

Death Circles

By

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Abstract

Death Circles is a meditational piece blending science and poetry that seeks to inspire the viewer to question what we know, what we believe in, and how we live our lives. It is comprised of five panels of cotton fabric stretched by heavy rods at the top and the bottom of the piece. These panels are imprinted with circles of ants. There is also a circle of metal ants suspended in the last fabric.

Artist statement

Death Circles is a meditational piece blending science and poetry that seeks to inspire the viewer to question what we know, what we believe in, and how we live our lives. It explores the unique behavior of several species of ants, particularly army ants (*Eciton burchellii*), and offers it as a metaphor for our own conduct as a species. Army ants are famous for marching out of their nests in staggering numbers and killing everything that crosses their path. They are indigenous to my country, Costa Rica, which is known for not having a human army.

In the death circle, a single ant leaves a scent trail for the rest to follow. Since most species of ants are practically blind, they rely on their chemical tracking abilities to find their way. However, should one ant become confused and leave the trail, it will lead the others astray. The ant will go in vain circles trying to find its original path. All the others will join soon, as if they are heading home. But they are lost, and march inevitably to oblivion, falling dead of exhaustion and starvation.

This reminds me of our own human predicament. We constantly question our origins and purpose and find every theory as valid as any other and thus, we go around in circles. We follow one another blindly, becoming unable to find our way home, the place from whence we came and where we hope to return. Tenacious and insatiable as the ants, we work, we seek knowledge, we “dig” deeper into our world, learning about it and ourselves, going deeper, becoming pressed into increasingly smaller, tighter circles. And we destroy the world and ourselves in the process. Just as the ants, it seems we cannot avoid this compulsive movement in circles of life and death.

I.

While researching insect behavior, in particular that of social insects such as ants, termites and bees, I discovered a video, “Ant Death Circle Explained.” In it, Sanford Porter, a research entomologist from USDA-ARS, explains that the ants are possibly army ants (*Eciton burchellii*), which happen to be blind. They follow a chemical trail left by another ant, form a loop, march fiercely on hoping to find their way home to the colony, but are trapped and soon die of exhaustion. I recognized in this behavior a poetic metaphor for humanity’s plight, a humanity that has never found its true purpose to exist or knows whether it matters to do so.

Every animal and plant fills a particular niche in nature. When one species disappears, another one replaces it. For example, when the gray wolf was exterminated in Yellowstone National Park in the 1920s, elk multiplied, demolishing the park’s ecosystem. The coyote, formerly a small prey hunter and a scavenger, replaced the gray wolf as the main hunter of big game animals, elk, and pronghorn antelope. However, since their reintroduction to the park in the mid-1990s, the wolves have been reestablished in their original niche as top predators along with bears.

Humans, however, no longer have a symbiotic relationship with the natural world; we have created our own environment. Though we still feel a connection with nature, we are not capable of surviving within it as our ancestors did. We have no niche to fill in the ecosystem. We don’t even have natural enemies anymore, except ourselves. The days of the saber tooth tiger and dire wolves (*Canis dirus*) hunting us as their natural prey are long past; our fellow humans have replaced them. We are both predator and prey of our own species.

We have, instead, created a world that is completely our own. We developed cities and towns, which continue to change with us as we advance technologically. We have filled this new world with human civilization, and though we may draw inspiration from natural forms, we arrange it in ways we deem fit. Could our niche have become that of guardian of this natural world? It is a very noble place, yet we greatly fail to fill it.

As we march in our loop of existence, we discover more and seem to destroy the world in the process. We want to learn and know everything, and in doing so, we follow a pattern from which we cannot break free. This pattern is our human nature. It would seem that the evolutionary error causing ants to go in circles is their over-reliance on their chemical tracking abilities, just as we humans over-rely on our sight. Yet although we are able to see, we lack vision. We do not see the full spectrum of the universe, and how could we? We are so small, our lives are so short, and we remain unaware of so much of our own world and the universe, very much like the blind army ants.

In the end, just as it is portrayed in the *Death Circles*, the enlightenment we search for may prove too costly, for us and for the environment. We may discover in the end that we dug too deep in search of answers, and the light of truth may be too bright for us.

II.



