

FAREWELL TO NATURE

Faivovich &
Goldberg: *Number 8*,
2014, pigment print
on cotton rag paper,
41 inches square.

Using technologies old and new, artists are creating images of the natural world that offer dazzling visual effects and challenge our understanding of the environment.

by Sarah Demeuse

TOWARD THE END of Jean-Luc Godard's *Adieu au langage* (Good-Bye to Language), 2014, a dog—by now practically the protagonist of the 3-D film—runs around in a wooded area. We perceive trees from the dog's perspective while images of bright red leaves, many of them, speckle the frame and appear to drift out of the screen toward the audience. The autumnal scene achieves a level of visual realism that feels almost excessive: the incredible detail with which Godard captured the leaves paradoxically makes them difficult to focus on. The swirl of foliage strained my perceptive capacities, and I found my stereoscopic vision starting to fail. To make sense of the forms onscreen, I was forced to watch with one eye at a time.

The sequence in the forest can be interpreted in a variety of ways. Turning leaves are, of course, a standard trope signifying transformation and the passage of time. Throughout the film, leaves are also depicted floating and sinking in various bodies of water—imagery that has a metaphorical resonance with the broad questions about symbolic communication and human relationships raised by the film's narrative and voiceover. However, Godard's depiction of the natural world—created with cutting-edge digital cameras—struck me as the key aspect of *Adieu au langage*. As much as a treatise on human society, the

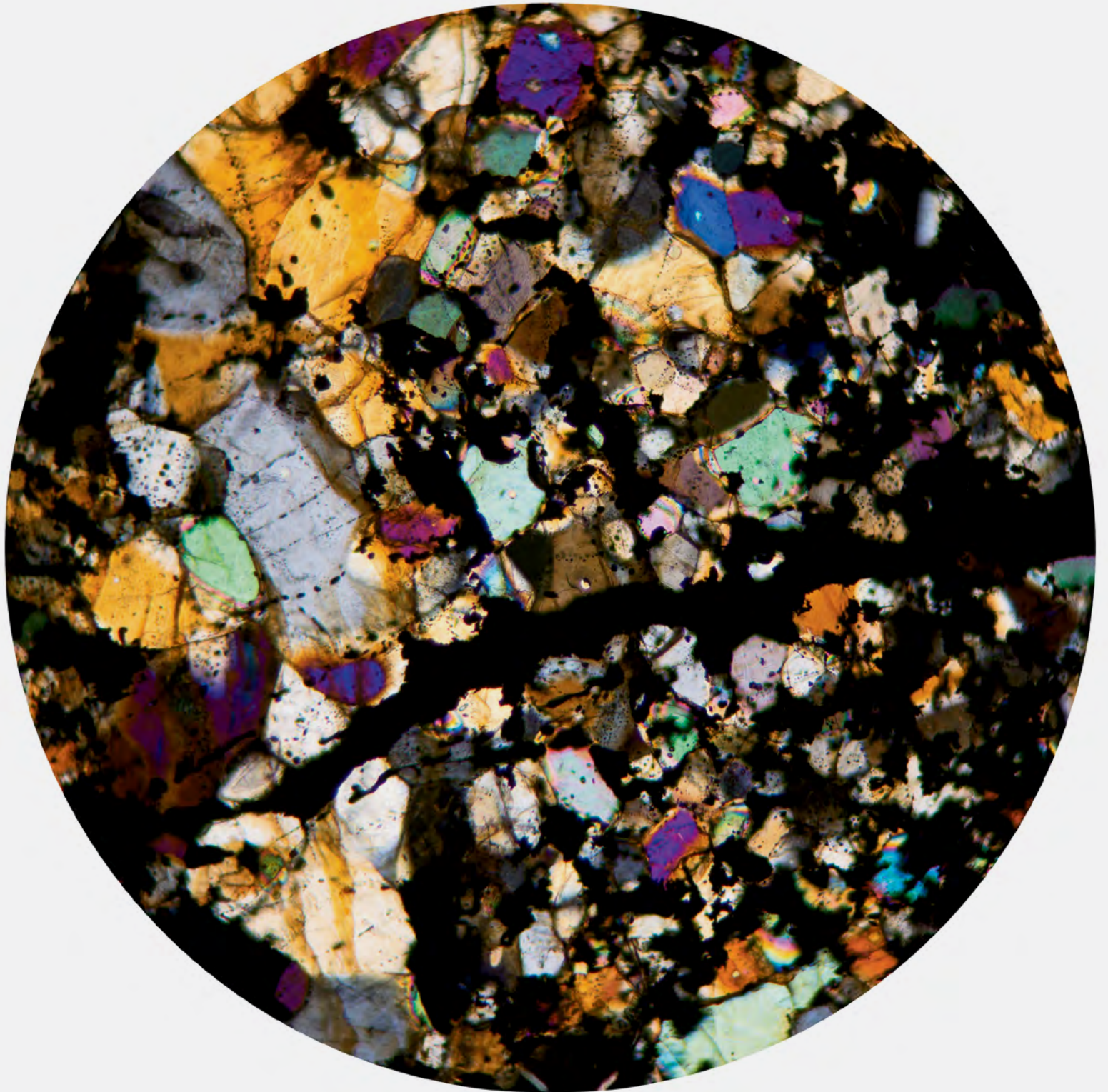
film is a visceral manifestation of how technological development informs representations of nature.

