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6 “The Roar of the River Grows Ever Louder”

Polluted Waters in Colombian Eco-Art, From Alicia Barney to Clemencia Echeverri

Gina McDaniel Tarver

Many social, political, and economic stresses currently experienced worldwide and demanding immediate attention have to do with water as a vital resource for drinking and hygiene, agriculture, industry, and renewable energy. Climate change leads to rising sea levels and warming oceans, displacing people and depleting food sources; nations build hydroelectric dams, providing green energy but uprooting communities and destroying ecosystems; water sources dry up due to drought or become polluted due to urbanization and extractive industrialization. In Colombia, artists since the 1980s have been concerned with the ecological devastation of rivers and its impact on people and the environment.¹ This chapter examines two artworks separated by thirty-five years, one marking the emergence in Colombia of eco-art and the other a recent example. Both focus on the degradation of the River Cauca. Alicia Barney (b. 1952), the first Colombian eco-artist, created *Río Cauca* (River Cauca) in 1981–1982 to highlight the problem of urban and industrial pollution. In 2016–2017, Clemencia Echeverri (b. 1950) exhibited *Sin cielo* (Without Sky), a video installation showing the contamination of waterways caused by gold mining. Both artworks expose capitalism’s polluting effects, but their approaches reflect different historical moments calling for distinct strategies, revealing the kind of contextual difficulties that eco-artists must creatively navigate. Their work provides case studies to help think through the complexities of effective artistic response to environmental disaster.

In creating these artworks, both artists harnessed techniques developed outside of art that have distinct nonart applications linked to totalizing knowledge and systems of social control, to capitalism, colonialism, and extractivism. Barney’s *Río Cauca* exhibits the trappings of scientific investigation grounded in geographical study and tied to governance. Echeverri’s *Sin cielo* employs aerial videography, associated with surveillance and military action. The artists harness the history and impact of these techniques but also use them in ways that overflow, even turn against, their normal functions. Barney’s installation seems a promise of what has been and still could be, questioning Western notions of progress. Echeverri’s is apocalyptic, wherein humans are revealed as significantly impacting but not controlling natural processes. Where Barney’s work appeals to rationality, Echeverri’s channels affect. Not just opposite approaches, Barney’s corresponds to the slow death of an epistemology of scientific progress, while Echeverri’s reveals a world in which capitalist extractivism appears to be unstoppable and its devastating environmental consequences beyond repair. Each challenges contemporary viewers to question what eco-art can achieve, and how, in this moment of climate catastrophe. In the course of contemporary eco-art charted by these two artworks, one sees a challenge to persistent notions of progress—scientific, economic, and social—in the death of a river.

Río Cauca

The River Cauca flows 600 miles, south to north, from its Andean sources in southwestern Colombia near Popayán until it merges with the River Magdalena before pouring into the Caribbean. It runs through the nation's most productive agricultural area, the Valle de Cauca (Cauca Valley),² dominated by the sugar cane industry. In the Cauca Valley, it also skirts Cali, Colombia's third largest city, and passes by Yumbo, an industrial center that produces construction materials, paper products, chemicals, and pharmaceuticals. On its way to meet the Magdalena, the Cauca flows between the western and central Andes ranges, through areas known for coffee farming, gold mining, and coca production. Threats to the river's health—and that of the plants, animals, and people who depend upon it—are multiple, including silt resulting from deforestation (caused by mining, logging, and agriculture); chemicals (fertilizers, pesticides, and herbicides) used in agro-business and in the war on drugs; sewage; contaminants leaching from urban garbage dumps; industrial wastes dumped directly into the river; toxins used in and wastes resulting from the mining of gold and other minerals; and corpses—the grim harvest of the country's chronic violence—clandestinely “buried” in the turbulent waters. These contaminants seep, spill, and surge into the river all along its course.

Alicia Barney Caldas was born near the River Cauca, in Cali. Growing up in the Cauca Valley on her family's dairy farm, she spent hours under trees and next to streams, learning about the natural world through immersion in it. After attending university in New York, Barney returned to the valley.³ A conversation with her father, who reminisced about the great number and variety of animals that once roamed the valley, including *tigrillos* (small wild cats), bears, and herds of tapir, made her realize how quickly humans were destroying the local ecosystem, and feeling it was “urgent to raise the alarm about all the damage being done,” she produced “several ecological works denouncing what I thought were the problems at their very base.”⁴

Río Cauca was Barney's second eco-artwork, the first being *Yumbo* (1980), which dealt with air pollution. For *Río Cauca*, Barney collected water from the river, first from its source above Popayán, where she filled five large jugs with water. Barney recruited the biologist Roberto Díaz, from the Universidad Nacional in Palmira, to travel with her to five river locations within the Department of the Valle de Cauca. With the scientist, Barney went to:

1. La Balsa, where the river enters the department;
2. Puerto Navarro, near a major sewage dump in south Cali;
3. Puerto Isaacs, at Yumbo;
4. Zambrano, downstream from a sugar processing plant; and
5. Gutiérrez, where the river leaves the department.

At each site, they took water samples midstream, and she photographed the process.⁵

Díaz analyzed each sample and compared results to previous studies of the river. The analysis confirmed that several circumstances contributed to the river's degradation. The water from Puerto Navarro contained alarming amounts of sewage. At Puerto Isaacs, near Yumbo, chemicals from industrial processes were highly concentrated. At Zambrano, a tributary feeding into the river brought large volumes of boiling water, regularly dumped by a sugar refinery upstream, causing further damage. These impacts were symptoms of rapid modernization in the valley after World War II, which itself reflects nationwide trends that the government supported through import substitution industrialization programs from 1945 through the early 1970s.⁶

The problem of sewage at Puerto Navarro reflected the rapid urban population growth that accompanied industrialization: Cali's population increased by a factor of 14 between 1938 and 1985, growing from 101,883 to 1,429,026.⁷ The chemicals in the river near Yumbo corresponded to the growth of new industries, mostly multinational. (For example, the Switzerland-based company Eternit established a factory in Yumbo in 1945 to create its trademarked fiber cement, containing asbestos, widely used in modern construction and in increasing demand in the postwar period.)⁸ These pollutants reflect what anthropologist Nancy Motta González and sociologist Aceneth Perafán Cabrera identify as the greatest threats to the river: "the lack of control by the authorities, in addition to the indifference of citizens and businesses in the face of the effects of degradation . . . of the Cauca."⁹ The river's degradation was an outcome of capitalism, an impact ignored within the official message of progress through industrialization and technological advancement to be fed by nature's presumably endless bounty. Any solution, argue Motta and Perafán, must be symbolic as much as practical, since the problems are systemic and widespread and cannot be solved without drastic mindset changes on the part of the government, business owners, and citizens alike.¹⁰

