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Proteus: An Examination of the United States Domestic Water Crisis

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PROTEUS: AN EXAMINATION OF THE UNITED STATES
DOMESTIC WATER CRISIS

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Fine Arts
Ceramics

by
Conor Allen Alwood
August 2019

Accepted by:
Valerie Zimany, Committee Chair
Dr. Beth Lauritis
Dave Detrich

ABSTRACT

My work acknowledges, reflects upon, and gives form to the crisis of domestic water contamination due to the runoff of three pillars of pollution: industrial manufacturing, corporate agriculture, and consumer products. Drawing from my experiences in water infrastructure, I use biomorphic ceramic sculptures and PVC pipes found in domestic water systems as a metaphor for the insidious presence of microscopic toxins within household water. The exploitation of Earth's resources presents an ecological hierarchy that positions humans as the controllers of nature. This dynamic perpetuates a neglectful hubris towards water quality, putting all organisms at risk.

Proteus consists of two separate, but interconnected sculptural installations. The first work, *The Indicator Species* consists of semi-rectilinear networks of PVC pipe that meander and meld with biomorphic forms throughout three sections of the gallery, quietly implying persistent contamination given the sculptures' fixed positions on the pipes.

These abstract ceramic sculptures reference various microscopic contaminants and appear to be attached or emerging from the pipe networks. The forms refer to several pollutants detected in the water supplies of my hometown of Hanna City Illinois but are left intentionally ambiguous. Their range of surfaces allude to variations of a "super pollutant," an unidentifiable amalgamation of contaminants unaffected by current water treatment processes.

I frame the biomorphic sculptures within a domestic context through the use of PVC pipes that have the same specifications of those used to transport potable water to homes, but they also produce an uncanny effect through shifts of scale, skewed perspectives, and an erratic overall composition. This prompts associations with the unpredictable movement of waterborne contaminants within supply systems.

Three totemic, human-scale sculptures comprise *The Body Burden* series. Similarities in form and surface to relate *The Body Burden* to *The Indicator Species* conceptually, and each monolithic sculpture is positioned in proximity to *The Indicator Species*. This spatial relationship highlights formal similarities in the anthropomorphic and biomorphic forms while it also implies a cyclical dynamic between polluters and pollutants.

The contrast of abstraction and representation elicits themes of uncertainty, commonality, and infiltration, and parallels the state of domestic water in the United States. My goal is to engage viewers personally through the work's domestic context and to create a broader dialogue regarding the domestic water quality.

DEDICATION

To my grandfather, Randy “The Chief” Alwood, your immense work ethic, and dedication to your trade taught me the value of manual labor and showed me the world of unseen water infrastructure. Without you this artwork would not be possible.

ACKNOWLEDGMENTS

I would like to give a huge thanks to the art faculty and fellow students who reached out to me after my apartment fire in January 2018, I will always be grateful for the kindness shown during that difficult time. I would like to thank the faculty of the Art Department of Clemson University. Specifically, I would like to thank my thesis committee members, Beth Lauritis, and Dave Detrich for their excellent guidance, support, and abundant patience during my final thesis semester. Finally, I would like to thank my committee chair, Valerie Zimany for her thoughtful advice, her encouragement, and her generosity. I continue to be inspired by her enthusiasm and experimentation she displays in her work and the wealth of time and energy she gives to her students and her position as Chair of the Art Department.

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CHAPTER ONE

INTRODUCTION

Fluid yet still. Expansive yet intimate. Essential yet defiled. Water is the fundamental building block for life to exist on Earth. This primary substance influenced religious practices, inspired mythologies, and has, over time, become increasingly contaminated due to new forms of human-made pollutants. Instead of addressing these issues, the developed world continues an ideology of ecological dominance that allows for the unseen, mass contamination of the planet's most valuable resource. This prioritization of monetary gain among politicians, big industry, and corporate agriculture promotes callous indifference and inaction towards issues of resource sustainability. Consequences from both environmental and human systems, ultimately threaten the future of all organisms.

