RESULTS OF A MEANINGFUL PROCESS
in Architecture
Place
BIOPHILIA
RESULTS
SUN N FUN

PROJECT BY CARLSON STUDIO ARCHITECTURE
The most beautiful gift of nature is that it gives one pleasure to look around and try to comprehend what we see.

- Albert Einstein
LIVING
Honey Ant

Many insects, notably honey bees and wasps, collect and store liquid in their nests and combs for latter use. Honey ants are especially unique in using their own bodies as living storage amongst other functions. Some honey ants store liquid, body fat and water from insects brought to them by worker ants. These ants have the unique capability of becoming a sacrifice to the colony by having the digestive stomach.

Possible architectural elements:
- Structure
- Storage

Honeycomb

Honeycombs can minimize the construction process and the materials needed to build a structure. Usually produced in columnar or hexagonal shape, the structure maximizes the amount of pressure you can put onto a structural element.

Possible architectural elements:
- Light/shading
- Structure
- Aesthetic

Termite Mounds

Termites use a clever system to keep their mounds cool on hot days. Their mounds are porous with a tunnel system that allows the cooler winds to flow through the soil openings and exit at the top, taking along with them the warm, stale air. These mounds are built to such surprising heights to increase chances of catching cooler winds.

Possible architectural elements:
- Model for passively cooled building design

Nambian Beetle

The Namibian Desert Beetle has small bumps on its back that attract water, while the fat surface repels it. Carefully placed along its sides, the water forming gets stripped out of the air by the Porargyrus Lungs and then passed along the beetle’s back by the determination of gravity and the beetle's hydrophobic film surface.

Possible architectural elements:
- Humidity control
- Water-shedding
- Non-wetting

Butterflies

Butterflies produce their iridescent wing color by structural color, rather than pigmentation. This structural color is caused by layers of nano-sized scales that each reflect light in a different way. This interaction between these different kinds of reflected light is what creates the color differences when the viewer’s perspective changes.

Possible architectural elements:
- Color

Ducks

Ducks possess a biomimetic shape in their body structure known as the ‘airfoil’ or ‘hollowed’ shape. This shape is the solution to the Bernoulli’s principle problem, in the sense that it is the quickest way for a fluid to flow from one point to the other off the duck’s body.

Possible architectural elements:
- Biomimetic
- Aerodynamic
WHAT CAN PINECONES TEACH US ABOUT FIRE + THIS ECOSYSTEM?

HEAT SWIRLS THRU IN A SPIRAL PATH TO CAST SEEDS

SEEDS CAST IN A CIRCULAR PATTERN.
Biomimicry – A new paradigm
STRUCTURE
"Annelid
Leach "Hirudine"

Segmented

Rhynchobdella are "Jawless"

Gnathobdella are "Jawed"
Thank You

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