Barney's instinct to highlight the problem through art was both timely, being much needed, and ahead of its time within Colombian art.¹¹ Her goal was to alter mindsets, effecting a symbolic change that might lead to action. To display her investigation results, she built three shallow acrylic tanks, one each for samples taken from the surface, mid-depth, and bottom of the river at each of the five points (Plate 14). In the bottom of each tank a hydrological map of the river was etched. The river's source water filled the tanks, and suspended above the points on the map corresponding to the sampling locations were the samples in test tubes (Figure 6.1). Photographs documenting the sampling process, clearly labelled, hung on the walls near the tanks along with the scientific analyses,

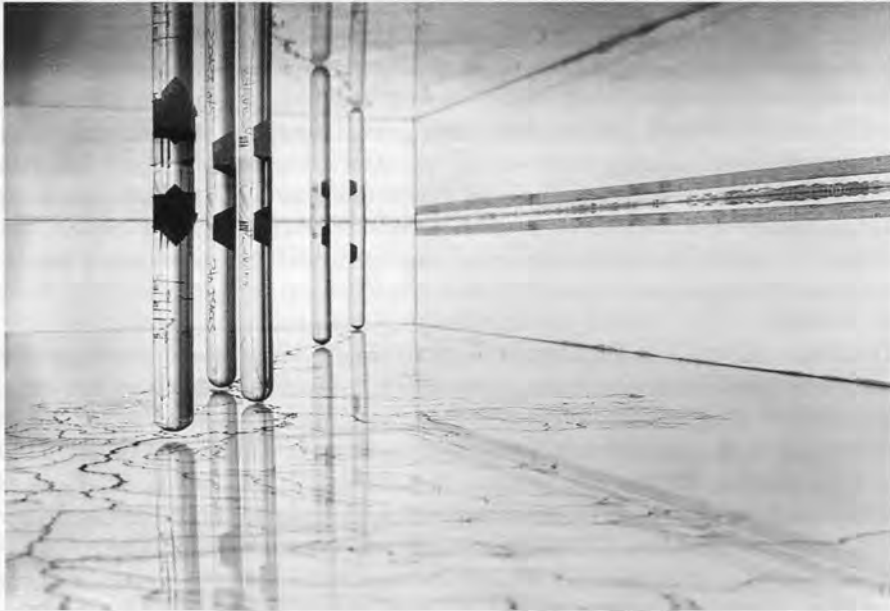


Figure 6.1 Alicia Barney, detail of *Río Cauca*, 1981–1982, mixed media and variable dimensions. Source: Photograph by Guillermo Franco.

and the large containers used to collect the source water sat nearby. Taken altogether, the display reveals a process of investigation similar to those which activist academics increasingly were using to denounce ecological devastation with scientific rigor.¹² It also followed and alluded to a national history of natural science that is well-known, respected, and closely entwined with Colombia's emergence as a nation-state.

Measurements, Maps, and Mirrors

No one better exemplifies this entwined history than Barney's own illustrious ancestor, Francisco José de Caldas (1768–1816). A *criollo* (American of European descent) born in Popayán in the Spanish Viceroyalty of New Granada, Caldas was a self-taught naturalist and inventor—he developed a pressure hypsometer, which measured altitude based on water's boiling point. The famous Prussian scientist-explorer Alexander von Humboldt, whom Caldas met in Quito in 1801, thought highly of him. Caldas also worked closely with the Spanish botanist José Celestino Mutis, participating in his Royal Botanical Expedition of the New Kingdom of Granada, launched in 1783 specifically to expand knowledge of the viceroyalty's natural resources so as to better exploit them economically.¹³ The expedition exemplified the use of science in colonizing nature. As T.J. Demos explains it, colonizing nature “entailed a multifarious, complex, and at times contradictory pattern of bureaucratic rationalization, scientific and technological mastery, military domination, integration within the expanding capitalist economy, and legal systematization in order to manage and maximize the possibilities of resource exploitation.”¹⁴ Simultaneous to studying the territory's bounty, Caldas and other expedition members spread Enlightenment ideas through the publication of the newspaper *El Seminario*, which Caldas directed. These ideas are credited with fomenting the independence movement. Shortly after the independence movement began, Caldas joined the independence army, serving until royalists captured and executed him. The American struggle to be free from Spanish colonialism's yoke eventually succeeded, while the *criollo* elite's colonization of nature, in the interest of developing strong economies, continued apace.

Caldas's greatest contribution, according to historian José Eduardo Rueda Enciso, was his emphasis on the importance of geographical study in the formation of a successful state.¹⁵ Indeed, having achieved independence, the newly formed Republic of New Granada launched the Corographic Commission in 1850, its own exploratory mission for mapping its territory and taking stock of its resources.¹⁶ The anthropologist Michael Taussig asserts that the true importance of the commission lay in the *symbolic* act of mapping:

The map was preeminently an emblem of statehood; to make the map was to make the state—in an act that appeared to be one of domesticating the chaos of nature and obtaining some leverage over the dense inwardness of local knowledges concerning geography, topography, chorography, flora and fauna. No map or associated survey actually achieves these things. It appears to. That's all. And it does so by the crudest magic, transposing the unruliness of the experience of nature onto a piece of paper marked north and south, east and west. . . . Was any abracadabra as crude as this? What seems crucial here is what this tells us about the state; how it needs this theater with its magic but needs it disguised as science, and how important the domination of nature is to such theater.¹⁷

Science, specifically figured through Caldas as an early local scientist and key figure of nation-formation, continued to hold an important place in the national imaginary and, furthermore, in the symbolism of the economy, as evidenced by the portrait of Caldas that appeared on the 20 peso banknote from 1966 to 1983. Based on a nineteenth-century portrait by an unknown artist, this image shows him holding a compass over a celestial globe, as if fixing the nation's place within the universe through scientific measurement.

