

## *Introduction*

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### BETWEEN THE HUMAN AND THE WILD PROFUSION

[The naturalist] looks upon every species of animal and plant now living as the individual letters which go to make up one of the volumes of our earth's history; and, as a few lost letters may make a sentence unintelligible, so the extinction of the numerous forms of life which the progress of cultivation invariably entails will necessarily obscure this invaluable record of the past. It is, therefore, an important object, which governments and scientific institutions should immediately take steps to secure, that in all tropical countries colonized by Europeans the most perfect collections possible in every branch of natural history should be made and deposited in national museums, where they may be available for study and interpretation.

—Alfred Russel Wallace, “On the Physical Geography of the Malay Archipelago”

IN APRIL OF 1996, I hiked through the upland forest that runs along the narrow central crest of Malenge Island with two biologists from Jakarta, Yakup and Budi, and with Pak Ahmad, a local ranger hired by the scientists to work at their research station, Camp Uemata.<sup>1</sup> We were there to collect new forms of herpefauna: lizards, snakes, and frogs. Together we scrambled up muddy slopes, grabbing hold of verdant branches and shrubs to pull us up, breathing hard. We scanned the trees for pythons and the ground for lizards. In the clearings we stopped to gaze at the vistas of the coast, and we rested against the architecturally fabulous buttress roots of the forest's huge dipterocarps. When we began to be bitten by red ants, which never seemed to take very long, we would move again, eyes fixed on the trail and underbrush, poking through bogs with sticks, constantly on the lookout for tiny eyes peering back at us.

Species uniqueness and endemism were the salient features of place delimiting a Togeian nature the biologists wanted to claim as “biodiverse.” To do this they needed to observe, record, and document species that were only found in the Togeian Islands. Yakup spotted some lizards with blue tails that he suspected were “new to science.” We dove with our hands out—to the left and to the right of the trail—trying to grasp the elusive electric-blue tails. We placed the lizards in plastic bags with air holes to

let them breathe, although later they would end up in a formaldehyde bath, and Budi would send them traveling to the Smithsonian Institution for confirmation of their uniqueness. Laboratories in Washington, D.C., and other EuroAmerican scientific institutions were important for determining the specificity of this place and for confirming Yakup and Budi's acts of discovery and nature-making.

We passed through Budi's plots marked off with strings, where he had kept track of three thousand trees of various sizes for the past several years. Through his marking, measuring, and counting, he was developing a scientific record of the trees in the forest. He knew their species names, when they would flower, and how fast they were growing. Further on down the trail, we descended into a cave that Yakup had found. The ceiling was lined with hanging bats awakened by our movements, and the floor was layered in guano. Yakup reminded me that it is not only human agency that is capable of transforming a place—bats are important for pollinating the trees of the Malenge forest. When we continued on Budi noticed a striped spider, ten centimeters long, hanging in its web between some leaves and vines. He took a photograph, a close-up still life that would later trigger memories of the walk, coding this place as nature and reminding us of its aesthetic perfection down to its smallest details.

In our movements through the Togeian landscape, scientists' stories of species endemism vied with the narratives of plants and animals Togeian people wanted to tell. Whereas biologists were most cognizant of the fig trees that provide food for the Togeian macaque, an unusual monkey living on the island, Pak Ahmad was aware that the dipterocarps scientists value as signs of a "wild" forest are excellent trees for canoe-building. Walking along the path, Ahmad, who was born on Malenge Island, told us of snakes. Togeian pythons have been known to eat deer, pigs, and even small children. Sliding his hand rapidly through the air, he showed us how a snake strikes. He and several others had once rescued a boy in a garden. A python had wrapped itself around the child and was beginning to take his breath away when they discovered him. They unwound the snake, tail first, before attacking it with their machetes.

Ahmad's ways of knowing Togeian flora and fauna called biodiverse nature into question. Bees will pollinate and snakes will wind, yet what is deemed important in a landscape depends on who is looking. Biologists found monkeys and lizards intellectually gratifying, while Sama people found the monthly flowering of the sea grasses—an event overlooked by Togeian biologists—to be aesthetically alluring. Natures are "made" at the intersection of humans with their particular social histories, and plants and animals with their unique evolutionary and ecological histories. Neither "science" nor "society" will tell us all the interesting things one might want to know about these natures. To proceed further, one

must travel along a path *between* the human and the wild profusion. This is the path we will follow here.

### The Togean Islands and Biodiversity

The Togean Islands<sup>2</sup> a small archipelago in the middle of the eastward facing Gulf of Tomini, harbor a volcano, which erupted as recently as 1983, and six raised limestone islands.<sup>3</sup> Small, craggy, thinly soiled islets bordering the shores of the main islands create anchorages, mangrove-lined boat passages, and resource collecting sites for Togean Island peoples. Small settlements intermittently punctuate the shoreline; houses built from cement, wood, and other forest materials lie at the edges of the land, or on stilts over the fringing coral substrate. There are no telephones or newspapers, and the only road is in Wakai town on Batu Daka Island. Coconut palm and vegetable gardens spread from coasts into the interiors. Forests in the midst of these encroaching cultivations supply Togean people with canoe timber, sago palm, medicinal plants, and other useful vegetation. Togean forests are also home to many insects, herpetofauna, and mammals of interest to biologists, who are concerned by evidence of forest clearing. Upon first glance, many signs of habitation in the landscape are hidden, however. One tends to notice only the overwhelming verdancy.

Surrounding Togean waters reflecting a violent equatorial sun contain coral reefs, sand banks, sea grass beds, and azure depths. Togean people collect subsistence and market-oriented marine goods in these waters, of which fish and sea cucumber (*tre pang*, S:*bale*\*) are the most important. Beyond the reef, in deeper waters, pelagic fish school, drawing local fishers and commercial boats from the mainlands of North and Central Sulawesi. Ferry boats make irregularly scheduled rounds between the islands and the mainland towns of Gorontalo, Poso, and Ampana. To the south of the islands, the mountains of Central Sulawesi are visible. To the north, only the waters of the Gulf of Tomini are in view. Biologists are concerned with the health of Togean reefs and waters. People have fished the surrounding reefs with both dynamite and cyanide, and several kinds of sea creatures, like the Napoleon wrasse fish, are threatened with local extirpation. But when one looks out at the expanse of Togean waters, coral reefs, ferry routes, and fishing sites are obscured. One notices, at first, only various shades of blue.

\* "S" represents a Sama language term throughout the book. The other terms in parentheses are Bahasa Indonesia, the Indonesian national language.

