More than Human
who do we design for?

11 July – 5 October 2025 at the Design Museum

Design solves a problem or makes life better for its user — but why is this user only ever human, when we exist alongside billions of other living beings?

More than Human is the first major exhibition centring the ‘more-than-human’ movement being forged right now by a new generation of designers, artists, architects, and researchers.

Drawing on traditional practice and cutting-edge technologies, through observation, speculation, and experimentation, they embrace the dawning reality that human beings can only flourish in symbiosis with the world’s species and systems.

Contents

all exhibition photography by Luke Hayes unless stated otherwise.

Future Observatory and fellowship

This exhibition was created in collaboration with Future Observatory, the Design Museum's national research programme for the green transition who have also supported 4 recipients of a More than Human fellowship research grant:

FIND *THE MORE-THAN-HUMAN (MOTH) RIGHTS MURAL* IN **SECTION 1: BEING LANDSCAPE**

- **César Rodríguez-Garavito / MOTH.**
  The More-Than-Human (MOTH) Rights Mural by Elena Landinez, César Rodríguez-Garavito (2025). PVC-free wallpaper, acetate. This 8-metre-long mural records the names of rivers and surrounding lands whose legal rights have been debated in court. The resulting rulings, constitutional provisions, and declarations protect rivers and, by extension, the many species (including humans) they support. Find out more and read the texts in full at https://futureobservatory.org/news/more-than-human-moth-rights-mural.

FIND *EARTHLY MEMORIALS: SÃO PAULO TERRA INDÍGENA* IN **SECTION 1: BEING LANDSCAPE**

- **Paulo Tavares, studio autônoma.**
  Earthly Memorials: São Paulo Terra Indígena by Paulo Tavares, studio autônoma (2025). Mixed media. The Jaraguá Guarani Indigenous Land is the last surviving piece of Atlantic Forest in São Paulo, Brazil. It is recorded in its current state through interviews, archival images, maps, 3D scans and a model of the landmark Jaraguá Peak, all compiled or created by Tavares in close connection with the Guarani Nation. After the exhibition, the model will be donated to the Guarani.

FIND *THE COAST IS NOT A LINE, IT'S A ZONE* IN **SECTION 2: MAKING WITH THE WORLD**

- **Feifei Zhou.**
  The Coast Is Not a Line, It's a Zone by Feifei Zhou in collaboration with Gillian Bogart (2025). Mixed media. Zhou challenges cartographic norms to suggest that the coast is not a clear boundary, but a complex zone sustaining a variety of species of whom humans are just one. She uses the sero – a vernacular fish fence used by fisherfolk in Kupang Bay, Timor – as an example of regenerative practice working with its environment

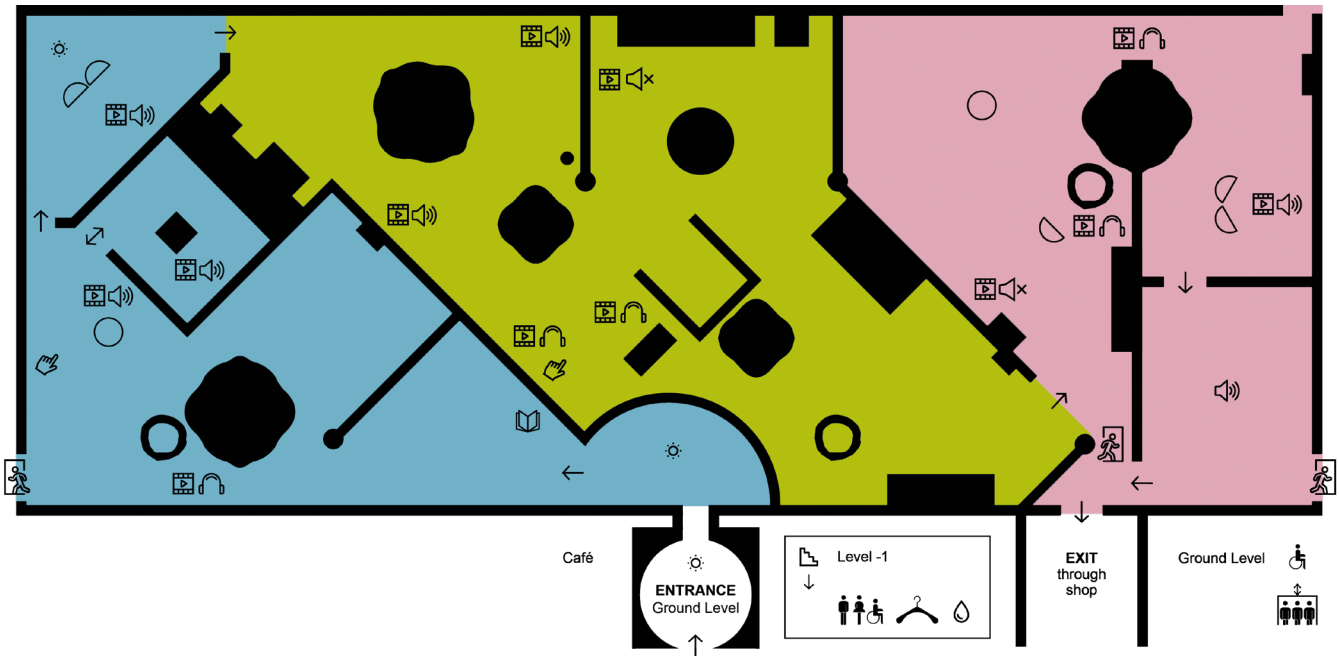
FIND *POLLINATOR PATHMAKER: PERCEPTUAL FIELD 7SZZLN6GNY97DSO7HCSLMF* IN **SECTION 3: SHIFTING PERSPECTIVE**

