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JUN–AUG 2.2020 CHF 28.– I EUR 24.–

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A Post-Anthropocene View on Plants and People

The Queer Nature project explores the little-known, often-overlooked and rare intimate behavior of the botanical world. Inscribed in "a field that doesn't quite exist",[1] it investigates the relationships between ecological thought and queer theory. By presenting the diversity of the vegetable kingdom, it celebrates the multitude of shapes, gender, sexes and colors around us, challenging the belief that matter and intelligence are dissociated.

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Queer NATURE

In order to cope with the current ecological collapse and the upcoming sixth mass extinction, we need to be able to, in the words of the feminist scholar Donna Haraway, "play string figures with companion species" and "refuse human exceptionalism".[2] In recent years, scientists, botanists and scholars are increasingly probing the notion of plant sentience. Indigenous relations of mutual care and assistance shared between humans and nonhumans are being acknowledged more widely,[3] corroborated by recent research in the field of plant neurobiology[4] and arboreal communication.[5] Switzerland reported on the issue of vegetal dignity, setting a frame of reference towards "the moral consideration of plants for their own sake".[6] It is high time we redefined our role amongst other species, considering the natural world as a network of relations that is multifaceted and intersectional. While the Anthropocene fosters the myth of human supremacy, a post-Anthropocene view embraces the notion that plants are our oldest teachers and share stories about their more-than-human knowledge.

The Queer Nature project is based on field observations informed by botanical knowledge. Twigs, flowers, leaves, needles, seeds and acorns are collected in the outdoor parks, gardens, riverbanks, meadows and woodlands of Basel. The samples are then flattened, dried out and pressed between herbarium folios, forming a dry garden[7] of vegetal matter. Together with illustrations, pictures and stories, they constitute a cabinet of curiosities addressed to those questioning binary, patriarchal or heteronormative gender constructs, as well as those curious about the nature of queerness in general.

BASEL'S KINKY WEEDS

Many species of conifers can be admired while going for a stroll in Kannenfeldpark in Basel, including several yews (*Taxus baccata*). The shrub, commonly found in parks and gardens, is often used to create dense evergreen hedges. All yews look very much alike in terms of shape, height or branch structure, carrying analogous shiny dark-green leaves, but they are dioicous. Their distinctive sexual features first appear in spring when blooms appear: some specimens then carry solely male flowers, while others bear only female flowers. The yew is indeed unisexual: an individual shrub can only be either male or female. After pollination, the male flowers are shed while the female blooms turn into a juicy fruit encapsulating one seed. This makes the yew gender clearly recognizable: if the shrub carries the crimson fruit it is a female. This natural ornament also makes it the gardener's favorite.

The Swiss stone pine (*Pinus cembra*) is another conifer: a handsome needle-leaved tree well suited to mountainous landscapes and native to high subalpine elevations. It is known as bisexual: being monoicous, each tree carries both male and female flowers on distinct parts of the same plant. The male organs are recognizable thanks to their conspicuous yellow pollen grains, while female blooms have a deep purple color. Pollination occurs thanks to small insects like bees, flies or ants. Once fertilized, the female flowers turn into cones of a deep brown color, carrying the tree's naked seeds, later wind-borne to create new pine colonies.

Evergreens like the yew and the stone pine appeared early in the course of evolution. Their modus operandi of growth is ancient and was later enhanced by a new mechanism: hermaphroditism. Hermaphroditic flowers gather both male and female features in a single organ, shaping what botanists call 'perfect' flowers. It is today the favored reproduction technique in the plant world, presumably because it allows both cross- and self-pollination. The hosta is one of those perfect flowers. The Merian Gardens in Münchenstein hosts a beautiful collection of such specimens, including the small-leaved plantain lily (*Hosta sieboldii*), appreciated by gardeners for its delicately striped leaves as well as its showy deep purple flowers. Its splendid lilac petals shelter the hermaphroditic sexual organ at the center of the plant.

Unisexual, bisexual and hermaphroditic features are not fixed, however, and queer nature likes to transgress its own rules. The wild carrot (*Daucus carota*), for instance, commonly found on the Rhine riverbanks, holds fragile pompom-shaped flowers arranged into umbels. While the inner rings are composed of male flowers, the outer ones are hermaphroditic, making the wild carrot both a hermaphroditic and a male being. The bladder campion (*Silene vulgaris*) is another herbaceous perennial growing along wild meadows and the edge of woody areas, carrying beautiful bulbous-shaped flowers that can simultaneously be hermaphroditic, male and female, all together on one plant. Plants' genders can also evolve with time. The previously mentioned yew tree, for instance, often begins in its youth as a male until it reaches so-called sexual maturity, when it then turns into a female, thus exhibiting sequential transsexualism.