The development of my concept and research stems from personal work experience in water infrastructure in the Midwest. While working as a laborer installing domestic, subterranean water systems with my father and grandfather, I became aware of the complexity and vulnerability of our regional water quality. Using tools to dig through the dirt and clay alongside my grandfather and father to provide homes with access to water was genuinely fulfilling, but considerations of water quality did not resonate with me at the time. Not until the crisis in Flint, Michigan did I understand the value of clean drinking water and how often it is taken for granted in America. In 2014, a massive

contamination due to poor municipal management and substandard water treatment caused the lead²² water pipes to deteriorate and leach into into the drinking water of over 200,000 homes throughout Flint, Michigan (Denchak). This problem acted as the primary catalyst which sparked my interest in this issue and motivated me to examine this catastrophe that is indicative of a more significant, national problem.

Agriculture in the rural area where I lived in, Central Illinois, is dominated by soybean, sweet corn, and snap pea fields. Besides agriculture, two of the largest local employers in Peoria, Illinois area are a steel mill and power station. Agricultural waste such as fertilizers and pesticides along with industrial waste byproducts such as hexavalent chromium and mercury, have all been detected in Peoria's neighboring water supplies (Environmental Working Group). The problem within Peoria's water is not an isolated incident.

My father, who also works as a lab technician for the city of Bloomington, Illinois, tests local water samples for harmful contaminants in order to regulate the quality of the drinking water. The pollutants that he detected within local creeks, rivers, and tap water were typically caused by runoff from three primary sources: agriculture, industrial manufacturing, and consumer products. However, some of the pollutants detected could not be identified. The unknown composition of these toxins presents an unnerving reality. Without a means for discerning what these adulterants are, a viable solution is nearly impossible. As time progresses, the concoction of contaminants will

progressively become more complex. Alex Prud'homme's passage in *The Ripple Effect* describes the vastness and severity of recent tap water deterioration throughout America:

“Between 2004 and 2009, a study by the Environmental Working Group found tap water in forty-five states and the District of Columbia was contaminated by 316 different pollutants...more than half of those chemicals were unregulated by the EPA and thus not subject to environmental safety standards. The EWG study ultimately discovered that the drinking water of 53.6 million Americans was contaminated” (Prud'homme, 11).

The unabated contamination of water could render the current water treatment processes ineffective and potentially lead to a rise in waterborne illnesses.

My installation *The Indicator Species* and *The Body Burden* deal with themes of uncertainty, commonality, and infiltration that parallel the United States current potable water crisis. I divide the installation of ceramic works in *The Indicator Species* and *The Body Burden* into three sections within the gallery space. Each section is representative of the three major pollutants that diminish the water quality throughout the United States. The specific titles for these two bodies of work reference indexes that measure pollutants within environments and organisms. The indicator species is an established term for an organism whose presence, absence or abundance reflects a specific environmental condition. The indicator species can signal a change in the state of ecosystems (McDonough, Caitlin, et al.) while the concept of the body burden refers to the specific amount of chemicals that are present in the human body at a given point in time (Silent Spring Institute).

The ceramic sculptures in *The Indicator Species* act as metaphors for the cumulative mixture of new and old pollutants, such as mercury, beauty products, pharmaceutical drugs, and pesticides that have, over the past several decades, altered the composition and quality of water. The individual pollutants have developed into a cocktail of waterborne toxins that are detectable yet unidentifiable due to the fast-paced manufacturing of contemporary products. This constant fluctuation of water quality presents an ominous sense that a catastrophic water crisis is inevitable. This mystery pollutant has the potential to become a tipping point for the environment and humanity. Without an understanding of the composition of these new “super pollutants,” a viable solution to eradicate these pollutants cannot be reached, thus intensifying the already unpredictable nature of global water quality. (Prud’homme, 11).

The material contrasts along with metaphor and representational forms in *The Indicator Species* emulate various qualities of the uncanny, described by Nicholas Royle as “...something strange and unfamiliar unexpectedly arising in a familiar context” (Royle, 4). My intent is to elicit the psychological phenomenon of the uncanny through the juxtaposition of ambiguous ceramic forms against the more recognizable PVC pipe. Biomorphic sculptures in *The Indicator Species* are given a monumental scale to present the imperceptible contaminant as something physically immediate. Through unity in form I imply a connection between the biomorphic sculptures despite their various proximities within the gallery. Monumentalizing these biomorphic forms also

elicits a sense of apprehension with the viewer given their physical encounter with representations of unseen, unidentifiable waterborne pollutants.