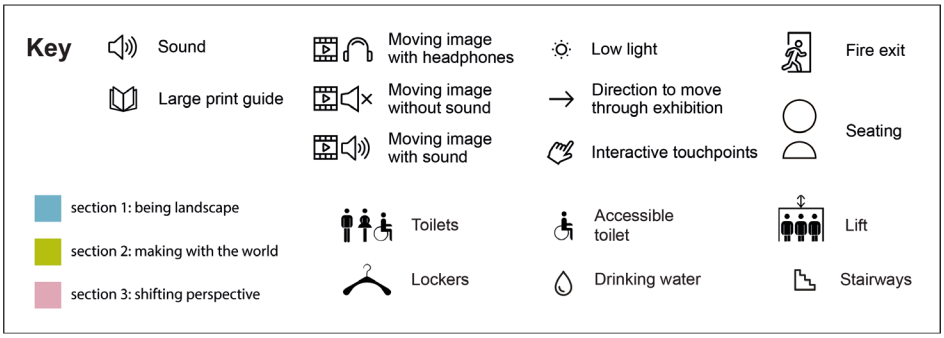
- **Alexandra Daisy Ginsberg.**
  Pollinator Pathmaker: Perceptual Field 7SzzLn6GnY97DSo7hCSLMf by Alexandra Daisy Ginsberg (2025). Wool, cotton, acrylic, polyester, cashmere. The Pollinator Pathmaker project uses an algorithm to generate garden designs catering to pollinators rather than human tastes. On display in the exhibition is a tapestry which places human viewers in the tiny shoes of a pollinating insect inside one of the resulting gardens, flowers towering above in hues that a pollinator would see. Create your own pollinator-friendly garden plan at https://pollinator.art/ or visit a real-life garden designed by this algorithm at St Mary Abbots Gardens, just off Kensington High Street.

exhibition content

map

This is a guide to sensory stimuli, access, amenities, and the exhibition's sections. It is designed to give you an understanding of what to expect before visiting the exhibition. If you wish to request a 'recce' trip prior to booking, please email learning@designmuseum.org with the subject line "MtH recce visit".





content note

The final section of the exhibition contains 4 short films from Isabella Rossellini's 'Seduce Me' series, which uses scientific terminology and theatrical performance to explore animal reproduction. Content is lightly educational but addresses mature biological topics and some parts may not be suitable for very young children.

being landscape

Humans have existed in the world for a very long time. We haven't changed much physically for the last 50,000 years, but our almost infinitely adaptable brains have allowed us to build language and culture – our first forays into complex problem-solving – and flourish in almost every corner of the world.

Early humans succeeded by living in rhythm with nature and each other, but in just the last few centuries – the comparative blink of an eye – mass industrialisation and urbanisation have made it easier to consider ourselves as separate from nature. Ideas of reciprocity or stewardship have been displaced by **extraction** and **anthropocentrism** (from the Greek anthrōpos, meaning human being). However, the accelerating **climate crisis** has shown the lie in this perceived disconnect.

***NATURE CALENDAR* (2022), MARCUS COATES. VINYL ON WALL.** AN UNDERSTANDING OF NATURAL CYCLES AND RHYTHMS – **PHENOLOGY** – WAS VITAL WHEN HUMANS FIRST BEGAN PRACTICING AGRICULTURE, LONG BEFORE THE INVENTION OF THE ANNUAL CALENDAR OR THE ALMANAC. TODAY, **PHENOLOGICAL SHIFTS** INDICATE THE RIPPLE EFFECT OF CLIMATE CHANGE.

FIND *NATURE CALENDAR* IN **SECTION 1: BEING LANDSCAPE**

It's increasingly clear that the environmental destruction we wreak only chases us back around the ecosystem, and our impact on the world is now so extensive that it has been termed a geological epoch, the **Anthropocene**. But how much longer can we and our co-inhabitants last at this rate? Some artists and designers are facing this reality head-on: through dissolution of the human-nature boundary and tapping back into our earlier connection with the living world. For better or worse, we do not just inhabit the landscape but form a part of it.

***MAPA DA ESTRADA (SERINGA) [MAP OF THE ROAD (RUBBER TREE)]* (1998), ARTIST AND RUBBER TAPPER HÉLIO MELO. LEAF EXTRACT AND INK ON PAPER. THE TREE'S BRANCHES RESEMBLE A MAP GUIDING THE TAPPER THROUGH THE AMAZONIAN FOREST, PERHAPS SYMBOLISING A MORE SYMBIOTIC HUMAN-FOREST RELATIONSHIP WHICH WAS RAPIDLY BEING REPLACED BY EXTRACTIVE INDUSTRIES SUCH AS MINING.** DONATED BY PATRONS OF CONTEMPORARY ART OF THE PINACOTECA OF THE STATE OF SÃO PAULO 2021, THROUGH THE PINACOTECA ART AND CULTURE ASSOCIATION - APAC, 2021.

FIND *MAPA DA ESTRADA (SERINGA)* IN **SECTION 1: BEING LANDSCAPE**

3 *UNTITLED,* FROM THE *SONHÍFERAS [DREAMERS]* SERIES (2020-21), SOLANGE PESSOA. OIL ON CANVAS. PESSOA'S AMBIGUOUSLY ORGANIC FIGURES FLOW INTO EVERY CORNER OF THEIR CANVAS, EVOKING METAMORPHOSIS AND A BLURRING OF BOUNDARIES. MANY OF HER WORKS RECALL THE ANIMIST BELIEFS OF BRAZIL'S INDIGENOUS PEOPLES. COURTESY OF SOLANGE PESSOA AND MENDES WOOD DM, SÃO PAULO, BRUSSELS, PARIS, NEW YORK

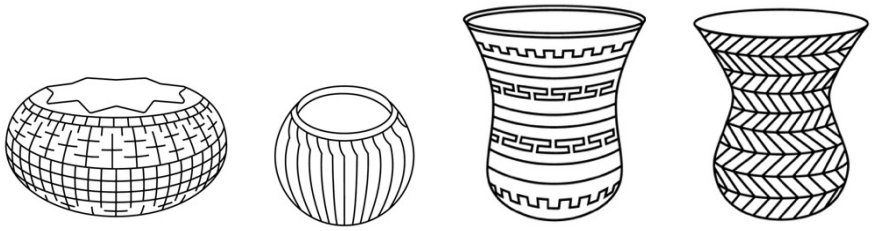
FIND THE *SONHÍFERAS* IN **SECTION 1: BEING LANDSCAPE**

Indigenous knowledge and rural traditions

Some of the most instructive and well-practiced relationships to the more-than-human are found in Indigenous communities, who despite forming only a small percentage of the world population currently manage ~80% of its biodiversity (Garnett, Burgess, et al, 2018). When we refer to someone as **Indigenous**, we mean that they and their ancestors lived in a particular place for a long time, predating the arrival of people who may have settled from elsewhere.

Because of this continuity, Indigenous people often retain generational knowledge about their homeland and more-than-human cohabitants (unless they have been subject to active erasure or cultural genocide). Very often this wisdom is deeply ecologically significant, an increasingly recognised fact.