In adopting a scientific approach to the problem of ecological devastation, utilizing measurement and maps, Barney tapped into this powerful theater of the state, taking advantage of the importance of the idea that the government has control of nature. If the government must be seen to be in control, perhaps it could be persuaded to tackle the problem of pollution, if only to preserve its own façade of order and prosperity. The display tanks with their test tubes, maps, and accompanying scientific documentation allude to the rich history of the nation and its promises of progress. In a sense, they demand that the state keep these promises. Yet they also overflow a scientific approach in their aesthetic impact, especially through transparent and reflective materials.

With *Río Cauca*, Barney's strategy was to make corruption visible, not by overwhelming the viewer with the river's abject state but by contrasting the contaminants with the beauty of source water within an immaculate and orderly display in order to prompt rational reflection and action. The pollution is carefully contained in the test tubes, held in suspension within the source water. *Río Cauca* seems to be a promise that the problem can be controlled. Barney stills the ongoing process in order to hold the various elements in tension, as at a crucial moment of potentiality and reflection.

The three tanks, identical at first glance, each with its five tubes in the same spots, create a visual repetition that emphasizes systematic study and also draws attention to the display as an abstraction of the river, an analysis. Repetition emphasizes the character of a map, that magical quality of any map but particularly a hydrological one: that it appears to fix, in a manageable scale, a vast area, making it, presumably, knowable.¹⁸ A river map is a practical absurdity—it charts a liquid that is in constant flux, never the same twice, as Heraclitus wrote. In Barney's installation, there is the map, the same three times, but the river, she simultaneously reveals, is not consistently the same and has hidden depths: we can only know it partially, in bits, as an abstraction, through the magic of the map.

The etched maps demand closer looking, drawing the viewer in. From certain angles the tanks' lower surfaces reflect the light, becoming mirrors. The viewer might gaze upon her reflection through the still water and reflect upon her relationship with water. Perhaps the citizen's individual self-interest might serve to activate a solution: we all need clean water. Yet a mirror, considered as metaphor, goes beyond narcissism. Mirrors are also associated with visions; they are mysterious material that beings might travel through from one world to another, à la Alice (Alicia) through the looking glass.

While the map is science-as-magic, the mirror is material-as-magic. The mirroring surfaces of *Río Cauca*, like the water itself, correspond to lakes high on the *páramo*, the river's source in the lands above 3,000 metres. In rare and wondrous moments when the clouds break, the sun shines, the mist lifts, the wind calms, and the water stills, these lakes become perfect images of the sky. At such moments, the earth seems to disappear. Distinctions dissolve into a sense of infinity and unity in being. In Andean mythology, such lakes are the origin of the gods, of life itself. The gods break

the mirror's surface from another world to emerge into this one, bringing divinity to earth. Thus, the artwork contains within it both the potential of European empiricism and something different, less rational and less individualistic. *Río Cauca* is a presentation in which science is privileged while sensibility subtly reinforces science's almost mystical powers but also hints at its limits.

The potential efficacy of Barney's early eco-artworks relied on the idea that the main problem was one of visibility: once brought to light, nature's corruption could be dealt with using the same tools of knowledge often used to exploit it. There *were* governmental reactions to pollution problems around the time that Barney made *Río Cauca*, such as a new Sanitary Code (Law 9 of 1979) intended to protect the natural environment by granting regulatory powers to the Health Department,¹⁹ put into effect in January 1982. Potentially, the government could have curbed pollution, but instead it tended to give concessions or remain silent on violations, so that the new code's enactment proved woefully inadequate. Reports twenty-five years after *Río Cauca* debuted revealed that 500 tons of waste entered the River Cauca daily; that despite large monetary investments, water treatment plants in Cali could not process the great volume of wastewater; that the river did not contain enough oxygen to dissolve contaminants, with the oxygen level at zero at Yumbo.²⁰ Recently Barney wrote that when she worked on *Río Cauca*, "I still had hopes that people would react in time."²¹ Now she sees *Río Cauca* as utopian, in the sense of being impossibly idealistic, leading to no-place.

T.J. Demos points out that while contemporary projects that bring public attention to ecological degradation are salutary, they have a problem: "The danger here involves deferring responsibility to scientific expertise and government authority in determining our collective response to environmental change, which makes us vulnerable to solutions forged by exclusive social, scientific, and political interests."²² Individuals need to share responsibility, increasing their knowledge *and* leveraging science as a tool of power rather than leaving potential solutions entirely to experts and authority. As Demos argues,

we can only affirm the need for a critical realism that both refuses to relinquish the validity of science and remains dedicated to a guarded analysis of ecological discourse as a representational system forged at the intersection of power and knowledge.²³

The questions of how to change the representational system, how to make scientific knowledge useful outside of or despite power systems, remain difficult and vital.

In the early 1980s, Barney faced problems in creating eco-artwork that went beyond the quandary of how to affect a symbolic shift, beyond the conundrum of reliance on government accountability, in ways specific to the Colombian political situation. "I had lots of trouble getting a hydrological map of the river from a government institution," she writes, "because of the guerrilla, anyone who asked for a map was suspicious."²⁴ Because maps are crucial in military, economic, and administrative control, they were tools to be guarded in the 1980s and 1990s as the state faced the growth of an armed leftist insurgency and the drug trade. During this period, the state was particularly vulnerable, leading authorities to distrust and harass critics such as Barney (and sometimes to do worse). Barney states,

When I showed *Yumbo* in 1980 at the museum La Tertulia in Cali, I was approached by three of the so-called intelligence police. These police dress as

civilians, spy on citizens, make unlawful arrests, and disappear people, but all the same, you can recognize them. I was asked to explain the work.²⁵

This environment was extremely hostile to activism, which might partially explain why eco-art did not thrive in Colombia as it did elsewhere at the time. Thirty-five years after *Río Cauca*'s creation, when Echeverri created *Sin cielo*, the country and its ecological well-being still faced extreme difficulties linked to government weakness and violent struggles for wealth and power within the systems of late capitalism.