Each sculpture within the three sections of the installation has a specific surface glaze that visually alludes to traits of certain pollutants, like heavy metals, or the physiological effects the pollutants can cause, such as blistered flesh. The glaze surface is created through multiple layers and firing temperatures, the visible accretion and intermingling of which allude to the passage of time and new, compounding forms of pollutants. I use a range of glazes that mature at various temperatures to build depth through multiple layers of color and texture, symbolic of pollutants' accumulation in the environment and body over time.

The PVC pipes' familiar application in modern water infrastructure functions as a visual prompt for the audience. Within the installation, they serve as what Haim Steinbeck describes as the "framing object" in that they imply a universality and understanding through the process of arranging (Steinbeck). The pipes contextualize the nonspecific biomorphic sculptures within the backdrop of water and water infrastructure. The diameter of the pipes one half inch is standard to most domestic, interior water systems. The specificity and commonality of half inch PVC pipe juxtaposes the unfamiliar ceramic forms that suggest unknown pollutants within domestic drinking water.

The Body Burden, a series of three monolithic, ceramic sculptures possessing a column-like verticality and human scale, illustrates the cyclical relationship between

water-borne contaminants and the human body through elements of form and surface which parallel those found in *The Indicator Species*. I suggest the recurring pattern of human made water degradation and the resulting physiological consequences through the inclusion of the protruding nodules, the textures, and colors of which formally correlate to the ceramic sculptures in *The Indicator Species*. Through the figural suggestion of *The Body Burden*, I also introduce a psychological concept, inactive altruism. Inactive altruism describes a paradoxical psychology of an individuals' desire, yet inertness, to enact change when faced with insurmountable ecological issues. Inactive altruism draws from pathological altruism, that is, altruism that attempts to advance the well-being of others but instead results in unexpected harm (Oakley). Due to rapid population growth industrial manufacturing and corporate agriculture have produced an abundance of goods and food. However, it has proven to be detrimental to the quality of water and subsequently human health.

The ceramic figures' column-like verticality in *The Body Burden* also alludes to an architectural support. The allusion to an architectural support metaphorically suggests how industry, corporate agriculture, and human consumption support mass production, resource exploitation, and excess in society, all of which are factors that diminish water quality. These customs prioritize humans' arbitrary need for monetary gain at the expense of less industrialized communities.

In what follows, I will explain how *The Indicator Species* operates through the material contrast of ceramic and PVC pipe to emulate qualities of the uncanny.

Additionally, I will explain how biomorphic ceramic forms and PVC pipes imply the contamination of household water and its unpredictable nature. This leads to an examination of the cyclical relationship between polluters and pollutants in *The Body Burden* as well as the psychological and physiological implications of this dynamic. I will explain throughout this manuscript how my work in *Proteus* employs contrasts of abstraction and illustration, along with the organic and industrial, to correspond with the crisis of household water contamination.

CHAPTER TWO

SYSTEMS OF THE UNCANNY

The Indicator Species uses direct connections to my personal experience in the trade of installing domestic water systems. The title of the installation references the theory in biology that describes an organism whose presence, absence or abundance reflects a specific environmental condition. Essentially, the theory states that any physiological change within a living organism can signal a change in the status of its particular ecosystem (McDonough, Caitlin, et al.).

The Indicator Species includes semi-rectilinear structures of PVC pipe that intertwine with biomorphic ceramic sculptures throughout three sections of the gallery. These materials present the audience with an immediate visual distinction between familiar qualities of industrially produced PVC pipes and the vaguely organic ceramic sculptures. PVC functions as an entry point for viewers to contextualize the installation through the PVC pipes' real world application in the home. However, combining the erratic composition of the pipes with the ceramic forms introduces unknown variables within the preconceived context of PVC pipe. The contrast of ambiguous ceramic forms elicits feelings of the uncanny. My specific goal is to disrupt the viewers' feelings of assuredness regarding the consistent quality of domestic water through the unplaceable strangeness of the biomorphic ceramic sculptures that interrupt confusing systems of PVC pipe throughout the gallery.

