



Playing with organic boundaries and imaginary microcosms, *Permutation*, is constructed of distinct yet related motifs or episodes, with each episode exploring the way generative and morphological relationships can be explored via video feedback and recursion. Video feedback demonstrates that some systems have the ability to spontaneously organize themselves into increasingly complex structures. At every higher level of complexity, there is greater potential for new structure and change. All the work explores the generative possibilities of video feedback, the optical equivalent of acoustic feedback, which occurs when a loop exists between a video camera and a television screen or monitor. In other words, when a camera (connected to the TV) is pointed at the TV it faces an infinite number of reflections of itself, like two mirrors facing each other. The image is doubled and the image interferes with itself. With patience and certain amount of trial and error it becomes possible to explore a vast arena of spontaneous pattern generation by varying the available controls (brightness, contrast, hue, focus, camera angle etc). The result is an astonishing array of spatio-temporal patterns, mimicking those exhibited by physical, chemical, and biological systems, i.e. plant structures, cells, tree forms, bacteria, snowflakes... They are not imposed from the outside in any way and are entirely self generated. A small selection of these forms have been layered to create this slowly evolving artificial construct which offers insights into the intricacy lurking within nature's processes.

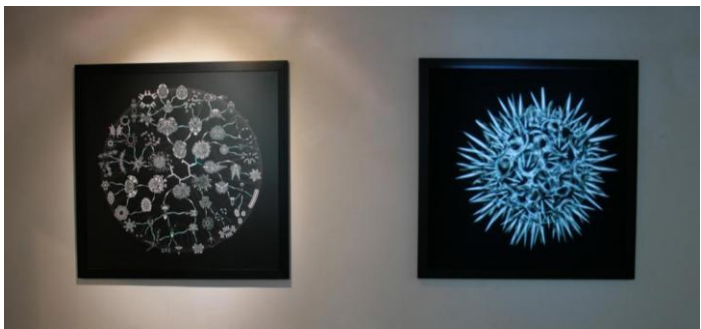
The entire body of work: prints, video, sculpture and drawings, 'aim to draw a link between the underlying laws and processes, arising from fundamental physics and chemistry, which govern growth and form in biological systems and their mirroring in the digital domain.