Though in his mid-80s, Godard may still have his finger on the pulse of contemporary culture in this regard. The relationship between human perception, technology and the natural environment has been repeatedly tested and stretched in recent art. Thanks to the use of advanced imaging equipment, artists are representing the inside of natural matter, thus challenging our everyday understanding of a leaf, a water droplet, a stone or a forest. Some of the most striking examples of this approach take as their subjects the environment of South America, or physical artifacts that originate there. While frequently collaborating with scientists and other experts, the artists I consider here question what we actually know about the “natural” world, how that knowledge is acquired and, ultimately, how people might interact with the ecosystems they inhabit.

FOR *HERBARIUM AMAZONAS* (2014), Berlin-based Christoph Keller collected various leaves in the Amazonian forest of Brazil's Upper Rio Negro region. He brought the small collection back to his studio and created high-resolution scans of the foliage. He then enlarged and printed these scans, creating images that are larger than a human body and which occupy nearly the

CURRENTLY
ON VIEW
Work by Eduardo
Navarro and
Daniel Steegmann
Mangrané in the
2015 Triennial,
“Surround Audience,”
at the New Museum,
New York, through
May 24.

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View of Christoph Keller's exhibition "Anarcheology," showing two *Herbarium Amazonas* prints, both 2014, 88½ by 59 inches each. Courtesy Galerie Esther Schipper, Berlin. Photo Andrea Rossetti.

entire space between the floor and the ceiling when mounted on a gallery wall. The leaves are depicted against white backgrounds, as if they had been laid out on a fluorescent medical lightbox. For his most recent show at Berlin's Galerie Esther Schipper, Keller paired an image of one bright green leaf with another that had dried out completely and looked almost like brown paper.

A dried or preserved leaf in an expert's herbarium stands as a token representing an entire species. Despite its title, *Herbarium Amazonas* resists such moves toward classification and analytical abstraction. Keller's scans emphasize the particularity of each leaf by making visible its unique cell configuration. Rather than as a specimen intended for study, Keller treats his samples almost like portrait subjects: their aesthetic appeal is grounded in their individuality. By juxtaposing living and dead foliage, Keller also underscores that the leaves are not necessarily timeless entities fixed in a preserved state, but objects subject to change and decay.

It is significant that Keller worked with a scanner to create these images. He might have achieved a similar level of detail by photographing through a microscope. But doing so would have lent the project an air of specialization and expertise, which Keller deliberately avoided. The scanned image reveals levels of detail imperceptible to the unaided human eye while remaining in the realm of more immediate everyday visual experience. Scanning further requires a direct connection

between the machine and the source material, and for that reason it can seem as if scanned reproductions are somehow less mediated than images framed by a microscope's circular lens or even a camera's viewfinder. As long as an object fits on the flatbed, its image will be rendered as a non-fragmented whole. Keller's leaf images allow viewers to appreciate intricate detail without relinquishing a total view of the object.

In a traditional herbarium, the plant variety of an entire geographic area could be indicated in a highly compact and systematic way, with authoritative knowledge condensed into a single transportable book. The monumental scale of Keller's work and its gallery setting obviously precludes this possibility. In my experience, Keller's images invite viewers to get lost among the depicted cells, as one can among the trees of a forest. Instead of granting access to scientific knowledge, Keller seems interested in positioning the spectator as something akin to a wayward larva grazing a relatively vast expanse of plant matter. This mode of spectatorship carries an ontological message: even as he presents a single leaf in each image, he also dismantles the unity of the specimen, revealing its component parts and intricate internal structure.