The organic sculptures in *The Indicator Species* allude to specific microscopic pollutants found within the water supply of my hometown. However, I intentionally complicate the biomorphic sculptures to metaphorically represent the congealed, singular contaminant known in environmental science as the “super pollutant.” The “super pollutant” is an aggregate made up of contaminants that include pharmaceuticals, personal care products, heavy metals, and insecticides, all of which correspond to the three pillars of pollution. Those of which are industrial manufacturing, corporate agriculture, and consumer products (Prud’homme, 11).

The bulging gesture of the nodules alludes to the unpredictable effects invasive pollutants have on the human body. The lumps protruding from the ceramic sculptures resemble growths or tumors (*Fig. 1.1*). Leukemia, brain, and breast cancer, along with congenital disabilities, have proven to be linked with the exposure to synthetic oils, industrial solvents, and dry cleaning agents in drinking water (Prud’homme, 64-65). I incorporate these nodules to indicate the human body’s susceptibility to disease, neurological complications, and hormonal disruptions through ingestion or exposure to water contaminated by various pollutants.

By giving these microscopic contaminants a monumental scale I contextually shift a minimized threat to something the viewer must now visually and physically confront. I address the passivity that often deters individuals from examining environmental issues that could exist within their household. By using metaphor and abstraction, the visually

imperceptible water pollutants are presented in the visible realm, making the threats facing water quality more tangible.

The static nature of the pierced ceramic sculptures attached to and emerging from the PVC pipes suggests a pollutant's longevity and capacity to affect environments and human systems over time. Additional ceramic forms separated from the PVC pipe are manifest in intervals around the gallery space. They imply a movement or agency that corresponds to the pollutant's ability to travel and become airborne, eventually seeping into domestic and municipal water systems and other conduits to living organisms.

The primary function of the PVC pipe within the installation is to contextualize the ambiguous sculptures within water and water infrastructure. I construct the semi-rectilinear networks of PVC pipes to spatially interact with the gallery walls and intersect the ceramic sculptures (*Fig. 11.1*). The point of contact between the gallery walls and PVC pipes suggests a gesture of perforation and implied line (*Fig. 12.1*) to illustrate that contamination of domestic water is not an isolated issue. Typically, when a contaminant is detected in a household, the surrounding areas are likely affected since most home systems extend from a shared municipal water main. The cluttered constructions deviate from the rational systems found in standard domestic water infrastructure to allude to the unpredictable movement of waterborne contaminants once they become present in larger supply systems. The constructions also appear dysfunctional because of the way they are routed and potentially corrupted by the mutant pollutant forms.

The biomorphic sculptures in *The Indicator Species* are constructed through the processes of pinching and wheel throwing. Wheel-throwing vessel forms allows for consistency in form and process, which I then distort through hand altering and incorporating pinched elements. The mouth of the vessel is closed off, which negates its functionality, a significant gesture because the ceramic vessel has historically acted as means of hygienically storing and filtering water for over ten thousand years. By removing this traditional function, these closed and altered containers become metaphors for contaminants trapped within water systems.

In the section of *The Indicator Species* installation corresponding to agricultural waste (*Fig. 2.1*), a variety of dry, matte greens, varying browns, and shades of ochre imply an earthen quality. Densely cratered textures suggest a surface that is worn down due to the deteriorating effects nitrates and pesticides have on farmland and living organisms (*Fig. 3.1, 4.1*).

In the section of *The Indicator Species* corresponding to industrial manufacturing, metallic and dry, wrinkled black glazes suggest industrial production (*Fig. 5.1*). Glazes in primarily matte blacks, grays or varying metallics visually relate to coal, soot, and heavy metals that seep into groundwater and freshwater supplies. The wrinkled, blistered effect of the glaze represents the physiological effects of certain chemicals, some of which can cause severe symptoms such as eye and skin irritation and blistering (*Fig. 6.1, 7.1*).