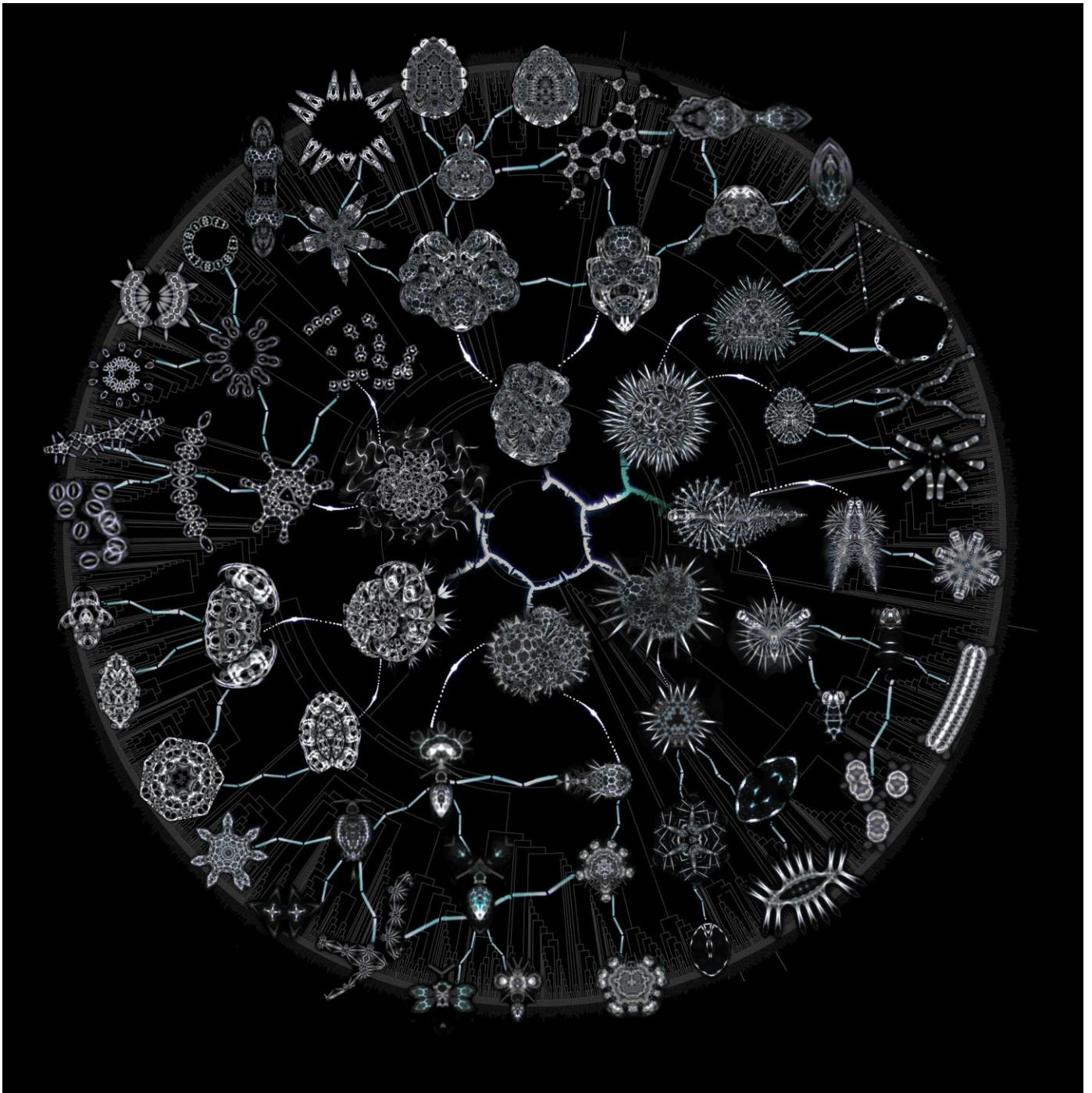
BLOODLINES

Video and Print installation 2009



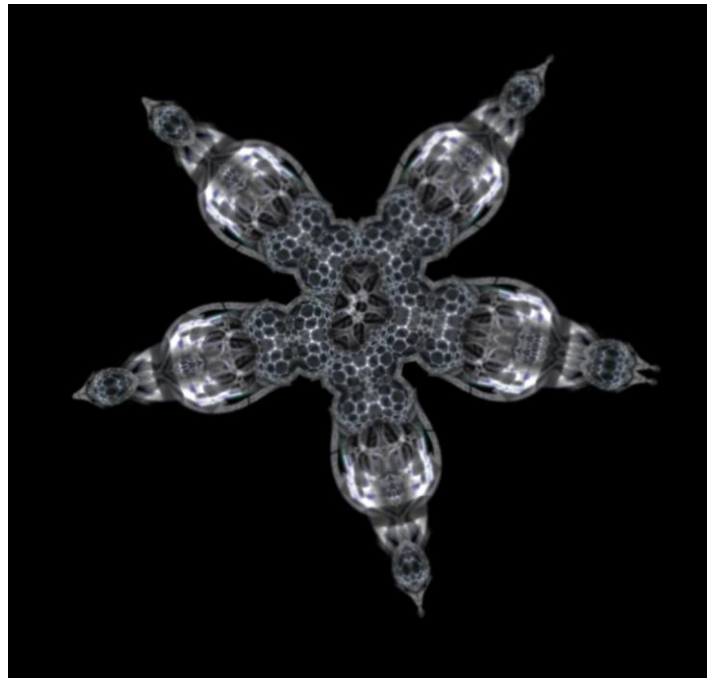
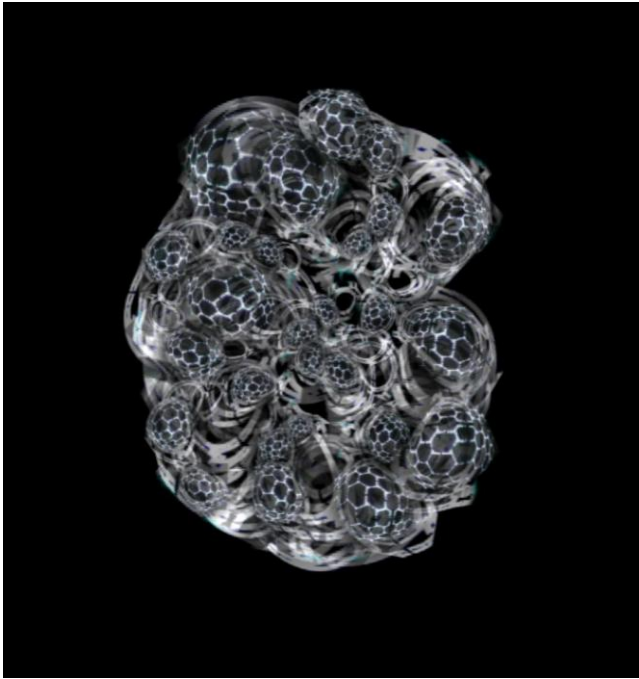
Installation view
archival pigment print & single channel video
(60 inches x 60 inches) (duration 45 mins)





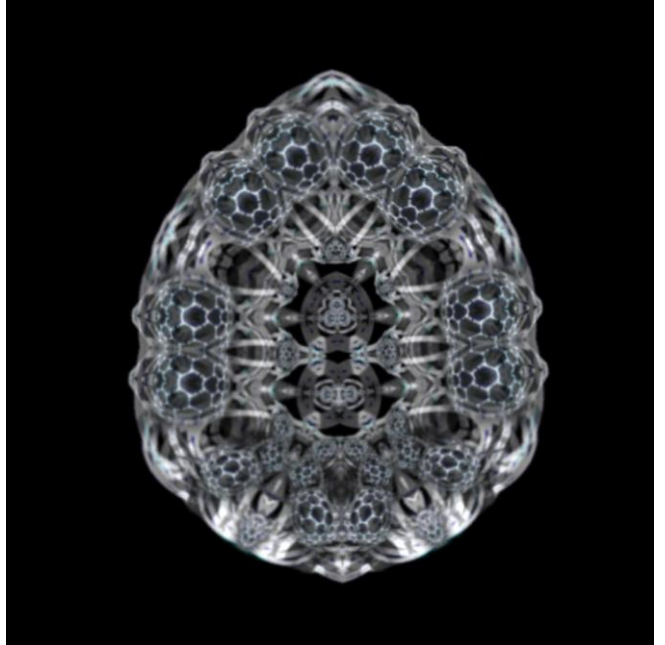
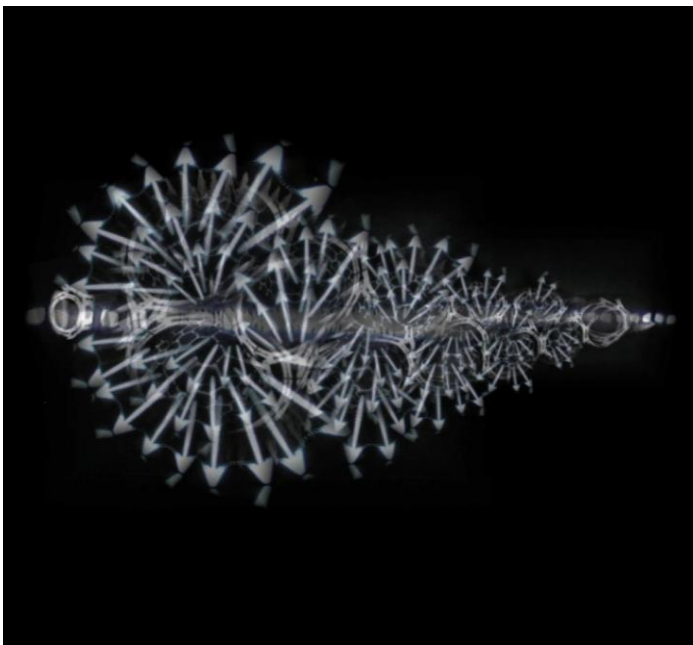
bloodlines: archival pigment print (60 x 60 inches)

A warehouse full of impossible monsters.... an idea put forward by the evolutionary biologist, Richard Dawkins in his book 'The Blind Watchmaker'. Exploring the theory of cumulative selection, Dawkins asks us to imagine a huge grid, a massive hanger with an infinite number of shelves that stretch off in all directions. Sitting on these are organisms, some of which are familiar and walk the earth; but equally possible are others, sitting in identical shelves to the left, right, top and bottom, etc. The only difference between the two is that the exact genetic sequence required to bring them into being hasn't been decoded yet.



bloodlines: single channel video, still frames

Dawkins also created a JAVA applet which allows the user the chance to generate and breed a set of their 'biomorphs' as he calls them. *'Bloodlines'* emerges from this. We begin with seven forms; parents let us say. Each 'parent' form is the result of a gradual construction of an intricate skeletal structure made of individual, manually placed layers of video. The original footage consists of video feedback which occurs when a loop is created between a video camera and a television screen or monitor. The result is an astonishing array of spatio-temporal patterns that emerge spontaneously from the feedback system. Interestingly, a great many of these patterns correspond to those exhibited by physical, chemical and biological systems.

