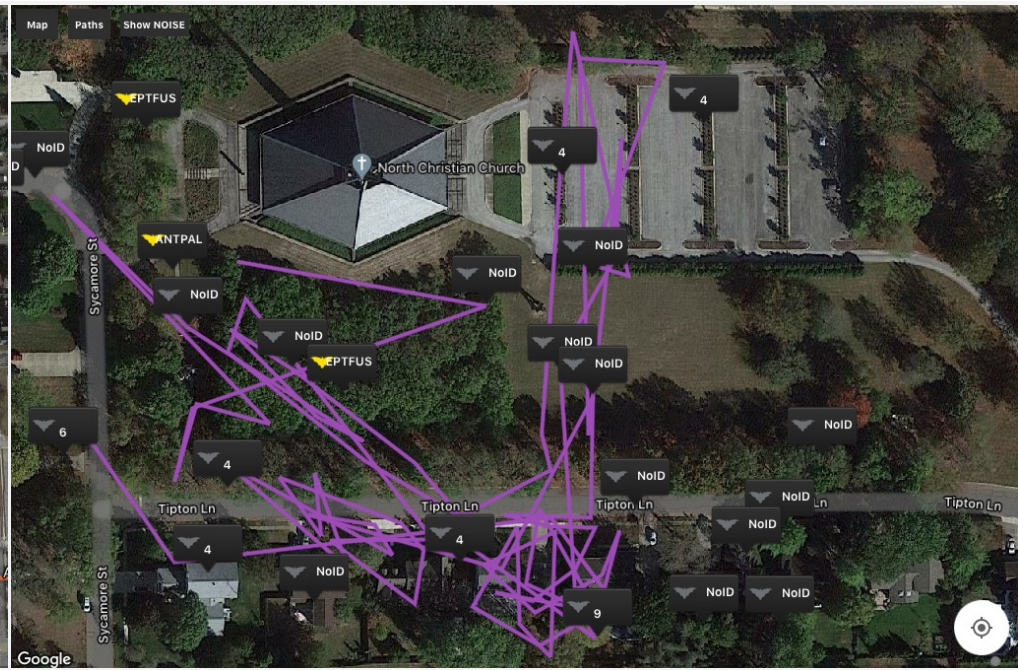
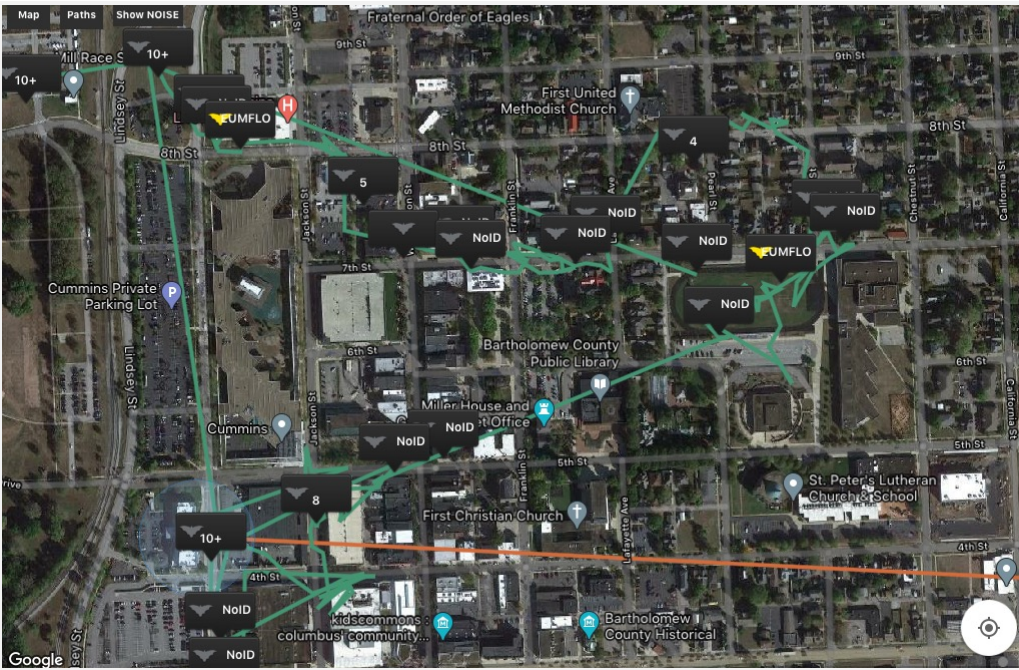
Name of Species & Architecture:
From Left to Right

- | | | |
|---------------------------------|----------------------------------|---------------------------|
| 1 Eastern Red-backed Salamander | 9 Big Brown Bat | 17 Purple Martin |
| 2 Jefferson Salamander | 10 Softshell Turtles of Indiana | 18 North Christian Church |
| 3 Indiana Bat | 11 Caroline Chickadee | 19 Red-bellied Woodpecker |
| 4 Mill Race Park Tower | 12 Northern Rough-winged Swallow | 20 Blue Jay |
| 5 Tri-colored Bat | 13 Tufted Titmouse | 21 Northern Flicker |
| 6 Grey Bat | 14 Downy Woodpecker | 22 Green Heron |
| 7 Hoary Bat | 15 Eastern Bluebird | 23 First Christian Church |
| 8 Northern Long Eared Bat | 16 American Robin | |