What do these expanses of primary colors interspersed with rare habitations offer us as a site for understanding biodiversity and its conservation? The term “biodiversity” emerged as a new mode of biological and social organization in the United States in the mid-1980s.<sup>4</sup> Coming, as it did, after several decades of heightened attention to environmental risk, biodiversity, as a particular framing of nature and culture,<sup>5</sup> began to reorganize earlier notions of natural history, wilderness, taxonomy, ecology, natural variety, species, and the like. Biodiversity was not so much a solution to the problem of environmental risk, however, as its problematization. It instigated a new form of critical inquiry into the relationship between entities conceived of as “nature” and “the human.” Thrust into the light was, on the one hand, nature, understood as the linkages between genetic variation, species populations, communities and ecosystems, and land and marinescapes and, on the other hand, humanity, with its ability to instigate what biologist Michael Soulé has termed the “sixth great extinction.”

Simultaneously, biological science itself was restructured around the biodiversity problematic. The task of protecting and restoring biodiversity was articulated with the sciences of population genetics, evolutionary biology, systematics, landscape ecology, and the study of ecosystems to form the new field of conservation biology. Unlike nineteenth-century natural history, or twentieth-century wildlife biology, conservation biology is self-consciously “mission-oriented” and sees itself as comparable to medical research in its goal of intervening in ailing systems.<sup>6</sup> Conservation biology is unusual among the natural science disciplines in that its value orientation—identified in terms of biodiversity’s utilitarian and inherent worth—is explicit. This new science sees its object of study as threatened, and describes the state of plants and animals in terms of crisis. As a scientific practice, it is focused on intervention and is self-consciously directed toward solving its urgencies.

Biodiversity also encompasses an important geographic dimension. Conceptualized through the variety and uniqueness of species, diverse life is not uniformly distributed. Rather, regions with large numbers of species, where many unique life forms are found, tend to be concentrated in the tropics. Conservation biologists recognize roughly twenty-five “hotspots” as having this hyperdiversity. Since most hotspots are located in the rainforests and on the coral reefs of the global South, the peoples of tropical nations—both non-EuroAmerican biologists, and those who live in close proximity to tropical flora and fauna—have taken on a particular significance within the biodiversity problematic.

Several elements have made this particular assemblage of nature and culture under the sign of biodiversity possible. First, biologists observe an exponential reduction in the diversity of species forms across the globe.

They identify habitat loss, degradation, fragmentation, the introduction of non-native species, and over harvesting as metacauses of a new rate of extinction. While a conservative estimate of the current rate of species loss is 27,000 species per year, far more species are considered endangered, vulnerable, or rare (Wilson 1992:280). Conservation biologists use the language of apocalypse, hemorrhaging, and holocaust to describe the decline in the abundance and variety of life forms.<sup>7</sup>

The emergence of biodiversity as a new form has also coincided with the global rise of the nongovernmental organization (NGO). NGOs are non-state institutions that nevertheless affect policy and aim to transform debates across national borders. Keck and Sikkink (1998) have described the influence of what they call “transnational advocacy networks.” Activists forming these transnational networks (scientists along with women’s, labor, and human rights advocates) are motivated primarily by values rather than economic gain. Networks of scientists and others concerned with the value of biodiversity and its loss link activists across borders; the World Wide Fund for Nature (WWF), Conservation International (CI), and The Nature Conservancy (TNC) are three of the largest advocacy NGOs forming the institutional backbone of this transnational assemblage.

Further, biodiversity has emerged at a contingent moment in postcolonial history. Under the logics of natural history and wildlife conservation (at least until the early 1990s), EuroAmerican experts held the important positions of authority in scientific nature-making projects across the tropical world.<sup>8</sup> This condition is increasingly rare, however. For example, when I first began working in Indonesia in 1994, the Jakarta offices of WWF, CI, and TNC all had EuroAmerican administrators, while by the time I left in 1997 each organization had hired an Indonesian director to oversee its domestic programs. Positions of leadership and authority in field biology and conservation management are now occupied by scientists and other experts from the South. The conjuncture of biodiversity’s tropical geography, the emergence of indigenous scientific expertise, and increased assertions of domestic bureaucratic authority in the realm of nature conservation, have shaped the particular understanding of biodiversity that this book will explore in detail.

Biodiversity conservation in the 1990s often proposed a particular solution to the problem of nature and the human in the form of the Integrated Conservation and Development Program (ICDP). Noting the ubiquity of conservation failures, the ICDP was premised on an understanding that previous efforts at wildlife conservation had not taken into sufficient consideration the needs of the people who live around conservation areas. These needs were interpreted in rational economic terms (by the biologists and economists who environmental NGOs tend to employ) as the ability

to derive income from surrounding natural areas. If alternative income sources could be found, the theory went, then people would stop hunting, fishing, gathering, felling, burning, planting, and all the other activities that threaten rare plants and animals in and around protected areas. Increased access to markets, land privatization, and ecotourism were key components of this neoliberal solution.

As a cultural formation, biodiversity conservation can be tracked globally. In order to understand conservation in a generative way, however, rather than as a set of established discourses, it is necessary to graph it at its specific sites of production. *Wild Profusion* is an ethnographic account of the rationalities surrounding a particular instance of mid-1990s biodiversity conservation. It concerns how biodiverse nature was made in the Togeian Islands of Sulawesi, Indonesia between 1988 and 1998, how the main actors in the Togeian conservation project (Indonesian biologists and Togeian people) constituted and were constituted through projects of nature-making, and how the nation was critical to both the particularity of the Togeian biodiversity project itself and to the subjectivities formed within the context of Indonesian science. Examining the ensuing configuration in a specific locality allows us to understand the emergent rationalities and identities, and the multiple natures, resulting from the project to conserve Togeian biodiversity.

The Togeian Islands first appeared as a potential conservation area in the early 1980s. Following upon traces in the scientific literature written by late-nineteenth- and early-twentieth-century natural historians who had documented bird and coral varieties there, Indonesian and Euro-American scientists arrived to establish the potential of the site for a nature reserve.<sup>9</sup> Then in the early 1990s, through the work of conservation biologist Jatna Supriatna and his students, the Togeian research station, Camp Uemata, was built and an enduring project of conservation research and management commenced. Two institutions, the new Indonesian Foundation for the Advancement of Biological Sciences (IFABS) based in Jakarta, and Conservation International based in Washington, D.C., then jointly set their sites on turning the islands into a national park.<sup>10</sup>

I call this work a multisited ethnography in a single locality because of what the Togeian Islands as a singular site can reveal of the travels of cultural meanings, objects, and identities across wider fields of engagement. Although biodiversity was a transnational practice, it took on shape and specificity through the work of Indonesian biologists to document species and implement a program of conservation and development, and the islands and their biophysical properties always meant different things to different people. The project collapses easy definitions of “nature” since Indonesian scientists, EuroAmerican biologists, commercial traders,