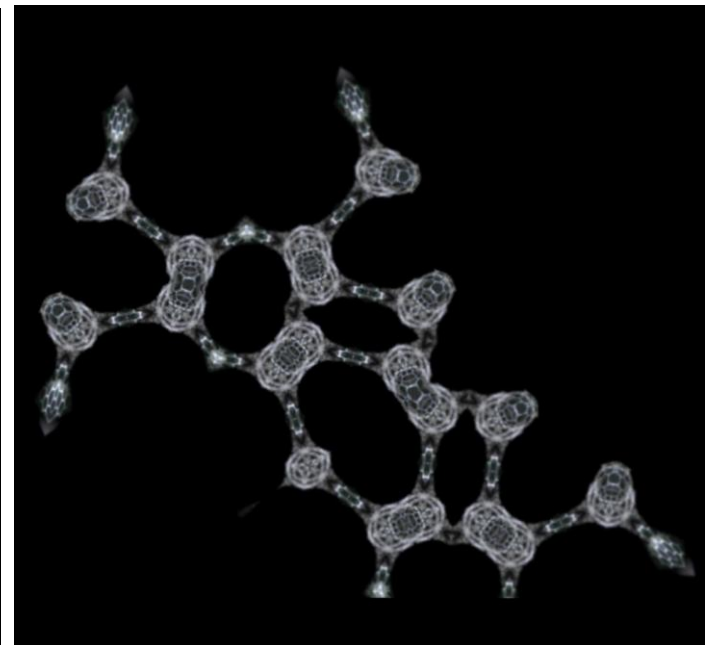
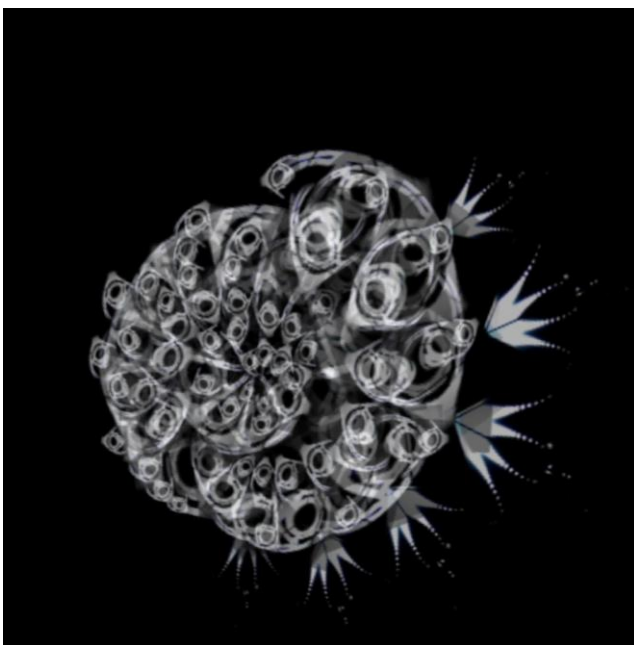


bloodlines: single channel video, still frames



bloodlines: single channel video, still frames

Bloodlines 'introduces us to a family tree where each 'parent' breeds a set of progeny, which in turn produce offspring of their own. These forms also echo deep-sea, single celled organisms such as Radiolarians and Diatoms, which are distinguished by their unique and intricately detailed glass-like exoskeletons. These natural organisms are another example of self-organisation of pattern in nature, where patterns appear when forces are strong enough to banish uniformity, but not strong enough to induce chaos. Similarly in the digital domain, video feedback demonstrates that some systems have the ability to spontaneously organize themselves into increasingly complex structures. At every higher level of complexity, there is greater potential for new structure and change. *'Bloodlines'* thus attempts a dialogue between the spontaneous generation of pattern within the technological realm and the biological.



bloodlines: single channel video, still frames

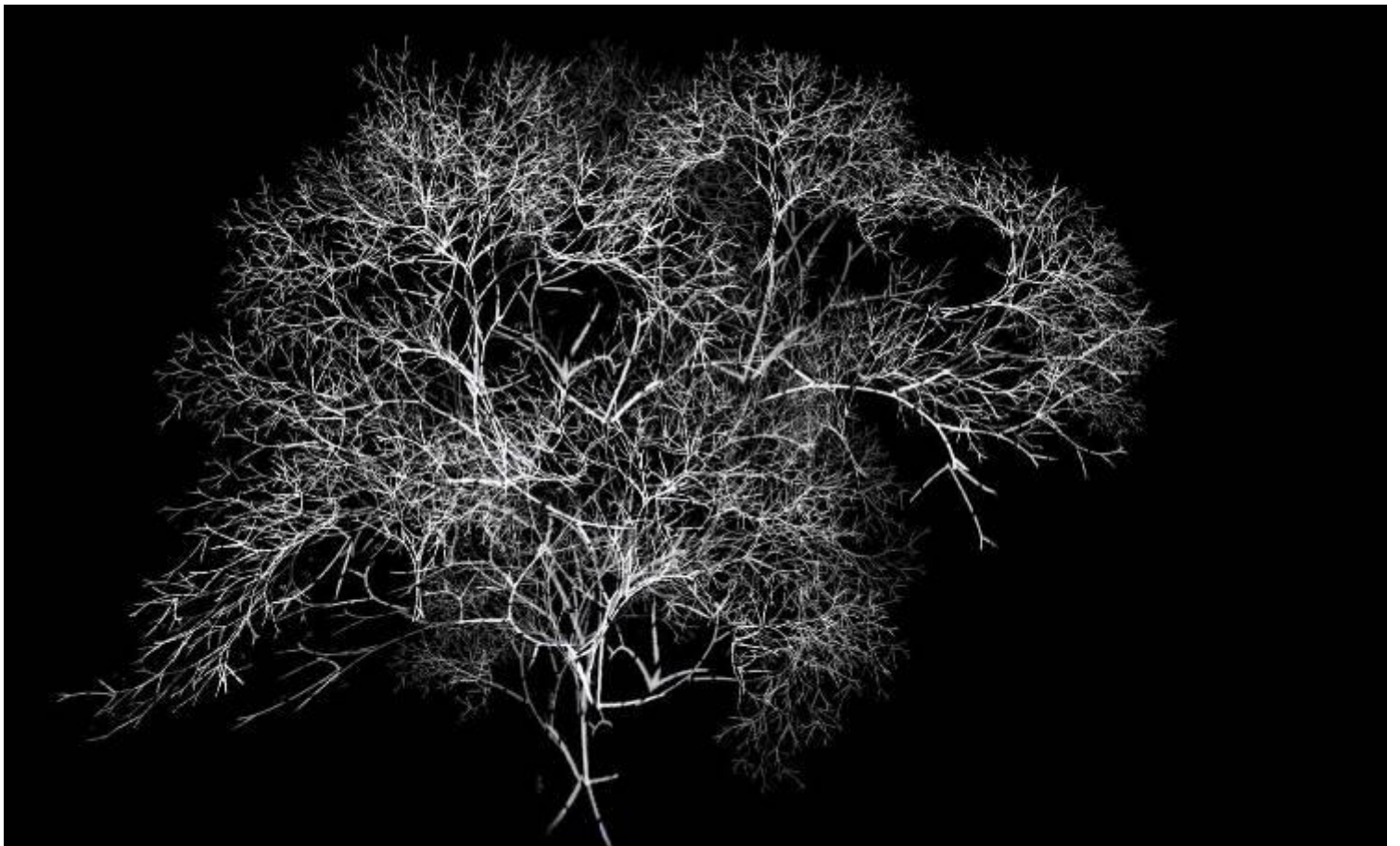
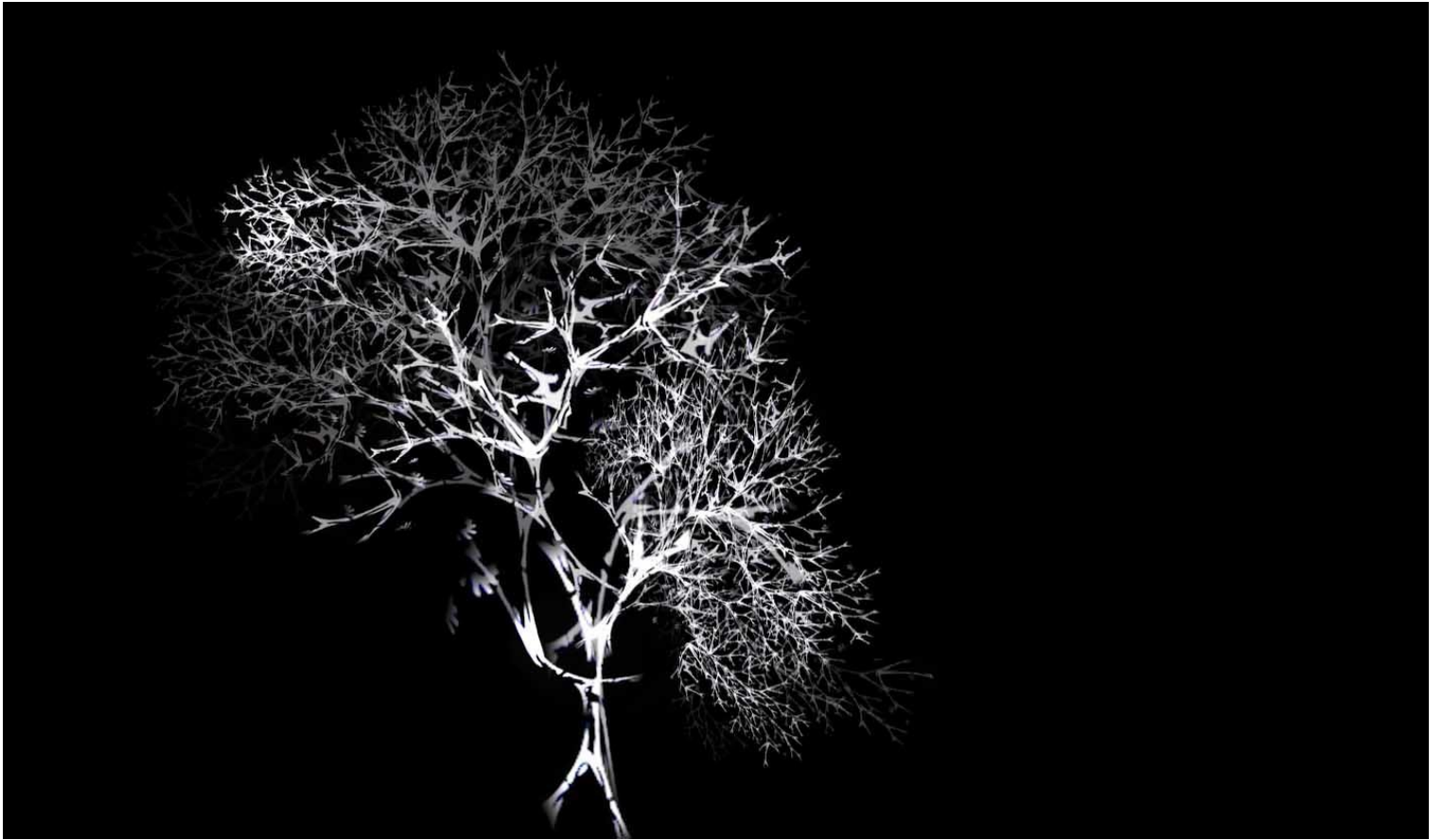
ARBOREAL

