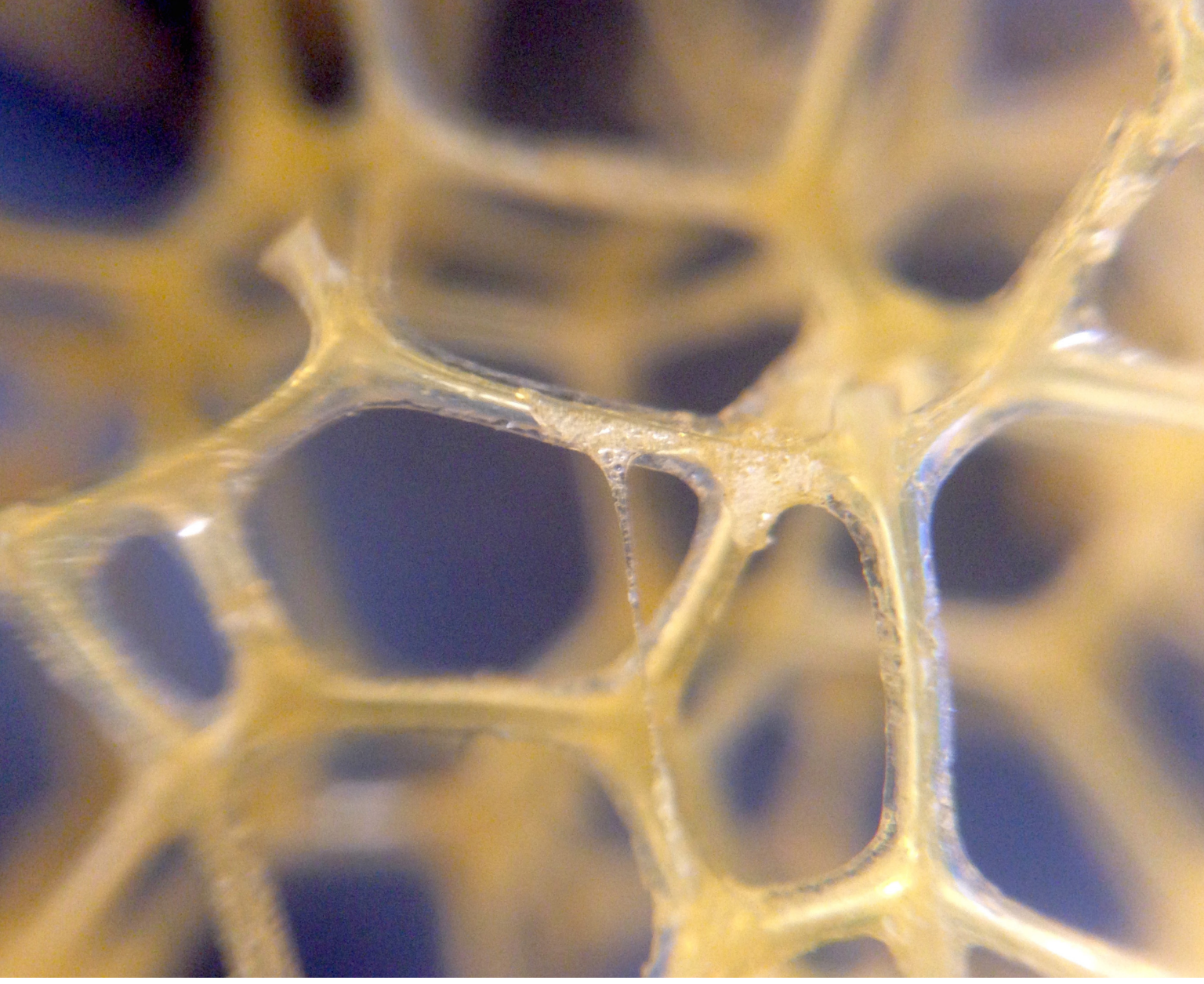


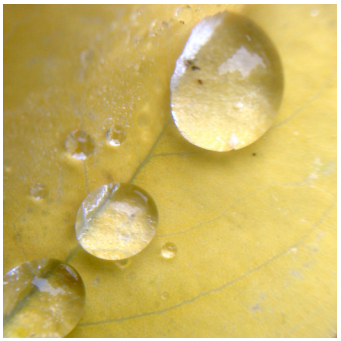
ICAT: *OPEN (AT THE) SOURCE*

The Macronaut Project

May 2–June 12, 2016
Francis T. Eck Exhibition Corridor
Moss Arts Center

VirginiaTech
Institute for Creativity, Arts, and Technology

MOSS ARTS CENTER



ICAT: *OPEN (AT THE) SOURCE*
The Macronaut Project

Our natural world is a complex web of cohesive systems and organisms that function out of the necessity to survive, sustain life, and prosper. Exhibiting design and engineering principles, these structures and natural phenomena are hidden gems ready to be discovered, explored, and utilized for inspiration and innovation across academic disciplines to solve human challenges.

However, as complex and scientific as these studies may be, the visual beauty of these organisms is also worthy of close examination. Diving deep into the natural world through a perspective that is not obtainable with the naked eye, these visual products of exploration unpack the raw essence that lies within organic structures. Breaking down our world into simple, coherent visuals, this altered perspective highlights the natural simplicity, balance, and beauty of the world that we inhabit and exposes the fragility of the life that it sustains.

