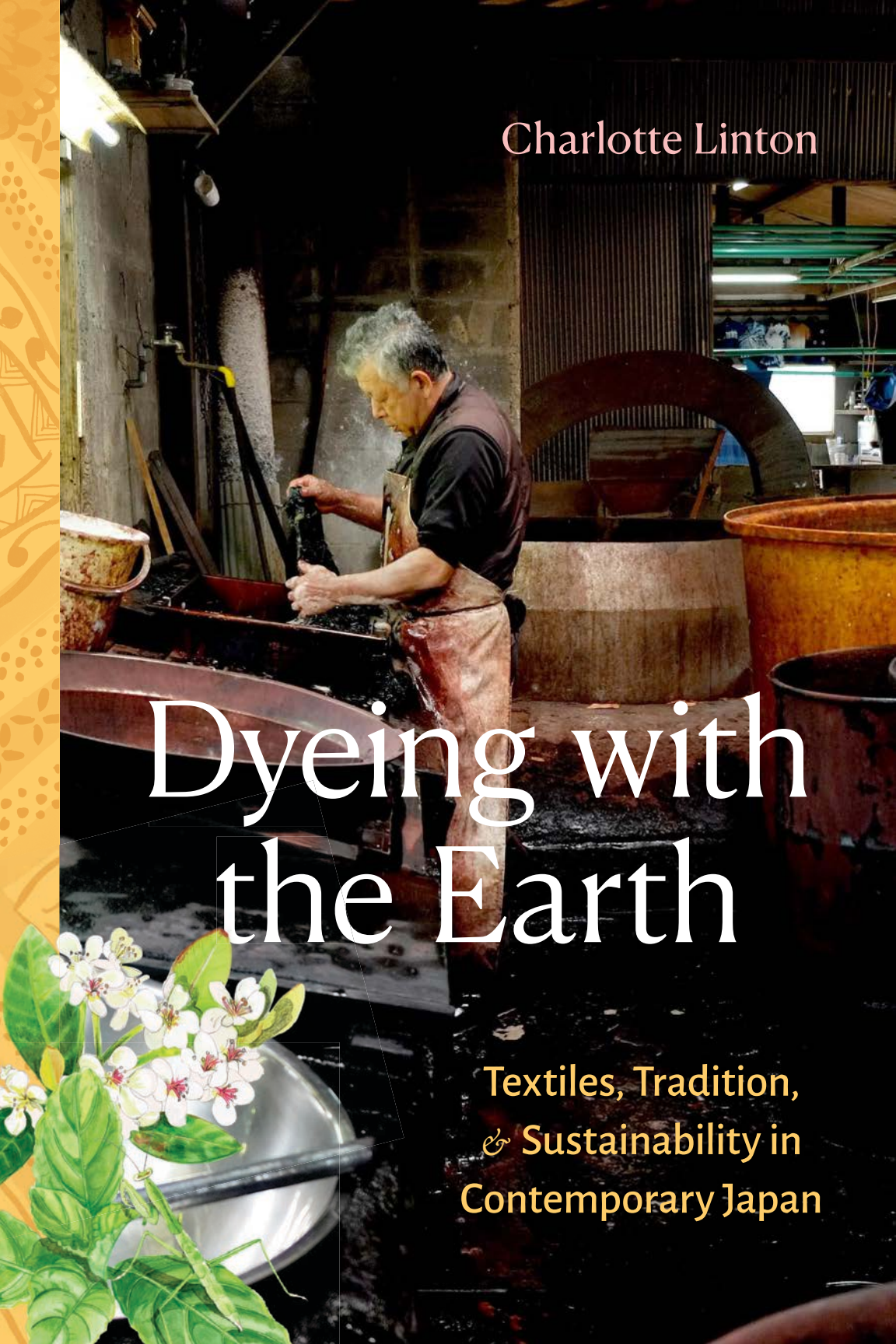

Charlotte Linton
Dyeing with the Earth
Textiles, Tradition, & Sustainability in Contemporary Japan

BUY

ハブ 30.11.18
On the road on the way to Togyachi.

