



VITAL
DECOMP-
OSITION
SOIL PRACTITIONERS & LIFE POLITICS

Kristina M. Lyons

VITAL DECOMPOSITION

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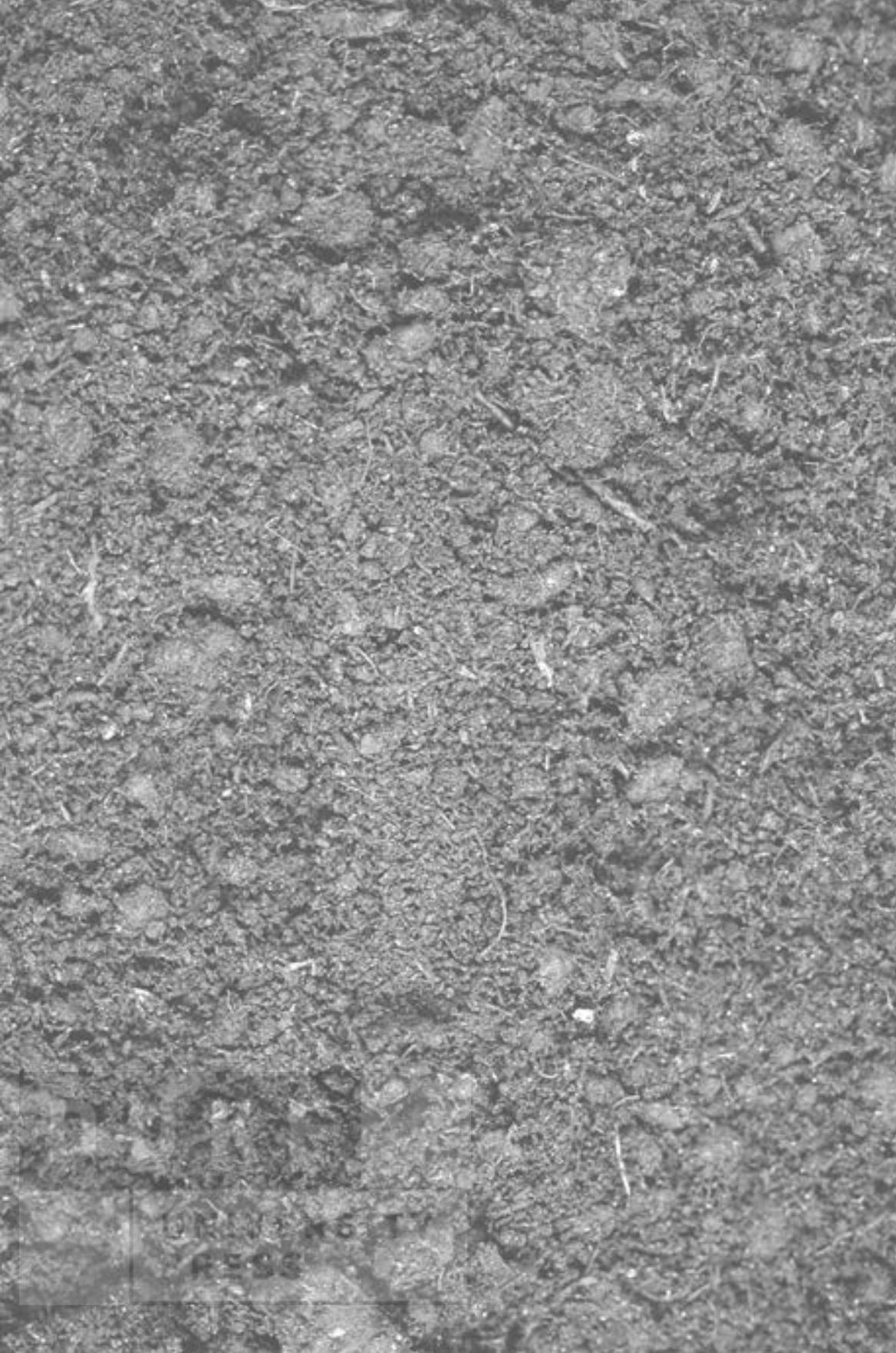
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*Para mi gran familia andinoamazónica,
seguimos soñando despiertxs, caminando juntxs y tejiendo vida.
For teaching me how to live as more than one and less than two.*

