

| methodologies to create augmentations for its vege |
|--|
| clients, which supplement and enhance their natura |
| reproductive strategies. |
| |
| |
| |

The Plant Sex Consultancy employs design



Plant Statement:

"Like our plant nature, we don't hunt, it's too much trouble. We seduce."

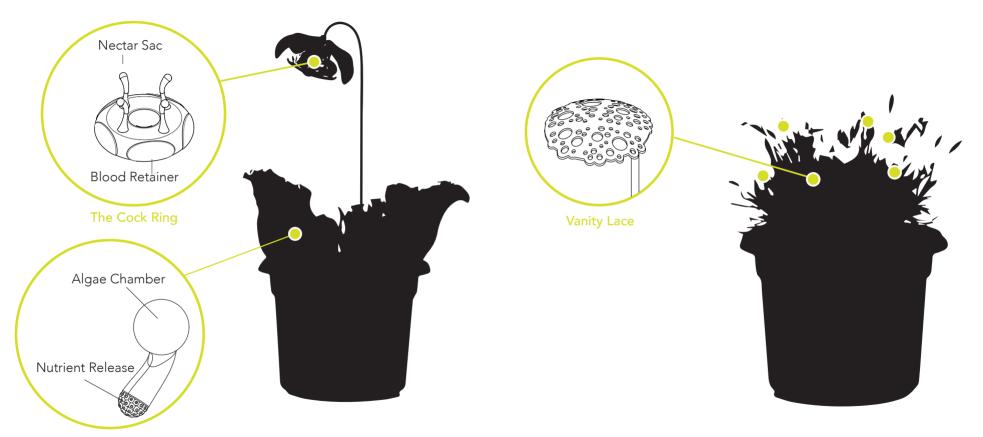
purpurea

The Problem:

"When we flower, and bear seeds, most efforts will be put into reproduction, while other parts of our body won't be our priority. In my case, I won't be able to digest as well as I normally do, since all my efforts are put into sex. Also, the bugs that pollinate me mustn't get trapped by the pitchers. I need a strategy to maintain resources and attract the pollinators to the flower."

The solution:

The pitchers are supplemented with an augmentation, which provides an alternative food source that's generated by algae through photosynthesis. The structure containing algae directly blocks Sarracenia's mouth to avoid it from eating pollinators. An additional augmentation on the flower carries sacs with blood to attract mosquitoes and nectar to attract the bees, drawing them away from the pitchers.



The Dildo



Description:

The carnations have been cultivated and hybridised by humans to bear an ever-greater number of flower petals, but the humans have done little to prevent the spread of sexually transmitted diseases (STDs) such as the fungal infections rust and smut.

The Problem:

The STDs are spread by pollinators and other visiting insects. In infected flowers the female function is aborted and fungal spores replace all pollen in the anthers. One infected flower is enough to make the entire plant sterile.

The solution:

The best way to prevent the spread of an STD is abstinence, but with such attractive petals, which bug could resist the temptation? The vanity lace masks protect a selection of flowers on a single plant, blocking contact with the pollinators and statistically reducing the incidence of STDs, while keeping the visual seductiveness in the form of a lace.



Description:

To ensure efficient pollen transfer from one cyclamen to the next, the plants co-evolved with a species of bee that shakes the flower with a specific frequency. Only in conjunction with this frequency code is the pollen released from the flower in opulent amounts, giving exclusive feeding rights to the bee and through the bee's preference ensuring the pollen is transferred to another cyclamen flower.

The Problem:

That particular species of bee happens to have gone extinct.

The solution:

A vibrating pod with a sensor is designed to gently grasp the cyclamen flower. When triggered by a visiting insect, the pod shakes with the exact frequency needed to release the pollen onto the insect





Plant Statement:

"Our friend the Abutilon Mosaic Virus makes our family much stronger and popular within the territory we share with humans due to the yellow spots it causes on our leaves."

The Problem:

"My problem is that while I am very proud of my yellow variegation, because it significantly boosts our desirability in human world, my offspring cannot inherit the virus causing the spots from me. Only through human's intention or the help of whiteflies do we have Abutilon Mosaic Virus spreading to us once more."