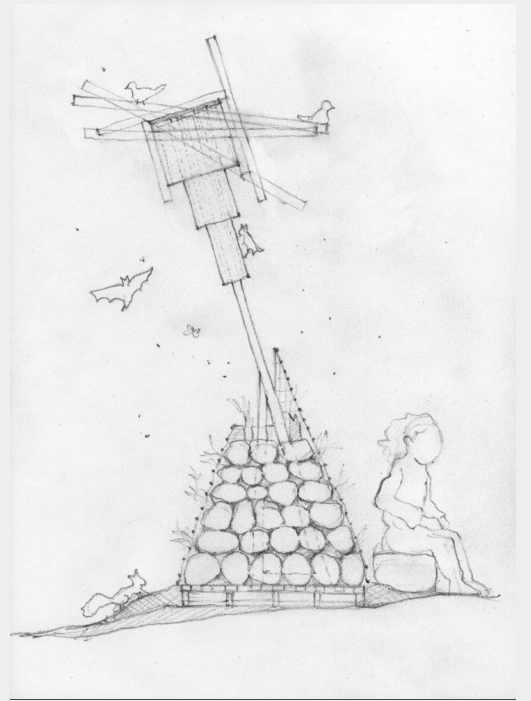
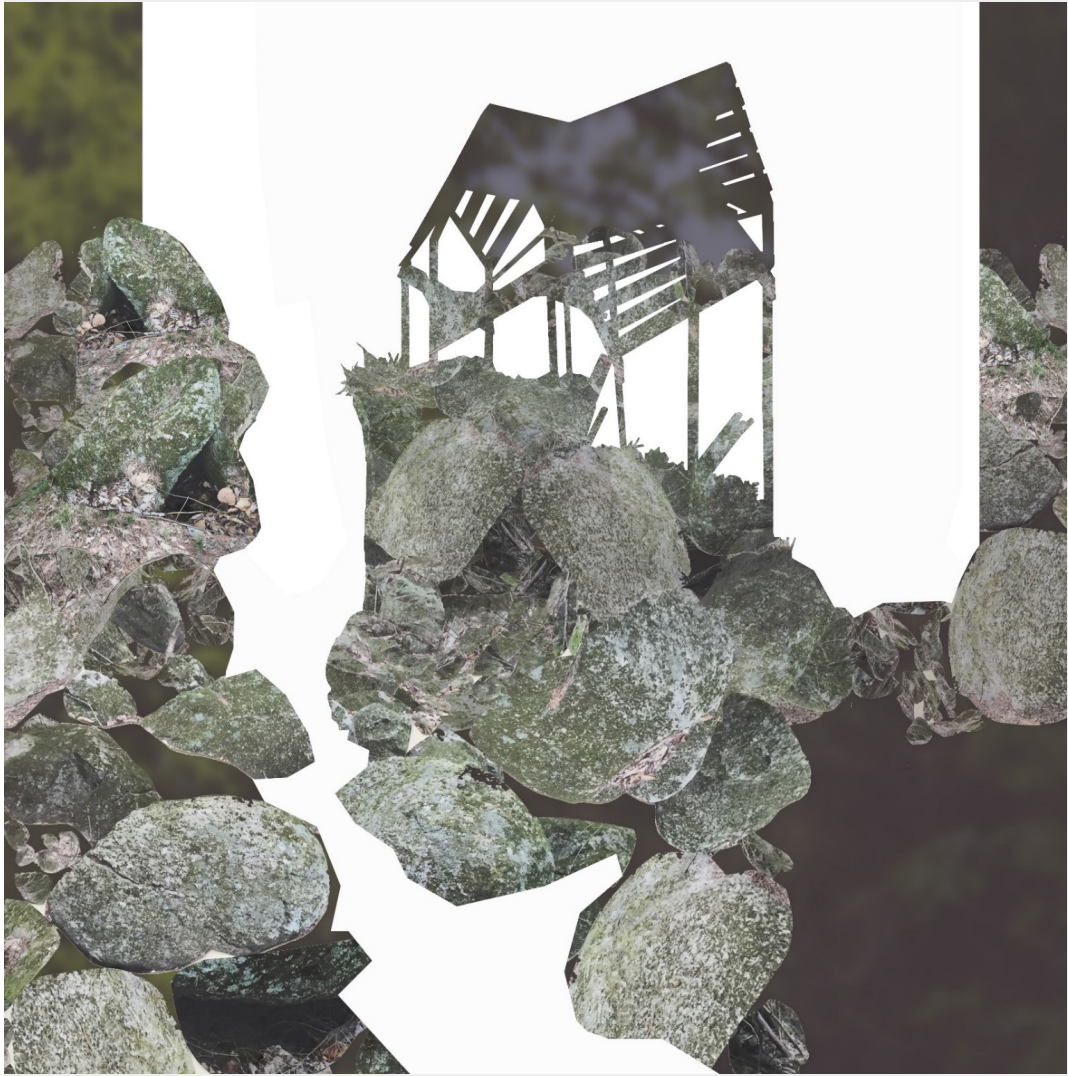
The graph portrays the variety of roosting height of bats and nesting and foraging range of salamanders, birds, and turtles. Iconic structures and architectures of Columbus, Indiana are also illustrated to understand the scale of activity undertaken in the world of nature.

- Amphibians & Reptiles
- Mammals - Bats
- Birds
- State Species of Special Concern
- Endangered Species
- State Endangered
- Threaten

Sources:
 Moore. (2016). Biology, Arkansas State University
 Schaefer. (2017). Murray State University, Digitalcommons.murraystate.edu
 TheCornellLab. All About Birds, allaboutbirds.org
 US Fish and Wildlife Service. (2014). fws.gov



North Christian Church, Columbus Indiana – with bat detecting mapping overlay







To Middle Species, With Love, for Exhibit Columbus



To Middle Species, With Love, for Exhibit Columbus



To Middle Species, With Love, for Exhibit Columbus



To Middle Species, With Love, for Exhibit Columbus





To Middle Species With Love, for Exhibit Columbus



To Middle Species, With Love, for Exhibit Columbus



To Middle Species, With Love, for Exhibit Columbus



Photo: Hadley Fruits



Photo: Hadley Fruits



Photo: David Schalliol

7:09



Back

SPECTROGRAM



LASBOR 20210807_064341



120 -

100 -

80 -

60 -

40 -

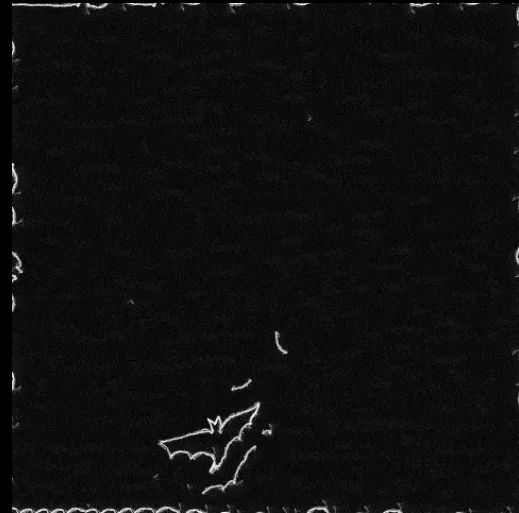
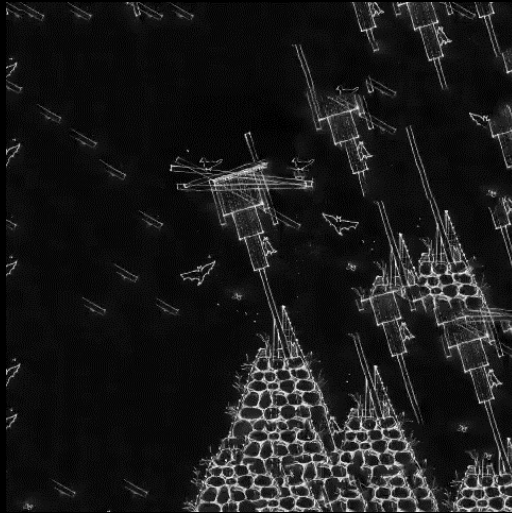
20 -

36.6K (A)



20 40 60 80 100 120 140





community members



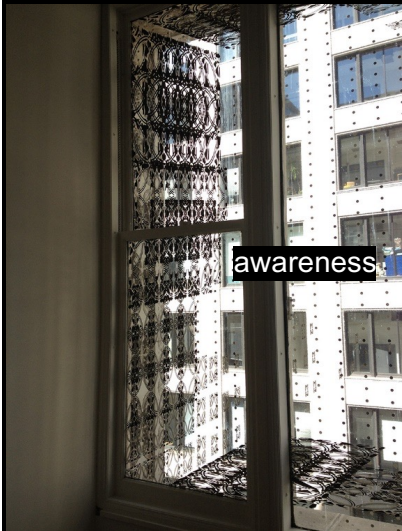
ecosystem services



awareness



awareness



ecosystem services



neighbors



advocacy



collaboration

JOYCE HWANG + NEREA FELIZ = DOUBLE HAPPINESS, + ELII + MATADERO

[architects + architects as curators + arts institution >>> Buffalo, USA + Austin, TX + Madrid, Spain]







E Y M A M J J A S O N D



Salix Bushhorn, Alder Bushhorn

Natties
Birn Tee
Common Hazel (haselnuß)

Natties

Flies (used for feeding bear)
Natties
Birn Tee

Flies (used for feeding bear)
Natties
Birn Tee

Flies (used for feeding bear)
Natties
Birn Tee

Animals: Flower Apatin plants (such as celer, carrot, parsley, many herbs, coriander, cumin, etc., fen, etc.)
Ruler: strongly scented evergreen shrubs