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INTRODUCTION

LIFE IN THE MIDST OF POISON

During the years that I engaged in my long-term fieldwork in southern Colombia, the military obliged people to periodically stop at roadside checkpoints. Depending on the public order scenarios, these stops could occur every forty-five minutes. At best, they happened only three times during the overnight transit from the Amazonian state of Putumayo to the Andean capital city of Bogotá. Generally a thirteen- to sixteen-hour bus ride, the trip depends on seasonal weather cycles and uneven road conditions over what are categorized as geologically unstable fault lines known to produce rock and mud slides during heavy tropical rains. The routine at the checkpoints was always the same.

National ID card out.

Boots off.

Backpack open.

(Labrador sniffing)

Don't smile at him (the dog). Don't even look at him.

Where to? Where from?

Often the soldiers handed out slips of paper that read: "Guerrillas in the 32nd and 48th Fronts of the FARC, demobilize now! Your family misses you. Come back to them. Come back to us. Live with dignity!"

Whenever I return to the memory of these scenes, I hear the sound of soldiers cutting open people's packages. Amid the crates of hens, plastic bags, and small suitcases stored beneath the bus, these packages contained homemade cheeses or other foods and products from farms that had been prepared as gifts for family

members living elsewhere in the country. There were always murmurs of protest emanating from the passengers, but mostly quiet resignation. Arms folded across chests as people watched the soldiers slice open their blocks of cheese and rustle through duffle bags in search of presumed hidden bags of cocaine. There was a repetitive and mundane violence unleashed in these acts, the sound of knives splitting open packing tape and cutting across hand-tied string.

When I first traveled to the state of Putumayo in 2007, I participated in a policy watch and human rights delegation with the US-funded NGO Witness for Peace, or, as it is known in Colombia, *Acción Permanente por la Paz*. The delegation was organized to track the impacts of US antidrug policy and its entanglements with what was, at the time, Colombia's ongoing fifty-year-plus war between the national government and the longest-standing leftist guerrilla organization in the Western Hemisphere, the Revolutionary Armed Forces of Colombia–People's Army (FARC-EP). Often referred to as the gateway to Colombia's Amazonia, Putumayo shares borders with Ecuador and Peru and transitions from central Andean foothills to the extensive Amazonian plains that make up 85 percent of its territory. In 2000, the year the bilateral US-Colombia counternarcotics policy Plan Colombia commenced, Putumayo produced approximately 40 percent of the country's illicit coca cultivations (UNODC 2005). The region was quickly converted into the epicenter of bilateral militarized eradication and state and USAID illicit crop substitution programs.

Between the 2000 and 2012 fiscal years, the US Congress appropriated more than \$8 billion to carry out Plan Colombia. As much as 80 percent of this assistance was invested in providing weapons, equipment, infrastructure, personnel, and training for Colombian military and police, including contracts with US-based multinationals that form part of the military-industrial complex, such as Monsanto, Sikorsky Aircraft, and DynCorp International (Beitel 2012). Since the late 1970s, illicit crop eradication strategies in Colombia have utilized chemical warfare tactics, including the application of paraquat, Garlon 4, Imazapyr, and Tebuthiuron.¹ By 2000, the policy relied on a controversial aerial fumigation program involving crop-duster planes that sprayed a concentrated formula of Monsanto's herbicide glyphosate over suspected illicit marijuana, coca, and opium poppy plants.² Given the volatile nature of aerial dispersal as a chemical application method, pastures, forests, soils, livestock, subsistence foods, watersheds, and human bodies were regularly misted with glyphosate. More than 1.8 million hectares of coca were aeri ally fumigated after 1994, including 282,075 hectares in Putumayo since 1997.³ Despite the generalized failure to reduce the overall quantity of illicit coca, this policy lasted

until October 1, 2015, several months after the Colombian government passed a national resolution to officially suspend the aerial spraying of glyphosate.⁴ The resolution (006) came in the wake of a report published by the World Health Organization's cancer research arm declaring the world's most widely used herbicide a *probable* carcinogen in humans. Regardless of this suspension, Colombia's Narcotics Council approved the continued manual application of the herbicide to eradicate illicit crops, and in 2018 the Colombian government under the Duque administration proposed reinstating the aerial fumigation of glyphosate instigating a new round of ongoing legal and political controversy in the country.