Without Sky

Clemencia Echeverri was born in Salamina, a town located in the Department of Caldas on a tributary of the River Cauca. She studied visual communication and fine arts in Medellín, established herself as a successful painter and sculptor in the 1980s, then studied abroad in the mid-1990s.²⁶ As art historian Sol Astrid Giraldo Escobar notes, upon Echeverri's return to Colombia, "the overwhelming reality of the late 1990s claimed her full attention."²⁷ Colombia was in the midst of one of its worst periods of violence as non-state armed actors (NSAA)—including leftist guerrilla organizations, right-wing paramilitaries, drug cartels, and other illegal gangs linked to these groups²⁸—terrorized the country, fueled by the lucrative cocaine trade and vying with the government for power. In response, since 1997 Echeverri has explored the nature of Colombian violence through a variety of media, notably video installation.²⁹

Commissioned in 2016 to create a video installation for the Museo de Arte Banco de la República for exhibition at the bank's cultural centre in Manizales, Caldas,³⁰ Echeverri turned her attention to the ecological violence of gold mining, a theme of current political and environmental relevance and apropos to the venue. Gold has been, since pre-Columbian times, an important resource in the lands that make up Colombia, and with the global gold price steadily rising between 2002 and 2012 and remaining high since, gold mining's national economic importance has grown. In recent decades, especially, it has played a major part nationally not only in ecological devastation but also in violent conflict.³¹ The Banco de la República, as Colombia's central bank, manages the country's financial policies. The bank has important connections to wealth, generally, and to gold: until 1997, the bank had a monopoly on the gold trade. The bank also owns Colombia's famous Museo de Oro (Gold Museum). The video installation Echeverri made for this commission, *Sin cielo*,³² evokes these links as it constitutes a critique of gold mining, specifically in Caldas.

The video focuses on gold production around Marmato, Caldas. Marmato is a small town (population around 10,000) on a mountainside above the River Cauca. It looms large in Colombian history due to its ancient and modern abundance of gold and its crucial role in the nation's foundation: Simón Bolívar, the Liberator, leased Marmato's gold mines to the British in order to fund the War of Independence.³³ The area's importance stretches back much further than that, though. Before the Spanish conquest, the Quimbaya, celebrated for their stunning, advanced metalwork, dominated the area, exploiting its minerals. Marmato is one of Colombia's oldest towns, founded by the Spanish in the 1530s to take advantage of the area's mineral wealth. To work the gold mines throughout its conquered territories, Spain brought slaves from Africa, and the majority of Marmato's population still are Afro-Colombian, while indigenous groups have a strong presence, too.³⁴ Most of the population,

whose livelihood depends on mining, are poor. These are the people most negatively impacted by the problems of gold mining in Marmato and elsewhere in the country—the impoverished, and especially ethnic minorities.

The many problems related to gold mining are extremely complex. Most of the gold mined in the country comes from small-to-medium-scale, informal undertakings, that is, from traditional artisanal mining utilizing methods that are centuries old.³⁵ This situation contributes to difficulties of regulation.³⁶ Despite a Mining Code in 2001 that instituted the requirement of a government-issued mining title and included environmental directives, in 2011, no more than 15% of gold producers surveyed reported having a mining title or following environmental standards.³⁷ Mining processes, both large scale and artisanal, frequently use mercury and cyanide to extract ore, and these dangerous substances contaminate local rivers. In addition, gold mining is currently the nation's top cause of deforestation, leading to massive erosion, especially in mountainous areas, and mining itself deposits large quantities of earth into rivers and even destabilizes mountainsides, resulting in landslides. "It leaves behind the death of the landscape," writes Echeverri; it constitutes a "moral ruin" with profound political, social, and ideological effects on the territory.³⁸ In Marmato, as *Sin cielo* shows, the extreme impact on the ecosystem is highly visible—in fact, impossible to escape.

Sin cielo consists of video projected through nine display screens on one wall, with stereo sound filling the gallery.³⁹ The screens sometimes show one gridded image, sometimes nine different images at once, or any number in between. It begins with a menacing, unnatural note, droning in the background and sustained throughout much of the video, now loud, now quiet. The river appears, the water running steady and black, with the sound of its rushing flow. Then sludge takes over, gray mud, dripping, pouring, splashing, gurgling, surging into the water, and a new sound begins: the metallic susurrant of coins, which seem to fall in an endless stream, sometimes slow, sometimes fast. The images steadily shift, from extreme close-ups to far away shots, always without a hint of sky.⁴⁰ With no sky, it seems impossible to breathe. Like suffocating.

Opaque, viscous substances stream downhill, over barren land (Plate 15). Then there is a person, then three people, but only appearing as rubber-booted feet, hints of dirty blue jeans and dark skin, with mineral-coated hands. Each dumps gray liquid from a bucket. More sound: winches turning, the hollow resonance of metal, water cascading, birds singing, cables creaking, insects buzzing, distorted voices, the ominous note fading in and out. A machine mixes water and sludge. Barrels turn on mechanical spits. Booted men, small like insects, labor at the edge of a precipitous slope, a gash on the mountain, under corrugated metal roofs. Water and dirt swirl around a washing pan, joined by another, and another, and another, each a small vortex (Figure 6.2).⁴¹ A glint of gold flashes. Hands coax it forth. Seen from above are buildings, more buildings, a crazy patchwork on a steep hill. Nine aerial views of the town slide off in nine directions, then coalesce into one scene (Figure 6.3). The entire area looks like it will skid off the sharp incline. Indeed, the mountain itself seems likely to erode away. Words cannot capture the sickening, dizzying, slipping sensation the video wall produces. Like falling.

Rocks. So many rocks. Ant-like men passing rocks from hand to hand, making a wasteland, a burial mound for the earth itself. Moving away from the town, the thick gray stream runs on and on, between green trees that stand apart, drawn back from the edges of the persistent runnel to reveal dead banks of stone, of rubble. Destruction. It spreads onward. The sludge pulses into the river. The river takes over again,