Herbarium Amazonas is part of a larger project called "Anarcheology," in which Keller develops his thinking on what he terms the post-archeologic condition. "Anarcheology" comprises films and collages (in which detailed leaf scans are also integrated), all of



which examine in some way classical anthropology's assumptions about indigenous and oral cultures. In particular Keller dwells on how singular objects, artifacts and sites come to play parts in the larger narratives offered by Western academic disciplines. Keller's images are often hybrids created by superimposing, for instance, a dried Amazonian leaf on top of a picture of the Parthenon. Through such combinations, the work appears to annul the distinctions between nature and culture that lie at the heart of many Western scientific disciplines. In Keller's project, archaeology, anthropology and botany exist as part of a continuum.

The large scanned leaves force an awareness of the technologies of visual reproduction that are essential in the process of understanding nature. But instead of inviting a purely analytical view, they offer a sense of wonder.

WONDER ALSO PLAYS a critical part in the work of the Argentinian duo Guillermo Faivovich and Nicolás Goldberg. Their "Número" series (2014) comprises square photographs, each featuring a quasi-psychedelic circular image of what looks like dark stained glass. The circles measure nearly three feet in diameter and stand out against white backgrounds. The colors are intense, the palettes bringing to mind 1980s sportswear.

One may very well think that these pictures are digital compositions, randomized patterns created to bewilder the eye.

But they are, in fact, enlarged photographs taken through a microscope of minute meteorite samples collected at Argentina's Campo del Cielo—one of the largest meteorite fields in the world—and held at the Smithsonian collection in Washington, D.C. The slivers were loaned to the artists for the purpose of this microphotography, which took place at the geology department of the University of Buenos Aires. The endeavor required that the shards be temporarily repatriated, a process that echoed previous work by the artists requiring laborious coordination between various scientific, cultural and political entities.

As is the case with Keller's *Herbarium*, these images are parts of a larger project: "A Guide to the Campo del Cielo," an ongoing collaboration on which Faivovich & Goldberg embarked in 2006. Producing photographs, installations and publications—and often provoking collaborations between institutions—the artists have focused on the relationships between the natural site of Campo del Cielo (located in a rural part of northern Argentina), the archives of historical documents about the area, and the scientific institutions around the world that house parts of the field's meteorites. For a 2010 exhibition at Frankfurt's Portikus, for instance, the artists reunited the two halves of a meteorite nicknamed "El Taco," rock samples that are normally held separately at the Smithsonian and Buenos Aires's Planetarium.

Faivovich & Goldberg: *Meteorit "El Taco,"* 2010, iron and nickel, each half approx. 23½ by 51 by 63 inches; at Portikus, Frankfurt.

A homeopathy dropper installed at Parque de la Memoria for Eduardo Navarro's project *Homeopathic Treatment for the River Plate*, 2013–ongoing. Photo Tomas Maglione.



“Número” is, in my view, the most visually appealing component of the “Guide,” which has predominantly featured archival or documentary imagery. This series clearly partakes in and pays homage to a tradition of “wondrous” photography, produced with microscopes, that has existed since the 19th century. On their own, the photographs provide few direct clues as to the context in which they were made and the archive in which they are held. Similar to Keller’s enlarged scans, which invite viewers to dwell on the internal complexity of simple plants, Faivovich & Goldberg’s series emphasizes the diverse components of a seemingly unified rock, revealing that the meteorite consists of a variety of elements, each of a distinct shape, translucency and hue.

The artists’ decision to present the images in the round shape of the microscopic lens in the final prints underscores their scientific origin. Looking at these works, we see as a scientist would see, which is fitting since the images were made in a laboratory setting, and only a specialist can slice the rock with enough precision to reveal its intricate details. This formal device also speaks to the institutional negotiation between Faivovich & Goldberg and the Smithsonian that made this loan possible. The artists required the assistance of scientists even as their project offers little in terms of scientific value; using tools designed for sophisticated analysis, they have instead put the object of study on hold and transformed it into a thing of beauty.

THE SCIENTIFIC METHOD plays an even bigger and more complex role in Eduardo Navarro’s *Tratamiento homeopático para el Río de la Plata* (Homeopathic Treatment for the Río de la Plata), an ongoing site-specific work initiated in 2013 in Buenos Aires’s Parque de la Memoria. *Tratamiento homeopático* is a multipart, durational project. As with many of Navarro’s pieces, the work originated in a conversation between the artist and experts in various disciplines, in this case Alejandra Bustamante (a biologist), Marta Mirás (a cultural historian) and Mario Draiman (a practitioner of homeopathic medicine). Together with Navarro, these experts conceived the optimal form and method for a homeopathic treatment for the heavily polluted Río de la Plata, which runs alongside the city. For *Tratamiento homeopático*, Navarro had the conversation transcribed and made available during the run of the exhibition in the form of a small publication.