> *"Traditional Ecological Knowledge (TEK) is the on-going accumulation of knowledge, practice and belief about relationships between living beings in a specific ecosystem […] acquired by Indigenous people over hundreds or thousands of years through direct contact with the environment."*
>
> – THE US NATIONAL PARK SERVICE [INTERNET]. HTTPS://WWW.NPS.GOV/SUBJECTS/TEK/DESCRIPTION.HTM



BASKETS WOVEN BY THE YE'KUANA, OF THE VENEZUELAN AMAZON, A PROCESS WHICH BEGINS WITH SINGING TO ASK THE RAINFOREST'S PERMISSION FOR PART OF IT. THE SMALL JOJO AND LARGER WÜWA (WHOSE VASE-LIKE CURVES FIT AGAINST THE BODY WHEN CARRIED) SHOWN ARE ONLY WOVEN BY WOMEN. WOVEN BY THE ASSOCIATION OF WOMEN WEAVERS OF CAURA ADOONI, LED BY THE ARTISAN DAWA (DAWANEDU EMAJENEWA/LUZ MARIA GARCÍA). DETAILS OF BASKETS WOVEN BY EMANEJEWA, ROSALINDA, AND DAWA. COURTESY OF MADAME TEPUY.

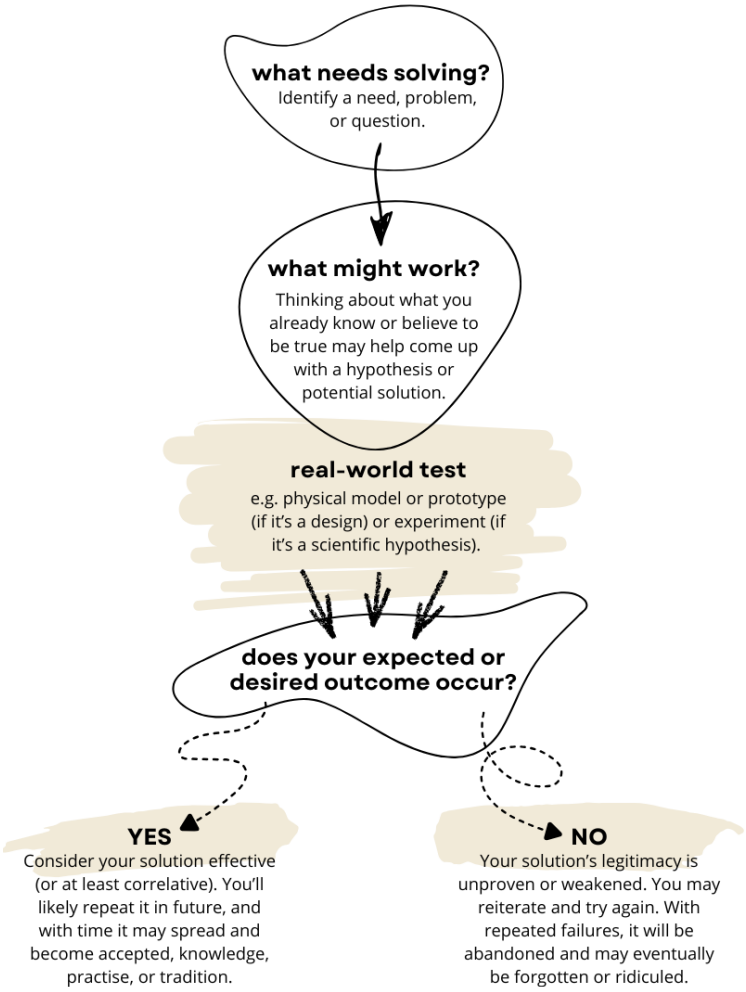
FIND THE YE'KUANA BASKETS IN **SECTION 1: BEING LANDSCAPE**

knowledge production, science, and design

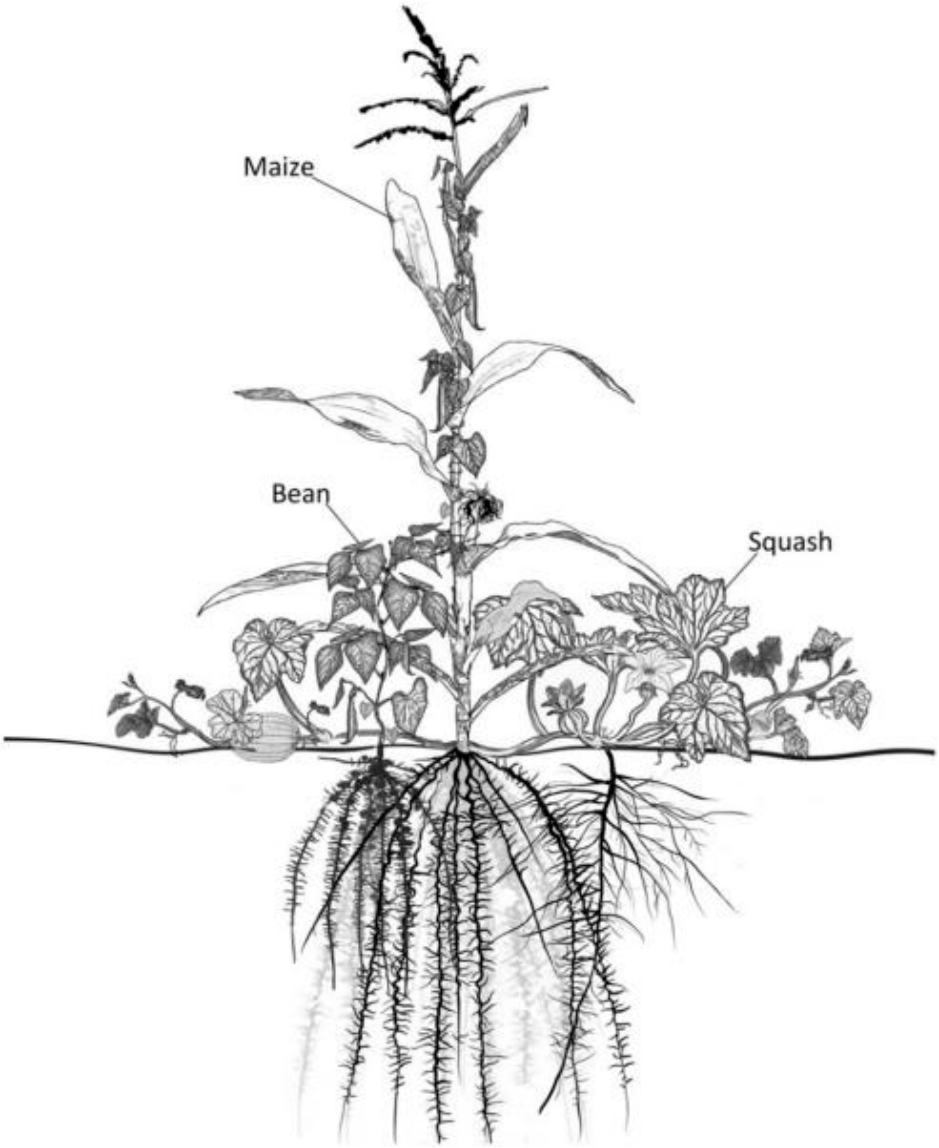
When discussing Indigenous communities' engagement with the more-than-human it's important to avoid echoing the racist logic of colonial pseudosciences, which often classified non-white people as 'closer to animal than human' as a method of subjugation. Indigenous knowledge is often preserved and transmitted across generations in the form of "stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language and agricultural practices" (UNESCO Glossary definition as of 2025; origin SCBD, 2007), so it won't look the same as laboratory science.

