DESERT BLOSSOM: MULTI-SPECIES COHABITATION IN URBAN ENVIRONMENTS

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Categories: Designing Matter, Essay, No Density, NYXO Studio, Southern Coexistences, Technology and fabrication

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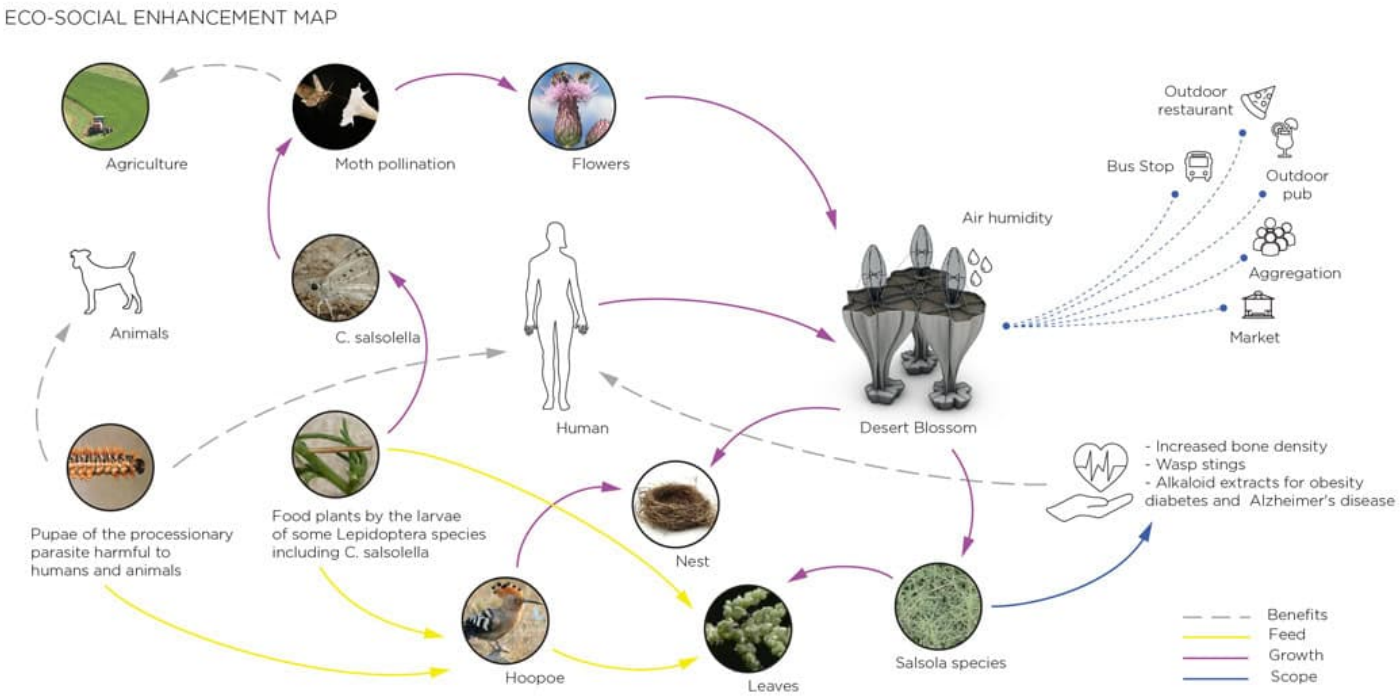
Desert Blossom (DB) is a flexible infrastructure enabling multi-species cohabitation in urban environments. It is a shelter that can be adapted to different contexts and different human activities, from a bus station to an outdoor market, thanks to the use of dynamic design strategies combined with additive manufacturing technologies. Architecture acts as a scaffolding that changes over time, where natural and artificial elements blend in a bio-integrated system.