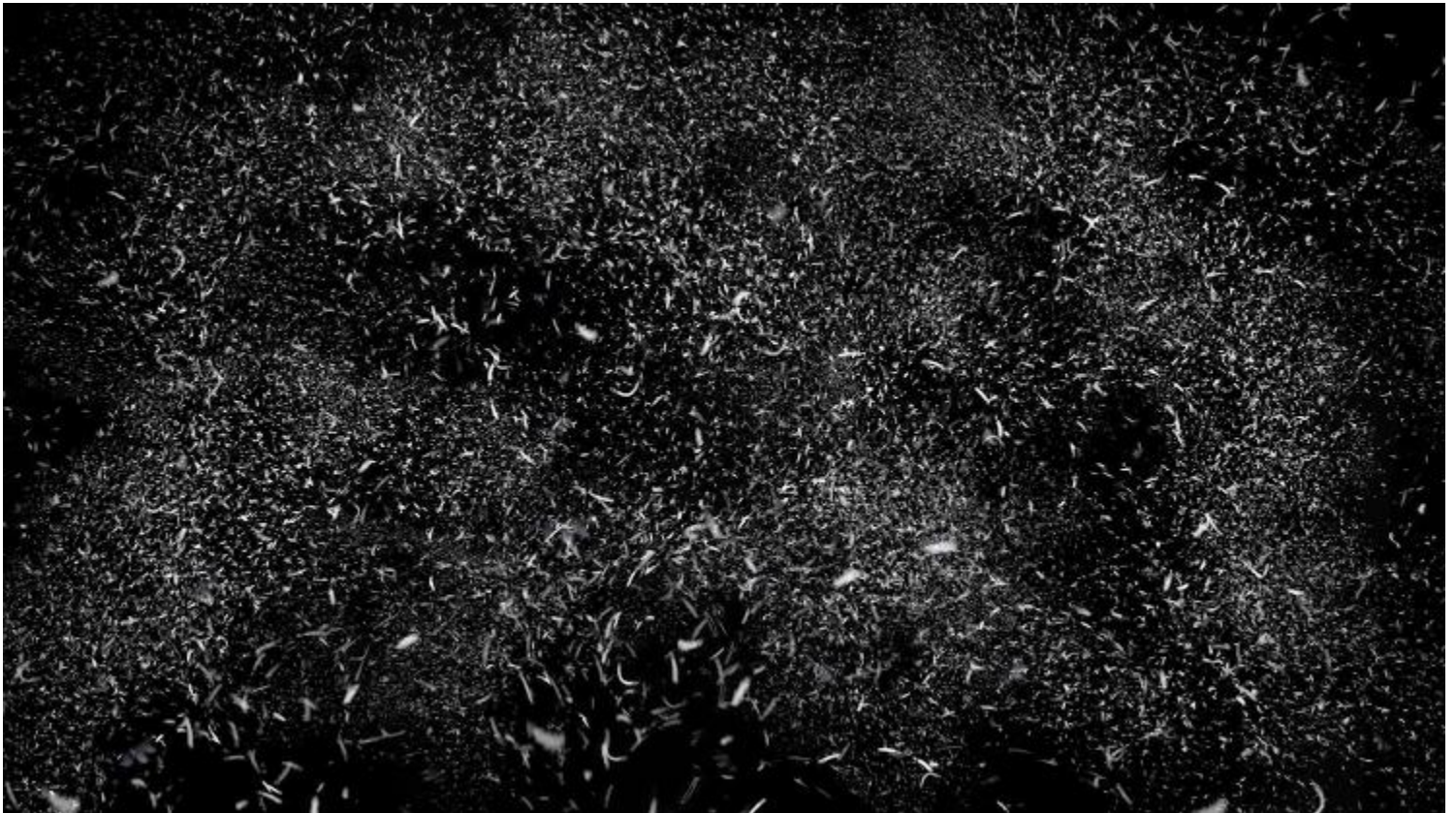
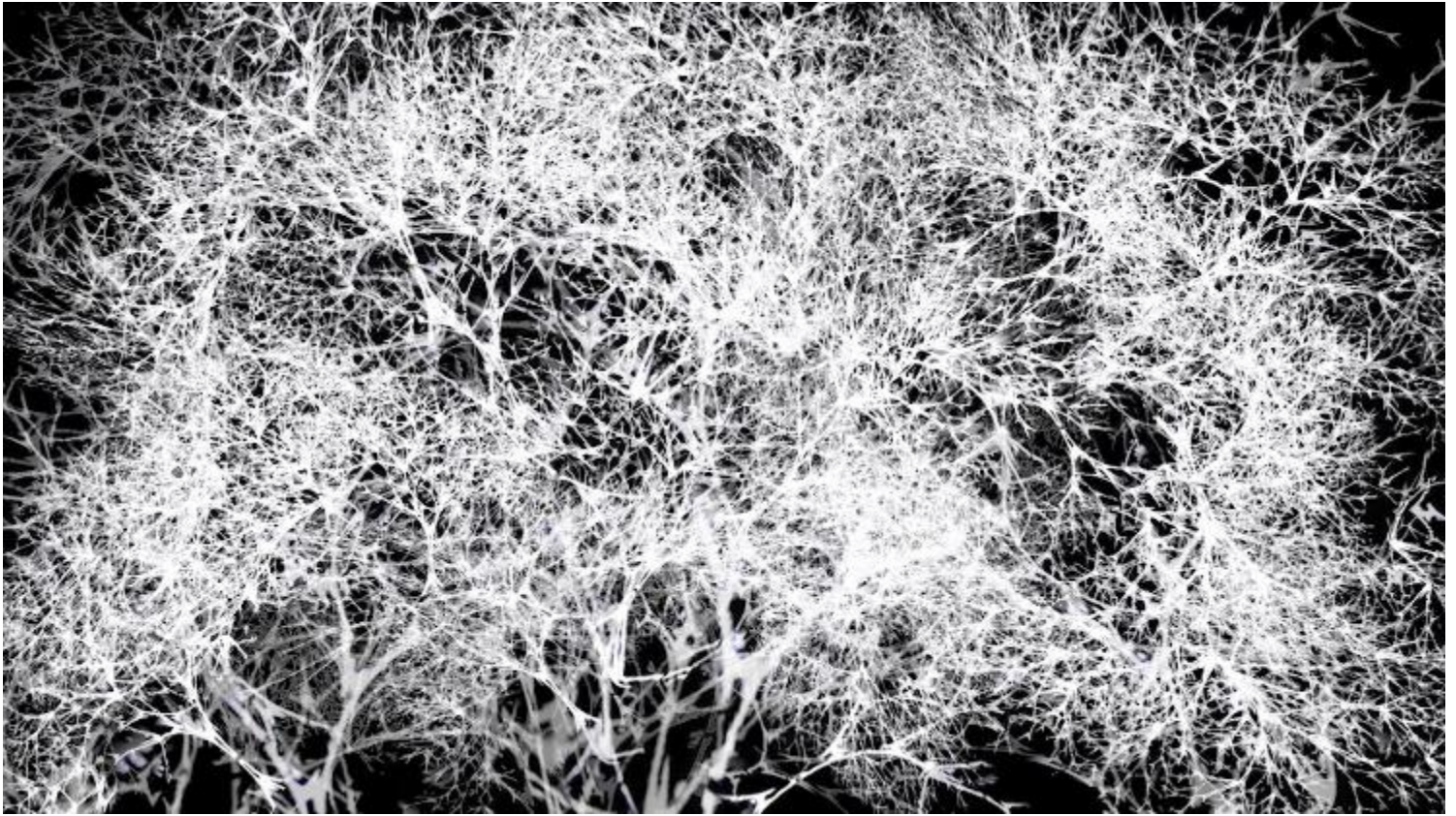
single channel video: duration 16 mins | 2011