Charlotte Linton

Dyeing with the Earth

Textiles, Tradition, & Sustainability in Contemporary Japan

Amami rabbit, アマミノクロウサギ
Pentalagus furnessi, on display at the Kaiser. museum

Duke University Press *Durham and London* 2025

Printed in the United States of America on acid-free paper ∞
Project Editor: Lisa Lawley
Designed by Courtney Leigh Richardson
Typeset in Garamond Premier Pro, Canela, and Alegreya Sans
by Westchester Publishing Services

Library of Congress Cataloging-in-Publication Data
Names: Linton, Charlotte, [date] author.
Title: Dyeing with the earth : textiles, tradition, and sustainability in contemporary Japan / Charlotte Linton.
Other titles: Textiles, tradition, and sustainability in contemporary Japan
Description: Durham : Duke University Press, 2025. | Includes bibliographical references and index.
Identifiers: LCCN 2025001892 (print)
LCCN 2025001893 (ebook)
ISBN 9781478032212 (paperback)
ISBN 9781478028987 (hardcover)
ISBN 9781478061199 (ebook)
Subjects: LCSH: Dyes and dyeing—Textile fibers—Japan—Amami Ōshima. | Textile industry—Japan—Amami Ōshima. | Kimonos—Japan—Amami Ōshima. | Textile crafts—Japan—Amami Ōshima. | Textile industry—Environmental aspects—Japan—Amami Ōshima.
Classification: LCC TT854.3 .L568 2025 (print) | LCC TT854.3 (ebook)
LC record available at https://lccn.loc.gov/2025001892
LC ebook record available at https://lccn.loc.gov/2025001893

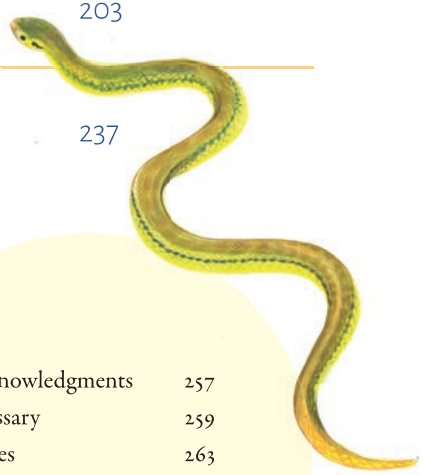
Cover art: Background image showing the Kanai Kougei workshop and the craftsman Kazuhito Kanai, 2018. Drawings of *sharinbai* blossoms, Ryūkyū indigo, and a praying mantis. Courtesy of Charlotte Linton.

Frontispieces: (*page ii*) Textile print designed by the author during a period of ethnographic research in Amami Ōshima. The design depicts the *rurikakesu* (Lidth's jay), found only in the Amami Islands. The word *giyā* is repeated in katakana text to describe the shrill noise of their call. (*page iii*) A taxidermy Amami black rabbit from the collection of a local folk museum.

Publication of this book was supported by the AAS First Book Subvention Program of the Association for Asian Studies.

Contents

リュウキュウアオヘビ 16.11.17
Ryūkyū Green Snake



Introduction

I first met Koki in 2017, around three months into fieldwork while I was working at Kanai Kougei, a traditional *dorozome* (mud-dyeing) workshop on the island of Amami Ōshima, in southern Japan (figure I.1).[1] Koki was learning about the production of the Amamian kimono cloth *Oshima tsumugi*, whose yarns are dyed using the dorozome technique, and had dropped by to introduce himself to the workshop's *shachō* (company president), Kazuhito Kanai.[2] In his crisp white T-shirt and black jeans, Koki's Tokyo style stood in contrast to that of the workshop's staff in our tattered dyeing overalls. In conversation, Koki and I quickly discovered we had both studied fashion at Central Saint Martins in London only a few years apart. When I interviewed him later, we discussed our shared interest in eco-friendly fashion and tried to establish when we became aware of a discourse around sustainability within the fashion industry. Koki recalled:

Figure 1.1 *The Kanai Kougei workshop.*

> I remember one American girl [in college], she was publicly speaking [out] about [sustainability]. . . . Then the financial crisis happened, and for me personally there were many things happening, and then at the end, the nuclear disaster happened . . . and also the Dhaka building collapsed in Bangladesh, that was huge . . . and you started to realize "Okay, this is really messed up." I couldn't really believe it—what kind of world are we living in? Maybe we need to focus on better things. But then I'm not going to become a volunteer, ditching everything I've studied. So, I try to at least maintain what I find, where good happens in my own industry.

Koki emphasized that this awareness, which began while we were studying between 2002 and 2011, grew steadily with a string of financial, environmental, and human rights disasters including the 2013 collapse of the Rana Plaza factory in Dhaka, Bangladesh, where at least 1,134 people producing garments for global fashion chains lost their lives (De Neve and Prentice 2017, 3). This was a landmark moment for the fashion and textile industry and highlighted the terrible working conditions in many producing regions.[3] Three months later, the *New York Times* published a photo-essay that investigated water pollution in Dhaka

caused by local factories producing pharmaceuticals and leather but also textiles and garments (Yardley 2013). Journalist Jim Yardley reported that many factories were dumping untreated industrial wastewater into canals, destroying paddies, killing fish, and contaminating crops. The canals' water—whose color, Yardley stated, changed according to fashion tastes—was so polluted that the fumes were making local children sick. The *New York Times* article is perhaps representative of the rising awareness among the public and media of the meeting point apparent in mass textile production of exploitative labor practices and the extensive impact of environmental damage. But the article also failed to elaborate on the effects felt within the wider ecosystems that constitute the environment. This is perhaps due to the absence of any visible wildlife to have survived the industrial onslaught; as of 2019, the Bangladeshi government declared three rivers in the Dhaka region "biologically dead" (Chowdhury 2019).

The fashion and textile industries are said to be one of the world's top water polluters.[4] The intensive use of chemicals and heavy metals in industrial dyeing processes is a significant part of the problem (Greenpeace International 2011; Greenpeace Germany 2021a and 2021b), but the production of textiles spans from plant cultivation and raw fiber extraction to yarn and garment production and includes all of the finishing processes in between. Add to that shipping, use, and disposal, and the fashion industry is estimated to be responsible for 4 percent of global carbon dioxide emissions (Berg et al. 2020, 5) and 35 percent of microplastic pollution, while 92 million tons of global textiles are disposed of annually (Niinimäki et al. 2020, 189). The unprecedented threat of the climate crisis and ecosystem degradation has advanced calls to address the sustainability of the fashion and textile industries. The debate has thus moved from the emphasis on human rights and consumer and commercial responsibilities that occurred after the Rana Plaza disaster in 2013 to one that also considers the rights of other species and ecosystems, recognizing that issues arising from unethical consumption are not mutually exclusive.

For Koki, the regularity of life-changing events happening at a global scale, and the questionable ethics of an industry he had committed to, spawned a persistent anxiety that prompted him to relocate to Amami from Tokyo to pursue a career in traditional craft. During my ten years of industry experience designing for luxury brands in London, Paris, and New York, I, too, became increasingly conscious of how globalization had closed the physical and cultural divide between factories in the Global South and design studios in the Global North. I watched (and participated in) the designing of four garment and accessories collections a year, which used exciting colors and fancy finishes to capture the whims of the market. Manufacturing agents in countries such as China and India were required to meet quality standards and ethical regulations via the brand's in-house corporate social

responsibility policies, yet outsourced factories—and ultimately the health and well-being of workers and ecosystems—were at the same time being squeezed by studio managers to lower production costs to increase the brand's profit margins.[5] The demands that mass manufacturing and high levels of consumerism had on the environment and labor force sat uncomfortably with me, and so in New York my interest in craft expanded, taking me to MONO JAPAN, an annual trade show of contemporary Japanese craft held in the Netherlands. It was here that I participated in a group dorozome workshop with Yukihito Kanai, thirty-eight, son of the Shachō and second-generation dyer from Kanai Kougei.[6]

