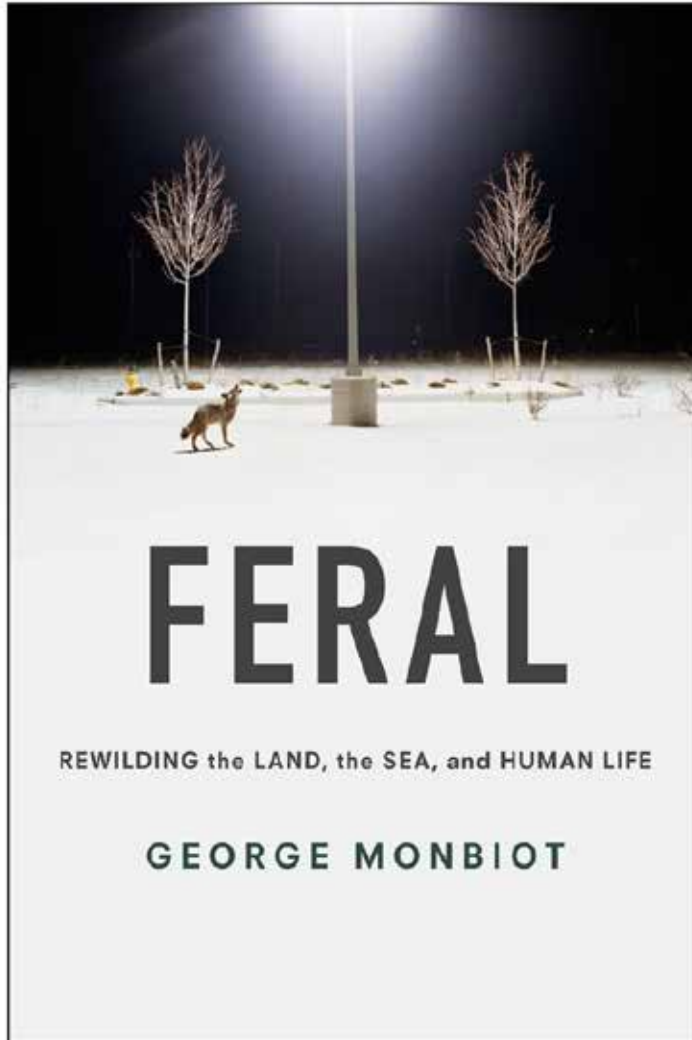


Biomimicry in the Anthropocene

Derek Rayle 10 05 2017



Edward Burtynsky

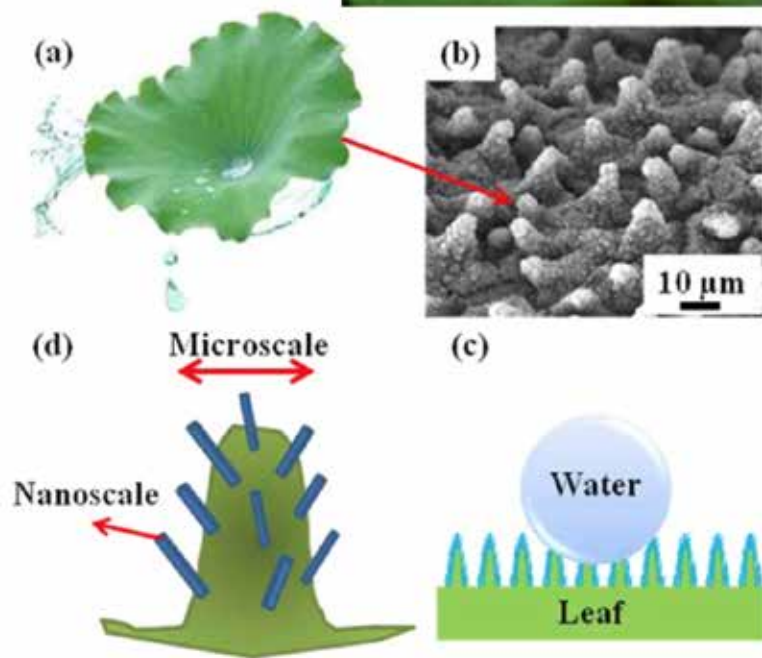


George Monbiot



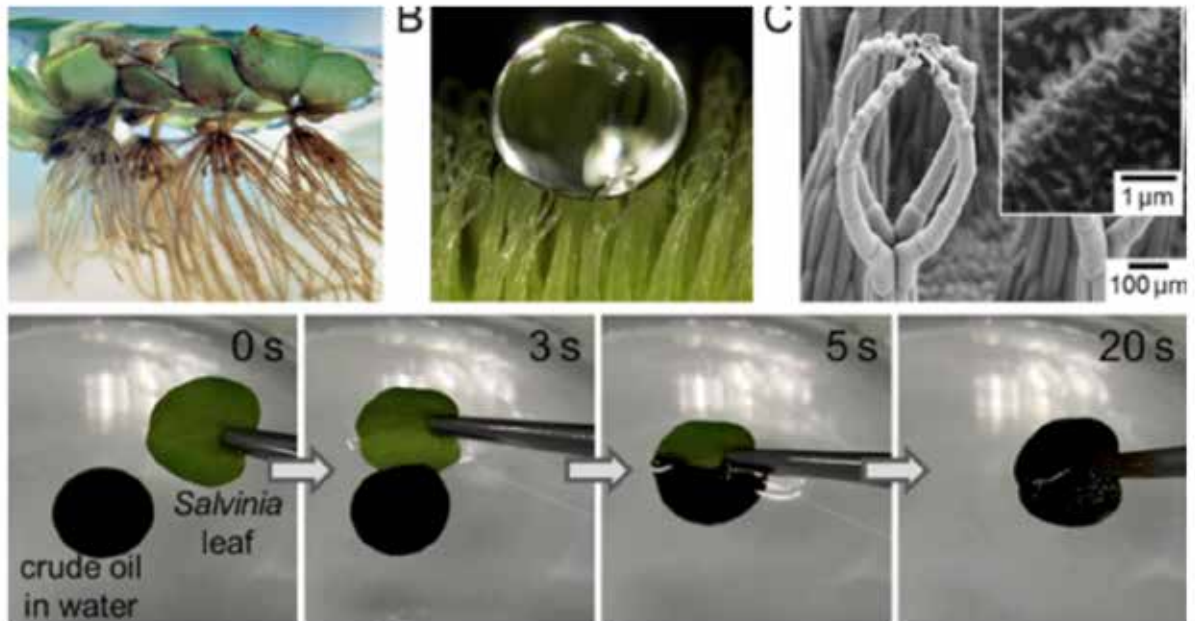
PLATE 51
Lotus-Bly, *Nelumbo lutea*

Nelumbo nucifera
Sacred Lotus

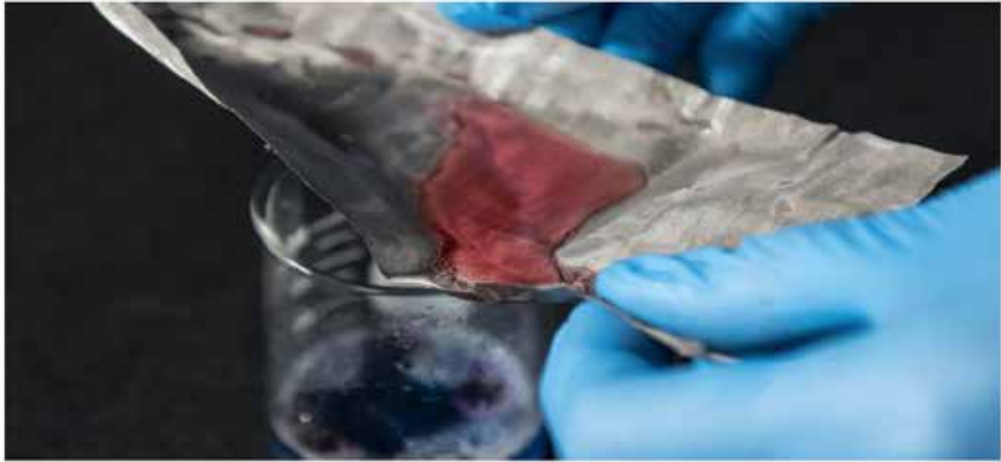


https://www.youtube.com/watch?v=VHcd_4ftsNY