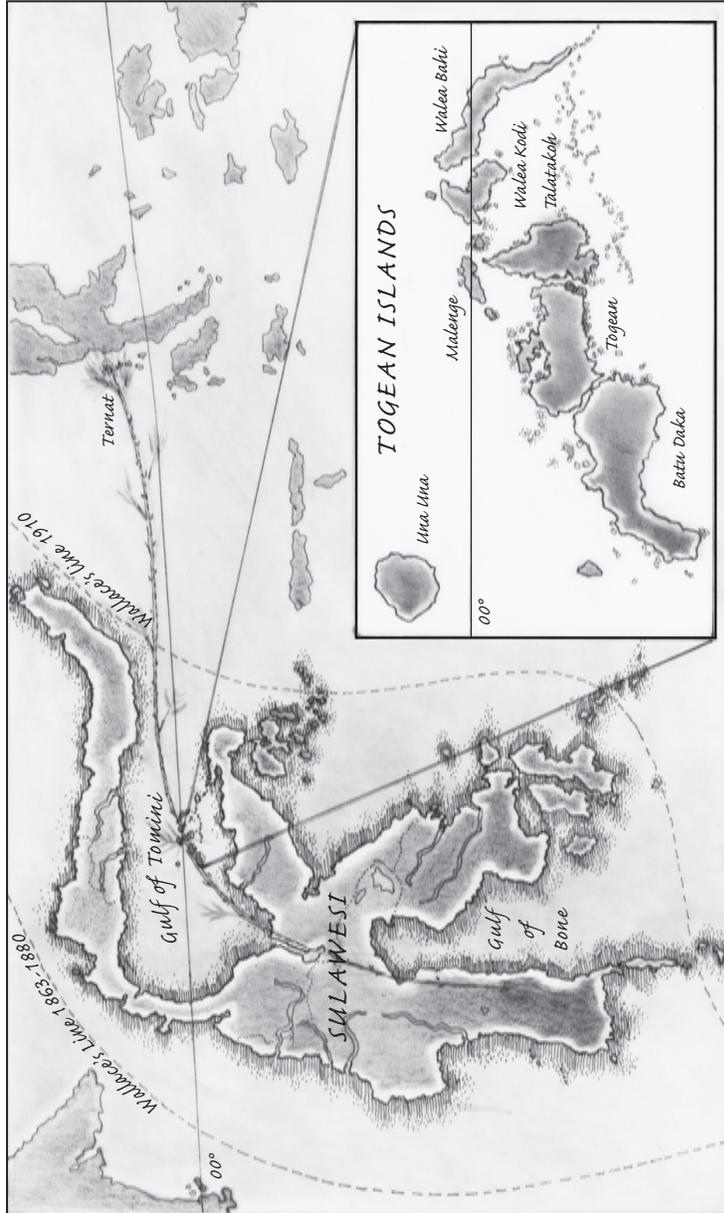
bureaucrats, and diverse Togeian people each engaged with Togeian land and marinescapes in discontinuous ways—producing the archipelago as contrastive and contested “sites.” Rather than the “conventional *mise-en-scène* of ethnographic research” (Marcus 1995), the Togeian Islands should be understood as a locality generative of cosmopolitan imaginings of science, nation, and biodiversity conservation.

The Togeian archipelago is positioned particularly well to tell this story, located, as it is, at the intersection of three significant lines: Wallace’s Line; the equator; and the tip of a strand of rattan that, legend has it, connects the islands to the former Sultanates of Ternate and Bone. These are the threads to which we will now turn.

### Wallace’s Line

In the mid-nineteenth century, Alfred Russel Wallace, the naturalist who devised a theory of natural selection independently from and simultaneously with Charles Darwin, observed a division in the morphology of birds and mammals across a line that separates the islands of Bali and Lombok in the south, and Borneo from Sulawesi in the north. “Wallace’s Line,” as it became known, divided the eastern half of the Indonesian archipelago from its western portion and demarcated a biogeographic division between Asiatic and Australian fauna. Later marks on the map (a second Wallace’s Line, Lydekker’s Line, Huxley’s Line, and Weber’s Line) express the controversy that once existed over precisely where the proper division was to be made (Daws and Fujita 1999:74). Now, the region encompassing the island of Sulawesi is understood to be a zone of transition and is referred to by the name “Wallacea.” In general terms, to the Australian side of the zone the marsupial order dominates among the mammals, while the Asiatic side is dominated by placental mammals.

In the collision between Asian and Australian land masses, the fauna of these regions became mixed and commenced a unique pattern of biological evolution (Whitten, Mustafa, and Henderson 1987:37–52). Sulawesi’s separation from Borneo by a deep ocean trench, and the complexity of its geologic history, have given the island a very high level of vertebrate endemism: 62 percent of Sulawesi’s 122 mammals are endemic. If one were to eliminate bats from the calculation, the rate is closer to 98 percent, striking compared with the 18 percent rate of endemism on the neighboring island of Borneo. More species of macaque monkey exist on Sulawesi than anywhere else in the world, and of more than 300 species of birds, 30 percent are endemic, the highest figure for any island other than New Guinea. Sulawesi is home to the Maleo, a bird that incubates a 250 gram egg in the island’s volcanic sands, and the Babirusa, a “deer



"Three Lines," by Jane Bixby Weller

pig” with four long tusks that curl back toward its head. The largest Sulawesi mammal is the Anoa, a dwarf genus of buffalo of which there are two species. Two kinds of cuscus, the Bear cuscus and the nocturnal Tree cuscus, and the world’s largest snake, the Reticulated python, live in Sulawesi trees. And the island has four high lakes, each with its own endemic fauna, including an unusual species of blind shrimp only found in caves.

What to make of this profusion of unusual and fascinating creatures? On the one hand we might insist, along with many biologists, that the meaning and value of this abundant nature is self-evident, the importance of such unusual and natural diversity speaks for itself. This perspective is intrinsic in the writings of biologist Edward O. Wilson, who describes this way his passion for enumerating the “diversity of life”:

In the realm of physical measurement, evolutionary biology is far behind the rest of the natural sciences. Certain numbers are crucial to our ordinary understanding of the universe. What is the mean diameter of the earth? It is 12,742 kilometers (7,913 miles). How many stars are there in the Milky Way, an ordinary galaxy? Approximately  $10^{11}$ , 100 billion. How many genes are there in a small virus? There are 10 (in a  $\phi$ X174 phage). What is the mass of an electron? It is  $9.1 \times 10^{-28}$  grams. And how many species of organisms are there on earth? We don’t know, not even to the nearest order of magnitude. (Wilson 1992:132)

On the other hand, anthropologists, historians, and science studies scholars who do not claim the value of nature as singular or self-evident, have been at the center of debates over the social constructedness of sex and gender, kinship, race, and other formulations that might otherwise be articulated in biological terms. In relation to the biophysical environment, social scientists have argued that people are involved in shaping many spaces that are overdetermined to be “natural,” that the idealist separation of “humans” from “nature” is an event historically and culturally specific to the European Enlightenment, and that any understanding of nature will always depend upon processes of representation and the subjectivity of those claiming to represent such a nature.