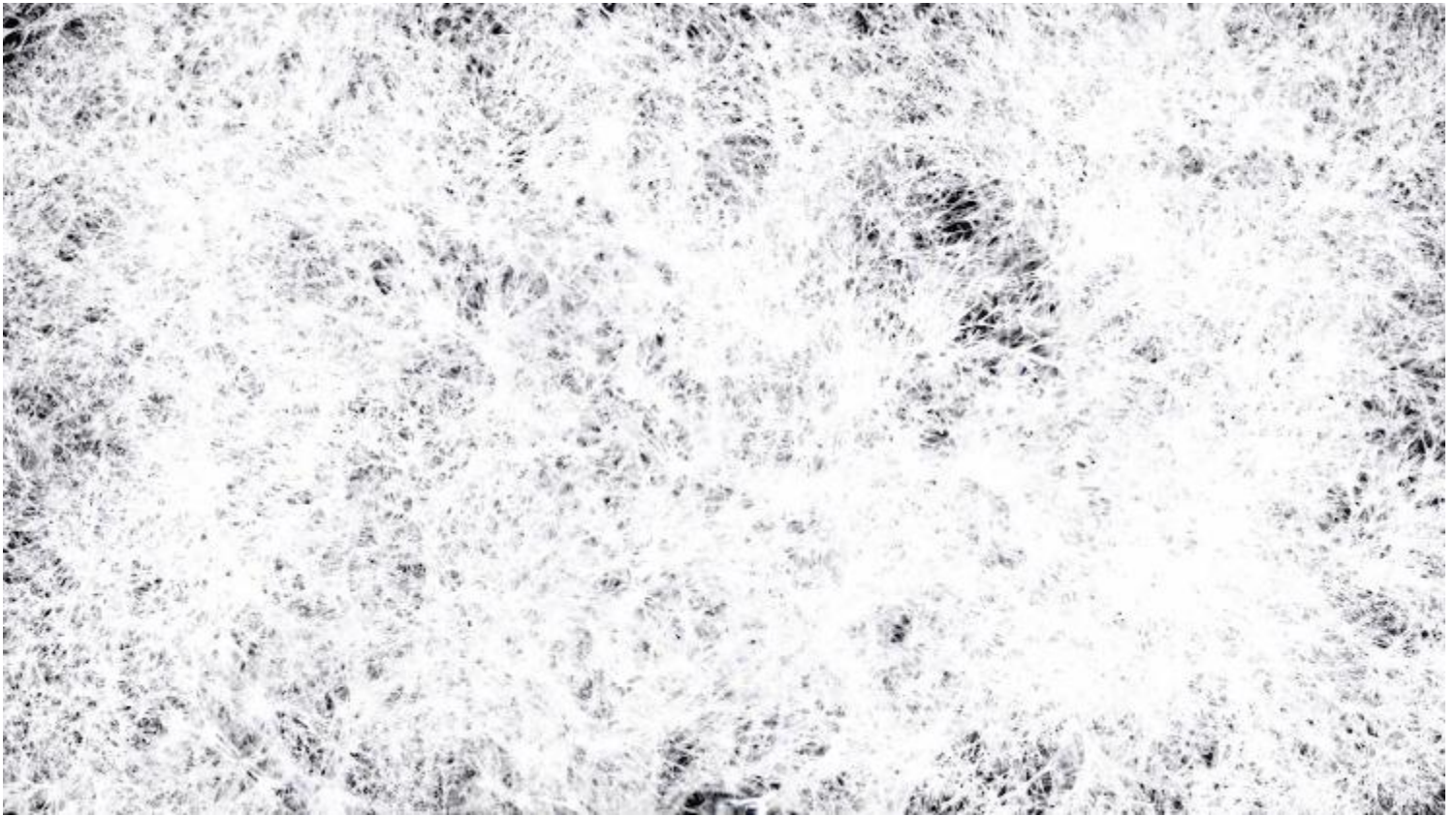
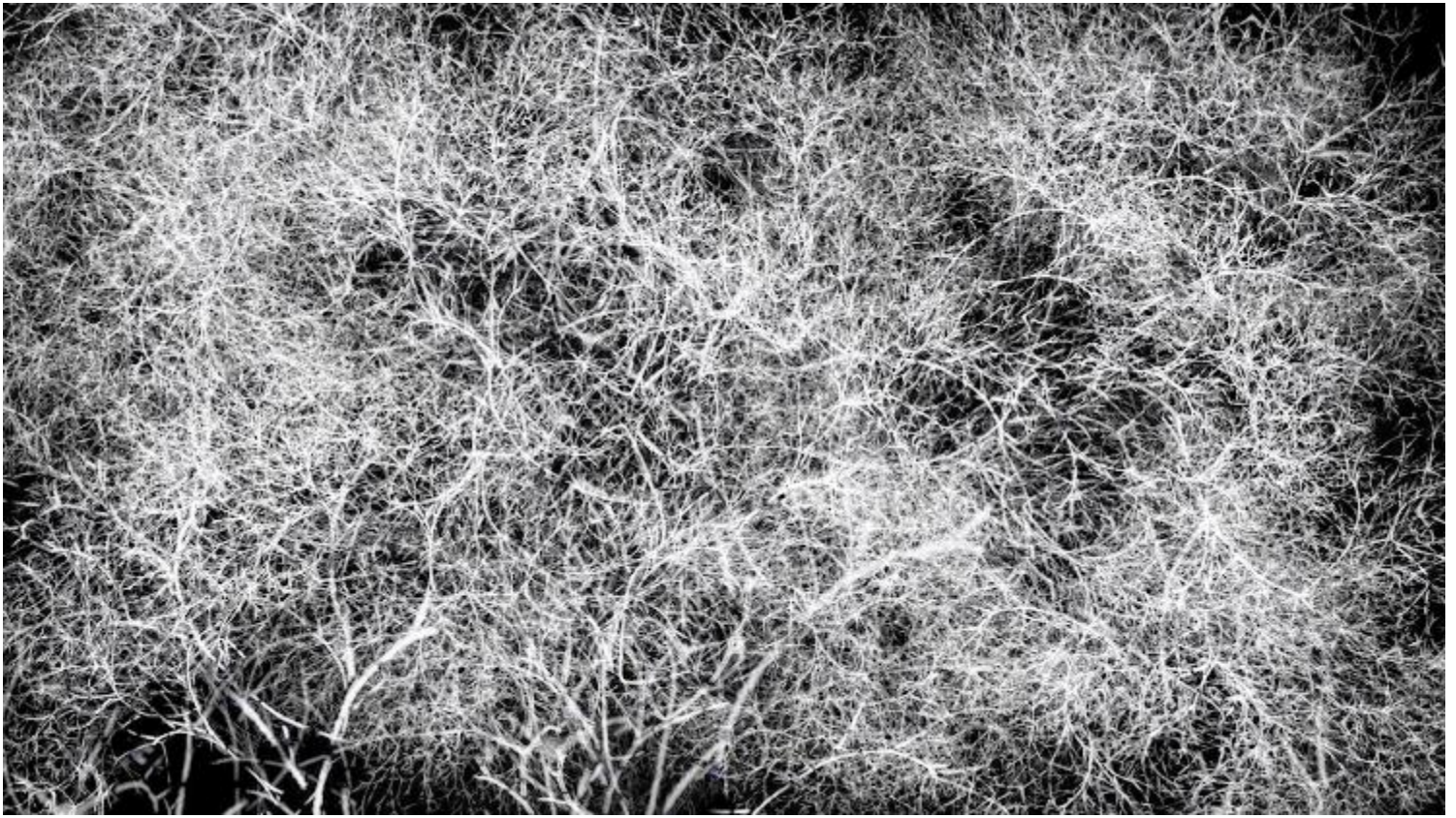
Arboreal: single channel video, Installation view

