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STRAIGHT TALK
with Brandon Ballengée

(detail) Styx: Variation VI (2010). 50" x 20" x 10'. Mixed media installation with nine cleared and stained Pacific treefrogs on sculptural light-box.

Installed at Parco Arte Vivente (PAV), Centro D'Arte Contemporanea, Torino, Italy. Summer 2010. Photograph by Valentina Bonomonte. Image courtesy of the artist and Nowhere Gallery, Milan.

Brandon Ballengée is an artist, biologist, and environmental activist concerned with a number of ecological issues including the increasing deformities found in amphibian populations. His own scientific research, published in journals such as the *Journal of Experimental Zoology*, serves as the backbone of his artistic practice. Ballengée lives and works in New York, NY.

SAiA: In your artist statement you describe your practice as pairing biological investigations with artistic interpretation. Can you elaborate?

BB: As an artist and biologist my practice falls into a transdisciplinary approach. Underlying my practice is a systemic methodology, which posits art practice as a means of realizing research science, and vice-versa. While conducting primary research biological studies scientific methods and standards are rigorously followed. The blur comes from the way these seemingly divergent techniques inform one another. The art is an expression derived from experiences with animals in natural or artificial conditions and from the primary scientific research. While making art, I work through mediums based on intuitive decision-making and reflect on the science questions in a different less objective way. This looking from a different viewpoint inspires new questions, experiments, and more science.

Art and science for me have always been intrinsically connected. I grew up in a rural area surrounded by nature and animals. My earliest memories are of catching turtles, frogs, fish, and insects—drawing them and later recording their behavior in aquariums. By the time I was a teenager my parents had let me set up a working wetlab in the basement and an art studio in our barn. At that point I was breeding Amazonian knife fish and making huge paintings. My father was a physician and my mother her own kind of artist—so from my early experiences it has always been natural to understand the world through the lenses of art and science.

SAiA: Much of your work is about environmental issues and public involvement; can you explain why and how this came about?

BB: Growing up in nature entrenched in me a strong desire for conservation of biodiversity

Collapse (2010/12). 12' x 15' x 15'. Mixed media installation including 26,162 preserved specimens representing 370 species, glass, preservative solutions.

In collaboration with Todd Gardner, Jack Rudloe, Brian Schiering and Peter Warny. Installed at Ronald Feldman Fine Arts, New York, NY (spring 2012). Photograph by Varvara Mikushkina, image courtesy of the artist.

and ecosystems. Bringing this message to the public underlies all of my work in science and art—what I call an impetus for "ecosystem activism." Here my field investigations and laboratory programs stress public involvement and engagement. In 2009, I coined the term "Participatory Biology" to describe these forms of citizen contributory science that also importantly facilitate participant reflection as part of the research process. Pragmatically, this has involved recruiting volunteers to aid in biology studies, and creating temporary research laboratories, namely Public Bio-Art Labs, which is open to general audiences. While conducting such primary research experiments scientific methods and standards are rigorously followed; however the process of science is made transparent, participatory, and reflective at a non-specialist group level.

Likewise, in ecological field surveys I encourage public participation, what I call "Eco-Actions." Here citizens contribute by actively helping to collect data on wildlife and monitor wetlands, and in turn learn more about the ecology and biodiversity of where they live. These Eco-Actions attempt to focus participants on specific ecosystems through experiential methods and basic scientific wetland-surveying techniques. Participants are also encouraged to express their experiences through making art. By looking, hands-on science, and artistic reflection, participants learn and generate knowledge about local ecosystems and the organisms they share their neighborhoods with. These kinds of experientially-based Participatory Biology programs allow for citizens to become directly involved in research and experience a side of nature many have not.

SAiA: In your "Malamp" series, you investigate the array of deformities found in amphibians, the causes of which are the subject of your scientific research as well. Altered to reveal bone structure and then scanned, these works exist ultimately as photographs. How did you begin this project, and what do you hope can be gained from the viewing experience?

BB: For over a decade, a central focus of both my art and scientific research has been the occurrence of developmental deformities and population declines among amphibians. Amphibians as a group are in crisis—with estimates at over 40 percent of the known 7,000 species in decline or already extinct. Learning what we can about them and developing strategies for their conservation may be vital for their survival, as well as countless other species impacted by their loss—even our own.

In 1995, a group of Minnesota school children found numerous severely malformed frogs on a class field trip. At this point I was a young artist just out of my undergraduate studies and newspaper images of these frogs with what they could mean environmentally horrified me. Within weeks, I had made contact with the Minnesota Pollution Control agency and scientists around the country—within a few years I was conducting field research with the USGS (U.S. Geological Survey) and working in labs to try to understand what could be causing these deformities.