FIND *FOREST MIND* IN **SECTION 1: BEING LANDSCAPE**

However, different types of knowledge need not be mutually exclusive. Ursula Biemann demonstrates this in her video installation *Forest Mind* (2021), which explores ways of expressing the intersections of knowledge between Indigenous medics and molecular biologists who have been trained in scientific methods. In fact, both scientific and indigenous knowledge become established through 'testing' in the real world, in a way very analogous to iterative design!



Several Indigenous groups on the North American continent including the Iroquois, Muscogee, and even ancient Mayans grow maize/corn, beans, and squash together, calling them 'the three sisters'. This is an example of **mutualistic intercropping**. Strong, upright maize/corn stalks provide a trellis for the **nitrogen-fixing** beans to climb up to the sunlight, while the ground-creeping squash maintains soil moisture and blocking weeds. All three yield an edible harvest and may even become more nutritionally complete when consumed together as in the Indigenous dish succotash.



'THE THREE SISTERS' IN VEGETAL FORM. LOPEZ-RIDAURA, S., BARBA-ESCOTO, L., REYNA-RAMIREZ, C. A., SUM, C., PALACIOS-ROJAS, N., & GERARD, B. USED UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 INTERNATIONAL LICENSE (CC BY 4.0).

tradition as a modern solution

Some artists are recognising the value of long-standing local traditions not only for their knowledge-holding capacity but as a means of reuniting communities, affirming identity, and reconnecting with an Earth in crisis.

SHOTS FROM *RUMITA* (2024), FEDERICO BORELLA AND MICHELA BALBONI. PHOTOGRAPHIC PRINTS. HTTPS://WWW.FEDERICOBORELLA.COM/RUMITA.

In southern Italy's Satriano di Lucania, younger generations are reviving the festival figure of the leaf-clad '*rumiti*' (singular '*rumita*', from the Italian for 'hermit'). Similar to 18th century Britain's 'Jack in the Green', the rumita may have been a **pagan** figure who was later absorbed into the Christian calendar, emerging the weekend before Shrove Tuesday.

In their ethnography-meets-portraiture project, Federico Borella and Michela Balboni pose the anonymised, verdant figure in front of natural and human-made backdrops, evoking our ever-evolving entanglement with our surroundings.

To see more examples of artistic documentation of Italian traditions which engage with the more-than-human, watch director Vittorio de Seta's series of ethnographic short films such as Parabola d'oro [Golden parable] (1955).

FIND *RUMITA* IN

SECTION 1: BEING LANDSCAPE

British artist Jonathan Baldock draws on not only his national but personal ancestral roots. Baldock comes from a family of hop-gatherers and gardeners, the kind of people who made '**corn dollies**' throughout Europe for generations before the practice faded in the hyper-urbanised 20th century.

These '**harvest tokens**' – traditionally made from the last sheaf of grain harvested – likely served as a promise or beacon of hope, preserving life through the fallow months until spring. Staffs, wreaths or, later, **figural** and animal forms were formed using techniques from rope-making, knotting, and straw-plaiting, skills associated with making hats or seafaring. Today the UK's Heritage Crafts charity classes corn dolly making as endangered, but highlights the awareness and hope created by artists like Baldock who use corn dollies "in innovative ways".

FIND TRADITIONAL EXAMPLES OF CORN DOLLIES, INCLUDING THE SHEPHERD'S CROOK DESIGN PICTURED, IN **SECTION 1: BEING LANDSCAPE**

FROM LEFT: **STRAWCRAFT SHEPHERD'S CROOK MADE BY FRED MIZEN FOR DISPLAY IN THE FESTIVAL OF BRITAIN, 1951, WHEN CORN DOLLY-MAKING HAD FALLEN OUT OF REGULAR PRACTICE.** STRAW, WIRE. MUSEUM OF ENGLISH RURAL LIFE, UNIVERSITY OF READING. MERL 52/78. CORN DOLLY (C.1895; NO.1898.29.3), CORN DOLLY (C.1896; NO.1898.29.2): BOTH OLDER, MORE TRADITIONAL DOLLIES COLLECTED IN 1898 AND NOW HELD BY THE PITT RIVERS MUSEUM, UNIVERSITY OF OXFORD.

FIND *CORN DOLLY I - VI* IN **SECTION 1: BEING LANDSCAPE**

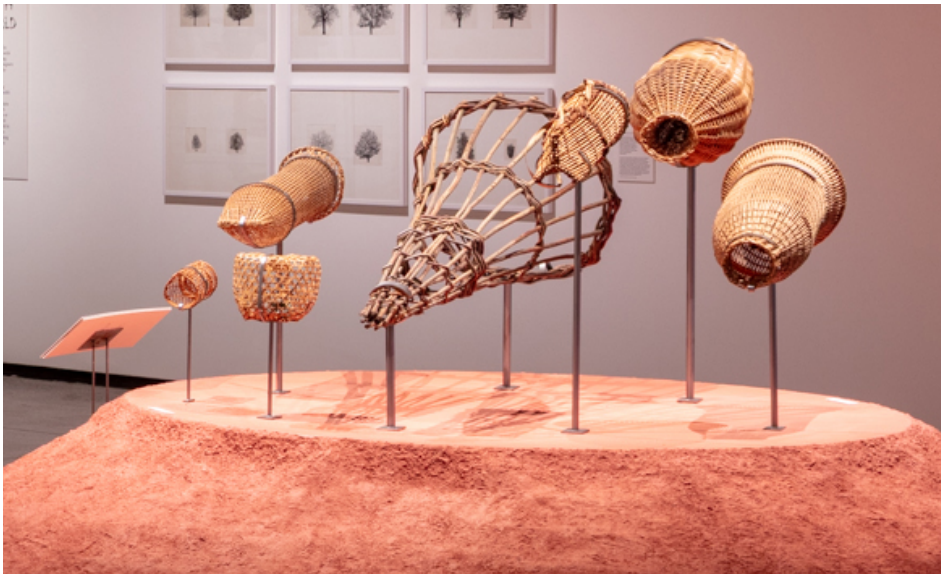
***CORN DOLLY II*, *III* AND *V* OF *I – VI* DISPLAYED IN MORE THAN HUMAN (2013/23), JONATHAN BALDOCK. BRONZE, CAST FROM MASKS MADE OF CORN BALDOCK HAD ORIGINALLY WORN FOR A PERFORMANCE. THE ACT OF CASTING TRANSFORMED THESE FROM SEASONAL OBJECTS OR FRAGMENTS OF AN INHERENTLY FLEETING ARTWORK INTO A PERMANENT RECORD OF BALDOCK'S HERITAGE AND HIS SKILL AS A MAKER.** COURTESY OF STEPHEN FRIEDMAN GALLERY, LONDON AND NEW YORK.