Yukihito-san had traveled six thousand miles to promote his family's business and Amamian culture and had brought with him to Europe the "earth" of Amami.[7] Dorozome uses a liquid made from the boiled wood of a local tree and Amamian mud to create shades from red brick to chocolate black with which to color textiles. The process was compelling, and Amami, a paradise of nature cloaked in subtropical rainforest and surrounded by coral reefs, provided craftworkers with abundant materials. Having made the move to academia, I asked Yukihito-san there and then whether I might come to Kanai Kougei, work as an unpaid apprentice, and carry out twelve months of ethnography in Amami. With an area of 712.35 square kilometers and a population of around 63,000 people, Amami is a small but immensely biodiverse island located in the Ryūkyū archipelago with an average mean temperature of 70 degrees Fahrenheit (figures I.2 and I.3). As a former stop on the historic trading routes between mainland Japan, the former Okinawan Ryūkyū kingdom, Taiwan, and China, culturally it borrows from these dominant forces.[8] Yet as an island it developed its own social and cultural practices. Examples include a popular music genre called *shima-uta*; a form of religious practice led by female priestesses known as *noro* and *yuta*; the island's own variant of the Japanese language, *shimayumuta*; and a kimono cloth claiming a lineage of 1,300 years—Oshima tsumugi (figure I.4). In recent years Amami's rich cultural and environmental heritage has drawn migrants moving from mainland Japanese cities looking for slower lifestyles and lower costs of living with access to culture, nature, and community.[9] Epitomizing contemporary Amamian cool, being a place that straddles the history and future of Japanese craft, Kanai Kougei has become a magnet for these migrants and increasingly a number of global brands.

While Koki had migrated to Amami to engage in learning the techniques involved in weaving a complex and beautiful traditional silk textile, what made Kanai Kougei of interest to me was its approach to evolving local traditions to make them relevant to contemporary markets and concerns. While it was a booming business in the mid-twentieth century employing twenty thousand residents, today the *tsumugi* industry exists precariously, having faced significant

Figure 1.2 *The Ryūkyū Islands, with dotted lines indicating the boundaries of the island groups.*

economic difficulties since Japan's economic downturn in the 1990s alongside changing cultural norms around wearing kimono. Kanai Kougei continues to participate in and support tsumugi production, but, to sustain its business and the future of the craft, the workshop has established a contemporary apparel business and joined a growing number of companies across Japan offering their own products and services directly to customers. This means that *kusakizome* (dyeing with plant and tree materials) is available as a technique for hire.

In line with the emergent interest in traditional, "eco-friendly" techniques, a shift in concern has occurred in regard to ways the industry colors cloth (Woodcock

Figure 1.3 *A map of Amami Ōshima showing key sites.*

2021). Designers and brands of fashion and home wares have begun to question the impact of synthetic colorants for human and ecosystem health and are commissioning the dyeing of textiles in geographic areas recognized for their local industries.[10] These narrators from outside of the craft community reference historically important materials and processes and their strong links with local culture and nature, which emanate from the site of production.[11] In 1856, during the midst of the Industrial Revolution in Europe, the petrochemical dye industry was kick-started when British chemist William Henry Perkin accidentally synthesized "mauvine" from coal tar, but before that, globally sourced organic materials