Over time the science research experiences led to different bodies of artworks, the longest running being my "Malamp Reliquaries" (2001-ongoing) and the sculptural series "Styx" (2007-ongoing). The artworks are derived from the complex sensations of finding such deformed animals in nature and the awareness that we are in part sculpting their development through our treatment of the environment. The works are exhibited with the intention of engaging viewers—hopefully making them interested and concerned for the global plight of amphibians.

"The Malamp Reliquaries" are created by chemically "clearing and staining" terminally deformed frogs found in nature. Once cleared and stained the specimens look almost like X rays. Aesthetically, the colors of the dyed bone and cartilage are vibrant in contrast to the skin, which is semi-transparent, almost shroud-like and ephemeral. This process enables a level of abstraction or distance while simultaneously revealing the complex configuration of malformed development. It alters direct representation as I do not want to exhibit large images of "monsters," which would be frightening and be exploitative of the misfortune of the organism.

This process is followed by high-resolution scanner photography of each specimen to create individual portraits. I use the direct imaging process of scanning to reference the tradition of photograms in natural sciences by Anna Atkins and others, and because of the remarkable details that can be captured through this technique. These portraits are printed as unique watercolor ink prints (never made into editions) and each individual is centered, appearing to "float" in what looks to be clouds or the night sky. This otherworldly quality is reinforced by the titles named after ancient characters from Greco-Roman mythology. They are scaled so the frogs appear approximately the size of a human toddler, to invoke empathy instead of detachment or fear—if they are too small they will dismissed, but if they are too large they become monsters. Each finished artwork is unique and never editioned, to recall the individual animal and become a reliquary to a short-lived, non-human life.

In the sculptural series "Styx," the actual cleared and stained deformed specimens are displayed on large dark structures—to resemble fallen obelisks. The specimens are small, out of our normal human-scale for bodily association, but through precisely illuminated glass dishes they become the "light," and focal point. Viewed up close they resemble gems or the stained-glass windows found in some cathedrals. There is something familiar about them, enchanting but terrible and otherworldly. "Styx" is a sculptural expression of complex sensations derived from finding the abnormal frogs in nature. It forces intimacy between the viewer and subject—it asks the viewer to re-question their behavior and approach towards the environment.

SAiA: Let's talk about your ongoing series, "Love Motels for Insects." In creating these sculptural "motels," you utilize embedded ultraviolet lights to attract countless insects and promote public interaction with local insect species. Could you talk about how you came to start this project and how it has been received thus far?

BB: "Love Motel for Insects" is an ongoing series of outdoor installations that use ultra-violet lights on enormous sculpted canvases to attract insects. Arthropods gather on the surface of the works, breeding, and I encourage people to come watch. The work is as much about creating a situation between people and arthropods—a "trans-species happening," as it is public art made for human and non-human communities. With each variation, the "Love Motel for Insects" becomes a temporary habitat for arthropods and the backdrop for events—picnics, biodiversity workshops, environmental festivals, graffiti jams, political rallies, scientific investigations, even musical events—it is an open-ended experiment to see who comes and what occurs when humans and other organisms gather.

The series began in 2001 in Costa Rica, when I used battery-powered black lights and bed-sheets placed in the jungle floor to see what would be attracted. Almost instantly numerous species of moths, beetles, mantids, scorpions, and other arthropods descended on the installation. I was so inspired that the next night I recreated the experiment but this time invited others to come watch. After, I began developing complex sculptural forms and public nocturnal field trips around the world. To date, versions of the project have debuted on boats in Venice, Irish peat bogs, Scottish moors overlooking Loch Ness, a bustling Delhi shopping mall, along side Aztec ruins in Mexico, an inner-city bus stop in New Haven, urban roof tops in London, temperate forest mountainsides in South Korea, a bayou in New Orleans, and most recently in NYC's Central Park.

SAiA: In 2012 you exhibited a large installation made with thousands of preserved specimens that responded to the Deepwater Horizon Oil Spill at Feldman Gallery in NY; can you talk about this project?

BB: The 2010 BP Deepwater Horizon (DWH) oil spill was the largest environmental disaster in the history of the United States. The installation *Collapse* responded to the unraveling of the Gulf of Mexico's food-chain following the spill and use of teratological dispersants used to "clean" the oil. Physically, *Collapse* was a pyramid display of hundreds of preserved fish, other aquatic organisms, and DWH contaminates in gallon jars. It was meant to recall the fragile inter-trophic relationships between Gulf species, and the way the spill may have altered this. There were over 20,000 specimens in the piece—from huge deep sea roaches (isopods), to oil stained shrimp with no eyes, to jars packed with tiny sea snails. It was really meant as a sketch, literally less than five percent of the biodiversity of the Gulf.