passive fish traps: ‘the least harm principle’

One way in which all of us engage with the more-than-human– although today often in a very far-removed way – is through our **dietary habits**. In *A Case for Animal Rights* (1983), American philosopher Tom Regan states that to do “least harm”, one must eat an entirely meatless diet. Others disagree, stating that the negative impact of meat substitutes made of soy, grown on deforested land and air-freighted, are worse than slaughtering a free-range chicken for a local consumer.

While the complex degrees of separation inherent to industrial chains of supply and production make it incredibly difficult to truly quantify, the **‘principle of least harm’** nevertheless provides a useful rubric for how we can live with the world.

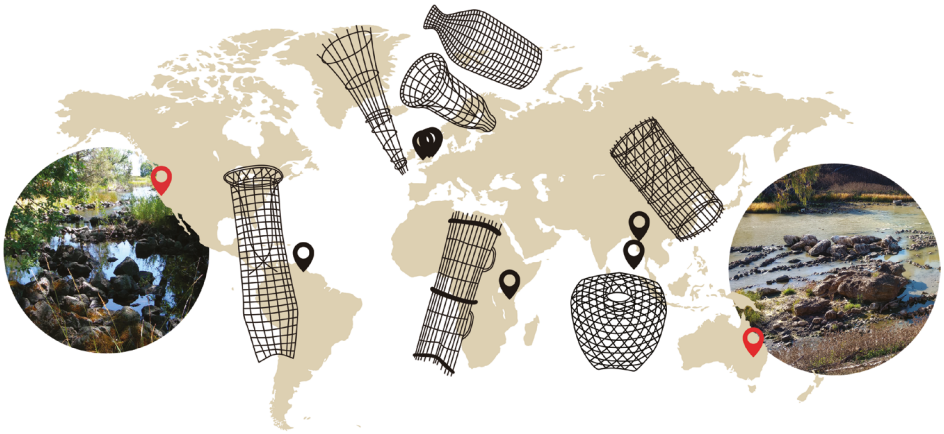
Traditional and Indigenous design demonstrate this in many ways, some already discussed, and another example being **passive fishing traps**. ‘Passive’ refers to the fact that these traps don’t depend on active movement or interference to capture prey. Instead they rely on the fish’s own actions, requiring a deep understanding of more-than-human behaviour.



THE LARGEST FISHING TRAP IN MORE THAN HUMAN IS A ‘PUTCHER’ STYLE SALMON TRAP (CENTRE ABOVE), MADE BY A MAN NAMED IVOR CADOGAN IN 1964. THE PUTCHER DESIGN HAS BEEN FOUND IN THE BRITISH ISLES SINCE THE 10TH CENTURY. SET ON A FRAME ACROSS A RIVER ESTUARY, IT WOULD CATCH SALMON MOVING WITH THE TIDE. MUSEUM OF ENGLISH RURAL LIFE, UNIVERSITY OF READING. MERL 64/22.

FIND THESE TRAPS IN **SECTION 2: MAKING WITH THE WORLD**

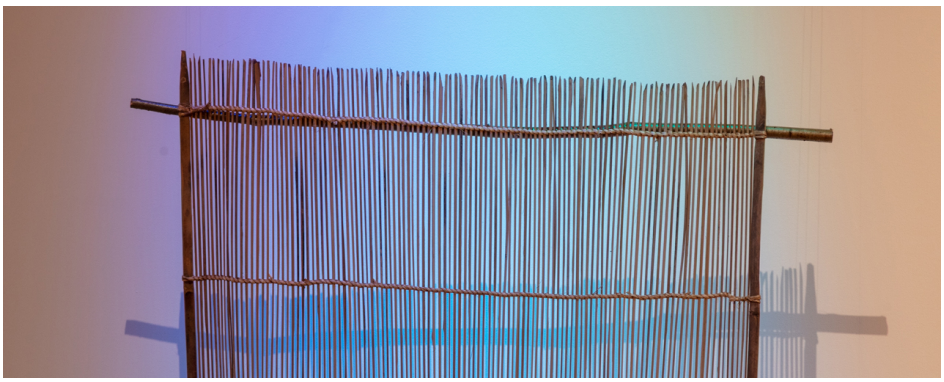
Passive fishing traps appear around the world, made from whatever local materials nature can offer. The Brewarrina fish-traps in modern-day New South Wales, Australia have been continuously reconfigured over potentially 40,000 years, to guide fish upstream where they can be caught by hand. An ocean away, the Ajumawi (translated as 'River People') in modern-day California, USA build intricate systems stacked stones under the water, which may appear visually similar but are grounded in a complex understanding of their local 'sucker' fish's bottom-feeding and spawning behaviour.



BLACK PINS INDICATE PROVENANCE OF TRAPS DISPLAYED IN MORE THAN HUMAN: ENGLAND, GUYANA, MYANMAR, THE NICOBAR ISLANDS, AND TANZANIA. RED PINS MARK BREWARRINA AND AHJUMAWI.

All of the traps above are **reusable** and/or **repairable** and designed to catch adults of a particular species while allowing the young either to escape or be released without harm. These young fish can then live long enough to reproduce and guarantee future catches – a lesson in **mutual benefit** that modern industrial fishing is only now beginning to relearn.

Realising this, More than Human fellow Feifei Zhou based her fellowship project *The Coast Is Not a Line, It's a Zone* (2025) on a **vernacular** Timorese passive fishing technique called sero. Similarly to the examples above, a sero is carefully handwoven from local vegetation in a way that allows smaller and juvenile beings to swim free. Zhou uses it as an exemplar of **regenerative** practice working with its environment.



DETAIL OF *SERO* IN *THE COAST IS NOT A LINE, IT'S A ZONE* (2025), FEIFEI ZHOU.