Figure 1.4 *An Oshima tsumugi photo shoot.*

were used to color the world's cloth (see Schneider 1987, 427–31).[12] Synthetic dyes replaced natural variants because they were more economically efficient and stable and offered vibrant new colors to a growing consumer market (see chapter 2). Throughout the Global North, many traditional textile processes have been superseded by industrial variants, but despite reduced output, Japan's regionally specific textiles have remained relatively resilient, including the use of natural dyestuffs in their production. This can be attributed to Japan's late industrialization, which occurred predominantly within the last century and accelerated after World War II. But a combination of government cultural preservation measures, the willingness of craftspeople to adapt to new materials and technologies, and the importance of craft as visual cues for national identity has meant the country's textile traditions continue to be held in high regard, making Japan a significant site for study.

The participation of a number of young Japanese dye craftspeople in MONO JAPAN—some of whom feature in this book—led me to consider how small-scale traditional craft, historically defined by its territorial region (Thomas et al. 2013), fits within the global picture. These pre-fieldwork encounters demonstrated that, while niche and local, the natural dyeing community is an international network. But in contrast to the production dynamics happening at the corporation scale, the people I encountered were a "community of practice" (Lave and

Wenger 1991) sharing knowledge, contacts, materials, debates, ideas, and ideals.[13] In their classic work on the anthropology of textiles, *Cloth and Human Experience*, Annette Weiner and Jane Schneider (1989, 3) state that cloth is "a convincing analog for the regenerative and degenerative processes of life, and as a great connector, binding humans not only to each other but to the ancestors of their past and the progeny of the future." Rather than by coincidence, it was because of the global discourse on sustainability and its intersection with traditional craft that Koki and I met at Kanai Kougei that day. Uncertainty about the future was generating a catalyst for change within our industry, and as I discovered, the most interesting developments were happening at the grassroots level.

By reviving kusakizome at a precarious time for their industry, the craftspeople at Kanai Kougei are engaging with global environmental issues and the preservation of Japan's traditional craft techniques on their own terms. Yet this raises critical questions: What does it mean for small-scale traditional craft processes, reliant on local materials, natural resources, and labor, to be propelled into a global market? How do the custodians of a craft negotiate the expectations and demands inherent in this contradiction? And what kinds of concessions must craftspeople make to their ideals if they want to sustain their business? Much of this book revolves around negotiating these terms, particularly between an old and new generation of craftsperson as they debate the tension between the need to innovate to stay economically viable and the desire to preserve, a desire that can so easily become reduced to the ideology of sustainability. I ask whether traditional crafting communities are equipped to translate their low-impact products and processes for contemporary commodity markets, meeting the quality, quantity, costs, and product longevity demanded by the market while maintaining their commitment to the integrity of their work and without being detrimental to the health of local ecologies. At the core of the dynamics that underpin *Dyeing with the Earth* is a tension between the promotion of resources such as craft traditions and local ecosystems for prosperity, their ability to be sustained for perpetuity, and the ways in which related uncertainties about their future function as productive and sustaining forces. In the context of my field site these dynamics combine to generate my core research questions: Can local craft processes and ecologies of production sustain a community socially, economically, and environmentally? And if so, what can we learn from such communities, and how might positive action be scaled up?

When I arrived in Amami in 2017, I had been drawn by dorozome and the specificity of this esoteric textile-dyeing process unique in Japan and developed only here because of local ecology, geology, and, as I will go on to describe, the sociopolitical history of the Ryūkyūs. But what I didn't imagine was how

Figure 1.5 *The Shachō dyeing cloth using the dorozome technique.*

the research would develop with an aim to understand the craftsperson's wider relationship with nature, as imagined through the body, local discourse, craft materials, and resources. This research therefore moves beyond a study of people who dye and their dyeing materials to show the diversity of species interacting with the craft process. This specificity is crucial for understanding how local ecologies subject to resource extraction are informally subsumed into the island's economy and are then abstracted to join larger economic systems. My friend and colleague Kazuko told me on my first day working at Kanai Kougei that "in Amami, nothing is without nature." Local fruits and vegetables grown on village allotments, endangered frogs and newts living in the workshop's drains, domesticated cats and birds, aging technologies, weather and water systems, and the kami (gods) who watch over the workshop's furnace all contribute to a holistic sense of community, replete with its own harmonies and conflicts. The Shachō