Through the ensuing years, as I returned to Putumayo for extended research, to film a popular education project, and to accompany rural communities during the 2013 National Agrarian, Ethnic, and Popular Strike, I was struck not so much by the kinds of violence and environmental destruction produced by the war on drugs, but rather by the tenacity of life in the midst of war. At the margins of the nation's agricultural frontier and experiencing criminalization due to the presence of illicit crops and right- and left-wing paralegal armed groups (referred to as *paracos* and *narcoguerrillas*), the networks of campesinos and indigenous communities I met in and around Putumayo quickly taught me that violence was not the only story to be told. They obliged me to turn my ethnographic attention away from what was raining down on them from crop dusters in the sky to the kinds of propositional life-making processes being actualized in the midst of chemically degraded ecologies. This did not mean that violent death, displacement, and dispossession were somehow less pervasive, but that death was being transformed into something else in the cultivation of gardens, forests, orchards, and ancestral cultivation areas or *chagras*. It was farmers' attunement to the workings of *hojarasca* (litter layers)—the decomposing layers of leaves and stalks that are often used as compost—that led me to rethink the relations between life and death and materiality and politics under everyday conditions of social and armed conflict. It was the potential for *hojarasca* to “force thought” among rural communities in the Amazon that would become the focus of my fieldwork.

Thus, instead of asking what it means for rural communities to live in coca-growing regions that have been the epicenters of Colombia's geopolitically perpetuated violence, the book that follows this introduction is inspired by practices that render life possible in criminalized and chemically assaulted worlds. How do people keep on and learn to cultivate a garden, care for a forest, or grow food when at any moment a crop duster may pass overhead dousing entire ecosystems with herbicides? Beyond official antidrug policy impera-

tives to “uproot coca or be uprooted,” what other potentialities emerge among rural communities responding to war by cultivating life, which is never altogether separate from death? It was during one of my initial trips to Putumayo that I met an animal husbandry technician and small farmer, Heraldo Vallejo, who would profoundly shape my research questions and ethico-political commitments. Popularly known throughout the region as *el hombre amazónico* (the Amazonian man), I spent the next decade building something akin to what Kim TallBear (2014) calls a “shared conceptual ground” with Heraldo and a dispersed network of alternative agricultural practitioners and organizations throughout the Andean-Amazonian foothills and plains. By a shared conceptual ground, I refer to our attempt to articulate overlapping conceptual and ethical projects while acknowledging our respective situated positions, understandings, and differences as interlocutors and potential collaborators.

As Heraldo explained the situation to me, “The problem in Putumayo is that we do not know where we are standing. This does not have to do with knowledge, but instead with aptitude and attitude. Contrary to what the state says, coca is not our problem. Our urgency has to do with Amazonian agriculture and the displacement and impoverishment of rural families.” The networks of campesinos and indigenous communities I came to accompany taught me that “knowing where one is standing” does not refer to *knowing the soil* through a laboratory analysis of its chemical fertility, pH level, or scientific taxonomy, or necessarily knowing any kind of stable entity. Instead, it spoke to the alienation produced by decades of working an export-oriented, monoculture agricultural system—illicit coca being only the last of a protracted series of colonially imposed, extractive-based economic activities that continue to dominate modern territorial relations with the country’s western Amazon. Interestingly, when I returned to Colombia in 2008 to begin my long-term fieldwork, the National Geographic Institute Agustín Codazzi (IGAC) launched a natural resources campaign in Bogotá called “The Year of Soils in Colombia.” The campaign sought to render soils visible as living worlds with ecosystem services and social functions, and not merely as an exploitable object or resource of political economy. “Place your feet on the soil” was the campaign’s 2009 closing motto.