FIND FEIFEI ZHOU'S *THE COAST IS NOT A LINE, IT'S A ZONE* IN **SECTION 2: MAKING WITH THE WORLD**

traditional technologies and modern design

Increasingly, designers are recognising that time-tested traditional approaches may offer solutions to contemporary challenges.

Johanna Seelemann's terracotta *Oase [Oasis]* (2023) vases demonstrate an ancient **irrigation** method based on burying clay pots and filling them with water. Many English-speakers call these pots *ollas* due to colonial Spanish settlers popularising the practice in America, but archaeological and textual primary evidence indicate the presence of clay pot irrigation in both North Africa and China 2000 years earlier.

The pots are unglazed/semi-glazed to ensure they are **porous**, meaning that when surrounding soil is dry the water seeps out in a process similar to **osmosis**. This method penetrates almost directly to the roots, using 70% less water than surface irrigation.

Seelemann's pots work the same way but are shaped like petrol cans as a comment on "the competition between trees and cars in urban landscapes", showing how even ancient and inherently simple technologies can evolve and remain not only practically relevant but symbolically potent and meaningful.

***OASE (OASIS) R1, H1, K1, W1* (2023), JOHANNA SEELEMANN. TERRACOTTA.** COURTESY OF STUDIO JOHANNA SEELEMANN.

Watch a video demonstrating both DIY and commercial irrigation options based on the olla method: https://www.youtube.com/watch?v=blZoPUrc2rM.

FIND *OASE* IN **SECTION 2: MAKING WITH THE WORLD**

shifting perspective and co-production

We can never really know what the world looks like to a salmon, a goat, or a bee. But radical shifts in perspective are necessary if we wish to design for and with more-than-humans. Like passive fishing this can offer **co-benefits**, whether by providing inspiration for **environmental design** or shedding light on our own social behaviour by imagining a human-dolphin community.

FIND *POLLINATOR PATHMAKER: PERCEPTUAL FIELD 7SZZLN6GNY97DSO7HCSLMF* IN **SECTION 3: SHIFTING PERSPECTIVE**

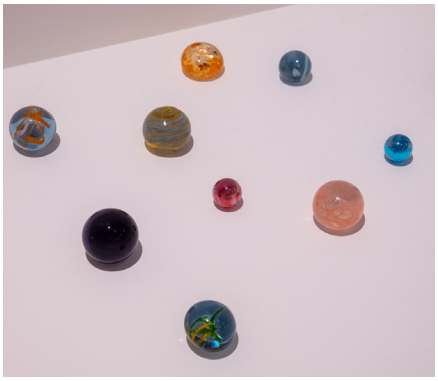
POLLINATOR PATHMAKER: PERCEPTUAL FIELD 7SZZLN6GNY97DSO7HCSLMF (2025), ALEXANDRA DAISY GINSBERG. WOOL, COTTON, ACRYLIC, POLYESTER COTTON, CASHMERE. **THE TAPESTRY SHOWS THE PERSPECTIVE OF A POLLINATOR, INCLUDING DEPICTING PLANTS IN ALTERNATIVE COLOURS THAT EVOKE THE SPECTRUM SEEN BY INSECTS.**

FIND THE TRAILER FOR *EVERYTHING* IN **SECTION 3: SHIFTING PERSPECTIVE**

The act of challenging human-centred perspectives and design is the first step towards (re)building our kinship with the millions of species alongside whom we live. Digital artist David OReilly toys with these complex **interdependencies** in his aptly named video game *Everything*. Players inhabit seemingly infinite lifeforms and objects: atoms, insects, plants, planets. Posthumous narration from writer and speaker Alan Watts plays over its award-winning trailer as it oscillates in scale, evoking our place within a vast more-than-human network.

> *"every creature in the universe that is in any way sensitive, and in any manner of speaking conscious, regards itself as a human being"*
> – ALAN WATTS C.1950S, QUOTED IN TRAILER FOR *EVERYTHING*.

Since the 1990s, artist Shimabuku has explored **interspecies** communication and gift-giving through his *Sculpture for Octopuses* series. After observing that octopuses appear to collect objects, he created small glass balls for them and recorded how they were received. These interactions sit somewhere between scientific experiment, offering, and play.



SCULPTURE FOR OCTOPUSES: EXPLORING FOR THEIR FAVORITE COLORS (2010), SHIMABUKU [LEFT: OCTOPUS IN ACTION. PHOTOGRAPH. RIGHT: SELECTED GIFTS ON DISPLAY. GLASS]. **THE OCTOPUS'S CURIOUS, PLAYFUL REACTION COULD BE UNDERSTOOD AS GRATITUDE IN A MOMENT OF GENUINE INTERSPECIES EXCHANGE.** COURTESY OF SHIMABUKU AND GALERIE BARBARA WIEN.

FIND *SCULPTURE FOR OCTOPUSES: EXPLORING FOR THEIR FAVORITE COLORS* IN **SECTION 3: SHIFTING PERSPECTIVE**

Designer Thomas Thwaites took new perspectives to a physical extreme in his *GoatMan* project, which sprung from his desire to 'take a holiday from being human'. Thwaites made a set of prosthetic limbs, a helmet, and an artificial external digestive system to wear on a Swiss goat farm. The goats were not fooled but curious about their unconvincing guest. Thwaites found it a physically uncomfortable but meditative experience demonstrating both the impossibility and the value of experiencing the world in another species' skin.

FIND *GOATMAN* IN **SECTION 3: SHIFTING PERSPECTIVE**

Finally, the 1970s architectural collective Ant Farm proposed a larger, almost civic-scale collaboration with their speculative *DOLØN EMB 1 (Dolphin Embassy)*. This floating research station was designed to foster and study communication between humans and dolphins by co-creating an eventual multispecies utopia. Though never built, it featured thoughtful cross-species spaces such as 'land/water living rooms', chutes for swimming between floors, and a shared navigation pod.

FIND *DOLØN EMB 1* IN **SECTION 3: SHIFTING PERSPECTIVE**

urban wildlife

The best place to start tapping into alternative perspectives is with your more-than-human neighbours, but in an **urban** environment they may not be immediately apparent. Cities tend to prioritise human activity at the expense of other species – but they do create **novel ecosystems** where some more-than-humans have managed to thrive.

FRUIT FOR ALL (2022), RIPAN BISWAS IN COOCH BEHAR, INDIA. **"MOST STALLHOLDERS SAW THE BATS [SHORT-NOSED FRUIT BATS, AN IMPORTANT POLLINATING SPECIES] AS A DISTURBANCE AND WERE SCARING THEM AWAY, BUT ONE SELLER HAD HUNG RIPE BANANAS AT THE EDGE OF HIS STALL, JUST FOR THEM."** HTTPS://WWW.NHM.AC.UK/WPY/GALLERY/2022-FRUIT-FOR-ALL.