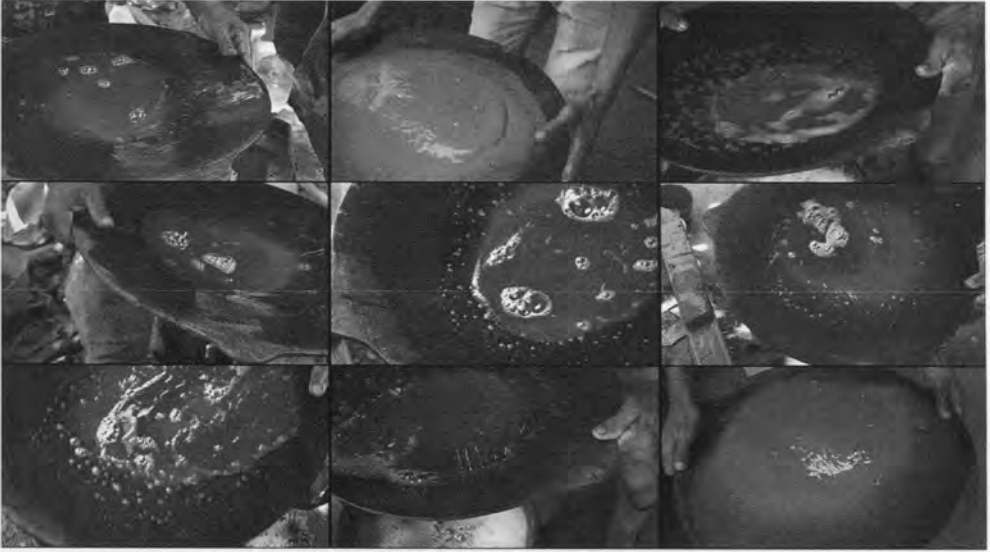


Figure 6.2 Clemencia Echeverri, still from *Sin cielo*, 2016–2017, video wall with nine monitors and stereo sound, 11:20 minutes.



Figure 6.3 Clemencia Echeverri, still from *Sin cielo*, 2016–2017, video wall with nine monitors and stereo sound, 11:20 minutes.

gulping the sludge, unabated. Darkness seeps slowly across the screen. Everything goes black. Like drowning.

Echeverri's use of montage, whereby jump cuts juxtapose close with distant views from multiple angles while also moving from river to mountain and back, along with her use of nine gridded screens, in and out of sync, creates a powerful kinesthetic

experience. These techniques also emphasize the problem's scope, showing it on both a micro and macro level, revealing how the problem multiplies through the seemingly endless repetition of individual actions. The use of aerial views within the montage, recorded with a drone camera, is particularly effective in conveying scope.

Aerial recording is also significant for its character as an optic of control, due to its original military application. In Colombia, aerial surveillance is closely linked to the "war on drugs." With aid from the United States, the Colombian military has long used helicopters and unmanned aerial vehicles (drones) to find coca crops.⁴² Increasingly, they use these techniques to crack down on illegal mining, which now equals or even exceeds cocaine as a revenue source for NSAA.⁴³ As visual culture scholar Jennifer Stob points out, the aerial view is not just tied to governmental control, it also creates a myth of an infinitely expandable, omniscient perspective: "The shared utopia of all aerial views is infinite scale, an ever-increasing distance from what they portray and the ever-increasing dominion this distance suggests."⁴⁴ While Echeverri's use of aerial perspective creates a sense of infinite scale—it seems the devastation will continue to expand beyond the camera's reach—at the same time it counters any sense of mastery that would normally be associated with such a perspective. Instead, presented in a bewildering array and interspersed with details of a no-man's-land that even seen up close loses all connection to a sense of place, aerial perspective presents a nightmare of human manufacture that has spun completely out of control. Thus, the "normal function" of aerial surveillance is stymied, and the ability of humans, with all their advanced technology, to stem the tide of destruction is called into question.

Without Heaven

Echeverri's *Sin cielo* constitutes a condemnation of the ecological damage gold mining causes, but two aspects of the artwork call for deeper consideration, as they may inhibit responsible and effective political and social ecological action in the face of the crisis. First is the artwork's tendency toward abstraction. The photographic aerial view, as Stob points out, is "the paradigmatic abstraction of social and economic life";⁴⁵ it is precisely through abstraction that aerial perspective acts as an optic of dominion. In *Sin cielo*, even when the camera moves in close, the picture is cropped in such a way that faces are not seen; therefore, it is not the miner's plight but mining's environmental effect that is emphasized. Keeping the focus on ecological devastation, the problem becomes one that, while recorded in one locality, may easily be imagined as it occurs simultaneously elsewhere. Indeed, abstraction of the problem of erosion and pollution could be an intentional strategy for reaching a broad audience. Such abstraction may contribute to a unity of purpose nationwide or even globally, but it also runs the risk of flattening the problems of gold mining, that is, overlooking the specificity of the complex circumstances of gold mining in particular locations, such as Marmato.

Viewers in Manizales, viewing the original installation, may have been familiar with Marmato's history—the troubled town is not far from Manizales and was frequently in the news—so its story likely provided a background to their experience of the artwork. Subsequent viewers outside Colombia, and even some within, are unlikely to know specific details of the Marmato crisis,⁴⁶ which has to do with changes in mining regulations, multinational investments, the criminalization of long-standing small-scale informal mines, and an influx of illegal miners that combined

to accelerate exploitation of the mountain, creating chaos in the local community.⁴⁷ Problems began in 2005 when a multinational corporation began buying up local mines and processing mills in an effort to establish a large-scale, open-pit mining venture. The government backed this foreign investment, aiming for more efficient use of national resources and greater regulation of the industry.⁴⁸ Local miners formed groups to protest the development. Then, in 2006, two landslides damaged buildings in Marmato. The government proposed relocating the entire town to a lower, flatter location. Many in Marmato and the surrounding area took it as an attempt to make room for the open-pit mine.⁴⁹ Resistance to the relocation was successful, but by purchasing and closing down mills, the corporation made it extremely difficult for small-scale miners to make a living, affecting the entire town's economy. The company, now called Gran Colombia Gold Corporation, also closed mines it had purchased while awaiting permits for the new operation. It seemed the town might be starved out for lack of work.

In 2008, local miners took matters into their own hands. The mining code states that if a mine is abandoned for six months, the title owner loses the right to work it. Therefore, the miners invaded and began to work the closed mines. After a brief period of great success, word got out to other parts of the country, and an illegal gold rush began, with thousands coming, lured by the ever-increasing value of gold. The government, in response, criminalized small-scale mining in Marmato and initiated measures to shut down the invaded mines. But the situation was beyond control and worsened by the fact that many outsiders brought with them drugs, prostitution, and crime. And the new mining spurt caused increased environmental destruction,⁵⁰ the subject of *Sin cielo*.