Death Circles

Approximate size: 10' long x 10' wide 10' deep

Photo: Aaron Paden

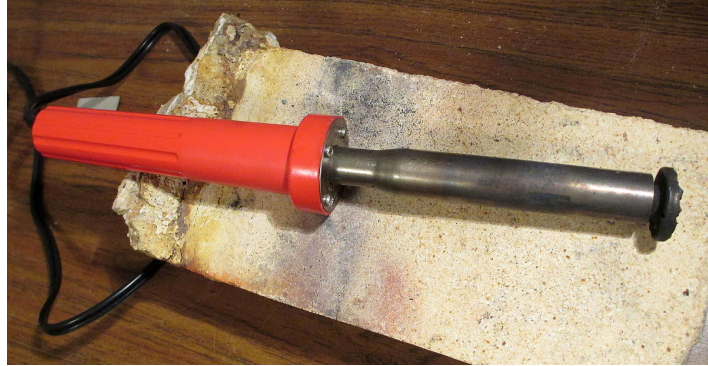
Death Circles is comprised of five panels of cotton fabric stretched by heavy rods on the top and the bottom of the piece. The fabric is imprinted with circles of ants that were burned into it using a special stamp first hand carved in wax, then cast in bronze. There is also a circle of metal ants suspended in the last panel. The circles in each panel are sequential, become smaller as one goes deeper and form a tunnel. *Death Circles* is lit from behind; light penetrates the entire piece and becomes brighter as one goes deeper into it. The panels are approximately two feet apart, which allows the viewer to walk between them. The intent was to invite the viewer to look at the piece not only from afar,

but to get closer, enter, and discover what cannot be experienced at a distance, such as the ant circle end at the of the tunnel.

Death Circles relies on repetition in concept, stamping and fabrication of the ants, and construction to reinforce the notions of routine and going in circles. Repetition of the same mechanical action over an extended period of time involves an engagement and a struggle with tedium, and is itself an exercise in discipline and devotion. This is further a reflection of and homage to the ants represented. It also mirrors how we go through life, so often oblivious to what we do automatically, mechanically, and seemingly without reason or inquiry.

The square is used here to represent the ideal human world constructed in our minds, appearing not only externally in architecture, but most fundamentally, in our beliefs. The circles represent repetition, a seemingly endless cycle. Both forms are an ideal of perfection we desire but cannot achieve, since we are flawed. With their burned and jagged edges, the *Death Circles* are not perfect, and neither are the squares of fabric, which sag because the removal of material in the middle creates uneven tension. In this sense the ideal of perfection is nothing more than that, an ideal. The piece reflects this notion, an attempt at flawlessness that can only be truly accomplished in theory, not in reality.

Stamping



L: *Ant stamp*, 1 inch in diameter, cast bronze

R: *Weller 120w soldering iron with stamp*

The stamp for imprinting the ants was first carved in hard wax, then cast in bronze. It resembled a branding iron for cattle. The stamp cooled quickly after each application to the cotton and had to be reheated with the torch afterwards to continue. This was inefficient. A modified soldering iron developed for hobby wood burning was the next choice; however, running at only 25w, it was too weak to effectively heat the cast stamp. A medium-duty soldering iron of 80w was used with somewhat better results. A heavy-duty soldering iron of 120w was used for the final process; with this tool, the stamp heated quickly and retained heat much longer.

Dense 100% cotton, 320 threads per inch, was used to create the stamped panels. Other materials, including paper, leather, wood, and composite materials were tested with variable results. Paper was a candidate, but unlike fabric that remains flexible after being burned, paper crumbles away. The other materials proved cumbersome. Fabric is lightweight, stable yet flexible, folds easily, and is reasonably affordable. It stretches

easily and can be installed without much construction or infrastructure. It is also very important to note that, only 100% cotton will yield any results; any blend with synthetics, no matter how small, will result in a molten plastic-like imprint.