Draiman developed a prescription for the river called “Nux Vomica 200,” and Navarro built a special dispenser for administering the compound. Once the treatment started, the artist collected water samples from the river on a weekly basis, froze them and brought them to Maimonides University in Buenos Aires, where he used a laboratory kept at temperatures below the freezing point to make high-speed microscopic photographs of frozen water crystals. The earliest one (from a test sample taken in November 2013) was also printed in the booklet.

There is one telling moment in the transcribed conversation when Navarro shows the participants pictures of water crystals taken by Masaru Emoto, a Japanese doctor of alternative medicine. Though the speakers come from different academic backgrounds and may harbor various degrees of suspicion of the homeopathic method, they embraced these images with a common sense of awe. Emoto’s pictures, published in what is essentially a coffee-table book, show the striking geometric complexity inside a drop of frozen water. His pictures are often set against a dark background that lends a certain romantic aura to the images of ice.

While intended to be beautiful and seductive, these photos are also meant to prove a theory. Emoto claims that water reacts to emotional conditions as well as changes in the environment—that it has something akin to feelings. His books, *New Age-y* in their tone and method, ultimately make a claim about humanity’s spiritual relation with water, which he tried to document with photographic evidence. His pictures show, for instance, how a beautiful, complex hexagonal structure will grow in ice crystals after the water has received kind treatment from humans (such as playing soothing music or praying nearby). However, the crystalline structure will remain largely unsophisticated—and appear aesthetically wanting—when the water has been insulted or otherwise treated poorly.

Navarro, keen on developing a project in which science and so-called pseudo-science meet, took a cue from Emoto and approached the Río de la Plata as a body of energy that is more than the sum of its chemical compounds. Though he borrowed Emoto’s photographic technique, Navarro’s intent was different. His images eschew dark backgrounds that enhance contrast, and he has zoomed in only as much as is



necessary to capture the outline of a crystal. Navarro's work also often features unstable, fragmentary geometric shapes surrounding a "beautiful" focal point. Most importantly, the images of *Tratamiento homeopático* exist as a component within, rather than as effective conclusion to, Navarro's three-part artistic effort, in which the booklet and the ungainly homeopathic dispenser play equally important roles.

There's an ambiguous mixing of expertise in Navarro's work, and with it a mixing of methodological assumptions. Whereas photomicrography implies distance and rational study, homeopathy is a course of treatment in which the subject (the river in this case) is cared for and transformed. When combined, the two techniques propose a hybrid method that makes visible how the river expresses a state of being and changes over time. *Tratamiento homeopático* ultimately suggests that the river is hardly a mute, passive entity, but that humans—whether biologists, historians or homeopaths—have only a limited register to perceive how and what it might communicate. Much like another recent work by Navarro, *Poema volcánico* (2014), for which the artist climbed a volcano so that the mountain could "paint" with its chemical off-gassing, his lengthy and collaborative project for the Río de la Plata highlights a conversational process between people, disciplines and techniques. And it sincerely probes the possibility that the river, like the volcano, might speak, a possibility embodied here in the photographs.

DANIEL STEEGMANN MANGRANÉ'S most recent work, *Phantom* (*kingdom of all the animals and all the beasts is my name*), 2015 was commissioned by New York's New Museum for "Surround Audience," its third Triennial. The Rio de Janeiro-based artist's project places the human observer on uncertain ground by presenting a visceral encounter with a depiction of nature. To experience the work, viewers don an Oculus Rift headset, a device commonly associated with virtual-reality video games. Here, the Oculus system transports its user into the thick of the Mata Atlântica forest in Brazil. The black-and-white stereoscopic images are derived from a precision 3-D laser scan of more than 3,200 square feet of foliage, trees and shrubs. The detail of the image is overwhelming, nearly blinding. The headset tracks every minute movement of the user's head and body, seamlessly re-rendering the scene to account for these physical adjustments. The user feels as if she is in the middle of the forest: no matter where she turns her head or how she moves her body, she'll see leaves, branches, trees and more leaves, branches and trees.

Where Keller's scans and Faivovich & Goldberg's photographs speak formally and conceptually to the question of framing, Steegmann Mangrané's immersive work has, on the contrary, employed the latest virtual-reality technology to facilitate a sense of borderlessness. Here, the user/viewer can continue roaming deeper into the woods, browsing up, down, left, right—all while her field of vision is apparently unframed. This limitlessness comes to an eerie

Frozen water crystals photographed in January 2014 during Navarro's project "Homeopathic Treatment for the River Plate."



Scanning process for Daniel Steegmann Mangrané's *Phantom* (kingdom of all the animals and all the beasts is my name), 2015, virtual-reality environment. Courtesy Galerie Esther Schipper.