Along similar lines, science studies scholars are responsible for intriguing efforts to get beyond the sense that nature must be *either* foundational or found only in language. In the wake of the so-named “science wars,” this group of thinkers has made intense efforts to “take nature seriously,” without necessarily taking its forms as self-evident.<sup>11</sup> For example, Andrew Pickering, who has studied the particle physics of Donald Glaser, writes, “Now I can clarify my sense of material agency. It is simply the sense that Glaser’s detectors *did* things—boiling explosively or along the

lines of tracks or whatever—and that these doings were importantly separate from Glaser. To understand what happened when Glaser took a passive role in the dance of [material] agency, I think one has to acknowledge that some other source of activity and agency was at work, and in this case that source was the material world” (Pickering 1995:51–52). Yet, material agency is not the same thing as intentionality, Pickering argues: “My argument is that we need to recognize that material agency is irreducible to human agency if we are to understand scientific practice. Nevertheless, I need to stress that the trajectory of emergence of material agency is bound up with that of human agency. Material agency does not force itself upon scientists” (53).

Likewise, Bruno Latour has argued that “nature” is an ally of “truth” only when all scientific controversies are settled. Before that moment, no one really knows what nature will say. “When you attack a colleague’s claim, criticize a world-view, modalize a statement you cannot *just* say that Nature is with you: ‘just’ will never be enough. You are bound to use other allies besides Nature. If you succeed, then Nature will be enough and all other allies and resources will be made redundant” (Latour 1987:98). This is not to argue, he would say, against the existence of substances and objects in historical time, yet we have to understand such historicity in terms of the *production* of things: “History of science does not document the travel *through* time of an already existing *substance*. Such a move would accept too much of what the giants demand. Science studies documents the modifications of the ingredients that compose an articulation of entities” (Latour 1999:162).

These scholars of technoscience help us to see how an object becomes a different “thing” or “substance” in the world over time, with each new “articulation of entities” or set of associations encompassing it. An attention to forms, assemblages, conjunctures, and histories will help us to understand how “Togean nature” would have been a different object in Wallace’s period of nineteenth-century natural history (where, for one, specimens should be repositied in museums by colonial governments to teach us earth’s history) than in Indonesian scientists’ biodiversity (where, instead, nature must be preserved in situ for some combination of “human” and “Indonesian” posterity). Emphasizing the active materiality of nature helps us to keep in focus both the unusualness of faunal forms in the region called “Wallacea,” and the moment in time when scientists reassembled matter, institutions, experiments, and identities around Togean Island plants and animals to produce a nature that could be named “biodiverse.” It also lets us predict that the green and blue hues of Togean land and marinescapes may be something altogether different for Togean people who assembled other material, institutional,

experimental, and identitarian forms around an encompassing Togeian flora and fauna.

### Hemispheric Divides

A second line running across the Togeian archipelago is the equator. The equator marks a metageography (Lewis and Wigen 1997) dividing global “North” from global “South.” This invisible line is a displacement of the earlier metageography, “East” and “West,” which for many generations has represented the specter of deep inherent divisions—divisions of science, reason, modernity, development, and similar civilizational ruptures. From the perspective of such a divided world, the term “Indonesians’ science” would be an oxymoron, since the global South purportedly stands for belief and unreason. From a more critical perspective, however, “Indonesians’ science” demonstrates the limitations, indeed the falsehood, of this modernist parsing of North and South. By now, the question is not whether the divide is accurate or not, but rather what the “truth-effects” of such a proposition are. What kind of labor does the “Western science” synecdoche perform in the process of creating identities and expectations? The truth-effects of hemispheric divides are a problem that will thread their way continually across the narrative of this text.

How do we study these effects in relation to conservation biology in Indonesia? In moving past the terrain of ethnoscience (disavowing its tendency to bifurcate types of knowers), in rethinking the idea of the field (instilling a focus on elite subjectivity), and in provincializing EuroAmerican science itself (one response to anthropology’s autocritique), anthropologists and other science studiers now take as their problem spaces the laboratory, the nuclear test site, cyberspace, and the hospital setting. To the extent that we have reincarcerated science within the bounds of Europe and North America in the process, science remains a metonym for EuroAmerican modernity and rationality, and Indonesia and the rest of the global South remain the lands of farmers and fishers living out “alternative” modernities. But what of science and reason produced beyond EuroAmerica? What of the natural sciences in Indonesia that do not fit into those locally circumscribed forms of knowledge conventionally studied as “ethnoscience” or “indigenous knowledge”?

When I first began to search for a research site in eastern Indonesia in 1994, I visited three different conservation projects: Bunaken National Park in North Sulawesi, Taka Bonerate Park in South Sulawesi, and the Togeian Islands. Both Bunaken and Taka Bonerate were managed by Euro-American consultants employing Indonesian field and office assistants,

and only the Togean Island project was run entirely by Indonesian scientists and staff. I believed (it turned out, correctly) that I would learn more interesting things from these Indonesian experts than I could from expatriate consultants with whom I shared a quite similar educational and social history. Although I could not predict what I would find, I assumed that there would be something “different” about the Togean project as a result of its nationalization.

My research with the scientists entailed living and working at Camp Uemata, participating in the scientists’ ICDP activities in the Togean Islands, attending conservation meetings with IFABS and CI in Jakarta and Palu (the capital of Central Sulawesi), and interviewing Indonesian and EuroAmerican conservation practitioners in Jakarta, Manado, and Central Sulawesi. What I discovered in the process of accompanying biologists in their species inventories, or participating in meetings and discussions about Togean conservation, was that difference and similarity are both part of the story of biodiversity in Indonesia. Indonesians’ scientific and conservation management practices were distinct from, but also very much the same as, what could be found elsewhere in the global travels of the mid-1990s biodiversity paradigm.<sup>12</sup> I came to understand that these questions of comparability were also important to Indonesian scientists who sought recognition but also desired a sphere of autonomy for their work.

I witnessed, for example, the frustration Indonesian scientists sometimes felt in their collaborations with foreign scientists, and heard the comments some of these same EuroAmerican visitors made. “The only thing disappointing about this experience at the [Togean] research station,” one foreign scientist said, “is that there are no *real* scientists working here.” Processes of negation were constitutive of the Indonesian subject of 1990s conservation biology. While science studies is an invaluable rubric through which to understand Indonesians’ conservation biology, it is also insufficient to explain the interplay of similarity and difference that exists across the imagined hemispheric divide. The “postcolonial condition,” as it is known, goes further in explaining the subjectivities produced through Togean science where Indonesians struggled to attain a voice in an international field.

Although the autonomy of the nation has secured a space for Indonesians within transnational science, and these biologists are now mentors, partners, and colleagues of EuroAmerican scientists in producing natural scientific knowledge, they still face many challenges: the terms for what can be considered “good” science are often set somewhere else; Indonesians are frequently expected to contribute only data, rather than theory; Indonesian scholars are required to know EuroAmerican literatures while the inverse is not usually the case; and EuroAmerican scientists continue



Photographing biodiversity, by Celia Lowe.

to take for granted that Indonesia is only one “problem space” within an entire world amenable to their investigations, while Indonesian scholars tend to perceive the nation as their most pressing area of concern. For these reasons, and more, Indonesian scientists struggle for recognition within transnational scientific domains.