Shrubs and trees of stone fruit (Pum, Cherry, Peach, Nectarine, Apricot, Almond, etc.)
Common Hawthorn
Rose Family Flowering Plants

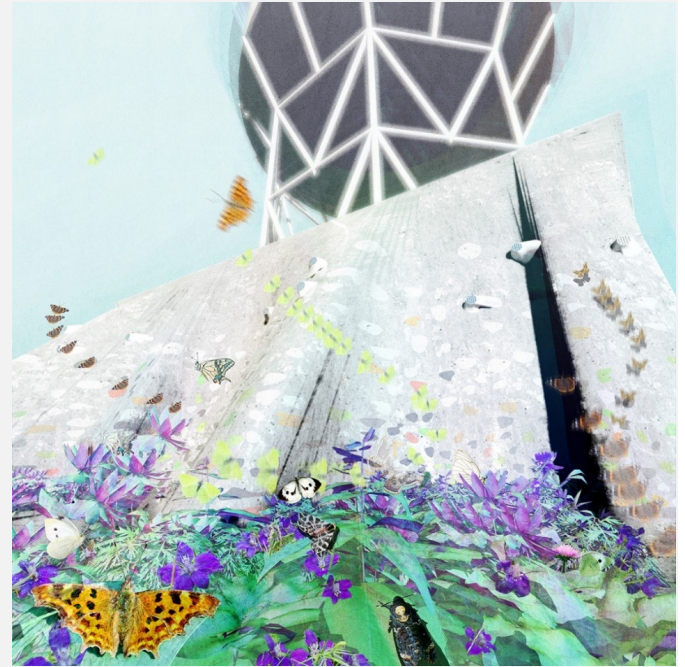
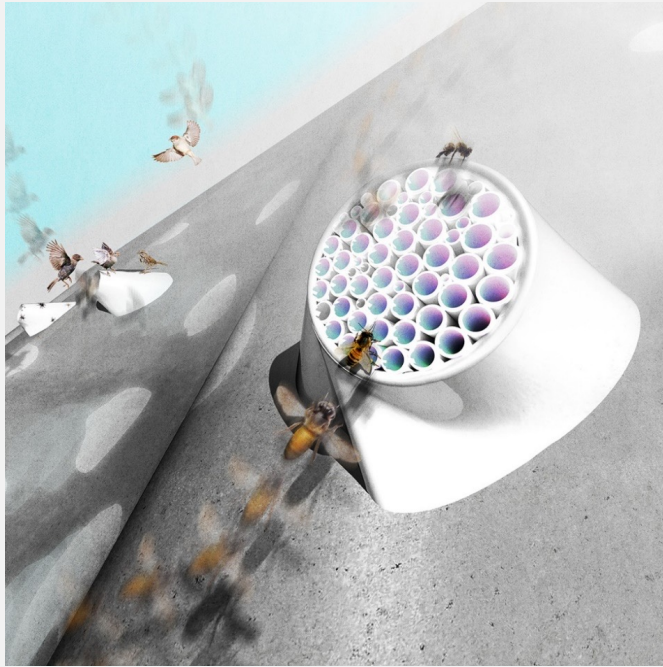
Shrubs and trees of stone fruit (Pum, Cherry, Peach, Nectarine, Apricot, Almond, etc.)
Common Hawthorn

Crosses (cabbage, brassica sprouts, broccoli, mustard, arugula, etc.)

Fruit trees (Pineapple)
Forest trees (Poplar, Ash, Oak)

A wide variety of herbaceous plants, including Common Nettle, Broad-leaved Dock, Silver Dock, Brunella, Horehound, and many garden plants. One 100% host plant, can even feed on random feeding from material, such as debris in gutter.

Plants (primary host plant for caterpillar)
Deadly Nightshade
Flowering plants: will receive no guests. (Adults can still be seen for honey)



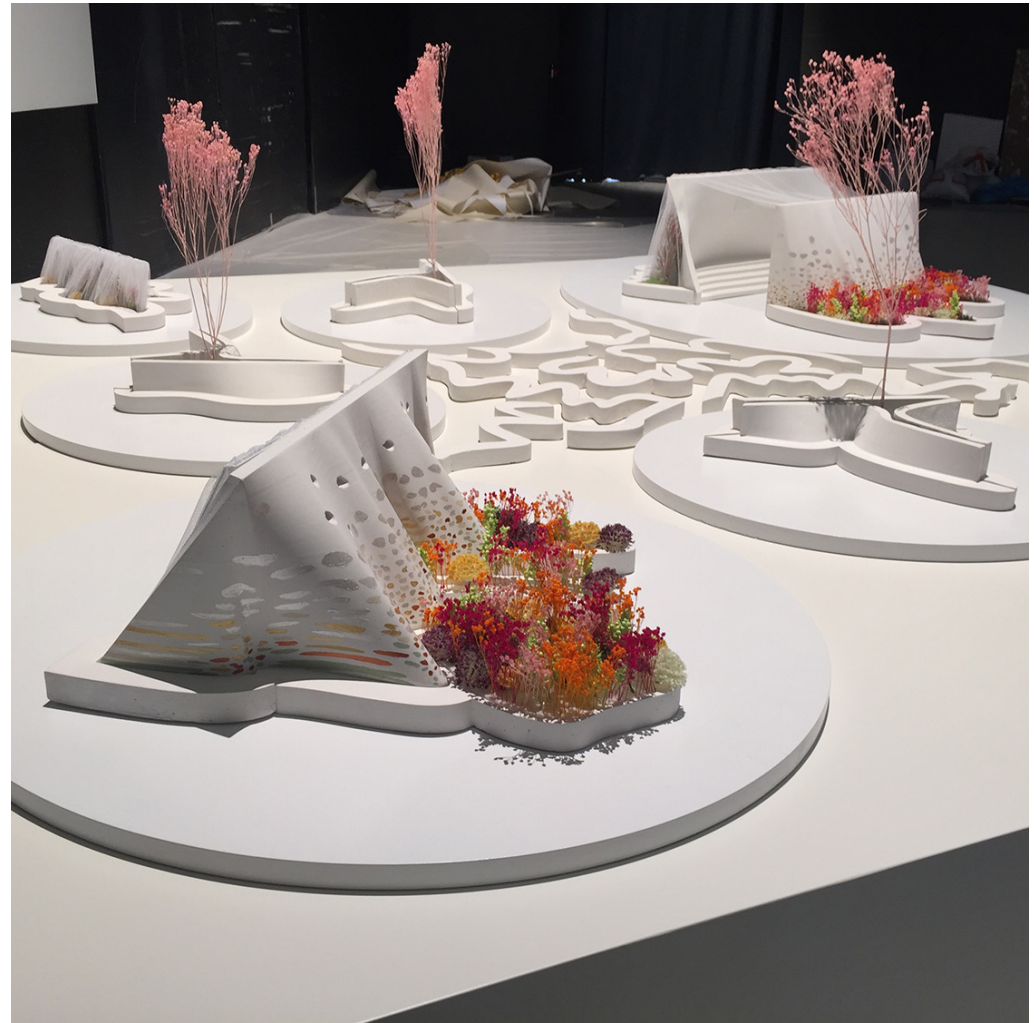
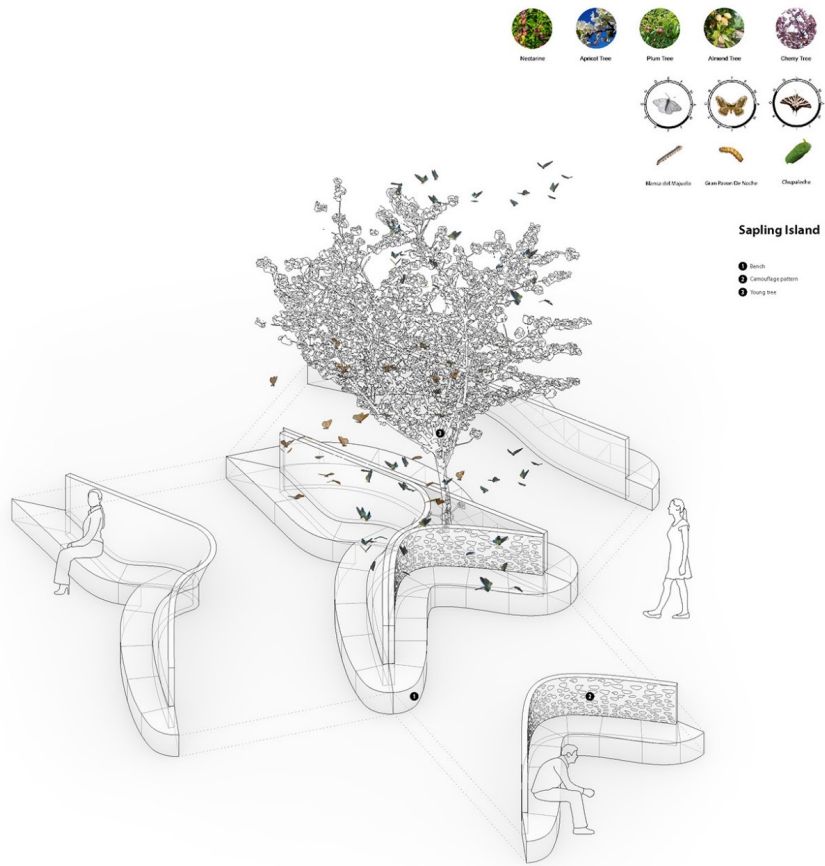
Hidden in Plain Sight, Cyborg Garden Exhibition, Matadero Madrid. By Double Happiness (Joyce Hwang + Nerea Feliz)