In London alone, pigeons, foxes, squirrels, peregrine falcons and countless insect species have developed new behaviours and sometimes even physical characteristics to adapt to their **urban habitat**. Monkeys across the continents of Africa and Asia have learned to ransack markets and take advantage of tourists; 5-foot-tall Australian cassowaries have become the world's 'largest urbanised bird'; and sacred Sika deer now form part of the ecosystem in Japanese city Nara.

Many urban-adapted species have survived by becoming **pests** or invaders. Whether we like it or not, our cities are multispecies habitats, and so designers are asking: can we intentionally create urban spaces that support the coexistence of human and more-than-human activities? Can design encourage **biodiversity**, creating architecture that hosts our smallest neighbours?

Finnish architects Suomi/Koivisto designed their *Alusta Pavilion* (2023) to offer shelter to humans, plants, insects and fungi. It was built between the Museum of Finnish Architecture and the Design Museum in Helsinki, from a combination of mass-produced insulating bricks and locally sourced clay and wood. Over several seasons the structure was used as a site of experimentation, observation and learning while a garden and insect community flourished around it.

***ALUSTA PAVILION* (ORIGINAL 2023; RECREATION 2025), SUOMI/KOIVISTO ARCHITECTS. BRICK, WOOD.** COURTESY MAIJU SUOMI AND ELINA KOIVISTO. PHOTOGRAPHS: MAIJU SUOMI AND ELINA KOIVISTO.

FIND THE *ALUSTA PAVILION* IN **SECTION 2: MAKING WITH THE WORLD**

Other urban wildlife interventions target specific species. SCAPE Landscape Architecture's Bird-safe Building Guidelines is a freely available publication presenting design solutions to prevent birds' deadly collisions with glazed (glass) buildings. These include a type of film applied to glass to make it non-reflective or patterned to birds, showing how small design changes can have enormous positive impact.

***BIRD-SAFE BUILDING GUIDELINES* (2007 – ONGOING), SCAPE LANDSCAPE ARCHITECTURE. PRINTED GRAPHICS, GLASS, BIRD-SAFE TAPE.** COURTESY OF SCAPE LANDSCAPE ARCHITECTURE.

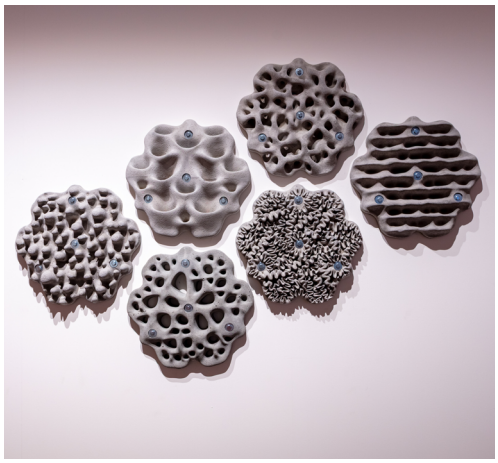
FIND THE *BIRD-SAFE BUILDING GUIDELINES* IN **SECTION 2: MAKING WITH THE WORLD**

With *Dovecote for London*, Former Future Observatory Designer in Residence James Peplow Powell rejects the conception of urban pigeons as pests. Reviving an ancient **symbiotic** relationship found in Greece and other parts of the Mediterranean, he proposes a citywide system where pigeon poo (guano) is collected and distributed to urban farms as fertiliser. His intention for it to be integrated into the many buildings owned by Transport For London, hence his use of the iconic 'roundel' logo, highlight how radical design can and should fit into our day-to-day lives.

***DOVECOTE FOR LONDON* (2023), JAMES PEPLOW POWELL. CERAMIC, PLYWOOD, ALUMINIUM.** COURTESY OF JAMES PEPLOW POWELL.

FIND *DOVECOTE FOR LONDON* IN **SECTION 2: MAKING WITH THE WORLD**

Reef Design Lab's *Living Seawall* panels apply a **3D-printed** tiling system to **coastal defence** walls, transforming them into dual-purpose shields and marine habitats. 10 different tile designs, resembling rock or reef formations, provide shelter for fish and seaweed as well as **pollutant-absorbing species** like oysters and barnacles. Living Seawalls have been successfully installed on European, Asian and Australian shores.



DETAIL AND INSTALL SHOTS: *LIVING SEAWALL* PANELS (2018), REEF DESIGN LAB, SYDNEY INSTITUTE OF MARINE SCIENCE. LOW CARBON CONCRETE, COMPOSITE REINFORCEMENT. COURTESY REEF DESIGN LAB, LIVING SEAWALLS AND ALEX GOAD.

FIND *LIVING SEAWALL* IN **SECTION 2: MAKING WITH THE WORLD**

learning and making with the living world

More-than-human species have spent millennia perfecting efficient solutions to many problems humans face too: strong but light structures, finding sustenance in sometimes hostile environments, and developing **adaptive** movement and communication systems. Designers can not only learn from these but design and make things for and with living species.

Here are some natural architects who work with the resources available to them to create efficient, protective structures perfectly adapted to their environments:

- **Wasps** chew wood into pulp so they can shape it before it hardens again, into structures with built-in ventilation and cells to shield their layers of eggs.
- The round, insulating mud 'oven' nests which give **ovenbirds** their name maintain warm temperatures for egg incubation while deterring predators.
- **Weaverbirds**, unsurprisingly, weave grass strands to create strong but lightweight shelter from an abundant local resource.
- **Hummingbirds** purposefully combine materials to benefit from all their different properties: foliage for camouflage, lichen for antibacterial properties, cobwebs for elasticity.
- The **edible-nest swiftlet** builds up strands of its own saliva to create its nest, allowing it to shelter high up out of danger on the sheer stone walls of caves.
- Subterranean **ant colonies** are vast and hugely complex despite their inconspicuous entrances. In monsoon areas, the ants shape excavated waste into sloping concentric circles around these holes to protect against flooding.
- **Termite** mounds (not included in the exhibition) are made of hardened clay and saliva and contain complex ventilation systems (the *Macrotermitinae termite* takes advantage of these to grow fungus gardens!).

WASP NESTS MADE FROM WOOD PULP. ALL COURTESY TRUSTEES OF THE NATURAL HISTORY MUSEUM, LONDON. FROM LEFT: VESPULA GERMANICA, BMNH 650942; PSEUDOPOLYBIA VESPICEPS, BMNH 013745592; AGELAIA ANGULATA, BMNH 013745593.