Local miners fought the company and government at every step, and finally, in February 2017, the Constitutional Court made pronouncements favoring the miners, reasserting the traditional rights of small miners throughout the country.⁵¹ Since then, the Gran Colombia Gold Corporation filed a massive lawsuit against Colombia⁵² but also announced plans to downscale their project.⁵³ Although these developments represent a relative victory for local small miners, and townspeople, Marmato still suffers the social and ecological problems brought on by the surge.⁵⁴ Yet the traditional miners and other townspeople have shown great resilience and strength in fighting for their rights and preserving their culture, and they deserve neither demonization for destroying the environment nor to be seen as passive victims of neoliberalism.⁵⁵ In fact, although their activism has not been focused on ecological issues, their relative success against powerful corporate and governmental opponents points to the potential and importance of grassroots movements and makes their group a possible organizational model for ecocritical action. This complicated reality lurks, unseen, behind *Sin cielo*.

The second problematic aspect of the artwork is in its affective impact. The video installation, with its swooping, slipping aerial views and stereo soundtrack, creates a powerful visceral experience; it impacts the viewer in a deep, preverbal manner. Affect can be a potent motivator when rationality fails and perhaps is necessary to convince people of the reality and urgency of ecological destruction, since reasoned presentations have foundered. Yet affect also runs the risk of becoming overwhelming, leaving the viewing subject inert.⁵⁶ The title *Sin cielo* can mean "without heaven," which might be taken as lack of hope for a better future existence. Without hope, who will bother to act? Apocalyptic scenarios are beneficial to neoliberal interests, comprising,

in Demos's words, "enforced narratives of disaster capitalism" that foster despondency since "they make it seem as though environmental catastrophe is our ineluctable fate."⁵⁷ The emphasis on catastrophe in *Sin cielo* approaches the apocalyptic, offering a vision of disaster without leaving much room for possible solutions, overlooking the citizens of Marmato's own determination and effort to improve the situation.

Muddying the Waters (Some Conclusions)

These two works, revealing the River Cauca's degradation since 1981, stand as examples of critical eco-art that are in many ways opposite in their approach. Together they offer insights into such art's potency and efficacy as a catalyst for political ecological action embedded within and responding to specific local realities. These works mark not only a particular problem and its intensification, but also a diminishing of hope for change. In 1981 at the south end of the Cuaca, Barney displayed a living river in danger from pollution but crystalized in a moment of tension and possibility. Her idea was that a rational revelation of the problem might stimulate a solution. Thirty-five years later, downstream, the River Cauca in Echeverri's *Sin cielo* is, in the words of one curator, "a dead body, continuously bringing destruction downriver with its inexorable flow."⁵⁸ Echeverri's work, like Barney's, raises awareness, but in a manner that overwhelms the senses and mind, risking the viewer's paralysis. Humans are lost within her work, overwhelmed by the disastrous environment they created, suggesting that the anthropocentric approach to the world itself is a failure.

Their histories in context reveal difficulties involved in crafting effective ecological art and in instigating activism, especially in a country plagued by violence where the government is weak. As they are in other parts of the world, the grave ecological challenges in Colombia are closely intertwined with economic, political, and social struggles. In particular, insufficient resources allocated for environmental protection, the continuing threat of NSAA, who are deeply invested in the gold mining trade, and tensions between proposed neoliberal solutions and traditional ways of life are some of the problems in Colombia. The government continues to see foreign investment in high-tech, economic development (such as in new large-scale mining ventures) as a solution, trusting that multinational companies will bear the responsibility of environmental sustainability, but Marmato is an example of a community that largely, with reason, distrusts both government and corporations and sees their way of living—which is also based on exploitation of nature, though on a smaller scale—as threatened by these outside interests. Any effective solution needs to respect the culture and desires of local populations, and in the case of mining, perhaps the solution is to return to and regulate, but from a grass-roots level, small-scale mining, setting aside the government's desire for more thorough exploitation of natural resources. In Colombia, *Sin cielo* is representative of current environmentally aware art but should not be seen as marking an ending point, since many other artists seek solutions through artistic practice.⁵⁹ So how best to continue?

In the face of such obstacles, it is reasonable to ask, what *can* artists do? How can eco-art be effective? Both Barney's and Echeverri's artworks have certain strengths that might point to possible courses of continuance and weaknesses that serve as cautions. Barney's meticulous installation draws from science and science's links to governance within the "theater of the state" in a way that suggests its usefulness in revealing problems, searching for solutions, and demanding accountability when

it comes to urban and industrial pollution, yet at the same time the work subtly reflects other, nonrational ways of thinking of water, potentially opening space for alternate worldviews, for ways of valuing nature that go beyond the exploitation of its resources for human benefit. It also, like most eco-artwork, hinges on a will and power, external to the work, a trust that observers will take on the problem, be willing and able to act. Echeverri's kinesthetic video work, on the other hand, has an undeniable affective impact that strongly conveys some of the problems of mining, that sticks in the viewer's mind and body so that its content is not easily shed; it is an impact that threatens hope, however, and the work flattens, through abstraction, ecological problems. Small-scale miners are seen only as contributing to an environmental disaster. The role of neoliberalism—and that of a complicit state—is unseen, as is the miners' continuing work against those powers. A critical approach to both works reveals the challenges of stimulating action, and the story behind the recent tensions around mining in Marmato points to the potential of local, grassroots activism as a force that eco-artists might collaborate with and support.⁶⁰

Since many nations face complex and violent realities, thinking through these two works, *how* they function, and both where they succeed and fail is not just an exercise for fostering Colombian eco-art but might stimulate critical feedback generally. Whereas eco-artists and those who support them can perhaps share a clarity of purpose—mitigating the effect of anthropogenic climate change—the answers of how best to do so are never clear, which is why artists, with their creative, often nonlinear approaches to the world, are so important. Artists, with a capacity for *visualizing* problems, and art, with its *visual potency* that can appeal in a wide range of ways, from rationally to affectively, could be key to finding solutions and helping implement them. Artists can take various approaches, try a wide range of strategies, garner attention, and continually provoke thought and hopefully action. Scholarship, in turn, can help to support their work, continually providing critical feedback, although not necessarily providing clarity of thought. When dealing with water pollution, clear water is a goal, but conversely, for art and art criticism to be effective, sometimes the waters need muddying, metaphorically speaking, to promote the greatest possible care in approaching complex problems and to constantly remind of and make room for local actors, alternative worldviews, and spaces of otherness.

Notes

1. The quotation in the title comes from "*Último poema sobre las formas del agua*" ("Last Poem about the Shapes of Water") by Tomás González, from his book *Manglares* (2013), translated by David Auerbach, reprinted in José Roca and Alejandro Martín (eds.), *Waterweavers: A Chronicle of Rivers* (New York: Bard Graduate Center: Decorative Arts, Design History, Material Culture, 2014), 328.