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It is a fact that contemporary cities suffer from a loss of biodiversity in urban areas. This project encourages a fusion of architecture and local biological components to enhance ecological cycles and include buildings in a mutual exchange between humans, vegetation, and animals. This configuration was developed for cities with a hot desert climate like Dubai specifically to reintroduce local species into the urban environment, but the principle could be adapted to other climates and conditions.

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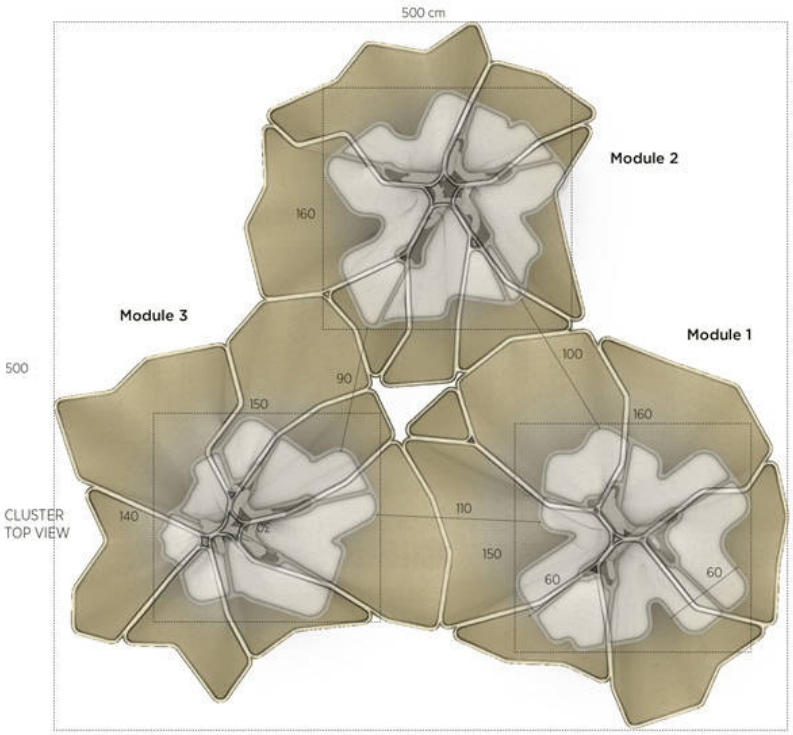

Module 1		Module 2		Module 3	
7 Pockets		7 Pockets		7 Pockets	
0.05 m³	56 kg	0.07 m³	78.4 kg	0.07 m³	78.4 kg
0.06 m³	67.2 kg	0.05 m³	56 kg	0.03 m³	33.6 kg
0.07 m³	78.4 kg	0.08 m³	89.6 kg	0.05 m³	56 kg
0.03 m³	33.6 kg	0.08 m³	89.6 kg	0.06 m³	67.2 kg
0.07 m³	78.4 kg	0.04 m³	44.8 kg	0.06 m³	67.2 kg
0.07 m³	78.4 kg	0.07 m³	78.4 kg	0.06 m³	67.2 kg
0.08 m³	89.6 kg	0.03 m³	33.6 kg	0.08 m³	89.6 kg
Base		Base		Base	
0.05 m³	56 kg	0.05 m³	56 kg	0.05 m³	56 kg
Steel Core	240 kg	Steel Core	240 kg	Steel Core	240 kg
Soil		Soil		Soil	
0.065 m³	1040 kg	0.065 m³	1040 kg	0.065 m³	1040 kg
Tot	1817 kg	Tot	1806 kg	Tot	1795 kg

The pavilion is composed of a series of 3D printed columns that gradually expand their horizontal section as they rise vertically. These funnel-like elements connect to one another generating a vaulted shelter. They can also be combined in different configurations, adding additional elements or scaling the installation up or down. The columns generate a system of pockets that are inhabited by local vegetation at the roof level. The plants, in turn, attract birds that can make their home in DB: the cavities in the columns and the gaps between the masses become the infrastructure for their nests.

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