FROM MOTHER NATURE TO MANUFACTURED BOTANY

Plant sexuality was long a contested topic within natural sciences, as it disrupted established archetypes about Mother Nature. The female gender, with its ability to produce offspring, was and is still commonly used to depict the vegetal world and its riches. As early as prehistoric times, clay figurines of women with seeds embedded in their back, belly or eyes were used as symbols for conjuring a fruitful harvest.

The first known reference to the idea of plant sex appeared in antiquity, when the philosopher Aristotle mused audaciously by comparing roses with upside-down animals.[8] According to him, roots were comparable to the mouth as nurturing organ, twigs to legs, and consequently sexual organs should also be present on the flowers. The philosopher's intuition was nevertheless not scientifically proven until the end of the seventeenth century, when the scientist Camerarius wrote the

1 Timothy Morton, "Guest Column. Queer Ecology." In: *PMLA* 125, 2.2010, p. 273.

2 Donna J. Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*. Durham in North Carolina 2016, pp. 9 and 13.

3 Robin Wall Kimmerer, *Braiding Sweetgrass. Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*. Minneapolis in Minnesota 2014.

4 Stefano Mancuso / Alessandra Viola, *Brilliant Green. The Surprising History and Science of Plant Intelligence*. Washington / Covelo / London 2013.

5 Suzanne Simard, *Exploring How and Why Trees "Talk" to Each Other*. New Haven in Connecticut 2016.

6 Federal Ethics Committee on Non-Human Biotechnology / Ariane Willemsen (eds.), *The Dignity of Living Beings with Regard to Plants*. Bern 2008.

7 Herbarium collections were traditionally kept in bound formats, where plants were mounted to the pages of a volume, stored in a library and cited like books. These albums of dried plants were known as either a dry garden (*Hortus siccus*) or a dead garden (*Hortus mortus*).

8 Aristotle, *De Generatione Animalium*. Circa 350 BCE, transl. by Arthur Platt, in: John Alexander Smith / William David Ross (eds.), *The Works of Aristotle*. Oxford 1908, vol. I, p. 44 and vol. II, p. 63.

first modern publication on the topic,[9] later used by the botanist Linnaeus as a basis for his own work on classification.[10] The natural philosopher Johann Wolfgang von Goethe had a divergent idea on the matter, which he described in an infamous poem: In his romantic mind, plants evolved through metamorphosis,[11] an argument that was later used by asexualists to back up denial theories. Subsequent discussions lasted for almost one hundred years until, in the 19th century, the scientific community ultimately reached a consensus on the true existence of plant sexuality.

Ordinary people didn't wait that long, and hand-pollination was commonplace ever since the beginning of agriculture – although it was not acknowledged as something erotic. Artworks found in modern Iraq show Assyrian arborists manually fertilizing the female flowers of date palms with male ones (like yews, date palms are unisexual) to produce the sweet edible fruit.[12] Pollination had also been used for horticultural purposes since ancient times in order to create new varieties of flowers. This art culminated during the Dutch Golden Age, when florilegium paintings depicted the abundance of shapes and colors produced by tulip breeders. This led to what is now known as the Dutch Tulip Mania, when the price of the coveted tulip bulbs increased one hundredfold within a few years, leading to the world's first economic bubble and subsequent financial crash in human history.

The Netherlands subsequently remained a leader within the market of horticultural production. The houseplants we purchase today in the garden centers of Europe are mostly cultivated within automated greenhouses in the province of South Holland. This manufactured botany is, however, not produced through pollination – the non-hierarchical relation based on an exchange with bees, insects and birds – but is in fact engineered by cloning, a method of vegetative propagation

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The *Queer Nature* project was presented at the *Theaterfestival Basel 2018*. The Klingental hall transformed into a lush paradise by MAMAZA, called the *Garden State*, was an ideal setting. The potted plants had been borrowed from Basel apartments. (photo: Vesna Jovanović © Studio Céline Baumann)

using growth material – such as branches, leaves or root parts – to create rows of well-aligned pots on a massive scale. Cloning has, on the one hand, the advantage of being a quick and efficient process, producing a large number of offspring that quickly reach maturity. Those exact copies do not generate new genetic material, however, and thus reject vegetal matter's legitimate claim to individual experience and expose identical generations to the risk of being entirely wiped out by disease. Sexual reproduction, on the other hand, enables plants to evolve by selecting a balance of favorable hereditary characteristics. This is a slow and demanding process, yet necessary to allow mutations that inevitably happen during growth, which is vital for plants to adapt to their often-changing environment – and nowadays to global warming.