FIND THESE WASP NESTS AND MORE IN **SECTION 3: SHIFTING PERSPECTIVES**

Some contemporary human designers fully embrace more-than-human collaboration by working with living materials like **mycelium** (the root-like part of fungi) or bacteria, calling on organisms they cannot fully control.

Bento's *Accalmie* table begins with a scaffold-like beechwood base which supports a tabletop made from its own offcuts. The tabletop provides the **substrate** for mycelia to colonise, growing rapidly before it becomes **dormant** (hence the name *Accalmie*, meaning 'lull' or 'calm'), meaning it can be reactivated for future adaptations and repairs. The same method produced the accompanying stools shown in More Than Human.

***ACCALMIE* TABLE AND STOOLS, CORENTIN MAHIEU, BENTO ARCHITECTURE, SONIAN. MYCELIUM, BEECH.** COURTESY CORENTIN MAHIEU × BENTO ARCHITECTURE × SONIAN.

FIND *ACCALMIE* IN **SECTION 2: MAKING WITH THE WORLD**

Jessie French's *Sands of Time* banners stand as an artwork, but they also offer a practical alternative to **single-use** plastic vinyl made by combining red algae with mineral pigments. The piece's name refers to the timescales evoked: the pigments began forming in stone millions of years ago while the algae grew in a matter of weeks or months. Together, they replace plastic which would only have decomposed over centuries.

DETAIL AND INSTALL SHOTS: *SANDS OF TIME 1707 - RED FLAG* (2024) BY JESSIE FRENCH. BIOPOLYMER, NATURAL PIGMENTS. ALGAL GROWTH PROCESSES CREATE SWIRLING PATTERNS, THAT INDUSTRIAL MANUFACTURING CANNOT REPLICATE. COURTESY JESSIE FRENCH AND OTHER MATTER™.

FIND *SANDS OF TIME* IN **SECTION 2: MAKING WITH THE WORLD**

provocations

- **Pick a plant or animal from a book or film that you like and create a short story, comic strip, or film from their perspective.** You don't have to follow the original narrative; perhaps they barely notice the humans around them or don't even recognise them as sentient. Research your chosen species, move like them or talk like they might, trying to really see through their eyes (if they have any!).

- **Pick a gardening/agriculture technique: from these notes, ask around the green thumbs in your life, or investigate the gardening section in your library. Research and evaluate (perhaps try it out for yourself!), the technique, comparing historic/current scientific and traditional explanations as to how it works.**
  - What is its environmental impact (e.g. on biodiversity, soil chemistry, pollinators, etc.)?
  - Can you come up with an improved version or alternative?
  - Create a poster or multimedia presentation using everything you've found, perhaps sketching or using CAD to create your own schematic(s).

- **Design and prototype a structure that serves human needs while supporting local wildlife, taking inspiration from the Alusta Pavilion, Bird-Safe Building Guidelines, and DOLØN EMB 1 project.** This could be anything from a bird-box to a community hub for more-than-human co-creation and communication. Think about year-round factors (e.g. weather patterns, any migratory or hibernation behaviours). As well as researching online and/or in the library, head outdoors to observe your users first-hand.

- **Research a local area using the Internet, nearby libraries, local archives or museums, and interviews with older community members to map out both human and ecological changes over time.**
  - Can you unearth any traditional knowledge which may have been lost, or preserved through 'old wives tales', urban legend, or superstitions?
  - Notice what you *can't* find, or 'gaps in the archive'. They might indicate how more-than-humans, or even certain groups of humans, have not been prioritised historically.
  - Create a timeline zine or website/page to share what you've found with your community.

further reading

- **Future Observatory publish their own website, blog, and an online journal including a 'more-than-human' issue**:
  - Future Observatory Journal Issue No.2: More Than Human. *Future Observatory Journal* [Online], 2. https://fojournal.org/.
  - Powell, J. P., & Hirson-Comley, L. (2023, April 21). *'If we care about the planet, we should care about pigeons'* [Interview]. Future Observatory [Internet]. https://futureobservatory.org/news/we-should-care-about-pigeons.

- **Dietary habits offer a point of entry for talking about the complexity of ethical consumption and our relationship with more-than-humans.** *Can you eat meat without damaging the environment?* (n.d.). BBC Food. https://www.bbc.co.uk/food/articles/meat_environment.

- Traditional knowledge - an overview | ScienceDirect Topics. (n.d.). https://www.sciencedirect.com/topics/social-sciences/traditional-knowledge.

- Cosier, S. (2021, November 30). *For Thousands of Years, Indigenous Tribes Have Been Planting for the Future.* Natural Resources Defence Council [Internet]. https://www.nrdc.org/stories/thousands-years-Indigenous-tribes-have-been-planting-future.

- US National Parks Service Reference and Reading List on Indigenous knowledge and TEK. (n.d.) [Internet]. https://www.nps.gov/subjects/tek/list.htm

- **Award-winning article (with audio recording option) about a passive fishing trap made by First Nations Salish people.** Payton, B. (2021, August 3). 'The Ingenious Ancient Technology Concealed in the Shallows', *Hakai Magazine: Coastal Science and Societies* [Internet]. https://hakaimagazine.com/features/the-ingenious-ancient-technology-concealed-in-the-shallows/.

- **About the MOTH Program (an initiative of Earth Rights Research and Action (TERRA), a program based at the Center for Human Rights and Global Justice at NYU School of Law).** (n.d.) [Internet]. https://mothrights.org/about/.

- **Find out more about 'the three sisters':**
  - *Growing Your Own: The three sisters.* (n.d.). RHS [Internet]. https://www.rhs.org.uk/advice/grow-your-own/features/three-sisters.
  - A recorded Mohawk story of the sisters personified: https://gardening.cals.cornell.edu/lessons/curriculum-classics/the-three-sisters-exploring-an-iroquois-garden/a-legend/.
  - *The Three Sisters of Indigenous American Agriculture.* (n.d.). National Agricultural Library [Internet]. https://www.nal.usda.gov/collections/stories/three-sisters.

- **Find out more about corn dollies and other traditional British craft skills (including wider straw crafts).**
  - *Corn dolly making.* (n.d.). Heritage Crafts [Internet]. https://www.heritagecrafts.org.uk/craft/corn-dolly-making/.
  - *What exactly is a Corn Dolly?* Straw Craftsmen website. [Internet]. https://www.strawcraftsmen.co.uk/what-exactly-is-a-corn-dolly/.
  - *Collections: Festival of Britain, 1951.* The Museum of English Rural Life [Internet]. https://merl.reading.ac.uk/collections/festival-britain-1951/.

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