This striking coincidence provoked me to ask: How might techno-scientific calls for one to place their feet on the soil resonate with and diverge from Heraldo’s and other farmers’ proposal to learn “where one is standing”? In what ways do human–soil relations take on political importance in the complex nexus of antidrug policy, development agendas, agro-environmental sciences, and daily life under military duress? What might the conceptual and material

fecundity of soils in tandem with and diverging from more dominant concepts of land and territory teach us? How do soils—what may or may not be conceived of as an object called “soil”—harbor the irreparable wounds and tracks of violence and germinations of transformative proposals and alternative dreams?

This book was written at a time of uncertain transition in Colombia. Certain aspects of the country’s more than a half century of social and armed conflict ended in a 2016 peace agreement that was signed between the state and the FARC-EP.

Colombia is engaged in a transitional justice process, with all the risks, expectations, hopes, frustrations, and open-endedness that a post-accord implementation scenario entails. In the chapters that follow, I discuss the ways scientifically informed and non- or *not-only* (as de la Cadena insists; 2015a) scientific practices with “soils” are deeply enmeshed in struggles between farmers, state officials, aid workers, popular agrarian movements, and scientists. These struggles are over the meanings, imaginaries, and material actualizations of “productivity,” “rural development,” “sustainability,” “peace,” and what constitutes a “good and just life.”

My long-term ethnographic fieldwork was carried out for three years between 2008 and 2011, another consecutive ten months between 2013 and 2014, and varying stints of research before and after this time. I moved between laboratories, government offices, greenhouses, gardens, forests, popular education workshops, and rural mobilizations where I accompanied a heterogeneous group of state soil scientists and technocrats in the capital city of Bogotá and networks of rural social movements and alternative agricultural practitioners in and around Putumayo. Besides attending IGAC’s Year of Soils events and seminars, I interviewed a range of scientists, including agrologists, agronomists, soil biologists and microbiologists, chemists, mineralogists, and ecologists. I also conducted fieldwork in the National Soil Science Laboratory of the IGAC and volunteered as a research assistant in the agricultural microbiology laboratory of the National University’s Institute of Biotechnology (IBUN) in Bogotá. At the National Laboratory and at IBUN, I assisted in laboratory and greenhouse experiments, took soil microbiology classes, and participated in field inoculations and soil surveys. I was able to learn the practices and fundamental concepts of state soil science and also to pay close attention to the politically charged—often implicit—relationships between soils, land concentration, environmental conservation efforts, territorial conflicts, and the agrarian-based roots of the country’s war. In addition to attending national soil science conferences in the cities of Bogotá, Ibagué, and Pereira, I partici-

pated in the Eighteenth Latin American Congress of Soil Science in Costa Rica in November 2009. This allowed me to situate Colombian research priorities, environmental legislation, and socio-ecological conflicts within broader scientific debates and policy initiatives across the continent.

Notwithstanding their potentially overlapping conceptual and ethico-political concerns, there are noteworthy differences between rural communities and scientists. Soil scientists' practices tend to take place in laboratories and depend on state research funding cycles, alliances with industrial trade associations, and soil samples transported from rural violence to relative urban safety. Rural communities' practices occur under the militarization of daily life and rely on different kinds of laboriousness and experimental approaches in potentially land-mined gardens, forests, and pastures. The direct relations between the two groups were not predictable, easy, or necessarily even existent. Learning alongside both soil scientists and small farmers quickly complicated any conventional anthropological division between "studying up," in Laura Nader's (1972) now classic sense, to understand the workings of power among experts and institutions, and "studying down" to analyze everyday people's ability to transform and resist these structures.⁵ It was impossible to simply oppose "science" and "nonscience," or to assume hierarchical dynamics and fixed locations of subjugation and subversive potential. In this book, I do not simply pit "classic soil science," such as a conception of soil as a reservoir for crop nutrition, against the lively and integral approaches of community agroecological networks and food webs. Nor do I conceive of alternative agriculture as assuming a blanket position against technology or market interactions. Instead, I track how both scientists and rural communities negotiate the boundaries of science and propel their knowledges and practices into political life—if they can—in order to transform the material conditions of different beings and elements that share the contingencies of life and death during protracted years of war.