Postcolonial theorists have contributed greatly to our understanding of this dilemma. Itty Abraham (1998), Partha Chatterjee (1993), Pheng Cheah (2003), Deepak Kumar (1995), Jean Langford (2002), Gyan Prakash (1999), and Ann Stoler (1995, 2002), among others have had much to say on the role and function of science and technology within the colonial civilizing mission, on “race,” “caste,” “ethnicity,” and “tribe” as outcomes of colonial science, on the cultural norms and forms of reason at particular scales and temporalities, and on relations between metropole and colony across hemispheric divides. These writings have also firmly established the connections between science and the nation in projects of colonial and postcolonial rule.

Links between science and the apparatus of state (relations of knowledge and power, in other words) demonstrate their effects in the realm of identity, and science is a primary site where putative “incommensurability” is produced. Incommensurable identities, dependent upon the experience of subjection in colonial and neocolonial contexts, should be understood as the outcome of elite efforts (knowing and unwitting) to instantiate hemispheric divides, and of subaltern struggles against such hegemony. Stagist theories of history worked out during colonial expansion continue to have relevance for the way many think of the scientific and political legacy of the European Enlightenment in places such as Indo-

nesia, that are far away from its (supposedly pure) point of origin. Yet, I argue, those identities that depend upon their relation to reason and modernity (either EuroAmerican or elite Indonesian identities) should be seen as outcomes of the practice of science (among other things), not the points from which science commences.

Struggles over the idea of generativity and newness—origin, originality, origination—are important aspects of postcolonial difference. How do we confront the aforementioned accusation of scientific non-reality, or address the problem that science must replicate patterns established in Europe or America to be recognizably “real”? From where does “newness” or “reality” come, and who should decide? Accusations of repetition (or of non-reality) depend upon a simultaneous desire to instantiate elite identities while ensuring that difference is sustained (Fanon 1991[1952]). This is a no-win situation; Indonesian scientists in the context of the Togean project can be seen struggling with the structure of (though not the fact of) the mimesis and ambivalence that Homi Bhabha (1994) describes so well.

Although funding flows primarily from organizations in the North to the many sites of biodiversity conservation in the South, I argue that knowledges, rationalities, and natures in Southern biodiversity conservation cannot be understood through the language of assimilation or adaptation in the tropics of a project that originates in a more temperate climate. Rather, nature-making in the global South has been productive of the very form that has come to be known as biodiversity. For example, ICDP projects should be viewed as an idea originating in Southern peoples’ resistance to wildlife conservation, rather than as the brainchild of Northern biologists for whom the ICDP is merely a formalized response. Along with many theorists of postcoloniality, I insist in this work that science is multidirectional in its rationales, causes, and effects; ideas flow back and forth across hemispheric, identitarian, and conceptual divides linking metropole with postcolony, center to margin.

What emerged from Indonesians’ conservation biology and practice in the Torean Islands was a highly specified “nature,” and a particular way of understanding “the human,” that contributed not only to the transnational problematization of environmental risk known as biodiversity, but also to a domestic project of building the Indonesian nation-state. Many Indonesian scientists I encountered believed that the transnational discourse of biodiversity, with its particular notion that people who live near rare plants and animals threaten this nature, does not fit the circumstances of Indonesia very well. For example, at Camp Uemata, Budi stressed to me that conservation was a “Western” idea. He said, “A country like America is rich enough for conservation and looking at wildlife the way Americans do is a luxury. I don’t think the Indonesian people are ready

to look at nature in this luxurious way. Nature is still full of resources for Indonesian people because of our level of development. We are not rich enough in Indonesia to afford conservation of species—species is a Western concept. Yet, conservation is an ‘in’ for me; my biology employs me.”

I argue that a study of science neither “ethno” nor “Euro” entails a recuperation not only of the making of science’s matter, but of where and by whom that matter is made. In the case of Indonesians’ conservation biology, this requires an exploration of how Indonesian scientists were shaped by the Indonesian state during the period of authoritarian leadership of former President Suharto. It also necessitates study of the commitment possessed by many of these same scientists to look beyond the state to the affective nation. For instance, while Togeian people were often viewed through the biodiversity problematic as those humans who threaten both nature and state order, at other times scientists recognized them as Indonesian citizens. In order to avoid being inhabited by the supposition that “there are no *real* scientists here,” we will need to take seriously and examine closely Indonesian scientists’ commitments to the nation form and their efforts to think through the meaning of their own, as well as Togeian peoples’, lives as Indonesian citizens and subjects.

#### A Thread of Rattan

The mountain at Benteng is the “navel” of the Togeian Islands and through it the islands are connected to the wider world. Benteng is the site of an old fort built by Bugis and Sama people at their first site of habitation when they came to the islands from southeast Sulawesi sometime before the 1860s.<sup>13</sup> Puah Umar<sup>14</sup> related to me how in the old days the Togeian Islands were called Togoya. Togoya was the youngest of three siblings. The eldest was Selatan (South Sulawesi), and the middle sibling was Ternate (an island and former sultanate to the east of Tomini Gulf). The three siblings were connected together by a giant rattan running through the earth: in Selatan were the roots of the vine; in Ternate were the main branches; and in Togoya, on Benteng mountain, you can still find the tips of the rattan emerging from the ground. Through this rattan vine, the Togeian Islands were bound to the Raja of Bone in South Sulawesi, and to the Sultan of Ternate to the east.

Like any project of nature-making, the Togeian Island biodiversity project would not be imposed on *terra nullis*. Nearly 30,000 Togeian people of more than half a dozen ethnic groups (Sama [Bajau], Bugis, Saluan, Togeian [Ta’a], Bare’e, Gorontalo, Bobongko, and others) lived in the islands in the mid-1990s (Kantor Statistik Kabupaten Poso 1995a and 1995b). All of the major Togeian ethnic groups had come from the sur-



Benteng Mountain, by Celia Lowe.

rounding mainland, and Sama and Bugis people had migrated there as well from South Sulawesi via the eastern coast when Sama fishers arrived in search of turtle shell and sea cucumber and Bugis traders had followed them to buy their sea products. The economy of the Togeian Islands still revolves to this day around exports of land and sea harvests. Most of these exports follow traditional subsistence and very old trade patterns, like the trade of sea cucumber to China, which has persisted for at least a millennium in eastern Indonesia (Warren 1981). But there is also a new Australian-Indonesian pearl farming venture in Kilat Bay, and a Japanese-Indonesian logging conglomerate has stripped the interiors of the larger islands of trees. Tourism is another industry that connects the Togeian Islands to far-away places, in this case mainly to Europe, in a sustained and novel way.