(figure I.5), too, highlighted the importance of nature, and I am indebted to him for the title of this book: "Nature (*shizen*) is at the heart of Oshima tsumugi and dorozome. The dyeing materials come from the trees, the mordant comes from the soil—we used to have a slogan at Kanai Kougei that was '*chikyū de someru*' (dyeing with the earth). This work is about dyeing with ingredients from the trees and the soil, natural things, so nature is important."

The Japanese word for nature, *shizen*, that the Shachō used, has been much discussed in Japanese studies (Asquith and Kalland 1997b, 8–10) because it was originally thought to reflect the more spiritual, inner nature of humanity, or "unconsciousness" (Moeran 1997, 86). In the Shachō's use of *shizen* I believe he was referencing the importance of the practical aspect of natural materials as being key to the dyeing process, as would be conceptualized along Western values of resource management. But it is important to note that the Shachō's slogan "dyeing with the earth" is referencing not only the soil but Earth (*chikyū*)—our planet—as being part of a dyeing cosmology. This is a specific worldview encompassing history, economics, science, nature, sociality, time, materiality, cultural practice, and aesthetics. The aim of highlighting this is not to engage in preindustrial nostalgia, to deny the existence or importance of synthetic materials and their use by craftspeople, including at Kanai Kougei, but rather to stress that to talk about natural dyeing among natural dyers in Amami, one needs to look beyond textiles. To define our individual but also our collective worldview, it is important to consider matters such as food, birds, water, and trees and the unique set of relations among them. The chapters that follow are therefore extensive in their reach to reflect the way I conceptualize natural dyeing as a cosmology. I argue that if we are to take responsibility for our ecological impact on the planet, we have to think beyond the scope of individual manufacturing sectors and the commodities they sell, to the everyday lives of factory workers and their overseers. By expanding the boundaries of production and taking an ecological perspective, we can begin to see how the producers of commodities make sense of the world and how they gather and use resources, whether material or immaterial, in order to sustain their livelihoods.

From Sustainability to Sustaining Processes

I worked as an unpaid dyeing assistant for one year, during which I spent between two and four days per week dyeing yarns, clothing, accessories, and home wares for Kanai Kougei's apparel business. This is a method I call participant apprenticeship, following in the footsteps of Michael Coy, who first surveyed

apprenticeship as a research technique in 1989, and architect turned anthropologist Trevor Marchand (2010, 2022), whose research with craftspeople has demonstrated how apprenticeship allows for insight into pedagogy, expertise, and knowledge transmission but also unparalleled engagement with materials, process, and environment. Having trained in fashion and textiles and worked in the industry, I had the skills necessary to quickly learn kusakizome, although the process was unfamiliar enough that I came to it with a fresh pair of eyes. Given my creative background, I was drawn to produce sketches, photographs, and prints during my time in Amami (except where otherwise noted, all artwork and photographs in this book are my own). As a member of the extended textile community—an "insider-outsider" (Burke 1989)—I was thus able to offer my own professional proficiencies in design and practice in exchange for the acquisition of insider knowledge.