The glazes in the third portion of *The Indicator Species* (*Fig. 8.1*), allude to consumer product contaminants. I reference colors found in consumer products, ranging

from plastics, pharmaceutical drugs, beauty products, to household cleaning products. The mixture of bright, saturated colors along with flesh tones, metallic, and a range of textures corresponds to the sheer variety of waste human consumption produces (*Fig. 9.1, 10.1*). Unlike the previous portions, the production of consumer waste applies to nearly everyone; it implicates virtually all who buy and consume goods.

A contemporary artist who is in a similar dialogue with water quality is Elizabeth Phelps Meyer. Her work *Each Day, Water* is an immersive ceramic installation that acts as a monument for the water activists at Standing Rock Sioux Reservation. In this work, Meyer installed 365 porcelain, wood-fired cups. The firing method links the atmospheric accumulation of wood ash on the vessels to pollutant accumulation in water sources. The vessels were thrown on the wheel and transformed to employ a human-like quality through hand-altered gestures. The circular form of the vessel is disrupted and strained to different degrees to embody the pressures exerted on the “sacred hoop of life” regarding ecosystems and social fabric. Meyer’s installation is a response to the water crisis of industrial pollution and waste from planned fossil fuel pipelines to run under rivers and lakes, which was an urgent concern for the Native American protestors at Standing Rock (Phelps, Text).

Like Meyer, I raise awareness, and create a dialogue about the importance of human threats to vital resources needed to survive. My work deals with this subject through a sculptural installation with multiples of similar vessel-based forms, but unlike Meyer, the context I use is less specific. Although the evolution of my work grew from

my initial encounter with the dilemma facing the local water quality in my hometown, I present the concerns facing water on a global scale, reflected in the intentional ambiguity and unplaceable nature of the ceramic sculptures. Also, we both view the historical context of the ceramic container as a means to a conceptual framework. While Meyer uses the functionality of the vessel more literally and specific to a single location, I use abstraction and negation of the functionality of ceramic forms to address the crisis of water quality through the broad lens of the entire planet.

By using metaphor and abstraction, *The Indicator Species* presents unseen water pollutants and makes the threats facing the Earth's most fundamental resource more tangible to the viewer. My goal is to have viewers reflect on the uncertain future of their own water supply, while I allow for a broader dialogue regarding America's water integrity.

CHAPTER THREE

BURDEN OF PROOF

In the series, *The Body Burden*, (Fig. 13.1), I allude to the three pillars of pollution: industrial manufacturing, corporate agriculture, and consumer products. The verticality of the human scale sculptures, suggestive industrial elements, and shared surfaces allude to the cyclical and transformative relationship between polluter and pollutant.

The myth of Proteus offers an analogy to the concept of environmental control and physical metamorphosis. Proteus, an early Greek god, could alter bodies of water, and possessed the ability to transform into organisms found within the scope of biology (Karl, 42-45). These two characteristics coincide with the ironic cycle of human pollution and the adverse, physiological effects a contaminated environment has on the body.

I employ similarities in the texture and color of the glazes to parallel the work in *The Indicator Species* and illustrate the cyclical relationship between polluter and pollutant. The human scale, protruding nodules, and surfaces that make up *The Body Burden* also reference the physiological transformation a body endures when exposed to water-borne toxins. Specifically, I use the forms' protruding nodules and corresponding glazes to bridge the gap between the two bodies of work. This inclusion of the nodules within the two series suggests the cyclical effects of mass water pollution. Through the repetition of formal elements, I create a metaphorical corollary between the pollutants

and the polluters. Inactive altruism acts to perpetuate the cycle of water pollution and its impact on the human body. The ecological impact of an individual, whether positive or negative, has been minimized by the vastness of the current water crisis. This overwhelming issue promotes a disillusion of individual agency that proliferates into a collective inaction. The problems facing water quality tend to be ignored due to the lack of viable solutions available to individuals. While the collective is concerned with water quality people often pretend the issues do not exist, secretly hoping they will resolve themselves (Prud'homme).