Several curators recently have plunged into water both as vital theme and organizational concept for Colombian art, promoting contemporary examples of ecological art—eco-art—that have grown out of local realities to address global problems. The exhibition *Waterweavers*, with its accompanying catalog, is one excellent example. Such projects lay a groundwork for an art historical assessment of Colombian eco-art, yet its beginnings are not well known and its historiography has yet to be developed. This chapter is only a beginning.

2. *Valle de Cauca* is a geological and political name, designating both a river valley and a department (subnational division for administrative, geographical, and political demarcation). Colombia comprises thirty-two departments, and the River Cauca flows through six.

3. Barney earned a bachelor of fine arts degree at the College of New Rochelle (1969–1974) and a master of fine arts degree at Pratt Institute in Brooklyn (1974–1977).
4. Alicia Barney Caldas, untitled text, in *Art and Psychedelia: A Critical Reader*, edited by Lars Bang Larsen and Caroline Woodley (London: Afterall and Koenig Books, forthcoming).
5. These, along with extensive documentation of all her artworks, are accessible online: Alicia Barney Caldas, "Obra," artist's website, n.d., www.aliciabarneycaldas.com/obra.
6. James D. Henderson, "Economic Progress and Social Change: From Ospina Pérez to the National Front: The False Paradox of Economic Progress amid Violence," in *Modernization in Colombia: The Laureano Gómez Years, 1889–1965* (Gainesville, FL: University Press of Florida, 2001), 325–345.
7. Population figures come from national census data. For 1938: Edgar Vásquez, "Historia del desarrollo económica y urbano en Cali," *Boletín Socioeconómico* no. 20 (April 1990): 20; for 1985: Departamento Administrativo Nacional de Estadística Colombia, "Muestras Censales 1964–2005," *DANE Información Estratégica*, www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/muestras-censales. The most recent census in 1981 was that of 1973, at which point Cali's population was 991,549.
8. Vásquez, "Historia del desarrollo económica y urbano en Cali," 14. Eternit is infamous for asbestos use, continuing well after its danger was recognized, especially in underdeveloped countries with little or no government regulation. In recent decades, Eternit's CEO, Stephan Schmidheiny, has been seen as a prime example of neoliberal greenwashing and art-washing (the use of "sustainable economic projects" and art to create a positive image for capitalism). See Guillermo Villamizar, "Daros Latinoamérica: Memorias de un legado peligroso," *esferapública*, December 3, 2012, <http://esferapublica.org/nfblog/daros-latinoamerica-memorias-de-un-legado-peligroso/>, and Guillermo Villamizar, "Informe Daros: Arte y dinero," *esferapública*, May 11, 2013, <http://esferapublica.org/nfblog/informe-daros-arte-y-dinero/>.
9. Nancy Motta González and Aceneth Perafán Cabrera, *Historia ambiental del Valle de Cauca: Geoespacialidad, cultura, y género* (Cali, Colombia: Universidad de Valle, 2010), 79. Translations from Spanish are the author's unless otherwise noted.
10. *Ibid.*, 21–24.
11. Historical academic studies of human environmental impact in the Valle de Cauca were beginning to be done in the 1970s, although many of the results were not published until the 1990s. *Ibid.*, 24–30.
12. Isaías Tobasura Acuña, "El movimiento ambiental colombiano: Una aproximación a su historia reciente," *Ecología Política* no. 26 (2003): 111.
13. Santiago Díaz Pedrahíta, "La Expedición Botánica," documents of the Sociedad Geográfica de Colombia, n.d., <http://sogeocol.edu.co/documentos/01laexp.pdf>.
14. T.J. Demos, *Decolonizing Nature: Contemporary Art and the Politics of Ecology* (Berlin: Sternberg Press, 2016), 14.
15. José Eduardo Rueda Enciso, "Francisco José de Caldas," in *La Gran Enciclopedia de Colombia del Círculo de Lectores, tomo de biografías*, http://enciclopedia.banrepcultural.org/index.php/Francisco_Jos%C3%A9_de_Caldas.
16. See Efraín Sánchez, *Gobierno y geografía: Agustín Codazzi y la Comisión Corográfica de la Nueva Granada* (Bogotá: Banco de la República, 1999).
17. Michael Taussig, *My Cocaine Museum* (Chicago: University of Chicago Press, 2004), 198.
18. Taussig notes that in the early nineteenth century, Caldas had in mind a map of the nation, a map that would be magical since it would allow each component of the state to know its place. *Ibid.*, 211.
19. El Congreso de Colombia, "Ley 9 de 1979 Nivel Nacional," Régimen Legal de Bogotá D.C., Secretaría Jurídica Distrital de la Alcaldía Mayor de Bogotá D.C., January 24, 1979, www.alcaldiabogota.gov.co/sisjur/normas/Norma1.jsp?i=1177.
20. Editorial staff, "Al río Cauca lo están matando las 500 toneladas de contaminantes que le caen cada día," *El Tiempo*, November 17, 2007, www.eltiempo.com/archivo/documento/CMS-3819669.
21. Barney, untitled.
22. Demos, *Decolonizing Nature*, 34.
23. *Ibid.*