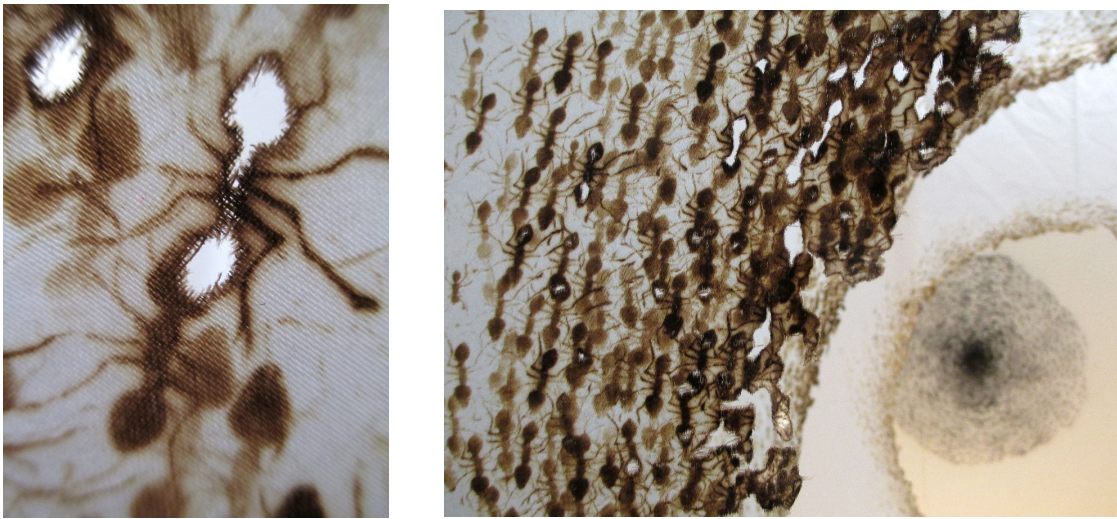
Prototype



Prototype panel, burned cotton
Approximate size: 6'4" square

The prototype panel, imprinted using the ant stamp, describes a series of concentric circles. This panel was used to explore the material and the reaction to the burning; the length of exposure to the heat is imperative, as seconds too long burn the fabric to brittleness. The heat range is also important. The ignition temperature for cotton is 482°F, the temperature used for the stamps ranges between 410°F and 482°F, from light brown burn marks to ashes. If the cotton reaches the flash point and catches on fire, it must be extinguished instantly, otherwise too much of the design will be burnt.

In the other panels, burning through the cotton became a key element; it created ants that were essentially silhouettes of light, an interesting opposition to the dark ants, and simultaneously created negative spaces that break the monotony.



Ants burned completely allow light to pass through becoming silhouettes of light

The stamping had to be done against a flat and not too rigid surface. This is due to the flatness of the stamp, and the pressure required for a consistent appearance in the ants. The suspended fabric is not rigid enough for this task. Cardboard and a table were used and the entire design was done in two-foot square segments. Considerable care was necessary to keep the fabric clean. The slightest breeze carried the ashes and charcoal produced by the stamping; even one's breath made little pieces of burned material land on a clean spot. Removing this was very near impossible as the ashes became embedded into the fibers. The screens were hemmed with a small electric sewing machine.



Sewing in process

The metal ants



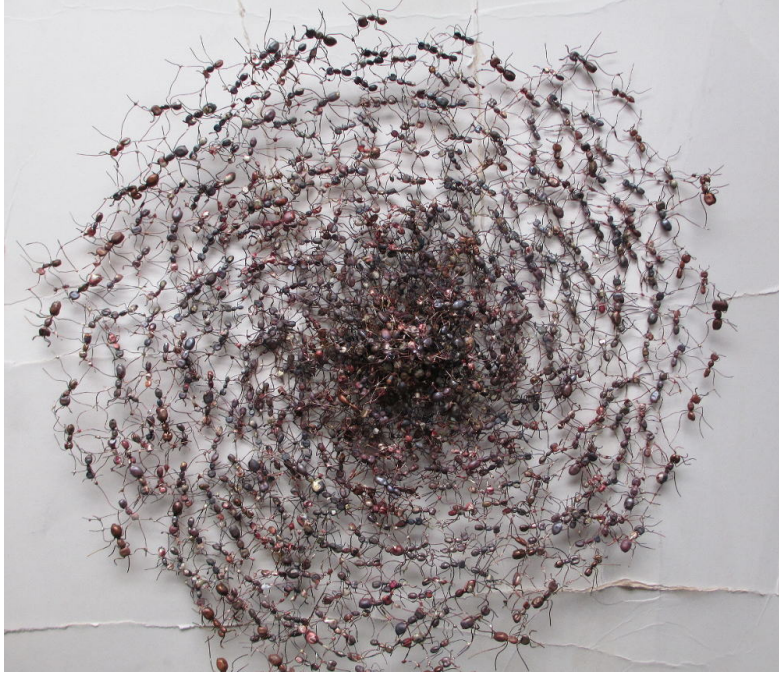
Ant
copper, size ranges from ½ inch to 1 inch in diameter

Hundreds of metal ants, each measuring between ½ and 1 inch from tip to tip of the legs were fabricated using copper beads and wire. The copper beads are hollow and were formed with modified pliers to resemble the head, thorax, and abdomen of the ants; all the connecting parts were made from 28 gauge copper wire. The copper beads were annealed before forming, so that they would take shape easier. This process and the soldering created a heat patina, and the particular colors ranging from reddish browns, dark browns to black that can be achieved in copper worked well to give the ants a realistic feel.