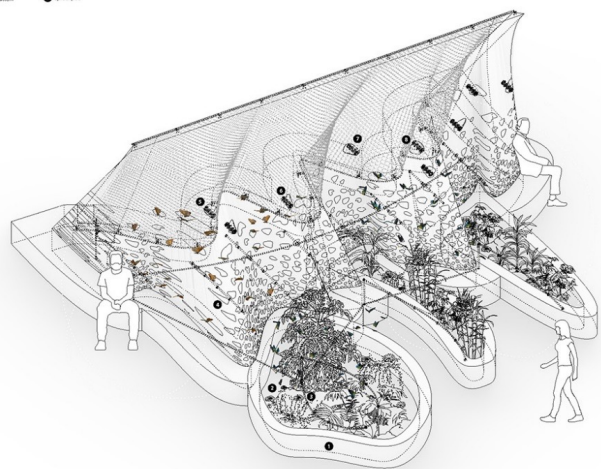
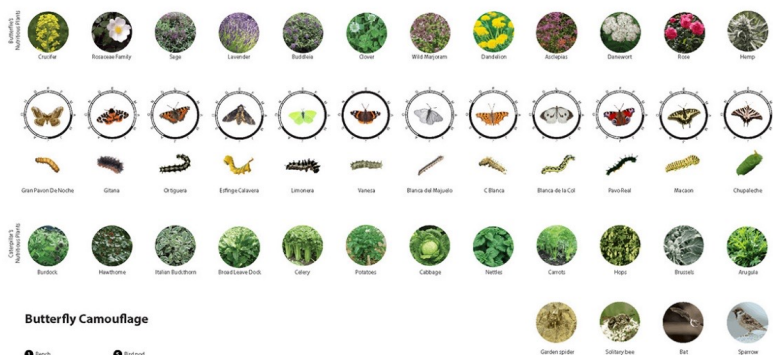
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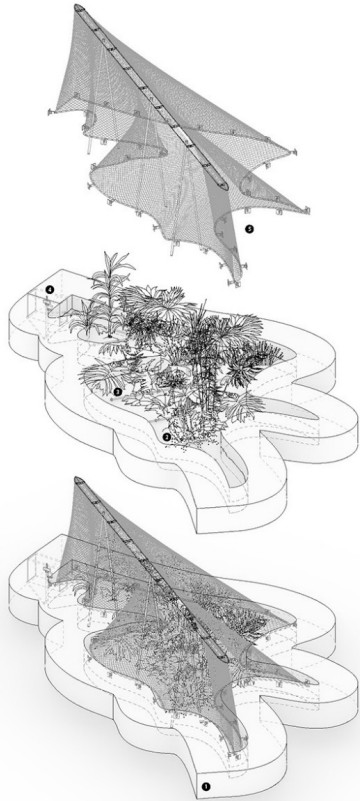


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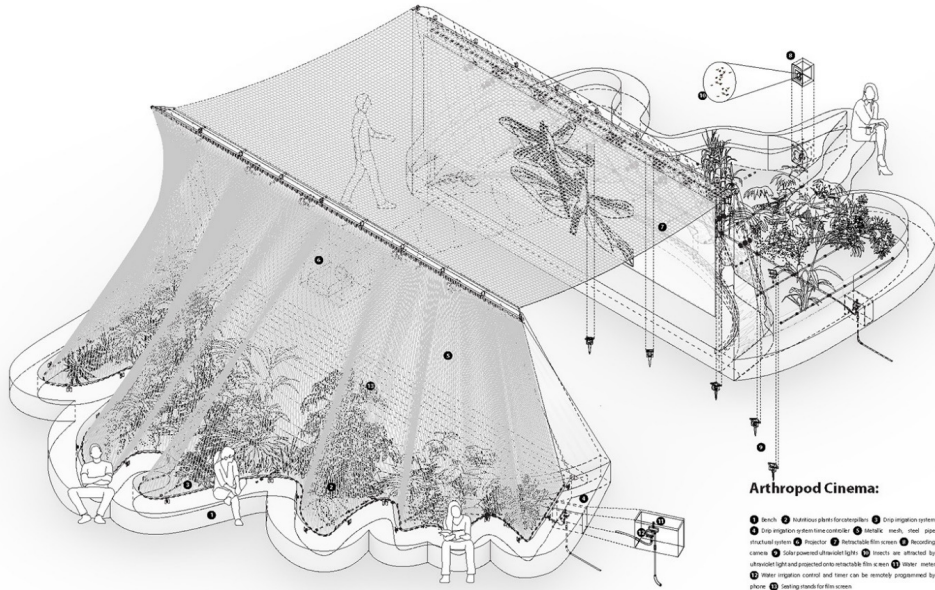


Caterpillar Refuge:

- 1 mesh
- 2 herbaceous plants for caterpillars
- 3 drip irrigation system
- 4 drip irrigation system with solar controller
- 5 plastic mesh, steel pipe structural system