A growing body of literature at the interstices of feminist and postcolonial science studies and anthropology has made important contributions to our understandings of the intensified shift in the capitalist appropriation of material and immaterial world(s)—or what some scholars have suggested is the commodification of "life itself" (Povinelli 2011a; Rose 2007; Sunder Rajan 2006; Vora 2015). This book both builds upon and departs from this literature by foregrounding the emergence of socio-ecological processes that strive to exist and persist as political, economic, and ethical alternatives to a reductive, market-oriented capture of life. Struggles over these processes lie at the heart of Colombia's ongoing transitional justice scenario as well as the perpetua-

tion of intersecting forms of violence and territorial conflict. They also matter deeply for collective and individual efforts to renew and transform organic and successional forms of life during a humanist capitalist epoch marked by universalizing discourses of the Anthropocene and climate change mitigation strategies that rely on the techno-scientific management of the “environment.”

In chapter 1, I introduce my encounter with Heraldo Vallejo in the midst of the US-Colombia war on drugs, and I historically situate the reader within the ongoing extractivist structures that shape territorial relations with and in the country’s western Amazon. I begin to familiarize the reader with the urgency expressed by rural communities to cultivate alternatives, what I call *selva*, agro-life processes. I also outline the ethnographic methods that I engage with to follow human–soil relations, and I present some of the key individual and collective actors that taught me to turn my attention to *hojarasca* (litter layers).

Chapter 2 focuses on IGAC’s 2009 Year of Soils campaign. I discuss the ethico-political implications that the shifting value of soils as living worlds has for the entwined fate of soils and state soil scientists. Taking inspiration from one Colombian scientist, Abdón Cortés, and his creative notion of soils as *el teatro de la vida* (the theater of life), I speculatively imagine what I call the “poetics of the politics of soil health” by allying scientific conceptualizations and poetic forms of soil sensing.

Through ethnographic engagement in laboratories and on state soil survey trips and small farms, chapter 3 places scientific and campesino practices in conversation. I expand upon a concept I borrow from Heraldo, cultivating *ojos para ella* (eyes for her)—*la selva*—to demonstrate the partially coinciding, diverging, and incommensurable relations that emerge between caring for the soil for the purpose of scientific interests and economic imperatives and caring for a world full of beings that mutually nourish each other.

In chapter 4, I follow the diverse material practices and corresponding life philosophies of a dispersed network of rural families and alternative agricultural practitioners throughout the Andean-Amazonian foothills and plains. Rather than productivity, one of the central elements of modern capitalist growth, I explore how the regenerative capacity of the *selva* relies on organic decay, impermanence, decomposition, and even fragility that complicates modernist, biopolitically oriented bifurcations of living and dying.

In chapter 5, I think with Brazilian-based agronomist Ana Primavesi’s agroecological term *espacios vitales* (vital spaces) as a conceptual and political tool from which to imagine what an Andean-Amazonian territory of what I call “resonating farms” might look and sound like. This chapter focuses on lessons learned through my conversations with Heraldo Vallejo, specifically

on the kinds of conceptual personage and *pensamiento propio* (a group or collective's own thinking) that constitute selva agro-life processes. Chapter 6 expands upon the kinds of potentialities and limits that arise from different sets of human–soil relations, relations that may unravel or destabilize concepts of the human and of soil, and of their hyphenated pairing. I return to the material and conceptual fecundity of hojarasca to discuss what can be learned from transitional states rather than stable entities and from “soils” that never became the industrialized or chemical soil that has taken center stage in global concerns over anthropogenic climate change.