Salvinia and Crude oil



Ohio State University



OSU





Liam Young



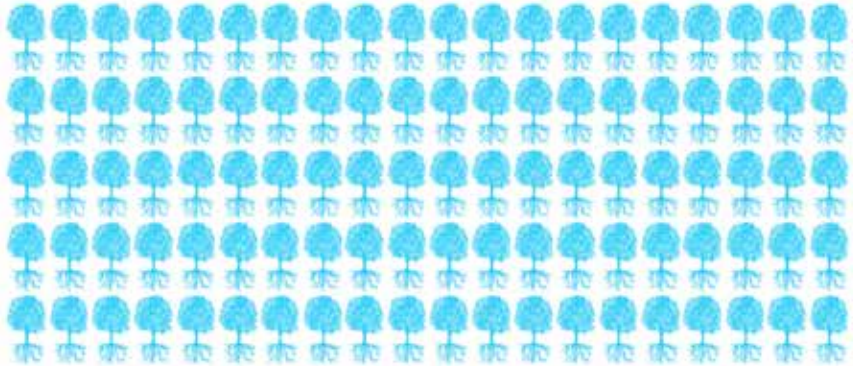
GROWING SYSTEM

Boston Treepods



ONE TREEPOD

IV



100 TREES

CARBON-SCRUBBING COMPARISON

Boston Treepods



PULMONARY ALVEOLI
STRUCTURE

+



THE DRACAENA CINNABARI
OPTIMIZED CANOPY SHAPE

=



BOSTON TREEPODS

Boston Treepods

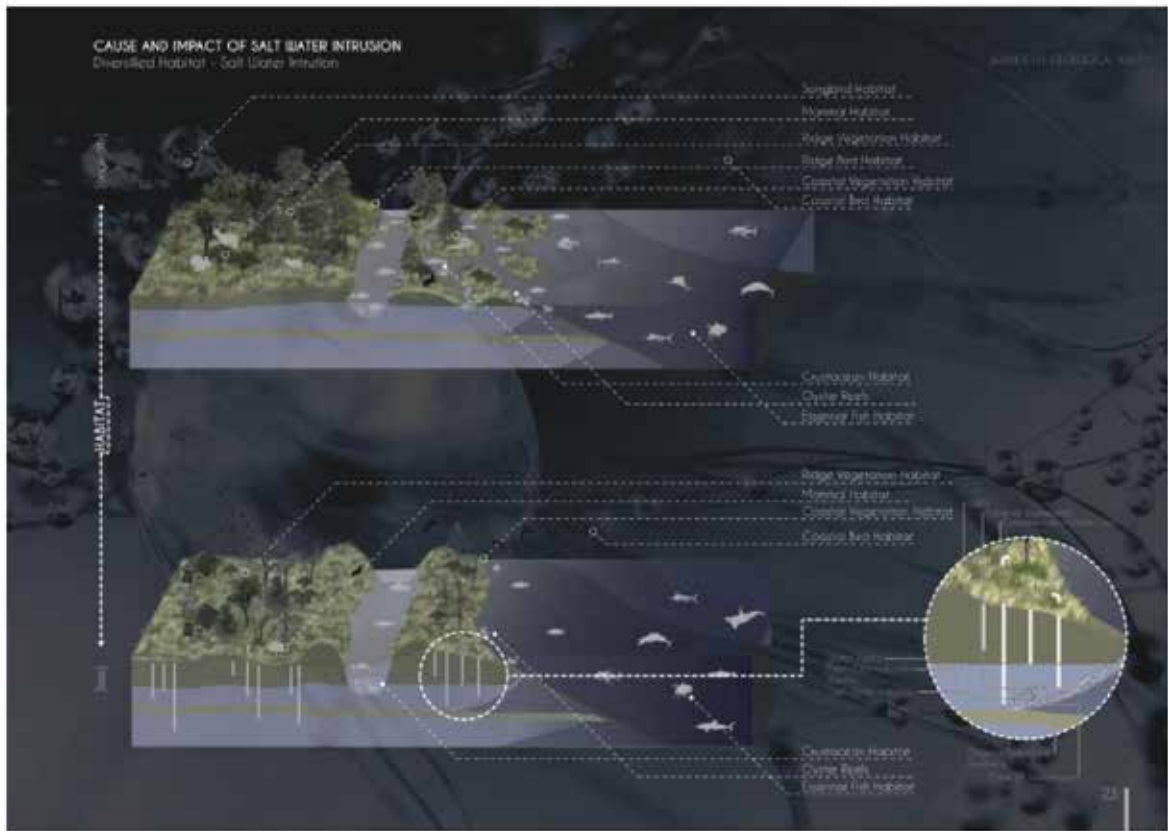


Boston Treepods



Boston Treepods





Hydro_Meditating Interface _ IAAC

CACTUS MEASOLIC PERFORMANCE

Succulents undergo cycles of filling and emptying water-storage

PHOTOPERIOD

The epidermis is the outermost layer of cells through which an exchange with the environment occurs. It also provides essential protective characters to help control air loss when heavily irradiated.