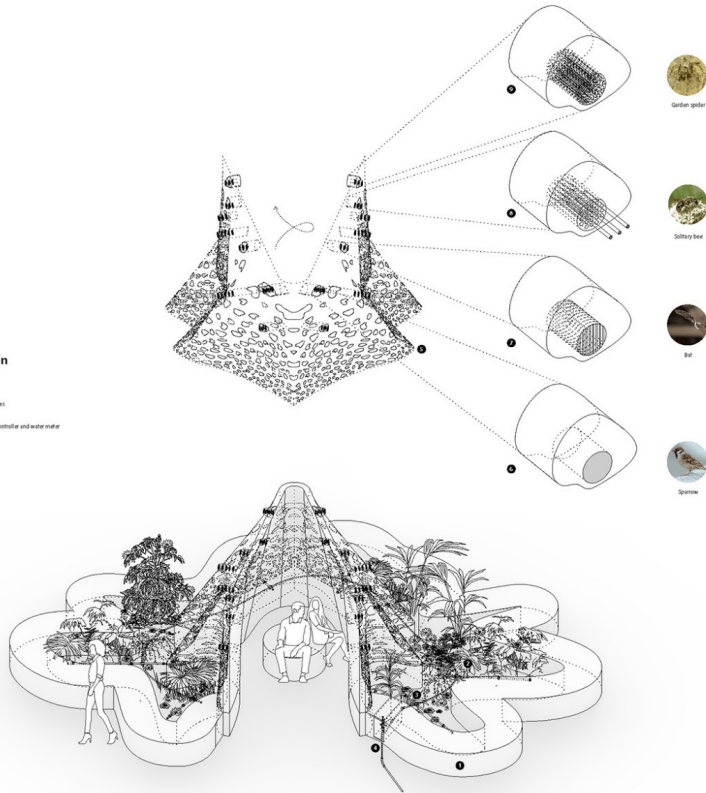
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Hidden in Plain Sight, Cyborg Garden Exhibition, Matadero Madrid. By Double Happiness (Joyce Hwang + Nerea Feliz)

Human Cocoon

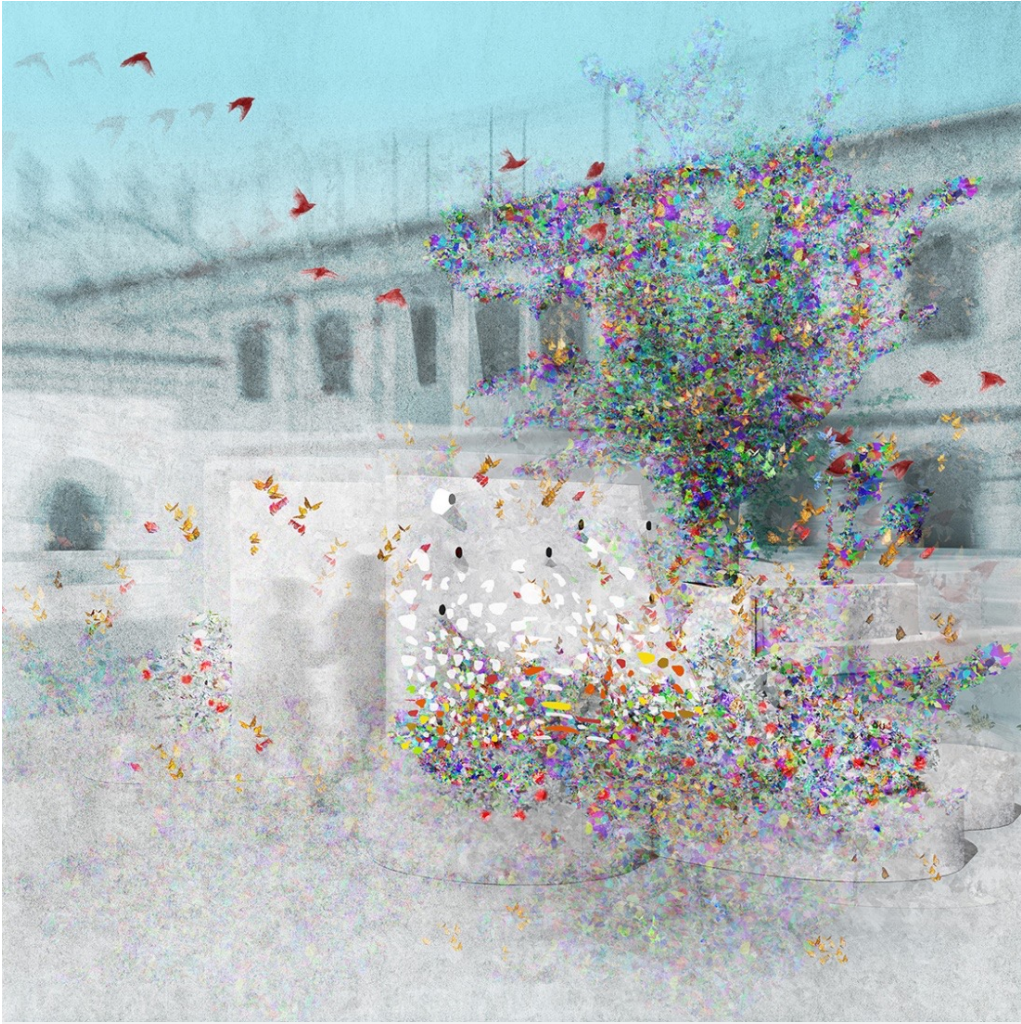
- 1 Arch
- 2 Sustainable plant for butterflies
- 3 Drainage system
- 4 Drainage system filter and water meter
- 5 Composting system
- 6 Irrigation system
- 7 Bird pool
- 8 Safety bee pool
- 9 Water spider pool



- | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|
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Hidden in Plain Sight, Cyborg Garden Exhibition, Matadero Madrid. By Double Happiness (Joyce Hwang + Nerea Feliz)



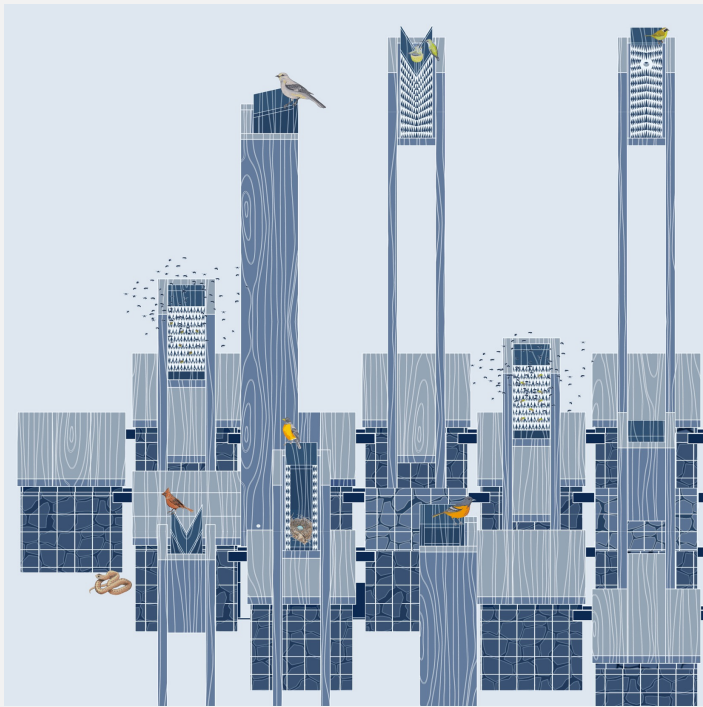
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Hidden in Plain Sight, Cyborg Garden Exhibition, Matadero Madrid. Project by Double Happiness (Joyce Hwang + Nerea Feliz). Film by Don Swaynos