The ants were arranged in a spiraling form and soldered with silver solder. A portable butane mini-torch was used because of the size of the objects. A total of 8 contact points were soldered for each ant, the six legs and the mandibles or antennae. All of these ants were soldered together, creating a web- or lacelike circle. The completed circle measures approximately 25 to 26 inches in diameter.



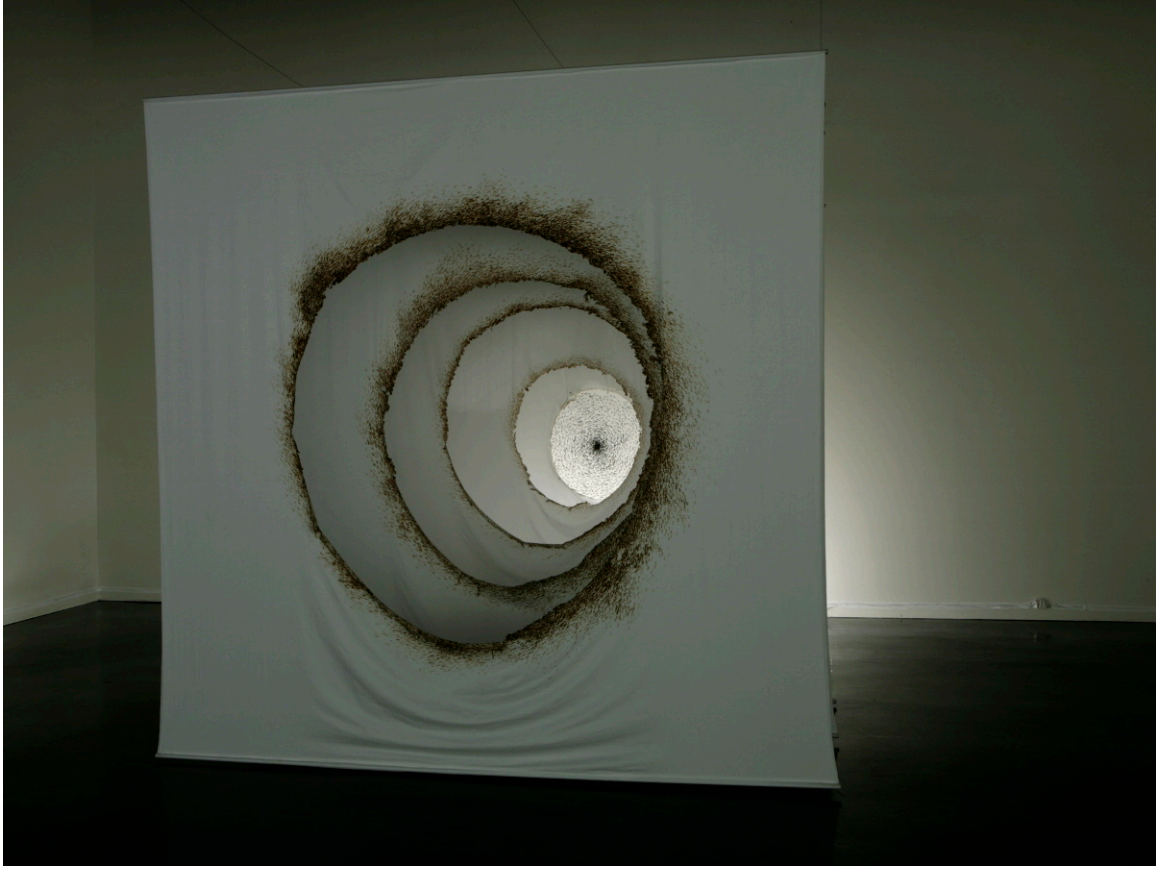
First soldering of the Death Circle. 5 inches in diameter



Growth of the Death Circle. 10 inches in diameter



Growth of the Death Circle. 22 inches in diameter.



Death Circles
KU Art & Design Gallery. 2013
Photo by Aaron Paden

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