24. Barney, untitled. Her gender, too, caused a problem in a highly conservative country dominated by the Catholic Church, which fostered traditional gender roles; she adds, "besides, [they thought that] a woman artist should paint, not ask for maps."
25. Ibid.
26. Sol Astrid Giraldo Escobar, *La imagen ardiente: Clemencia Echeverri* (Bogotá: Ministerio de Cultura, República de Colombia, 2017). She earned graduate degrees in sculpture and contemporary art theory and history at Chelsea College of Arts, London.
27. Giraldo, *La imagen ardiente*, 208; English translation by Caroline Peña Bray.
28. I borrow the terminology "non-state armed actors" (*actores armados no estatales*) from Juan Felipe Ortiz-Riomalo and Angelika Rettberg, "Minería de oro, conflicto y criminalidad en los albores del siglo XXI en Colombia: Perspectivas para el posconflicto colombiano," *Colombia Internacional* 93 (2018): 17–63.
29. Echeverri's earlier video installation *Treno* (*Threnody*, 2007) deals with the River Cauca's most disturbing pollution: corpses. The Cauca continues to be a dumping place for bodies that the NSAA disappear and kill. See Giraldo, *La imagen ardiente*, 247–248; José Roca, "Restless Water," in *Clemencia Echeverri, Sin cielo* [*Skyless*], exhibition brochure (Houston: Sicardi Gallery, 2017), n.p.
30. The Banco de la República owns one of the most complete collections of Colombian art, along with a substantial collection of Latin American art and European modern art. It has museums in central Bogotá, with cultural centers and branches of its Gold Museum in various Colombian cities.
31. Ortiz-Riomalo and Rettberg, "Minería de oro," provides an overview of the situation.
32. Echeverri conceives of and directs her video projects, collaborating with others on design, filming, sound, and editing. For *Sin cielo*, Camilo Echeverri contributed to camera and photography, Juan Forero to sound design and editing, and Victor Gárces to video design and editing.
33. Elizabeth Ferry and Stephen Ferry, *La Batea* (Brooklyn, NY: Red Hook Editions, 2017), 7.
34. In 2011, the municipality's population was 16.7% indigenous and 56.5% Afro-Colombian; Agencias de Noticias Universidad Nacional, "Marmato: ¿reubicación o ambición minera?," *UN Periódico*, April 7, 2011, <http://agenciadenoticias.unal.edu.co/detalle/articulo/marmato-reubicacion-o-ambicion-minera.html>. On the history of slaves and gold in Colombia, see Taussig, *My Cocaine Museum*.
35. Anthropologist Elizabeth Ferry and photographer Stephen Ferry's *La Batea* documents this kind of traditional mining in Colombia. My thanks to Elizabeth Ferry for commenting on a draft of this chapter.
36. Ortiz-Riomalo and Rettberg, "Minería de oro," 37.
37. Ibid.
38. Clemencia Echeverri, "Sin Cielo (2017)," *ClemenciaEcheverriEstudio*, www.clemenciaecheverri.com/clem/index.php/proyectos/sin-cielo.
39. The video is online: Echeverri, "Sin Cielo (2017)."
40. *Sin cielo* has been translated as "Skyless," but it can also mean "without heaven."
41. *La batea* (the washing pan) is an ancient vessel used in and symbolically closely associated with small-scale or artisanal mining.
42. Colombia is the first Latin American nation to develop its own drone, the Iris, in 2015; see Alejandro Sánchez, "From Surveillance to Smuggling: Drones in the War on Drugs," *Oxford Research Group Sustainable Security Programme*, February 15, 2016, <https://sustainablesecurity.org/2016/02/15/drones-in-the-war-on-drugs-from-surveillance-to-smuggling/>. In addition, the Colombian air force uses drones purchased from Israel, and the US Pentagon has provided contractors for aerial surveillance to Colombia. Erich Saumeth Cadavid, "Los Hermes 900 y 450 de la Fuerza Aérea Colombiana," *Tecnología Militar* 40, no. 1 (March 2018): 58–59; "FARC Warns US against Hostage Rescue: Pentagon-Contracted Civilians Maryland Aerial-Surveillance Firm," *The Washington Post*, February 28, 2003.
43. Jim Wyss, "Dirty Gold Is the New Cocaine in Colombia: And It's Just as Bloody," *Miami Herald*, January 16, 2018, www.miamiherald.com/news/nation-world/world/americas/colombia/article194188034.html.
44. Jennifer Stob, "Détournement as Optic: Debord, Derisory Documents and the Aerial View," *Philosophy of Photography* 5, no. 1 (2014): 19.
45. Ibid., 29.

46. For example, when I saw *Sin cielo* at the Sicardi Gallery (Houston, March 2017), I had only cursory knowledge of Colombian gold mining.
47. My account here draws from a version of the story that focuses on the impact on the local community: Equipo Colombia Plural, "Marmato, después de la avalancha," *ColombiaPlural*, January 16, 2018, <https://colombiaplural.com/marmato-despues-la-avalancha/>.
48. On the government's efforts to stimulate foreign investment in gold mining and tighten mining regulations nationwide, see Ortíz-Riomalo and Rettberg, "Minería de oro."
49. Agencias de Noticias Universidad Nacional, "Marmato."
50. Equipo Colombia Plural reported that by the beginning of 2018, approximately 4,000–5,000 miners were working informally, without permits, in more than 500 small mines and 100 new facilities with mills and separation tanks using cyanide, in addition to mines in operation legally. Equipo Colombia Plural, "Marmato, después de la avalancha." In terms of dangerous pollutants, Elizabeth Ferry notes that small-scale miners in Marmato, unlike in other areas, have never used mercury. She adds,

They also, to be fair, have been petitioning the government for some years for funds to help clean up and mitigate the effects of mining, but these have not been forthcoming (skeptics in the town say this is because the environmental contamination fortifies the company's arguments).

Elizabeth Ferry, correspondence
with the author, May 27, 2018

51. Equipo Colombia Plural, "Marmato, después de la avalancha."
52. "Canada's Gran Colombia Gold Files \$700 Million Lawsuit against Colombia over Marmato Project," *Financial Post*, April 10, 2017, <http://business.financialpost.com/commodities/mining/canadas-gran-colombia-gold-files-700-million-lawsuit-against-colombia-over-marmato-project>.
53. Cecilia Jamasmie, "Gran Colombia Gold to Switch Marmato Project from Open Pit to Underground," *Mining.com*, October 4, 2017, www.mining.com/colombia-gold-switch-marmato-project-open-pit-underground/.
54. Equipo Colombia Plural, "Marmato, después de la avalancha."
55. Elizabeth Ferry emphasized this point to me, correspondence with the author.
56. Teresa Brennan, *The Transmission of Affect* (Ithaca: Cornell University Press, 2004), 97.
57. Demos, *Decolonizing Nature*, 13.
58. Roca, "Restless Water," n.p.
59. Flora ars + natura, a contemporary art space and residency program headquartered in Bogotá and directed by José Roca, is exemplary in its support of such artists.
60. Compelling examples of Colombian eco-artists who do so include Carolina Caycedo, who works with activists and communities affected by hydroelectrical dams, such as Hidroituango in on the River Cauca. See Lisa Blackmore's chapter in this volume.

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Plate 14 Alicia Barney, *Río Cauca* (1981–1982). Mixed media and variable dimensions. Photograph by Mauricio Zumaran.



Plate 15 Clemencia Echeverri, still from *Sin cielo* (2016–2017). Video wall with nine monitors and stereo sound, 11:20 minutes.