This work began with an exploration of L-systems or the Lindenmayer system, a formal grammar most famously used to model the growth processes of plant development, introduced and developed in 1968 by the Hungarian theoretical biologist and botanist Aristid Lindenmayer. L-System rules are recursive in nature which in turn leads to self-similarity and thereby fractal like forms that mimic branching patterns in the natural world. *Arboreal* or 'relating to or resembling a tree.' however is not modeled on any algorithms or programs. Via a deeply intuitive process, the artist constructs a successive set of trees through the gradual manual layering of more than 700 individual layers of video, within a video editing software. By gradually increasing the recursion level the form slowly 'grows' and becomes more complex, engulfing the space.





Arboreal: single channel video, still frames

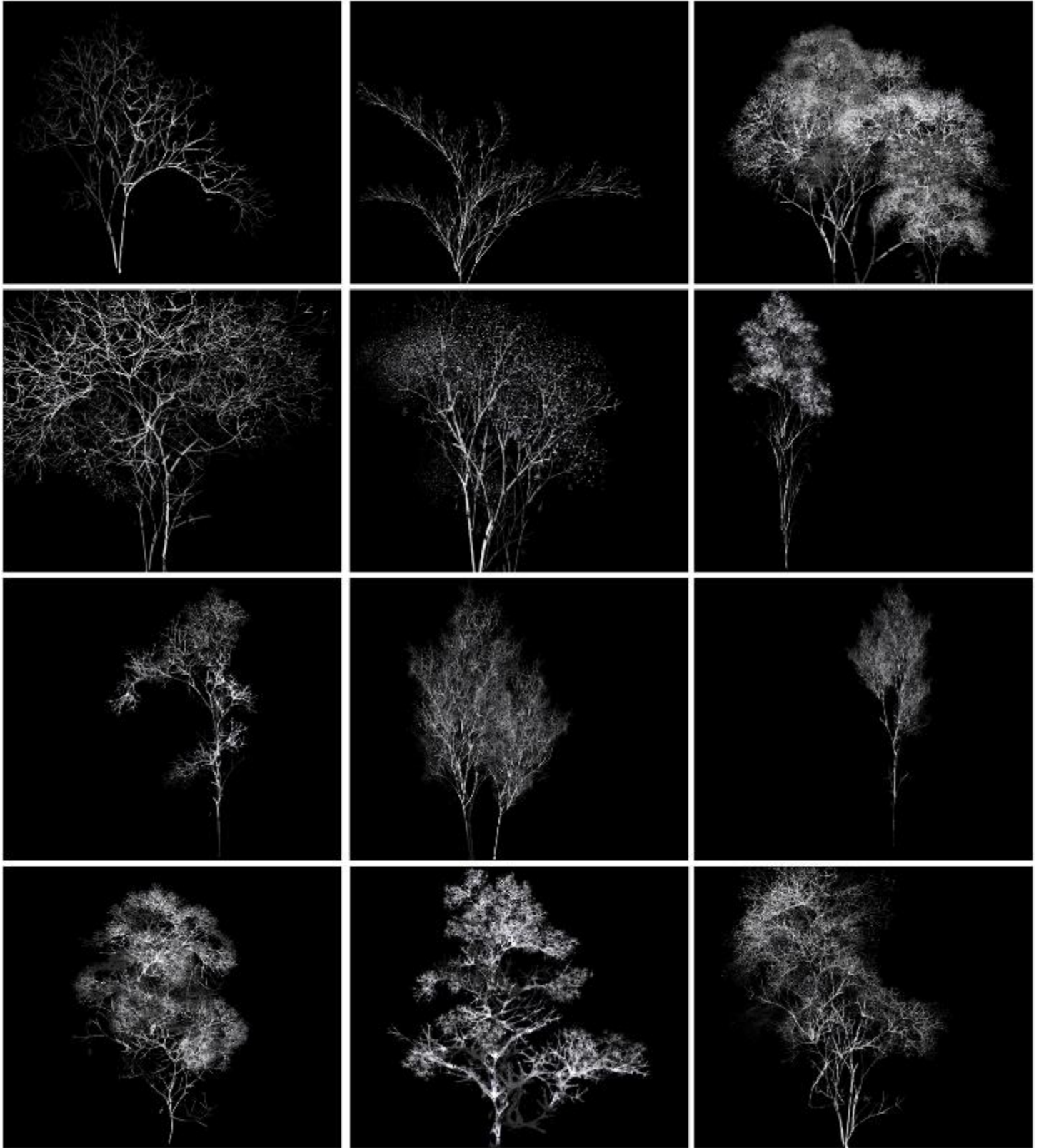


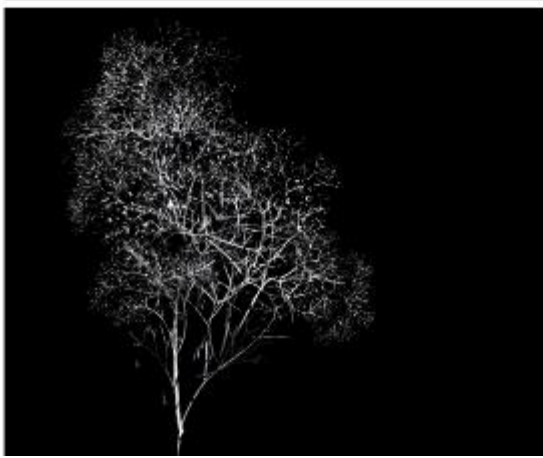
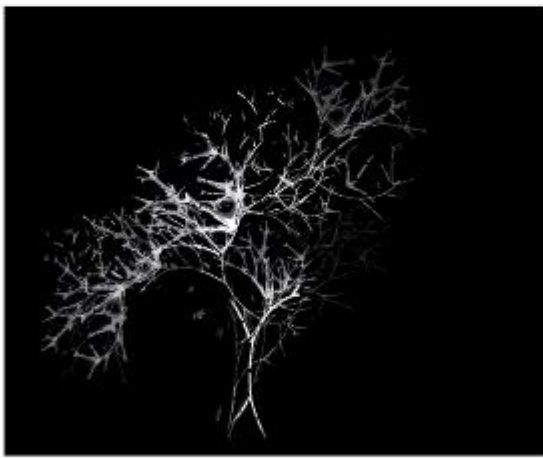
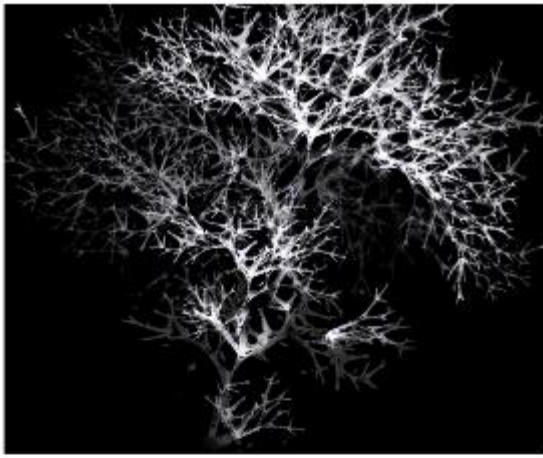
Arboreal: single channel video, still frames

ARBOREAL

Prints: set of 20 | 20x24inches on Hahnemühle Fine Art Baryta paper | 2011

If we consider the *Arboreal* video to be the archetype or ideal tree, then the *Arboreal* prints are a window to the other trees that could also have been. Once again these are generated by the layering of selected still frames of video, stacked one on top of the other. What results is a digital forest, a greenhouse of possibilities.





DOPPELGÄNGER

Double channel video: duration 7 mins each | 2011



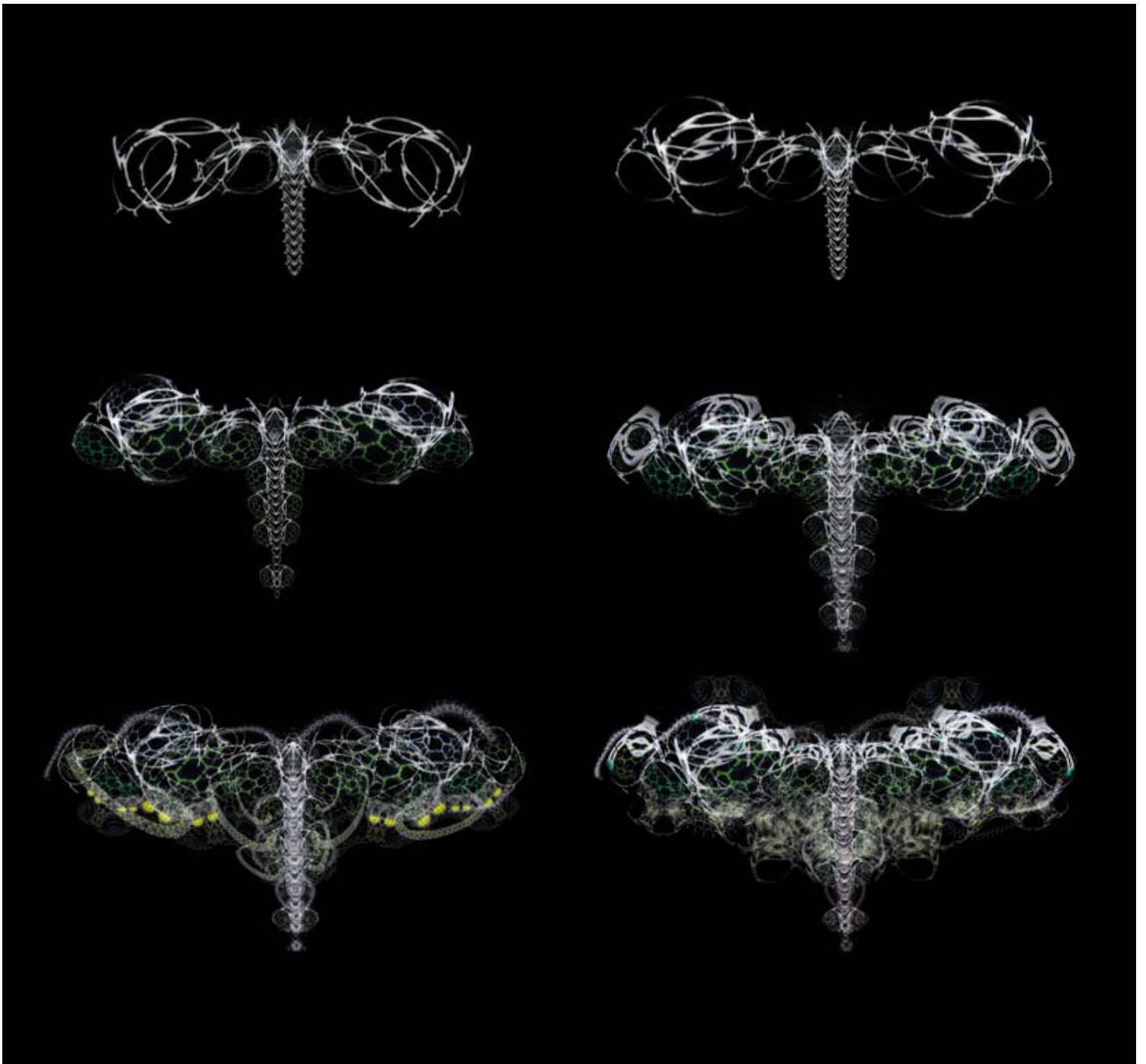
Doppelgänger(II): double channel video, still frames



