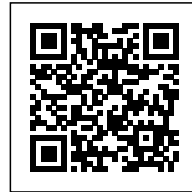




## DESERT BLOSSOM: MULTI-SPECIES COHABITATION IN URBAN ENVIRONMENTS

*Posted on May 26, 2023 by martabuges*



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**Categories:** [Designing Matter](#), [Essay](#), [No Density](#), [NYXO Studio](#), [Southern Coexistences](#), [Technology and fabrication](#)

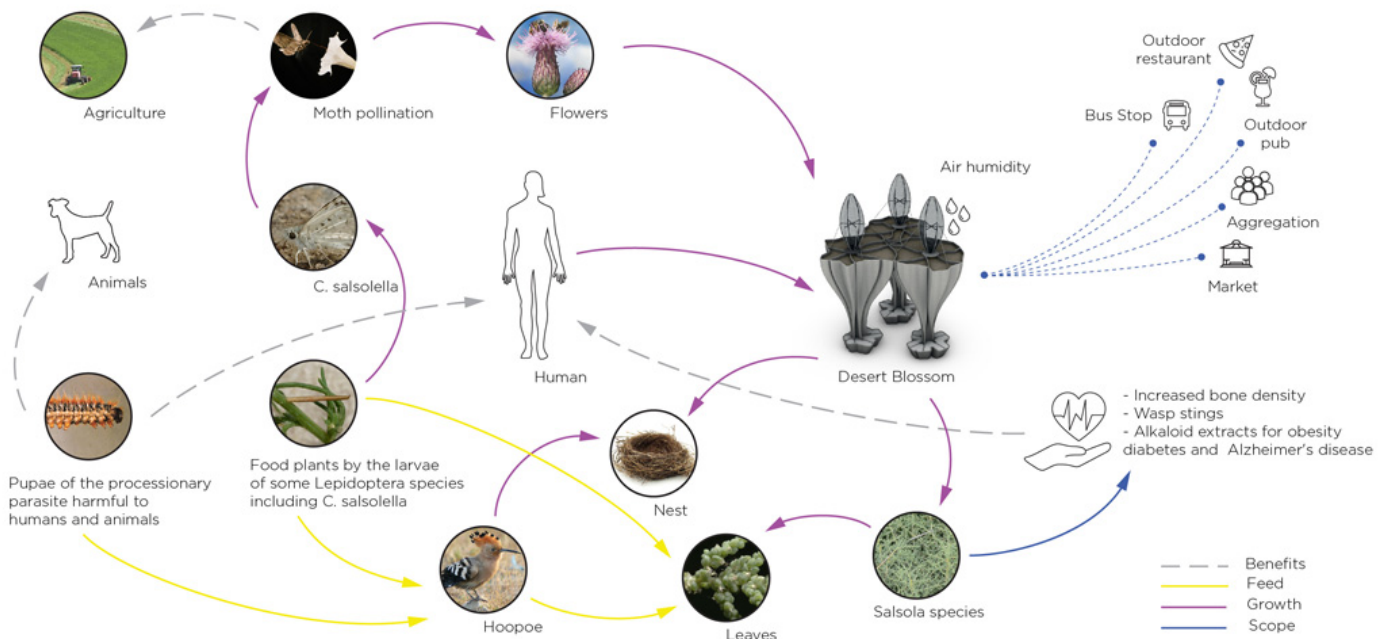
**Tags:** [Architecture&climate](#), [Biodiversity](#), [Extreme conditions](#), [Greenery](#), [Innovation](#), [Pavilion](#), [Project](#), [Research](#), [Urban environment](#), [Well-being](#)

**Authorship:** Project by [NYXO Studio](#).

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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.

ECO-SOCIAL ENHANCEMENT MAP



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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.

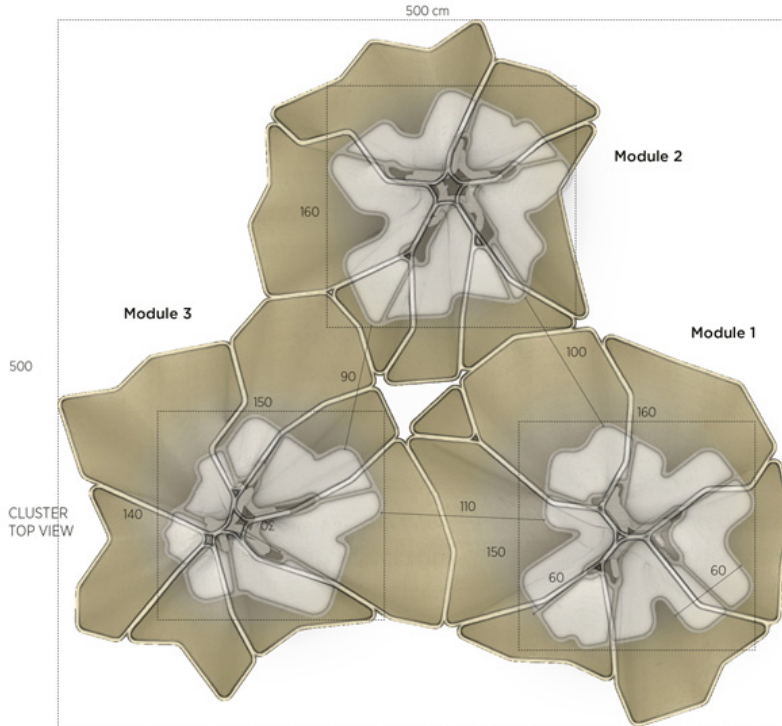
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Module 1		Module 2		Module 3	
<u>Z Pockets</u>		<u>Z Pockets</u>		<u>Z Pockets</u>	
0.05 m <sup>3</sup>	56 kg	0.07 m <sup>3</sup>	78.4 kg	0.07 m <sup>3</sup>	78.4 kg
0.06 m <sup>3</sup>	67.2 kg	0.05 m <sup>3</sup>	56 kg	0.03 m <sup>3</sup>	33.6 kg
0.07 m <sup>3</sup>	78.4 kg	0.08 m <sup>3</sup>	89.6 kg	0.05 m <sup>3</sup>	56 kg
0.03 m <sup>3</sup>	33.6 kg	0.08 m <sup>3</sup>	89.6 kg	0.06 m <sup>3</sup>	67.2 kg
0.07 m <sup>3</sup>	78.4 kg	0.04 m <sup>3</sup>	44.8 kg	0.06 m <sup>3</sup>	67.2 kg
0.07 m <sup>3</sup>	78.4 kg	0.07 m <sup>3</sup>	78.4 kg	0.06 m <sup>3</sup>	67.2 kg
0.08 m <sup>3</sup>	89.6 kg	0.03 m <sup>3</sup>	33.6 kg	0.08 m <sup>3</sup>	89.6 kg
<u>Base</u>		<u>Base</u>		<u>Base</u>	
0.05 m <sup>3</sup>	56 kg	0.05 m <sup>3</sup>	56 kg	0.05 m <sup>3</sup>	56 kg
<u>Steel Core</u>		<u>Steel Core</u>		<u>Steel Core</u>	
	240 kg		240 kg		240 kg
<u>Soil</u>		<u>Soil</u>		<u>Soil</u>	
0.065 m <sup>3</sup>	1040 kg	0.065 m <sup>3</sup>	1040 kg	0.065 m <sup>3</sup>	1040 kg
<b>Tot</b>	<b>1817 kg</b>	<b>Tot</b>	<b>1806 kg</b>	<b>Tot</b>	<b>1795 kg</b>

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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