The totemic forms of *The Body Burden* suggest through their static presence a perceived immobility. They act as a metaphor for the detrimental and uncompromising ecological positions and practices that result in three forms of mass pollution.

The Dada/Surreal artist Max Ernst informed my formal decisions through his totemic figure sculptures, specifically, his bronze sculpture, *Le Parisienne*. *Le Parisienne* and *The Body Burden #2* share very similar formal traits. Thin, totemic bodies and elongated necks support ring-shaped heads that emote only negative space. *The Body Burden* series has formal similarities that are more akin to conduits. The thrown parts from which the forms are built are indicative of infrastructural pipes. The vertical orientation of ceramic pipes that culminate at the top at the top with elements that may suggest a human head, despite their lack of discernible facial features. It is through this integration of body and machine that references the Dadaist motif of incorporating mechanical elements into figurative forms. In *The Body Burden*, this fusion of the

industrial object and the human body illustrates the metamorphosis of humans' ecological ethics and our disconnected relationship with the natural world upon which we depend. The exploitation of natural resources and environments by the three pillars of pollution has given way to a false sense of human control over nature. This false logic of ecological dominance has proven to be detrimental to the sustainability of natural resources and ultimately the survival of living organisms.

Aspects of Enlightenment philosophy posits the idea that humans are the dominating "subjects" of the world that order the natural environment as the "object" of their interests (Descartes, 74). This hierarchical relationship positions humans as the "subjects" of the world, which grants complete authority over the "objects." This philosophy has striking similarities with the institutions of manufacturing, and corporate agriculture, which prioritize the production of consumer goods and monetary gain at the cost of environments and resources.

The unique form within the installation relates to the waste produced by consumer products, seen in *The Body Burden #3*. This sculpture offers the most specific cue to the human body, specifically a head. The decision to sculpt this figure with this recognizable feature was intended to engage audiences' own culpability as a source of water pollution. While the industrial, monolithic forms are more pronounced in the installation, the human-like monolith is tucked towards the corner of the space. The sculpture's position implies the individual passivity, a feeling perpetuated by the influence and power institutions hold over the individual. Often, when individuals are faced with a seemingly

insurmountable problem the concerned rhetoric is apparent, however, enacting individual change in the face of opposition can appear too challenging. This inactive altruism is the paradoxical psychology of self-imposed ineffectiveness. It enables passivity and despondency towards global issues. In the context of concerns about water quality, this attitude is detrimental to self-preservation and the entire populous. My goal is for viewers to recognize that an individual's inaction allows for the further adulteration of Earth's limited supply of drinking water.

Giving this sculpture more human-like characteristics further admits my own contributions to this problem. Through thorough research and my previous experiences with water infrastructure I have become more self-aware of my own impact on water quality. The average person typically does not have this sensitivity unless they are immediately affected or conscious of their broader ecological impact. *The Body Burden* informs viewers about the ecological damage hubris and inaction presents to drinking water.

CHAPTER FOUR

CONCLUSION

My work acknowledges the crisis of domestic water contamination through its pervasive effect on organisms, specifically humans. While the broader context of this issue presents itself on a global scale, I use my own experience in the domestic water trade to shed light on this issue within the American home. Through contrasts of materials, metaphor, and representation, I am giving form to a problem that often remains unseen, unknown, or unresolved.

Abstracted yet biomorphic forms throughout *The Indicator Species* and *The Body Burden* are informed by qualities associated with water contamination. These forms facilitate a feeling of unfamiliarity from the viewer to parallel the lack of certainty most people face regarding their homes water quality. Additionally, I use abstraction and amplified scale as a means of metaphorically portraying the “super pollutant,” an unidentifiable, untreatable composition of various contaminants. I contextualize ceramic sculptures through the material contrast of PVC pipes often used in water infrastructure and the size specifications to allude to the domestic potable water systems.