Empty containers represented species in decline as a result of the disaster; visually this was a way to frame absence and suggest the ecosystem collapse. The piece was made in collaboration with fellow biologists Todd Gardner, Jack Rudloe, and Peter Warny and with my former student artist Brian Schiering. It took us two years to gather data, Gulf specimens, and other samples.

The Gulf of Mexico is one of the most important and biologically diverse environments in the world. It literally is a nursery for thousands of marine species, and numerous endemic organisms inhabit these warm waters. Likewise Gulf seafood is an important source of food for millions of people in North America, and as marine species migrate following the Gulf Stream people throughout Europe rely on these fish for protein. As such, the DWH spill could not have occurred at a worse place, from an ecological

Love Motel for Insects: Anax Junius Variation (2012). 12' x 4' x 16'. Steel, fabric, native plants, invited insects.

Outdoor installation and Eco-Actions (public field-trips) with: black ultraviolet lights. Installed Central Park, New York, NY (fall 2013). Installed Smithsonian National Zoological Park, Washington, D.C. (summer 2012). Image courtesy the artist and Ronald Feldman Fine Arts, New York, NY.

occurred at a worse place, from an ecological and economic standpoint. British Petroleum claims all is well with Gulf ecosystems; however, we are still far from understanding the long-term impacts of the DWH disaster.

By generating discourse through the exhibition at Feldman Gallery I hoped we could raise attention for the need for continued research and coastal remediation. It is hard to say if this worked, but the show did receive considerable publicity in which the spill was discussed, dozens of petitions were signed and several politicians visited, including a senator from Florida. *Collapse* is currently on view in the "Beyond Earth Art" exhibition at the Herbert Herbert F. Johnson Museum of Art at Cornell University and will travel to the National Academy of the Sciences in Washington, D.C. this fall.

SAiA: What are you working on now artistically, and scientifically speaking, respectively?

BB: In 2012, I began a new ongoing body of works called "Ti-tânes." This series pairs the portrayal of ancient animal species with the idea of the Greek mythological deities, the Titans. Symbolically, the series is meant to link such animals to archaic lingering nature deities surviving, banished, in now degraded environs. The complete series will consist of 12 finished works, in reference to the 12 historic Titans mentioned in Greek mythology. To date, I have completed three initial artworks, which depict ninespine stickleback fish. These were collected in polluted canals of Essonne, France, in 2012. This species, though ancient, appears to be thriving at least in part due to warming waters and their ability to survive in contaminated wetlands.

For the science side of things, my research into the occurrence rate and proximate cases for amphibian limb deformities in amphibians is ongoing. As part of my Ph.D. research I found that dragonfly nymphs can selectively predate (remove and eat) the limbs of tadpoles. Many tadpoles survive these attacks and at the time when they metamorphose into young anurans (frogs and toads) have permanent "missing limb" deformities. Stanley Sessions (one of my Ph.D. advisors and long-term collaborators) and I published these finding in 2009 in the *Journal of Experimental Zoology* and received considerable attention in the amphibian research community. We appear to have found a big piece of the deformed amphibian puzzle, but much more research is needed. Since this time I have continued my research into the predatory injury/deformed frog relationship as a Visiting Scientist at McGill University (Canada) with new studies in France, Ireland, Italy, and Slovenia.

SAiA: When and where is your next exhibition?

BB: I am really excited that the first career survey of my works, exhibited last summer at Château de Chamarande (France) under the name "Augures d'Innocence" will travel and be expanded at the Museum Het Domein in Sittard (the Netherlands). It will include additional works from my series "Seasons in Hell," new "Malamp Reliquaries," *Apparitions* (a new installation with historic taxidermy birds from the collection of the Natuurhistorisch Museum Maastricht), and the Museum Het Domein itself will be transformed into an amazing version of the "Love Motel for Insects." "Seasons in Hell," will open February 15th and be on view until June 28th, 2014.

Visit Ballengée's website at *brandonballengee.com*.

Ti-tânes (2012/2013). 8' x 4' x 36'. Duratrans prints on double-sided light boxes. Cleared and stained ninespine stickleback (Pungitius pungitius) photographed on coal. Photograph by Laurence Godart, image courtesy of the artist..

Installed at Château de Chamarande, Essonne, France. Summer 2013.