The archipelago is divided into two administrative districts: Una Una and Walea Kepulauan. Every Togeian village has an elementary school, and there is one middle school in each district. The majority of Togeian villages in the 1990s were described by the government as “left behind” (*desa tertinggal*) and received government benefits based on this status. With few exceptions, the people of the islands follow Islam rather than any of the other four state-sanctioned religions and, despite the appearance of isolation, the Togeian Islands have been connected to wider spiritual, economic, and political worlds for as long as there have been people living there. As the third line running across the archipelago, Puah Umar’s thread of rattan symbolizes these connections: plants and animals have

always linked Togeian people and their islands to centers of far-away charisma and influence.

Biodiversity is a new layer in this much older story. Rather than purchasing all kinds of plants and animals for sale and export, however, conservation biologists came to the islands to enumerate, classify, and preserve the creatures they found. While species inventories are imagined as the foundation of biodiversity conservation by Indonesian and international biologists alike, numbers and totals have proliferated in conservation projects around the globe with only a magical connection between inventory and any ability to preserve nature's newly visible creatures. There is no clear identity between crisis (loss of biodiversity) and form (enumeration). The wrench in the works, from a biodiversity perspective, is *human* incalculability. Biologists have been unable to save vast species inventories on their own; they require the help of a local populace, often the very same peoples whom they suspect of instigating biodiversity loss. Thus, biodiversity projects have focused their gaze on these populations and, alongside of Togeian species, Togeian people have become an object of scientific study and analysis.

My interest in Togeian people shadowed the interests of the biologists, and I was most curious about people of Sama ethnicity for two reasons.<sup>15</sup> First, biologists from the Togeian project were themselves very concerned about Sama people, often believing Sama are the ethnic group most destructive of the environment, especially the marine environment. Scientists frequently attribute the problems of blast and cyanide fishing to Sama people because Sama are renowned as fishers and many make their livelihoods from Togeian waters and reefs. Since Sama people, wherever they are found (along the coastlines of Sabah, Malaysia, the southern Philippines, and throughout eastern Indonesia), have often followed sea cucumber and fishing harvests living aboard small boats, they have been called Southeast Asia's "sea nomads." This brings me to a more personal reason for my interest in Sama lifestyles. I myself had lived aboard a boat for seven years in the 1980s and had circumnavigated the earth passing through the tropical waters of Asia and the South Pacific. For this reason I felt especially intrigued to learn about the identity of an ethnic group described as "sea nomads" and "floating people" (*suku terapung*).

There are several Sama villages in the Togeian Islands. These villages (*desa*) are usually found on outlying islets offshore from the larger of the Togeian Islands and are readily identifiable by their bald white mounds stripped of trees where the soil has been used to fill in the surrounding shallows. Sama houses tend to be built on stilts, with the front edge standing over the water and the back of the house on dry or reclaimed land. Like other Togeian Island people, Sama work at small-scale resource harvesting, gardening, coconut palm farming, and low-level trade, and their

activities are more varied than fishing alone. I developed most of my research relationships and friendships in Susunang, a village of around 2,000 people divided into five hamlets (*dusun*) and the largest Sama village in the Islands. I had a house built for me there, bought a canoe, and spent the better part of 1996 and 1997 traveling, talking, fishing, and farming with Puah Umar and many others.

Through these activities, I began to understand how Sama people had engaged with the materiality of the Togeian Islands through their own historical and contemporary nature-making practices. As a counterpoint to the discourse and practice of scientific biodiversity, I followed in detail how Sama fishers and farmers physically and discursively constructed Togeian land and marinescapes and made the islands into a productive and storied place of familiarity and knowledge, experience and expertise. As a result, I tell a different story about Sama people and their relationships with Togeian flora and fauna from some of the conservation biologists I know. I do not want to claim, necessarily, that my descriptions of Sama peoples' lives are more "true" than those biologists tell. I do want to demonstrate, however, that we can tell a story of Sama peoples' nature-making that is at least as complex and nuanced as the narrative of how biologists have come to "discover" profuse Togeian natures.

Part of this complexity entails how human mobility in the Togeian Islands is narrated. While scientists travel the world frequenting conferences and seminars in far-away locales, attending to natures that are remote from the places where they themselves reside, and consuming natural resources from sources they can't always identify, most of the Sama people I met had never been outside of the Togeian archipelago. Still, Sama travel aboard canoes on resource-collecting trips called *pongkat* is viewed by elite Indonesians as uncivilized, as is Sama peoples' habitation of stilt houses overhanging the water's edge. Sama "mobility" is perceived as threatening, both to biodiversity and to state control of the Togeian population, and there have been several efforts to resettle Sama people from their offshore villages onto the land of the larger Togeian Islands. At the same time, paradoxically, Sama and other Togeian peoples' perceived lack of cosmopolitanism and connection to a wider world is also seen as a threat to biodiversity and governmentality. This is the case even though they are obviously integrated into larger scales of region, nation, and cosmos in complex ways.

Togeian people, Sama people in particular, are crucial then to the story of conservation in Indonesia. If biodiversity is a new problematization of the relationship between nature and the human, we will want to know who is this "human" that appears to trouble nature so. The figure that Indonesian scientists produced through their Togeian Island work was inevitably a different human than that developed by EuroAmerican biolo-

gists in thinking through the problem of tropical biodiversity. This is because Togeian Island people were necessarily more than just “threatening humanity” to Indonesian biologists. They were also Indonesian subjects and citizens who fit into recognizably Indonesian ideas of national development, belonging, and alienation. The particularity of Indonesians’ biodiversity was dependent on this understanding.

For this reason, I have found it useful to follow Sama people using the same methods I use to track scientists in their work. I ask, What does Sama peoples’ nature-making entail in the Togeian Islands? What are the networks that connect Sama people across scales of region, nation, and transnation? How far do Sama peoples’ inscriptions, assertions, and objects travel? And how are Sama logics similar to or different from authorized and “official” discourses of science, nature, or nation? The story of mid-1990s Togeian biodiversity cannot be comprehended without this parallel narrative of the ways Togeian people engaged with the biodiversity project and with their own material and idealist natures.

### The Reason for Reason

Indonesians’ encounters with the biophysical world have conventionally been described and evaluated from the perspective of “indigenous knowledge.” At times this has proved a hopeful and necessary strategy, and the framework of indigenous knowledge has been crucial to expanding our understanding of what is able to count as knowledge. Different, so-called “indigenous,” ways of knowing the environment have often proved commensurable in relation to the hegemonic knowledges of natural science, and are frequently demonstrated to be more efficacious when compared with the nonsituated and instrumental knowledges produced and promoted by governments or transnational modernization schemes. Indigenous knowledges have also been used to reflect back upon natural science. In the process it has become clear that all knowledges are situated, practical, dispositional, flexible, and social.

I have chosen to study Indonesian encounters with nature not through the analytic of indigenous knowledge, but rather through an analytic of “reason.” Obviously, even though Indonesian scientists are literally as “indigenous” as Togeian peoples, they do not resemble the figure who forms either the conventional subject or object of indigenous knowledge; Indonesian scientists have represented Togeian nature through “transnational,” not “traditional,” ways of knowing. I also find it more problematic than productive, at this point, to describe Sama peoples’ ways of knowing nature through the rubric of indigenous knowledge. If all knowledges are situated, practical, dispositional, flexible, and social, then we

need an analysis capable of placing Indonesian scientists and Sama people in the same frame. While scientists' knowledges are clearly not indigenous, Sama knowledges have cosmopolitan dimensions that also do not fit within the ambit of indigenaity.