Installation view



Doppelgänger (II): double channel video, still frames



Doppelgänger(I): double channel video, still frames

Two dragonflies, side by side each 'drawn' with lines of video-feedback. The forms are hybrid, deliberately layered and constructed to begin a new taxonomic structure. The two videos are related yet distinct; one charts a slow process of evolution gaining in complexity (figure II). The other explores the idea of invariant pattern linking variable detail (figure I), i.e. some elements such as the basic structure which remain constant with other structures such as wings, segmentation etc varying in detail. Of the two the more skeletal of the dragonfly's came first. This structure then forms the prototype for the other. Both videos have 9 transitions where in one case the forms increases in complexity, while in the other the forms changes sometimes subtly sometimes drastically but always with the same basic structures in place.

FOSSUS

Video projection on white sandstone relief | 4 x 5 feet | 2011

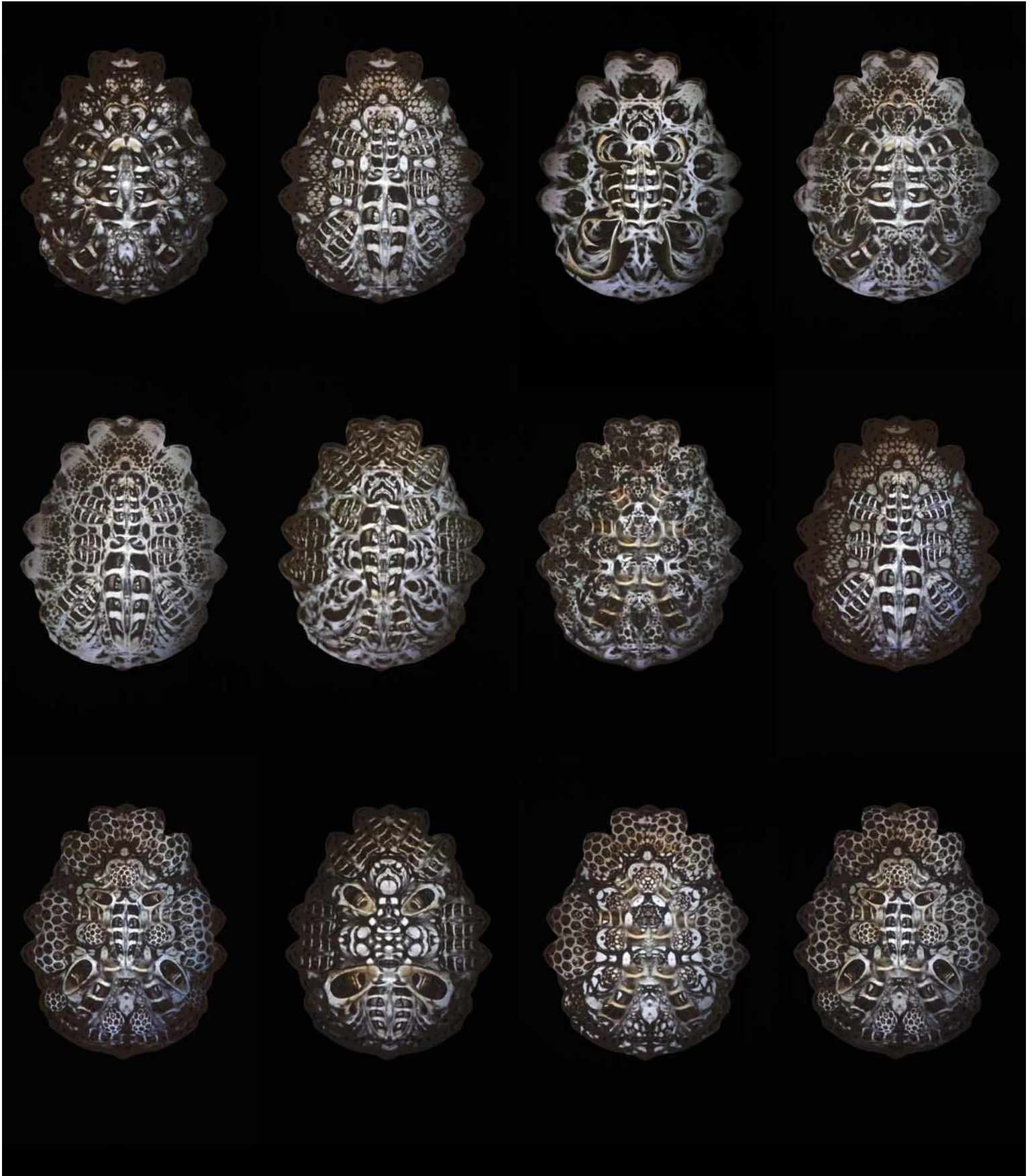


Fossus: Installation view

Fossus ... something that has been dug up. What would one of the artificial forms that form part of the *Bloodlines* family tree look like if they existed in the real world? These forms echo deep-sea, single celled organisms such as Radiolarians and Diatoms, which are distinguished by their unique and intricately detailed porcelain-like exoskeletons. *Fossus* and the series of drawings that follow developed from this. *Fossus* is a hybrid work the base of which is white sandstone cut into the shape extracted from one of the video organisms from *Bloodlines*. The sculpture forms the base for a video which again derives from *Bloodlines* but is further layered with 12 individual drawings that gradually morph and metamorphose over a period of 12 minutes.



Fossus: video projection on white sandstone relief | 4x5 feet | 2011



Fossus: details

PROTEUS

colour pencil, acrylic on archival pigment print | 60 x 60 inches | 2011





Proteus (detail) colour pencil, acrylic on archival pigment print | 60 x 60 inches | 2011

COLONY

colour pencil, acrylic on archival pigment print | 60 x 60 inches | 2011



ITERATION

colour pencil, acrylic on archival pigment print | 44 x 70 inches | 2011



CHRYSALIS series

colour pencil, acrylic on archival pigment print | 17 x 23 inches | 2011











Untitled from the *Genus* series | acrylic on archival pigment print | 12 x 18 inches |2011|



Untitled from the *Genus* series | acrylic on archival pigment print | 12 x 12 inches each |2011|