This exhibition highlights the documentation images collected through the scientific exploration that took place during two Institute for Creativity, Arts, and Technology (ICAT) cross-disciplinary seminars led by Virginia Tech industrial design and biology professors Brook Kennedy and Arthur Buikema over the past two years.

All images exhibited here were gathered throughout Virginia, with a focus on the Virginia Tech campus, Blacksburg, and the Huckleberry Trail. Further detail about this program and the process can be found in the adjacent statement by Kennedy.

Jaclyn Sanders
Curator, ICAT: *Open (at the) Source, The Macronaut Project*
Curatorial Graduate Assistant and MA candidate,
Material Culture & Public Humanities,
Virginia Tech

THE MESTRAL PROJECT:
Learning to Look at Nature for Innovation

In a global age obsessed with innovation, yet struggling to provide basic global access to water, food, and other human needs, the Mestral project endeavors to encourage younger generations to explore the developing field of bio-Inspiration in order to find better ways to address these challenges and others. Unlike alternative methods of creative problem solving, Bio-inspiration examines "design" found in nature; an example might be looking at how desert-dwelling insects gather drinking water as a basis for designing comparable solutions for human benefit.

Modeled after engineer Georges de Mestral's serendipitous discovery of the natural principle driving the invention of VELCRO®, the Mestral project tasks students to explore the natural world in a similar manner for discoveries that could propel meaningful, humane innovation. As a pedagogical activity, the Mestral project is a set of class journaling exercises that were piloted by industrial design and biology professors Brook Kennedy and Arthur Buikema via two transdisciplinary bio-inspired Design seminars in the spring of 2014 and 2015. Their purpose was to engage students in the potential of this field and to inform a design-based team project in the class.

For the purpose of this exhibition, the images shown were created from the second journaling exercise, the Macro Journaling Exercise. In particular, the Macro Journaling Exercise uses smartphone macro lenses like the Macronaut, which were developed specifically for the class. In this exercise students are asked to take close up macro photos of local natural specimens with tools like these to see closer and uncover or highlight interesting phenomenon or behaviors from nature that might spark meaningful design inquiry. Some examples of ideas derived from this exercise include water capturing devices inspired by spider webs, water repelling surfaces for clothing and bicycle seats inspired by hydrophobic leaf surfaces, and new ways of making stronger 3D prints inspired by unusual clam shells. During the course of the exercise, these photographs become a common language amongst students with different strengths, whether they intend to enter technical, life science, or creative fields. Many of the pictures seen in this exhibition were taken on the Virginia Tech campus, in Blacksburg, and along the Huckleberry Trail. Some were taken on the Eastern Shore of Virginia.

In the process of performing the Mestral Journaling Exercise, students gain additional valuable learning experiences. Whether this project directly contributes to a breakthrough idea or simply widens the students' set of problem-solving horizons, students take away strong perspectives in the realities of transdisciplinary teamwork, which they will bring to today's increasingly complicated collaborative workplace. The exercise also stimulates interest in biology and other STEM fields, which contributes to larger national initiatives to encourage students to pursue careers in these fields.

At present, the Mestral project is being expanded in Denmark at the Silkeborg Gymnasium, the largest secondary school in the country. Concurrently, research expenditures in the field of Bio-inspiration have been growing nationally, and Virginia Tech's Center for Bio-Inspired Science and Technology (VTBIST) is developing the field, alongside many other research centers worldwide.

—Brook Kennedy, associate professor of industrial design in Virginia Tech's College of Architecture and Urban Studies

About Brook Kennedy

Brook Kennedy is an associate professor of industrial design in Virginia Tech's College of Architecture and Urban Studies. He received a bachelor's degree in art from Reed College in Portland, Oregon and a master of fine art degree in design from Stanford University in Stanford, Connecticut.

With a 15-year career in industrial, interaction, and communication design consulting, Kennedy has also taught at Pratt Institute in New York and served as a critic at the New School in New York City. Prior to coming to Virginia Tech, he worked as associate director of industrial design at Smart Design in New York, where he assisted consumer product companies to embrace the value of design and a user-centered process for innovation.

Kennedy holds over 10 domestic and international patents for his work and has been honored with international design awards from IDSA, iF, Red Dot, and Chicago Athenaeum, among others. Most notably in 2011 his OXO Tot Sprout Chair won an IDSA Silver and Red Dot Best of the Best Award.

Works in the exhibition

Untitled
16 x 22 inches
Color print on foam board

All works collection of Brook Kennedy
Courtesy of Brook Kennedy and the Institute for Creativity, Arts, and Technology

Acknowledgements

Sincere thanks to the Institute for Creativity, Arts, and Technology (ICAT) for supporting this project and to Brook Kennedy for making this innovative work available for audiences at the Moss Arts Center to experience. Thanks also to the intrepid students from biology and design for sustainable innovation in the spring of 2014 and 2015.

General Information
Admission to galleries and exhibition-related events are free.

Gallery Hours
Tuesday–Friday, 10 AM–6 PM
Saturday–Sunday, 10 AM–4 PM

VirginiaTech
Invent the Future®

For more information about exhibitions and events

www.artscenter.vt.edu /artscenteratvt **@artscenteratvt** *use #attheMAC* **@artscenteratvt** *use #attheMAC*