The solution:

When the newly grown Abutilon is 2 months old, it receives the final gift from its mother - the Abutilon Mosaic Virus, which causes beautiful variegation of the foliage. The virus bread on the mother's leaf is transferred to the young plant by whiteflies using an inoculation kit. The inoculation kit guarantees the young Abutilon obtains the beneficial trait without the whiteflies spreading uncontrollably.



Plant Statement:

"Usually I'm not considered as a growing plant but cut flower or a spice. I sleep from November to May every year in the form of a rhizome bulb where all my belongings are stored."

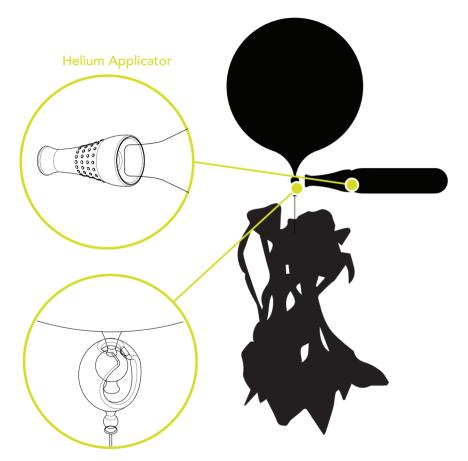
Curcuma alismatifolia

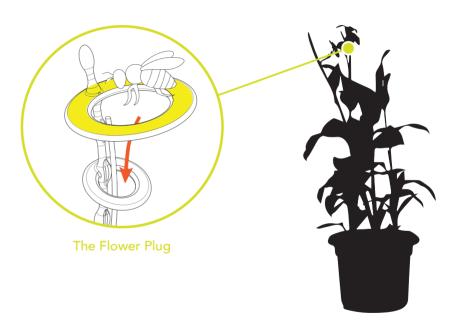
The Problem:

"I come to you because I literally have NO SEX LIFE. I'm infertile... My offspring are just clones, and I hate looking at younger versions of myself, blossoming in my vicinity."

The solution:

The rhizome is dug out when the plant goes into dormancy. A weather balloon is then tied to the rhizome, carrying it to the edge of the Earth's atmosphere, where the rhizome receives a huge amount of radiation and thus mutates the genome. As the balloon rises closer to the space, the temperature and pressure burst the balloon and the rhizome is dropped back to Earth far from where it originated, planting a mutant different from its clonal lineage.





Rhizome to Balloon Adaptor



Description:

The highly unusual and asymmetric canna lily's flowers (the petals are actually transformed stamen) are adapted to pollination by hummingbirds - the flowers are bright orange and the luring nectar they produce is tucked away at the bottom of the petal tube.

The Problem:

In temperate climates (the canna lily originates from the tropics) where the plant is popular in gardens, the hummingbirds are replaced by bees as the main pollinators. However, the bees are much less efficient at their job, since they can't see the color orange and can't access the nectar. In fact, certain bees drill a hole into the flower funnel to get the nectar reward, completely avoiding the pollen and style.

The solution:

To better suit the bee pollinators, the architecture of the flower needs to be augmented. The device uses capillary action to passively transport the nectar from the bottom of the flower to the area with the pollen. The top ring of the augmentation, positioned at the level of the stigma (the pollen receptor) serves as a landing platform and is bright yellow to visually signal the nectar reward to the bees. First the bee deposits pollen from another flower onto the stigma, then crawls through the ring to the source of nectar, which is conveniently positioned next to the pollen, picking it up as it consumes the nectar.

DESIGNING FOR THE NON-HUMAN OTHER

The outcome of the exploration of the PSX Consultancy's plant-centered design is a collection of concepts, which appeal to the viewers' imagination, but leave them confused amidst the different rationalizations of what the objects are and what purpose they serve. Their formalizations linger between allusions to medical devices and erotic hardware, but their intended functionality can only be perceived through an understanding of the principles that support the interaction between the plants and the agents on which they depend to overcome their immobility.