Likewise, there are problems with a conventional tracking of "knowledge." "Local" knowledge has often seemed an antidote to the universalist claims of scientifically derived natures, or the global ambitions of biodiversity conservation. The assumption in this work has been, if you know a group's boundaries you can investigate their knowledge, coherent and original. Natural scientists themselves are also presumed to be a group, bounded and whole, who share a single form of knowledge and a common worldview. As such, the study of knowledge has often been about the collection of objects—bits and pieces of information or perspective—rather than an examination of knowledge-making projects or the travels and transformations of thought across space and time. The science of ethnobiology, to cite but one example, has often entailed collecting names for things and interpreting these lexicons as coherent knowledge. Such a collection does not capture nonlexical hybridity, change, or process, however, or the elements of thinking as practice.

While "knowledge" proposes fully formed objects that are simply excavated or revealed, "reason," on the other hand, delineates the active practice of thinking. In Paul Rabinow's (2003) words, thinking "is a situated practice of active inquiry whose role and goal is to initiate a movement from a discordant situation to a more harmonious one." Knowledge might change through learning or discovery—the acquisition of more objects—yet, thinking demands the assemblage of matter, language, and technique—the creation of new objects. Since the time of Aristotle, studies of reason have interrogated the status of objects and how claims to knowing are made. I engage this process here, not to determine the foundations of truth sought by ancient Greek or Enlightenment thinkers, but rather to understand the conditions of possibility upon which particular contemporary thinking and knowledge-making practices rest.

Although a study of knowledge can answer many of our questions about nature, it does not help us to see how nature becomes a question in the first place. A study of reason, on the other hand, operates as a metacommentary on knowledge. It shows us what will become valued as knowledge, how thought is actively structured and normed, and how these norms expand to cover a variety of situations. More than a hemispherically bounded analytic, reason can help to uncover the possibilities for, and conditions of, thought no matter where thought is located. This is not how reason is ordinarily conceived of by those who assume for themselves the mantle of rationality, however. Reason is conventionally understood as a system of universal truth that reveals the natural traits,

and the relations between the elements of nature, that allow us to apprehend an actually existing world “out there.” Kant (2001[1781]) famously critiqued this concept of “pure” reason for the proposition that the truth of an object in and of itself is discernable. Rather, he argued things can become objects of knowledge only with recourse to the experiencing human mind structured a priori by space and time.

An archaeological shift in the milieu of reason occurred at the start of the nineteenth century, when the European colonial enterprise, formerly organized exclusively around extractive trade practices (those, for example, of the Dutch and British East India Companies), became reorganized around the governance, education, and “advancement” of colonial populations. In the process, the capacity to recognize and acknowledge the universally true and good came to be viewed as unequally distributed along social lines of race, class, gender, and geography. Within both metropole and colony, reason was claimed as the property of a certain class of white European men, while women, peasants, laborers, and non-Europeans embodied backward, unchanging tradition as well as enchantment, emotion, and sentimentality. The civilizing mission (the success of which was, of course, infinitely deferrable) emerged as a technological remedy for the lack of reasoning capacity among the white man’s Other.

Alongside these historical developments, the origin of reason in nature and its teleological progress in human history began to be called into question in European political philosophy. Nietzsche (1998[1887]), for example, described how reason not only reveals things but shapes them, and he commented on the reality-shaping effect of affect: “[T]here is *only* a perspectival seeing, *only* a perspectival knowing; and *the more* affects we allow to speak about a matter, *the more* eyes, different eyes, we know how to bring to bear on one and the same matter, that much more complete will our ‘concept’ of this matter, our ‘objectivity’ be” (85). Weber (1946[1914]) wrote of bureaucratic reason and its capacity to bound up human creativity in routinized and stultifying forms that disenchant the world we live in. Writing as refugees from European Fascism, Horkheimer and Adorno (1969[1944]) saw the failures of reason as part and parcel of the failures of capitalism, and argued that as Enlightenment attempts to secure itself against the mythic it becomes as totalitarian as any system. And Freud (1989[1933]), while espousing the scientific *Weltanschauung*, was instrumental in exposing the human mind as divided against itself, thereby opening up new possibilities for a theory of subjectivity.

Most nineteenth- and early-twentieth-century thinkers maintained liberal positions on reason and its capacities—if only reason could be rid of one tainting imperfection or another it might still perform its liberating function. It is also worth noting that nearly all placed reason in Europe using Asia, especially China, as a site of originary backwardness against

which European reason might be recognized. By the late twentieth century, however, reason had come to be seen for its arbitrariness—as a repository of social norms and ancient prejudices, rather than as a guide to universal, unsituated truth. As elaborated in the work of Canguilhem, Foucault, Rose, or Bourdieu, for example, reason displays a self-interest-edness that situates it within a field of normalization and social power. Instrumental, calculating reason, including, especially, “reason of state,” employs the proposition of universal validity in order to reinforce the claims of many narrower interests. Critical reason, on the other hand, is a way forward, if not a way out.

The status of the object has also been in flux. How do we know the object if it is conceived differently from different subject positions? Following upon Marx’s insistence on the objective value of proletarian vision from below, theories of situated and partial knowledges have emerged (Hartsock 1999). Pressures on the postcolonial thinker, women, and subaltern subjects to conform to the God’s-eye view of universal knowledge as seen from patriarchal centers have been elaborated (Harding 1998). At the same time, the argument for situated knowledge has also been an attempt to get closer to the object, not to do away with the principle of objectivity entirely (Haraway 1991). Anna Tsing has made an especially compelling argument for “engaged universals” observing that universals can be found in both imperial and liberatory projects: “Universals are effective within particular historical conjunctures that give them content and force. We might specify this conjunctural feature of universals in practice by speaking of engagement. Engaged universals travel across difference and are charged and changed by their travels. Through friction, universals become practically effective. Yet they can never fulfill their promise of universality. Even in transcending localities, they do not take over the world” (Tsing 2004:8).

Although universal human reason has come under revision in political theory and critical ethnography, this reason still maintains an active life as a folk category. While anthropologists and others now tend to view reason as a *strategy* of universalization, in certain places, among certain types of institutions, among certain peoples at certain times, to deny the universal means to deny one’s own humanity (Bourdieu 1998:89–90). Natural science is the social field perhaps most invested in the universality of reason, where to disclaim a truth derived through scientific practice is to become a lesser form of human. Nonetheless all concepts, scientific or otherwise, have particular historical and social conditions of possibility. Dipesh Chakrabarty (2000) has argued for “provincializing” universalist claims in EuroAmerican thought by examining these enabling conditions. Reason, as a folk category, entails those ideas, forms, and assemblages

that attempt to erase their own conditions of possibility to stake universal claims, yet histories of thought as practice, and the locations from which claims on the universal are made, leave traces. *Wild Profusion* is a study of these traces.