collaboration

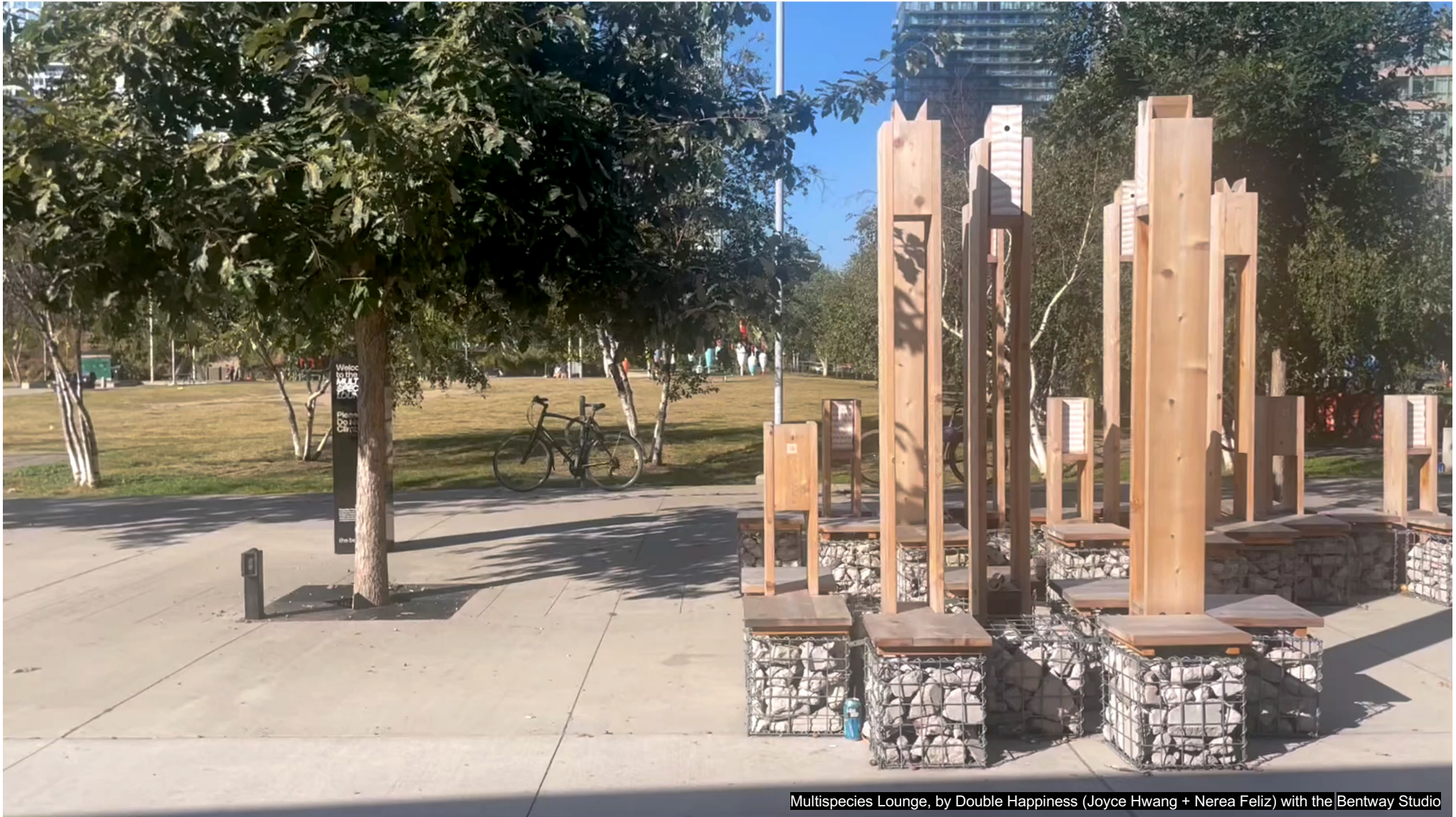
JOYCE HWANG + NEREA FELIZ = DOUBLE HAPPINESS + BENTWAY CONSERVANCY

[architects + arts organization >>> Buffalo, USA + Austin, TX + Toronto, Canada]





Multispecies Lounge, by Double Happiness (Joyce Hwang + Nerea Feliz) with the Bentway Studio

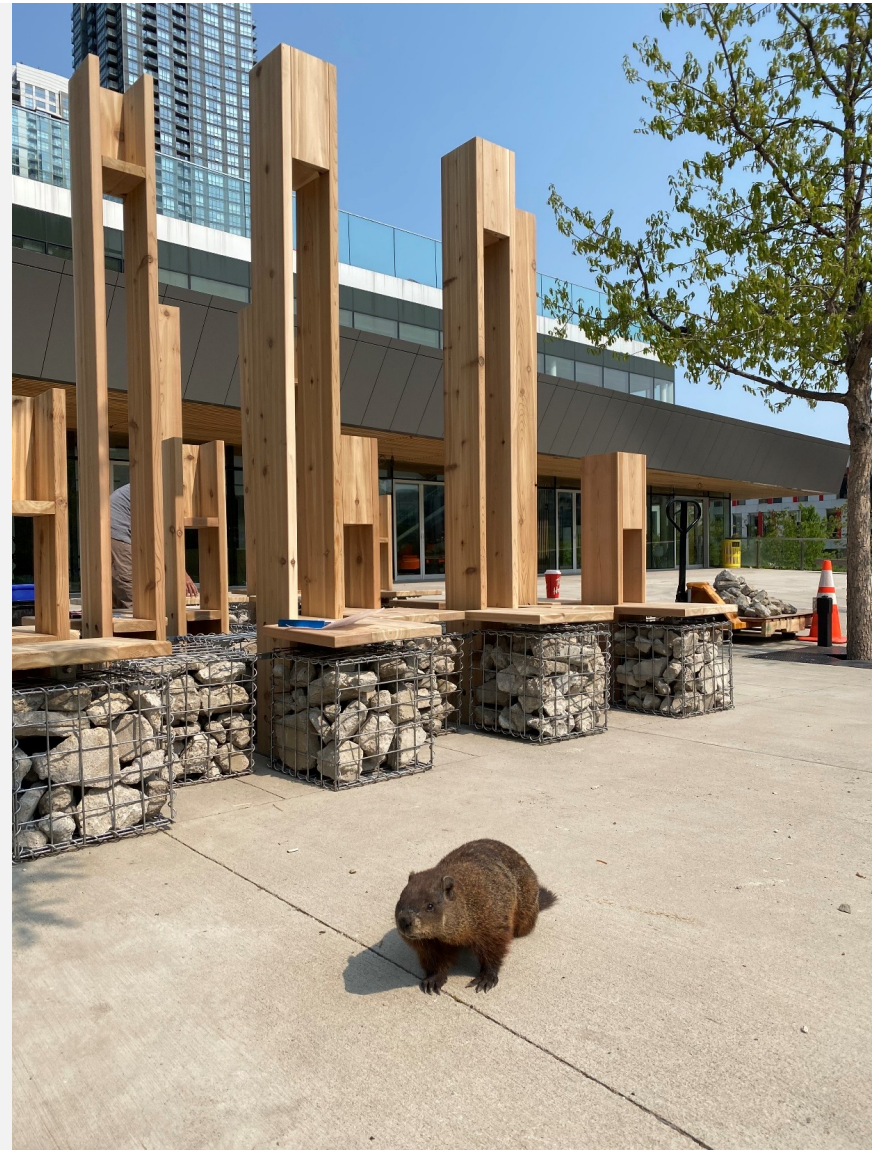


Multispecies Lounge, by Double Happiness (Joyce Hwang + Nerea Feliz) with the Bentway Studio