Steegmann Mangrané: *Phantom*, 2015, virtual-reality environment. Courtesy Galerie Esther Schipper.

extreme when the user realizes that her body has been erased from the scene. If she searches for her feet she'll only see leaves, dirt and moss. Similarly, if her arm tries to move a branch, she won't be able to do so. Yet, bodiless, she can move straight through tree trunks or the meshwork of tropical branches. If being alone in a high-definition forest isn't bewildering enough, being alone in it without a body is definitely perplexing.

With this perplexity, *Phantom* poses a dilemma. It offers virtual access to the Mata Atlântica forest, but at a cost. The disappearance of the human body amid the constant flow of 3-D imagery can cause physical nausea and even a sense of cognitive disconnect. Oculus Rift, combined with laser-scanning, brings us closer to the old cinematic dream of total representation—incrementally realized through sound film, color stock, 3-D cinema, IMAX, etc. But experiencing this contemporary pinnacle of visual reproduction can also make us queasy.

Steegmann Mangrané's imaging of a Brazilian forest, made available to audiences in New York, can be understood as commentary on the Western tradition of depicting foreign, overseas landscapes. The colonial and imperial eyes that, since the 1500s, have tried to measure and visually capture the Amazonian terrain also deployed the latest mechanical tools of their eras. On his early 19th-century expeditions to South America, for instance, Alexander von Humboldt studied the continent with the most technically advanced instruments available for geophysical research. Such depictions of the natural world, in order to be seen as truthful and objective, had to omit traces of the subjective observer. This omission is, of course, a standard part of scientific procedure. But amid Steegmann Mangrané's lushly detailed imagery, this absence is acutely felt through the real physical discomfort it produces.

Steegmann Mangrané shares with Keller an awareness of how the imperatives of empire helped stimulate the development of picturing technology. Much like early explorers, these artists have undertaken traditional fieldwork (Steegmann Mangrané) and botanical collecting (Keller). But the images they

produce complicate our understanding of the supposed object of study rather than analytically parsing and explaining it. They want viewers to be aware of the construction of their pictures by making them feel not like dominating forces controlling a passive landscape, but like minute insects or disembodied ghosts. Despite the marvelous aesthetic effects Steegmann Mangrané's and Keller's work produces, their aesthetic strategies ultimately unsettle easy viewing and knowing.

NATURE HAS OFTEN been seen as the "other" of human culture, an ahistorical, passive screen on which to project a truth about humanity's origins—think of Romantic escapism, or the diaries Gauguin wrote while in Tahiti. Nature conceived as a beautiful allegory of this sort is nature mystified, producing aesthetic feelings of wonder and awe. The scientific gaze, on the other hand, demystifies nature by turning it into an object to study, measure, classify and explicate. In this conception of the natural world, humans are the active knowers, interested in, but not overwhelmed by, what they see.

I sometimes ask myself whether a re-mystification of nature is at play in the artworks I've discussed above. These artists mostly emphasize not knowing, cultivate a loss of understanding and offer strong, immediate visual experiences. At the same time, the cold, detached gaze of the flatbed scanner, the laser or the microscope precludes sentimental attachment. Over the past decade, the art world has adopted the language of object-oriented ontology, a philosophical school that has in part produced theoretical descriptions of humanity's relationship with nature that, to some extent, resonate with the artistic positions I've highlighted. Graham Harman, a leading figure of this "ontological turn," has argued, for instance, that objects retain a "dark core" that is inaccessible to human observers and fundamentally unknowable.

But rather than applying such a theoretical framework to these artworks, I'd like to contextualize them instead within a contemporary visual paradigm that includes Godard's film as well as a broadly defined visual culture. Microscopic detail is a familiar part of our image vocabulary. Medical dramas on television, for example, have accustomed us to images of malignant cells moving through arteries, attacking healthy organs. Good chefs and knowledgeable diners have likewise embraced the idea of "molecular gastronomy."

Our lives are increasingly subject to surveillance procedures that make our everyday actions available in great detail to observers. In a way, these technologically advanced artworks bring the technologies and visual language of surveillance to leaves, stones or drops in a river—terrain that is often considered "pure," untouched by power.

The drive to look more closely at the detailed structures of things that may appear remote from us (an extraterrestrial stone, the structure of an Amazonian leaf) is hardly unprecedented in the optical paradigm we inhabit. What differentiates these artworks, and makes them vital to discuss, is how they decentralize the human viewer as a knowing subject, requiring us to rethink boundaries between ourselves and the world at large. ○