QUEERING THE PUBLIC REALM

Queer Nature allows the emergence of a redefined idea of the world, not as something separate and dominant, but as relational and queer. City planning can also benefit from this emancipating process. The public realm is a prominent space of expression for civil society and deserves to be placed under scrutiny. How compliant are our open spaces? Is the way we build our commons emboldening for all, including sexual minorities?

The study of street signs invites us to tackle the topic. Within the city of Basel, around one hundred of all public spaces are named after people.[13] The name givers include historical and political luminaries, influential families, cultural actors and mythological figures. Just about a tenth of the spaces are named after women, and out-of-the-closet gays are simply absent. This situation is not specific to Basel but actually widespread. To highlight the issue, feminist and queer groups throughout Europe are undertaking bottom-up activism, renaming to their liking the public realm in cities like Geneva, Paris and Amsterdam.[14] Some governments are hearing them: in tribute to the Stonewall riots, Paris renamed a series of squares and streets after local and international queer personas, including the transgender writer and resistance fighter Ovida Delect, the holocaust survivor Pierre Seel, and the politician and activist Harvey Milk. Acclaimed Swiss personalities like Annemarie Schwarzenbach would undoubtedly deserve such recognition in their homeland.

Other insights can be found in the range of freely accessible recreational equipment that public spaces offer. Soccer and table tennis amenities are, for instance, ubiquitous in our cities – certainly for good reasons, as those sports are amongst the most popular outdoor activities. Yet they inconspicuously tend to reinforce gender stereotypes. Women in Switzerland represent only one third of all table tennis players, while this number falls to one tenth in regard to soccer.[15] A study conducted in Geneva acknowledges that city-subsidized sport resources are allocated to men in more than two thirds of cases.[16] Facilities for strength-based recreation like skateboarding or urban fitness are widespread, while agility and team sports like badminton or volleyball are underrepresented, favoring athletic skills over frail or non-normative bodies.

"The built environment is largely the creation of white, masculine subjectivity. It is neither value-free nor inclusively human. […] It is shaped by human intention and intervention, a living archaeology through which we can extract the priorities and beliefs of the decision-makers in our society."[17] This statement from the feminist architect Leslie Kane Weisman still prevails today. The success of public demonstrations like Women's Marches and Pride Parades show a rising demand from citizens to transgress patriarchal and heteronormative conformism. Queering the public realm – that is, fostering gender and sexual minorities within our open spaces – can address both plants and people. Unseal the soil; make it porous and permeable to create a welcoming ground for all. Grant spaces for roots to grow in all human and nonhuman communities. Promote a wide diversity of beings that will grow and mingle, exchanging and caring for each other. By exploring the power of trees, shrubs, flowers and herbs as a source of inspiration, we can find alternatives to the way we design and act – whether on the scale of a private garden, a public space or a national territory – in order to shape truly inclusive metropolitan ecosystems.

9 Rudolf Jakob Camerarius, *De sexu plantarum epistola*. Leipzig 1694.

10 Carl Linnaeus, *Disquisitio de sexu plantarum*. St. Petersburg 1756.

11 Johann Wolfgang von Goethe, *Versuch die Metamorphose der Pflanzen zu erklären*. Gotha 1790.

12 Unknown artist, Apkallu-figure Fertilizing the Sacred Tree, Assyria circa 883–859 BCE. Relief on alabaster, collection of the Brooklyn Museum in New York.

13 Bau- und Verkehrsdepartement des Kantons Basel-Stadt (ed.), "Basler Strassennamen mit Kurzerklärungen." 2017. On: bvd.bs.ch, retrieved March 2020.

14 Anon., "Maiden Lanes. The Push to Name more European Streets after Women." In: *Economist*, January 12, 2019, p. 23.

15 Office fédéral du sport (ed.) / Markus Lamprecht / Adrian Fischer / Hanspeter Stamm, "Sport Suisse 2014. Activité et consommation sportives de la population suisse", Zurich / Macolin 2014, p. 19.

16 Yves Raibaud, "Analyse des facteurs influençant les pratiques sportives des femmes en ville de Genève", Bordeaux 2017, p. 3.

17 Leslie Kanes Weisman, "Women's Environmental Rights. A Manifesto." In: *Heresies* 11, 1981, *Making Room. Women and Architecture*, pp. 6–8.