Supporting the work of *The Indicator Species*, human-scale forms in *The Body Burden* confront the viewers through their relative scale. In this body of work I am examining how hubris impacts the foundations of contemporary production, exacerbating water pollution through toxic runoff and consumer waste. I use the elements of the

industrial pipe fused with the human scale of the forms to metaphorically depict the transformation of humans from coexisting with the natural world to becoming a mechanism that controls and disrupts it.

The goal of my work in *Proteus* is to create an understanding of how my past experiences in water infrastructure can inform and reveal the issues concerning the Earth's most valuable resource. Through contrasting elements of the familiar and unfamiliar, along with the organic and industrial, I directly engage viewers through a strange intimacy that can create a larger dialogue regarding domestic water quality.

FIGURES



Figure 1.1

The Indicator Species, (detail).



Figure 2.1

The Body Burden #2, The Indicator Species, installation.



Figure 3.1

The Body Burden #2, (detail).



Figure 4.1

The Body Burden #2, (detail).



Figure 5.1

The Body Burden #3, The Indicator Species, installation.



Figure 6.1

The Indicator Species, (detail).



Figure 7.1

The Indicator Species, (detail).



Figure 8.1

The Body Burden #1, The Indicator Species, installation.



Figure 9.1

The Indicator Species, (detail).



Figure 10.1

The Indicator Species, (detail).



Figure 11.1

The Indicator Species, (detail).



Figure 12.1

The Indicator Species, (detail).

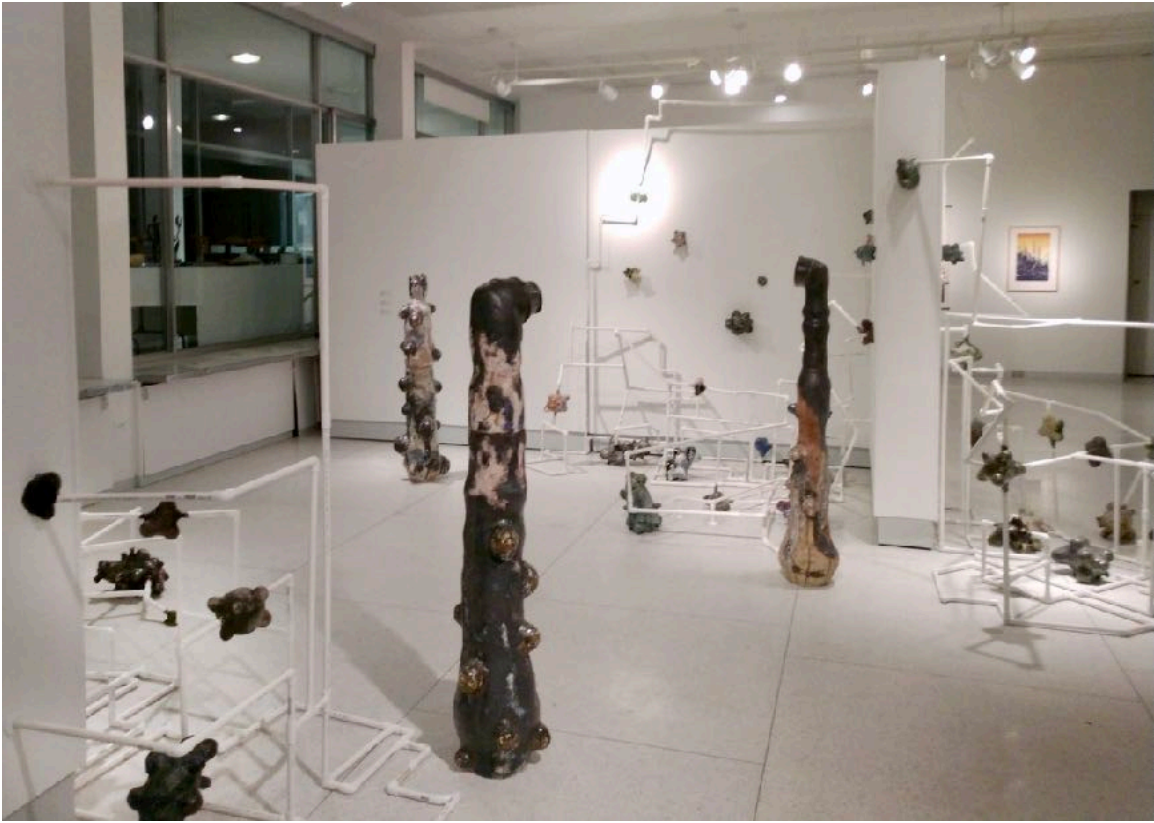


Figure 13.1

The Body Burden #1-3, The Indicator Species, installation view.