STOMATA

The main gas exchange molecule transport occurs in a cell which lies between the lower cortex and the pore. The guard cells are:



PHLOEM which serves to move water as well as dissolved nutrients.

PSYCHEM which distributes photosynthetic products and other organic molecules.

PHLOEM CORKS

Marked the outer as the "stem" of cactus with the inner cortex.

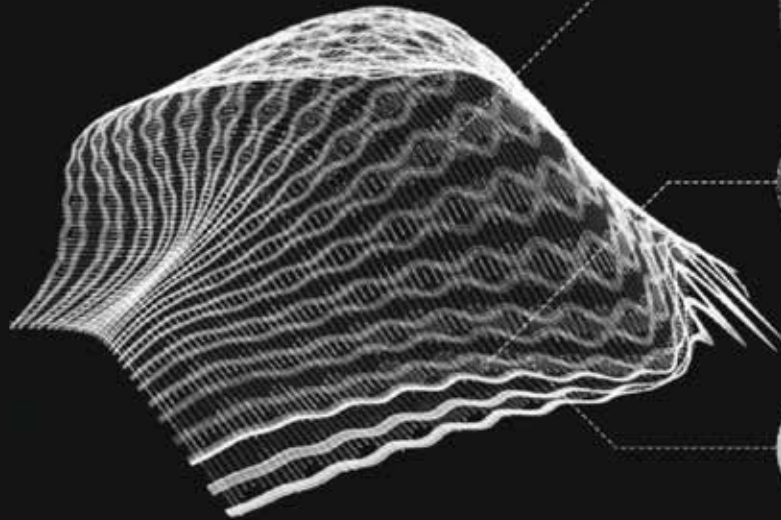


CELLULOSE POLYMER

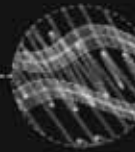
Special type of tissue that for flexible and deacidify elastic walls.

ORTHOGENESIS

Morphology - Spatial Arrangement of Vascular Vessels



VASCULAR BUNDLES
Locations of the vascular bundles are based upon direction and height of the leaf, upon the number of traces per leaf and the nature of leaf venation.
A. J. KRAMER, 1954



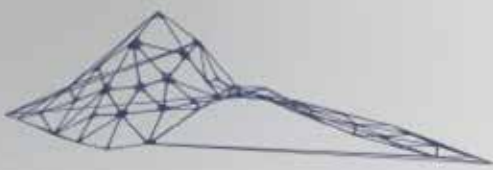
TRANSITION
The transition from leaf trace to vascular bundle happens as soon as an actively laid out leaf trace gets in contact with the existing vascular system.
Axial bundles are usually interconnected thus creating a communicating conjunctive system. The places where the leaf traces branch out the vascular sections are called internodes.
A. J. KRAMER, 1954



HYDRO-MEDIATING INTERFACE
Project Future Implementation - Research



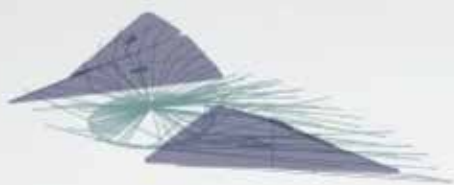
[1] Hydrovacuoles, Epidermis



[2] Colloidal - viscous flow



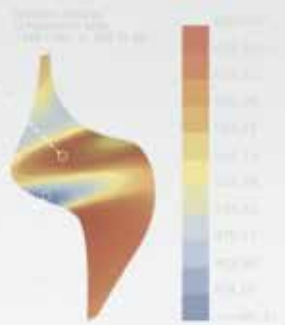
[4] Hydrovacuoles - energy



HIGH RADIATION SURFACE
vacuoles, solar panels, opacity,
shadow, excessive geometric gradient

MEDIUM RADIATION SURFACE
smaller vacuoles, solar panels,
transparency, openings, ventilation,
geometric interface gradient

LOW RADIATION SURFACE
storage, vacuoles, transparency,
openings, electronics, ventilation,
tightening geometric gradient





Hydro_Meditating Interface _ IAAC

Sources

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