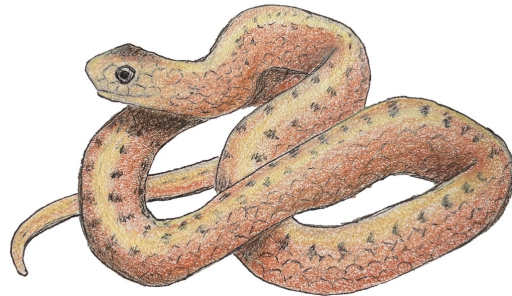
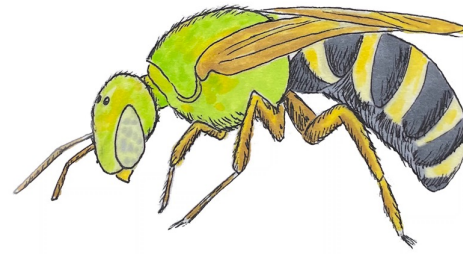


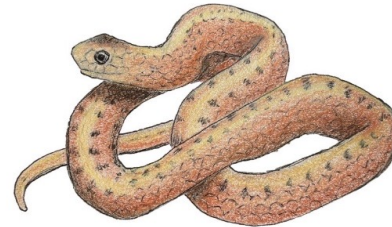
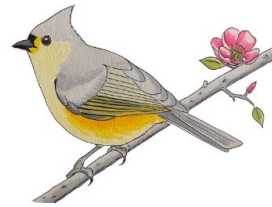
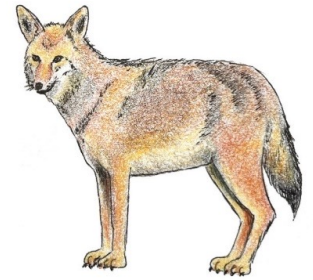
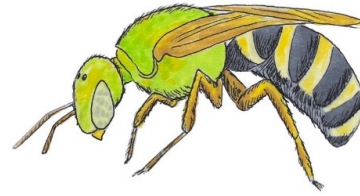
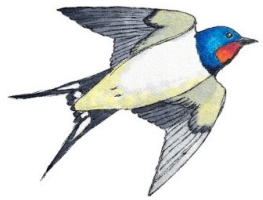


Multispecies Lounge, by Double Happiness (Joyce Hwang + Nerea Feliz) with the Bentway Studio



Multispecies Lounge (drawing on left by Alice Hwang, photo on right by Nerea Feliz)





Multispecies Lounge (drawings by Alice Hwang and Laurice Hwang)



Photo by Sam Morland, BBC News, June 2022





Bat Tower



Birdhouses, Turkey, Ottoman Empire



Pigeon Towers, Isfahan Iran, 16th and 17th centuries



Left: Auke-Florian Hiemstra with a nest. (Alexander Schippers/Naturalis) via Washington Post; Right: Photo by Auke-Florian Hiemstra via New York Times, July 2023

Forbes

FORBES > INNOVATION > SCIENCE

Can You Be A Person If You're Not Human?

Andréa Morris Contributor ©
Science, Robots & The Arts

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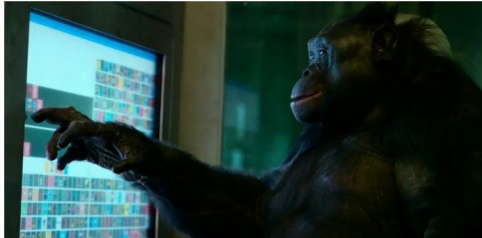

Mar 13, 2018, 05:03pm EDT

This article is more than 5 years old.

TWEET THIS

species-membership is as arbitrary as race and gender as a basis for denying rights.

These days, if you are not a human or legal entity, you're a thing.

Happy the person

She has deep emotions, complex social needs and a large, elephant brain. Her legal personhood should be recognised too.

BBC Sign in Home News Sport Reel Worklife Travel Future

NEWS

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World Africa Asia Australia Europe Latin America Middle East

Dolphins deserve same rights as humans, say scientists

21 February 2012



Recognising the rights of dolphins would end whaling and their captivity

Dolphins should be treated as non-human "persons", with their rights to life and liberty respected, scientists meeting in Canada have been told.

Experts in philosophy, conservation and animal behaviour want support for a Declaration of Rights for Cetaceans.

Left top: Article by Andrea Morris via Forbes (2018); Left bottom: Article by Lori Marino and photo by Gigi Glendinning via Aeon (2022); Right: Photo by AFP via BBC (2012)

INTERNATIONAL

A New Zealand River Now Has The Legal Rights Of A Human

March 16, 2017 - 6:09 PM ET

Colin Dwyer



Māori paddlers guide a boat down the Whanganui River in New Zealand, during a visit from Britain's Prince Harry in 2015. Chris Jackson/Getty Images

For the first time in New Zealand's history, the country's lawmakers have granted a river the legal rights of a human. The parliamentary vote Wednesday, which caps more than 140 years of legal struggles, ensures the roughly 90-mile Whanganui River will be represented by two guardians in legal matters that concern the waterway.

The legislation marks a monumental victory for the local Māori people, who

WORLD

Should Rivers Have Same Legal Rights As Humans? A Growing Number Of Voices Say Yes

August 3, 2019 - 8:02 AM ET

Ashley Westerman



In recent years, many rivers—including the Amazon (pictured here), which flows through several countries in South America—have been granted legal rights in order to provide concrete protections. PHOTOGRAPH BY MARCIA KEBBON, NAT GEO IMAGE COLLECTION

TRAVEL | EARTH DAY

This Canadian river is now legally a person. It's not the only one.