While selva is often translated into English as “jungle”—a word imbued with a complex colonial history—I continue to use the Spanish word selva at specific moments throughout this book. This is because I learned with rural communities to treat selva as a concept, a relational set of practices, and an existent or living force rather than an entity that can easily be divided into units or reduced to a representational landscape descriptor. These communities explained to me that the word *bosque* (forest) does not necessarily convey conspicuous, complex biodiversity since it may refer to a monocultural system of trees or a collection of commercial timber–yielding varieties destined for extraction. Selva also works to resignify *monte* (brush, forested hilly land) and *rastrojo* (animal fodder, weedy regrowth) when the latter are used disparagingly to describe an unruly and/or uninhabited landscape that should be cleared, feared, or tamed.

The playful and politically motivated conceptual work of the rural practitioners I accompanied and thought with led me to ask what forms of writing are necessary to articulate a selva analytic. By this I refer to an analytic that aspires not only to write about the selva or like a selva, but instead to follow and perform the shifting relations, temporalities, and material and immaterial textures that compose and decompose selva life and death. The question of how forms are tied to, constitutive of, and transmitted via other than humans, species, beings, and elements has received growing ethnographic attention in McLean's work on poetics and materiality (2009), Choy's (2011) account of the “four forms of air,” Kohn's (2013) work on forest semiosis, and Myers's (2015a) and Hartigan's (2017) respective explorations of plant sensorium and intelligence, among others. I conceive of writing selva not as a romantic mode of “giving voice” to a tropical forest ecology, but rather as an attempt to attune to and perform selva modes of expression that may work through literary and poetic genres that hold geologic, human, and microbial temporalities in tension and simultaneity with the analytical languages of the social and ecological sciences. I use vignettes and poetic forms of writing at different moments

to interrupt the narrative, which is primarily focused on the cultivation of life in the midst of death. These interruptions attend to the acts and latent threats of violence that explode into the everyday, producing gray spaces between official times of war and transitional periods of peace. Territorial conflicts and structural violence was and continues to be a destabilizing condition of daily life in rural Colombia, and it shapes the material sediments and embodied memories harbored in and expressed by regional ecologies even when it was not the explicit focus of my interlocutors.

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NOTES

INTRODUCTION: LIFE IN THE MIDST OF POISON

- 1 For a comprehensive historical memory of the origins of aerial fumigation policy in Colombia, see the report published by MamaCoca and authored by María Mercedes Moreno (2015), http://www.mamacoca.org/docs_de_base/Fumigas/Memoria_historica_de_los_origenes_de_las_fumigaciones_MMMoreno_9mayo2015.html, accessed on May 6, 2017.
- 2 The mixture of glyphosate utilized in aerial spraying has been estimated to be 110 percent more concentrated than Monsanto's commercially available version called Roundup Ultra. Like most worldwide industrial applications of glyphosate, other chemicals accompanied the herbicide to enhance its activity and make it adhere to plants in a humid tropical climate: two surfactants, polyethoxylated tallow amine (POEA) and Cosmo Flux 411 (Vargas Meza 1999).
- 3 The Antinarcotics Directorate of the National Police provided these official statistics on August 18, 2015.
- 4 Despite the quantities of illicit crops sprayed, national coca-monitoring surveys have reported a steady increase in coca, with the number of hectares returning to and even surpassing the quantity that existed in 1999 when aerial fumigation policy first intensified (UNODC 2015). Resolution 006 was passed on May 29, 2015. See <http://www.aida-americas.org/ngos-celebrate-suspension-of-aerial-spraying-advance-in-colombian-environmental-law>, accessed on March 16, 2017.
- 5 A nice example of this is Juno Parreñas's discussion of methods in terms of multispecies ethnography. See <https://aesengagement.wordpress.com/2015/09/15/multispecies-ethnography-and-social-hierarchy/>.

CHAPTER 1: FROM AERIAL SPACES TO LITTER LAYERS

- 1 For an in-depth ethnographic analysis of the US foreign policy-making process in the design, implementation, and assessment of Plan Colombia, see Tate (2015).
- 2 Glyphosate is a broad-spectrum, nonselective systemic herbicide. It kills a plant by inhibiting a specific enzyme pathway and interferes with the synthesis of aromatic amino acids necessary for its growth.