Figure 14.1

The Body Burden #3.

APPENDICES

APPENDIX A:

Clay Bodies

CONE 10 VOULKOS STONEWARE

HAWTHORNE BOND FIRE CLAY:	22.5%
TENNESSEE BALL CLAY:	22.5%
GOLD ART CLAY:	22.5%
CUSTER FELDSPAR:	9%
FINE GROG:	13.5%
COARSE GROG:	9%
BENTONITE:	1%

*When using the Voulkos stoneware for wheel throwing, I would recommend using medium grog as a 1:1 substitution for the coarse grog. The amount of refractory materials in this clay body makes it great for high temperature firings, specifically atmospheric firings due to the colors pulled from the high iron content. It is an incredibly durable clay that can withstand a lot during the construction and firing process.

APPENDIX B:

Glaze Recipes

J. Beads, (Cone 6, white, base reticulating glaze):

Nepheline Syenite:	75%
Magnesium Carbonate:	20%
Tennessee Ball clay:	3%
Zinc Oxide:	2%
+ Various mason stains:	15%-40%

*To create more contrast, apply an oxide wash or an underglaze on the work before applying the glaze. The consistency should be similar to a thin milkshake, but I have had good results using it at a yogurt-like consistency, but make sure the kiln shelf has a generous amount of sand laid down before placing the piece in the kiln.

APPENDIX B (CONT.)

CA Crackle (Cone 6, white, base reticulating glaze):

Hawthorne Bond Fire Clay:	27%
Magnesium Carbonate:	25%
Talc:	20%
Spodumene:	18%
Titanium Dioxide:	10%

*This glaze works best on top of another glaze, I tested it using a satin, dry, and glossy glaze at cone 6 and had promising results with all three. Should be a yogurt-like consistency and applied to bisque ware. I recommend lightly spraying the work with water before glazing to remove any particulates from the works surface, and to allow the glaze to adhere. Also, be sure to put a layer of sand down on the kiln shelves when using this glaze.

APPENDIX B (CONT.)

Later J.B. Crater (cone 6, white, base crater glaze):

Custer Feldspar:	50%
Whiting:	24%
EPK:	13%
Silica/Flint:	13%
Titanium Dioxide:	13%
Silicon Carbide:	10%

*This is a slight variation of John Britt's crater glaze. I removed the original 2% of bentonite, the glaze seemed to have a more consistent surface with the Voulkos clay body after doing this. The consistency should be thicker than typical glazes, slightly thicker than a shino glaze. The silicon carbide can be extremely hard on electric kilns, especially the elements. If this glaze is on a number of pieces, consider firing them separately, or in a gas, oxidation firing. The surface and color still hold up well in a lightly reducing atmosphere.

APPENDIX B (CONT.)

Wrinkle Glaze (cone 5, white, base wrinkle glaze):

Cryolite:	62%
Fritt 3110:	12%
Alumina Hydrate:	25%
+Rutile	2%
Cobalt Carbonate:	.5%
Copper Carbonate:	2%

*This glaze benefits from a thick application. The surface can be very interesting when different thicknesses are applied to the same piece. The added oxides listed are the ones I had the most success with.

APPENDIX B (CONT.)

Dark Bronze Glaze, V. Scotchie (cone 2-4):

Manganese Dioxide:	60%
Red Art:	20%
Copper Oxide:	10%
EPK:	10%

*This metallic glaze will be brighter and more reflective in the range of cone 2 and will appear more tarnished at cone 4. Do not push this glaze past cone 4, it has a tendency to run a lot when it is over fired. Be sure to place a layer of sand on the kiln shelves before firing work that uses this glaze.

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