To understand how biodiversity was a new assemblage in Indonesia, how it problematized relations between Togeian natures and Togeian peoples, and how at the same time scientists themselves operated within degrees of freedom and constraint, it is helpful to understand biodiversity as a form of reason that produces both subjects and objects. Thinking of humans as subjects constituted by knowledge, rather than unconstrained individuals who possess and control knowledge, is useful for comprehending the identities that emerge from projects to conserve biodiversity. For example, at some point in the 1980s Indonesian activists (and here I include scientists with ethical and interventionist mandates) changed the designation of their collectivities from “nongovernmental organizations” (*organisasi non-pemerintah*) to “peoples’ self-improvement leagues” (*lembaga swadaya masyarakat*, LSM). We see here how elite Indonesians were invited in the Suharto era to become a prosthesis of the state, not a node of opposition to it. This act involved an arbitrary reorganization of the self designed to accommodate the state’s anxiety toward anything exterior to it. While Indonesian scientists’ mediation between the state and Togeian people was regulated and normalized, scientists themselves were also in the business of producing normalizing and standardizing knowledges about Togeian people. These knowledges might serve state interests, though just as easily they could become a way to challenge the reason of state.

In the move from indigenous knowledge to an analytic of reason, I seek, therefore, to describe the contingent conjuncture where science, nature, and the Indonesian nation came together through a particular problematization of nature and the human assembled under the sign of biodiversity. The three lines running across this text—Wallace’s line representing Sulawesi’s unique faunal forms, the equator representing hemispheric divides across the fabric of human identities, and a line of Sulawesi rattan symbolizing Togeian peoples’ connections to cosmopolitan worlds through plants and animals—intersect to create a circumstance within which transnational biodiversity conservation gained specificity, form, and generative capacity.

In reflecting upon the possibilities and limits of such forms and capacities through genealogies of reason, I hope to introduce new possibilities for thought, moving from discord to harmony, therein opening up a space from which to understand the lives of Indonesian scientists, Togeian people, and the profusion of Sulawesi flora and fauna.

### The Lines of This Book

The narrative of *Wild Profusion* is divided into three parts. Part 1, “Diversity as Milieu,” moves from the forms of transnational biodiversity to the specificities of Togeian nature/cultures to looks at how “biodiverse nature” and Togeian “indigenous knowledge” were outcomes of conservation biology. Part 2, “Togeian Cosmopolitics,” proceeds in the opposite direction. Beginning from Togeian natures, it examines how Sama people produced local land and marinescapes as well as cosmopolitan worlds through their nature-making practices. Part 3, “Integrating Conservation and Development,” studies the outcome when the world of biodiversity science and management meets Sama people’s nature-making.

In chapter 1, “Making the Monkey,” I explore the postcolonial world of Indonesian science by examining how the Togeian macaque (*Macaca togeanus*) was proposed as a new species endemic to the Togeian Islands. Through the scientific practice of conservation biology, Indonesian primatologists identified the monkey first as a “new form,” then as a “dubious name,” and ultimately as an “endemic species.” Throughout these acts of making, unmaking, and remaking the monkey, its unique status was crucial for developing Indonesian science, attracting foreign donors, and enlisting government and public interest in Togeian Island nature, even as the natures important to Togeian peoples were overwritten in the process.

Chapter 2, “The Social Turn,” asks how Indonesian biologists formed their object of reason when this object was no longer conceived of as “nature,” but rather as “culture.” I begin with a comparative perspective on past and present instances of nature-making in the Togeian Islands and eastern Indonesia. Adolf Bernard Meyer, who collected Togeian birds in the 1880s, and Georgius Everhardus Rumphius, who collected natural curiosities in seventeenth-century Ambon, each developed a particular representation of Malay people that differs from the figure of the human produced in biodiversity conservation. Through a “social turn” in 1990s conservation, Togeian people were asked to contribute “indigenous knowledge” to the project of conserving Togeian nature. “Ethnobiology” and “participatory spatial planning” became the mediums through which Togeian peoples’ knowledges were elicited, and through which their identity as “indigenous” emerged.

I explore how it is possible to think Sama identity and Togeian nature simultaneously without essentializing such a connection in chapter 3, “Extra-terrestrial Others.” Sama identities and natures have taken on cosmopolitan attributes through their connections to, and imaginations of, other places. I follow these connections through Sama place-making, including a sea cucumber collecting trip, making sago in a sago palm

swamp, through place names, and by way of canoe travel along the Togeian shoreline. I then contrast these practices with the “tribunals of reason” Togeian Sama people are subject to and that frame Sama lifestyles in negative terms.

In chapter 4, “On the (Bio)logics of Species and Bodies,” I look at how Sama identity was produced in relation to enchantment, disenchantment, and instrumental reason in the context of health and well-being in the Togeian Islands. Both biomedicine and biodiversity conservation have been similarly viewed as remediation for “improper” or “ineffectual” knowledge or belief, for pseudoscientific practices, and for social “underdevelopment.” Managerial interventions in the Togeian Islands often took on unexpected forms, developed unanticipated lives of their own, and ultimately missed their mark. In this chapter, I extend my analysis of nature to questions of bodies and health as they intersect with Togeian land and marinescapes for Puah Lidja, her family, and her neighbors in Susunang village. Further, I describe how new forms of “unreason” reveal the limitations of and aporia in practices of scientific calculation and instrumental governmentality.

In chapter 5, “Fishing with Cyanide,” I present one specific type of environmental threat, cyanide fishing practiced in the live reef food fish industry, and interrogate it for what it can tell us about identity, science, and legal rationality. Most biologists understood Sama fishers to be the perpetrators of cyanide fishing, and Indonesian laws and conservation philosophies rhetorically placed fishers at the center of responsibility for how fish were caught. Many others of diverse ethnic backgrounds were also involved in the live fish trade however and, in most cases, at a more fundamental level. Chapter 5 examines how “community” became the arena for conservation and bureaucratic intervention despite the cosmopolitan nature of the live fish trade.

Chapter 6, “The Sleep of Reason” documents the ultimate emergence of the Togeian Island National Park in 2004. Serving as an epilogue to *Wild Profusion*, this final chapter also describes change in the form of 1990s biodiversity conservation—which coalesced around species, the ICDP, the emergence of Southern expertise, and late-Suharto era political norms and cultural forms—to a new millennium milieu emphasizing eco-regions, enforcement, and the possibilities of the post-Suharto “reformation” era. Reason, I conclude, produces monsters when it is purified from enchantment. Reading conservation practice through Francisco Goya’s 1799 painting, *El Sueño de la Razon Produce Monstruos*, the rational mind and its demons meet, amidst the seemingly pure logic of disappearing species and the imaginations that are necessary to preserve a diversity of life as well as lives worth living.