Although extensively studied, the plant clients remain candid in their true necessity and haplessly silent about their interest. The appropriation of the human-centered design methodology onto plant life provides a necessary albeit provisional framework, within which the designer attempts to "feel into" the subject. Given the lack of first-person experience and limited knowledge on plant cognition (if it exists), biofiction prototyping offers cross-referenced insight and to the best of human ability approaches the plant entity, resulting in a benevolent projection of a paradoxical utility and personification onto nature. The reproductive augmentations conceived through this project are critical discursive objects rather than pragmatic design solutions. They question the validity and the ethics of the cultural imposition onto nature and explore sexuality in its trans-biotic manifestations.

The process of methodological appropriation is, however, a double-edged sword. The legitimacy of intentional anthropomorphism depends on the viewer's cultural context. The method is effective if the designer employing it subscribes to the Eastern philosophy, which grants an equivalent status to all entities, living and inanimate, but irrationally unpalatable to designers stemming from the Western Cartesian tradition, which ascribes true individuality and sentience solely to human beings. The inherent antagonism, ab-

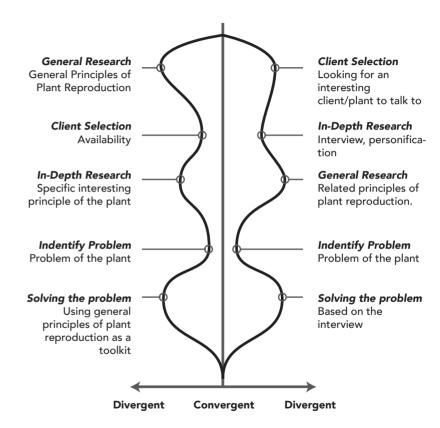
surdity and humor apparent in the augmentations also manifest themselves in the design process, which stems from West, but is in this context more congruent with the Eastern world view.

Additionally, taken as a case study in the extreme, the exploration of augmentations for plants elucidates the limitations of the designer-client relationship. Thorough background knowledge of the end user is invariably a critical point in the success of any proposed design solution. Although this aspect is, due to an assumed similarity, often understated when dealing with human clients, it remains in the foreground when attempting plant-centered design.

The project utilizes the capability of applied arts to shape the society's perception of itself. In this sense, the PSX Consultancy project bluntly serves its own agenda, creating objects that carry true meaning for the human, but not the plant. The analogy between plant and human reproduction resides in the function of the designs and is visually communicated through the formalization of the proposed solutions, which are misleadingly familiar. Each of the sex toys and medical devices carries a surprising functionality suited to plants. The project thus fetishizes plant reproductive strategies and in turn, by emphasizing its universality, trivializes human sexuality.

The exploration of plant-centered design aims to populate the human attitude of convenience, use, fascination, necessity, and ignorance towards the plant realm with strange and quirky reflections, which inform the existing perception of plants. Moreover and despite irreconcilable differences, it encourages the possibility of a respectful awareness of the Other, be it vegetal, alien or female.

THE PROCESS



AUTHORS

Pei-Ying Lin *peiyinglin.net*Dimitris Stamatis *leavenlab.com*Jasmina Weiss
Špela Petrič *spelapetric.org*

3D PRINTING

Ortotip d.o.o.

PLANTS SUPPLIED BY

University of Ljubljana Botanic Gardens

SUPPORT

Scenart, d.o.o.

PRODUCED BY

the Museum of Architecture and Design, Ljubljana, and BIO50

THANKS TO

Miha Turšič, Blanka Ravnjak, the Taiwanese Bioart Society, Tzu-Yang Lin from Chiawei Li Lab, National Tsing Hua University, William Myers & Jurij Krpan

BIO 50

24. bienale oblikovanja 24th Biennial of Design 18. 9.—7. 12. 2014

MUZEJ ZA ARHITEKTURO
IN OBLIKOVANJE
MUSEUM OF
ARCHITECTURE AND DESIGN



E otanični University vrt Botanic Univerze v gardens I.jubljani Ljubljana





3.2.1...TEST