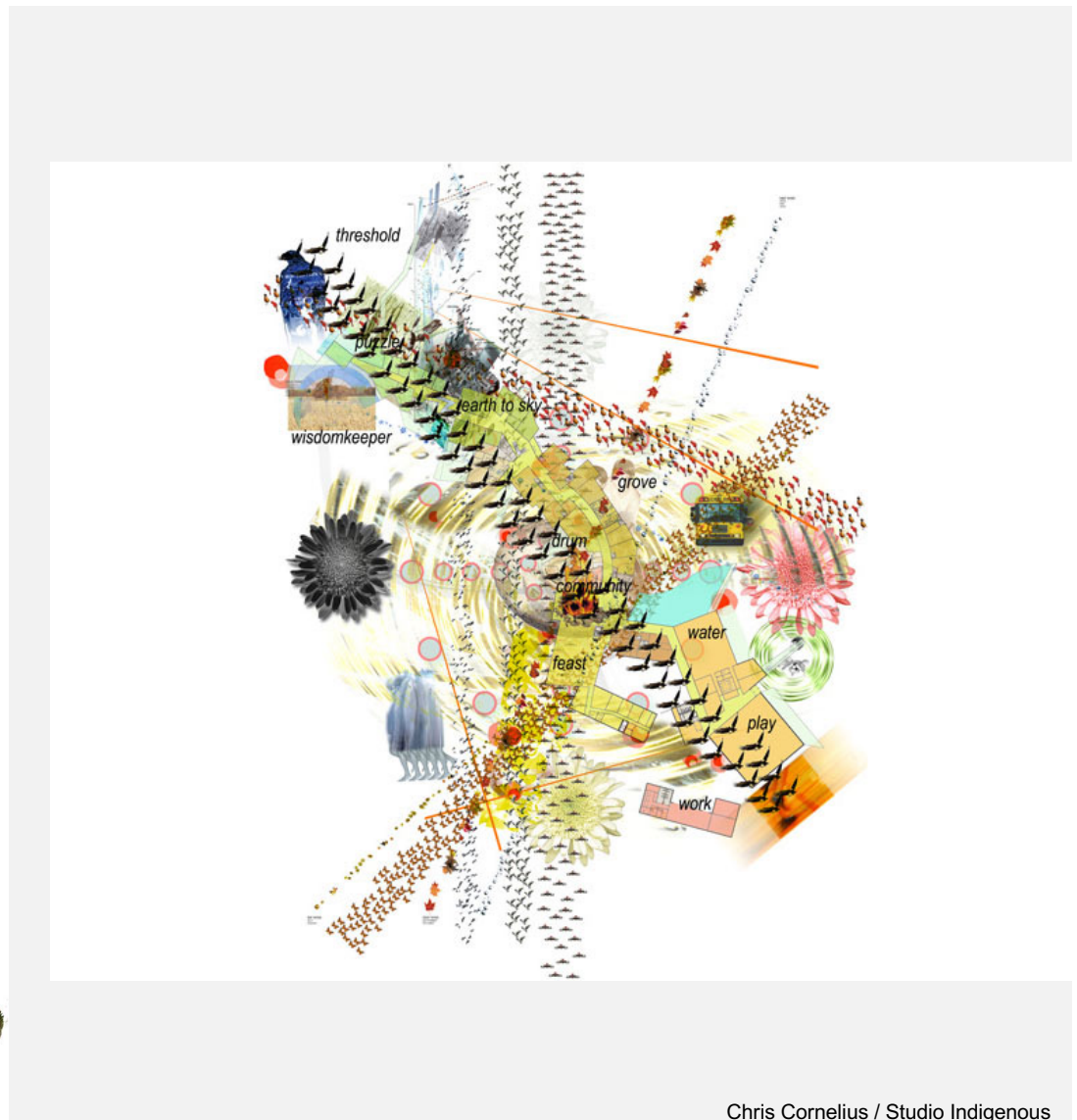
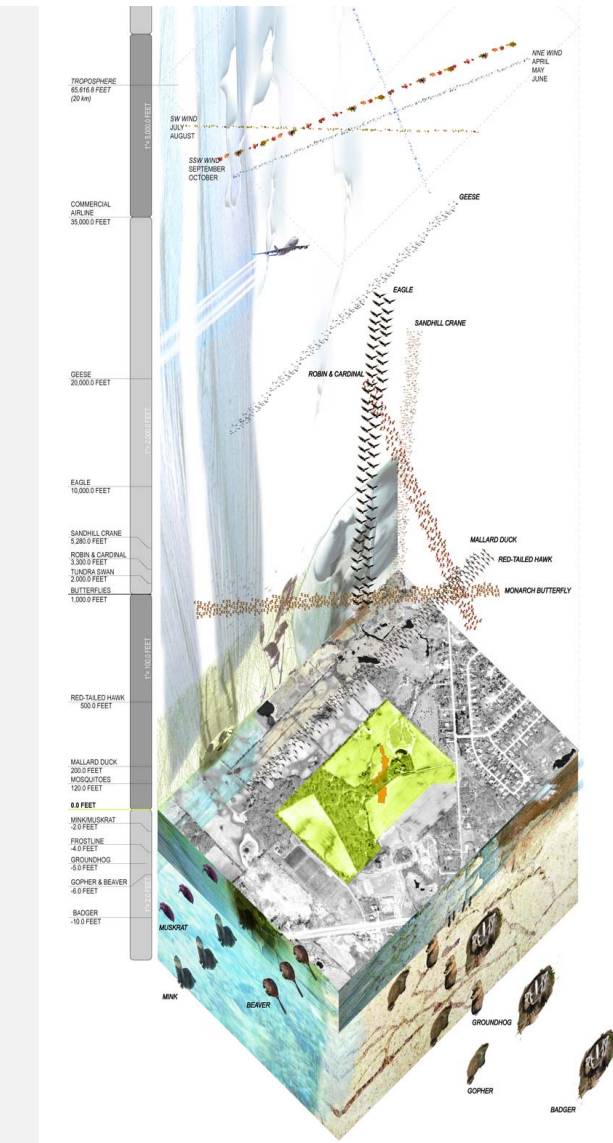
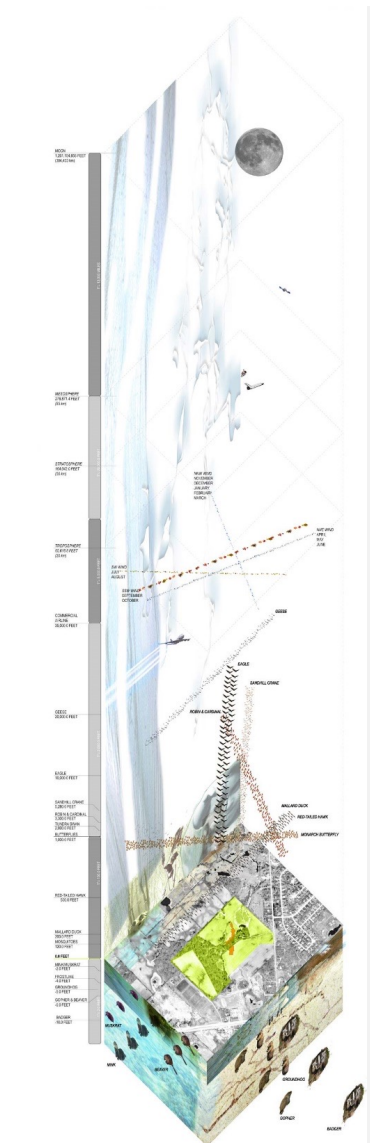
From the Amazon to the Klamath, granting rivers legal rights is part of Indigenous-led efforts to protect them.

BY CHLOE BERGE

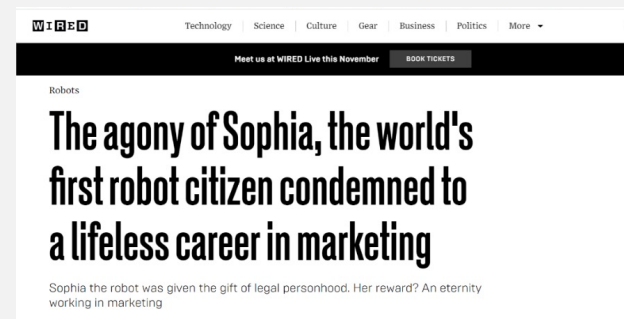
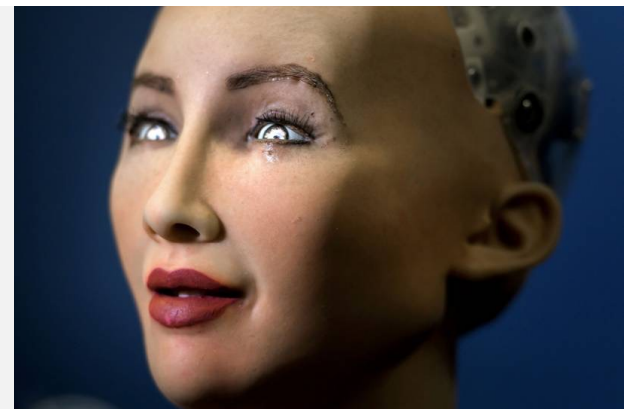


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Left: Article by Colin Dwyer, photo by Chris Jackson/Getty Images via NPR (2017); Middle: Article by Ashley Westerman, photo by Munir Uz Zaman/AFP/Getty Images via NPR (2019); Right: Article by Choe Berge, photo by Marcia Keibbon/Nat Geo Image Collection (2022)



Chris Cornelius / Studio Indigenus



Sophia the Robot via Cosmopolitan Magazine and Wired UK, 2018 (Image right: Fabrice Coffrini/AFP/Getty Images)





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