A number of anthropologists have studied textiles by seeking a "making point of view" (Bunn 2011) and demonstrating how the localized production of textiles can reveal larger social, economic, political, and environmental happenings (see Ahmed 2002; Küchler and Miller 2005; Portisch 2010; Makovicky 2010; Nascimento 2023). Stephanie Bunn, who has worked with Kyrgyzstani felt makers (Bunn 2010) and Scottish basket weavers (Bunn and Mitchell 2020), describes this generative approach as an important intervention to the study of material culture because it uncovers forms of knowledge, skill, and sociality that are difficult to garner by engaging with finished artifacts alone. Being embedded at Kanai Kougei, I built strong relationships with my work colleagues, the Kanai family, and their business and friendship groups, many of whom I was able to interview. I engaged with the daily running of the workshop, observed who was coming and going, and tracked orders as they arrived and were shipped out. I became acquainted with dyeing materials, over time establishing their origins, understanding their application and how they were transformed. My ability to acquire and use practical skills took priority over verbal communication, and learning while doing improved my Japanese and formed a constructive methodological ground.[14] This method of immersion, which Marilyn Strathern (2023, 3) says facilitates "'finding' the unlooked-for," led to the diversity of chapters that follow.

The importance given in this book to addressing small-scale traditional craft environments does not lie in any romanticizing sense of their exceptionality or outsider status. Rather, I argue that such environments have become entwined in the sustainability policies of public entities and global corporations. *Sustainability* can be traced back to the term *sustained yields* used in seventeenth- and eighteenth-century German forestry, which suggests that resource extraction should account for natural regeneration to avoid resource depletion. The word was little used until it was adopted by environmentalists in the 1970s, when scientists

became increasingly concerned about overpopulation and overconsumption exceeding the earth's capacity to regenerate (Purvis et al. 2019, 682). It was around the turn of the millennium, however, that intergovernmental organizations such as the United Nations and the International Union for Conservation of Nature developed the three "pillars" of sustainability—the interconnecting spheres of the environment, society, and the economy—also committing to sustainable development initiatives (685). Broadly thinking, sustainability raises the question of how to manage the health and resilience of resources so that economic growth can continue, while sustaining what we have and the circles of extraction that came before (Brightman and Lewis 2017). Its breadth and ambiguity have allowed it to be employed disingenuously for the purpose of greenwashing or by those genuinely misinformed, with anthropologists defining sustainability as a "malleable" (Yamada et al. 2022, 3), "mythical" (Checker et al. 2015), and even "utopian" (Greenberg 2013, 55) discourse.

Sustainability's slow rise in public awareness from academia to public policy and its eventual dissemination in the media accumulated in a social imaginary that by the early 2000s began to influence individual behaviors in both consumption practices and working environments. In the fashion industry, outdoor clothing brand Patagonia's sustainability initiatives via product recycling, materials innovation, landscape conservation, and even ownership model have become world-renowned. The Kering Group, owner of Gucci and Saint Laurent, meanwhile, became "luxury's activist" in 2015 by publishing its environmental impact, and in 2020 the company released a "biodiversity strategy" to restore and regenerate habitats while committing to halving its greenhouse gas emissions by 2025 (Friedman 2015). Companies such as Patagonia and Kering operate under an inherent paradox and are not without controversy, but in adopting whole-systems thinking—that is, trying to address sustainability across the complexity of their operations—they remain in the minority. More commonly, market approaches to sustainability are apparent in brands identifying problematic processes and materials and adopting "drop-in replacements" (Ginsberg and Chieza 2018), as demonstrated by the trend of switching from synthetic to natural dyes for coloring textiles. Materials are the most visible and tangible aspects of production and can define how a consumer might gauge a product's sustainability.

At the industry level, recycled textiles made from used cloth or the waste of other industries have become commonplace, with polyester frequently made from used plastic bottles and fishing equipment, while other types of cloth and leather have been developed using orange peels, pineapple leaves, and cow's milk (Stenton et al. 2021). Anthropologist Lucy Norris (2010), who has researched secondhand clothing economies and textile recycling, brings a wealth of experi-

ence to contemporary discussions on what are widely termed "circular economies." Norris describes a circular economy as a "utopian vision" and "sustainable solution" for a thriving industry that is "systemic by design, close-looped, restorative, waste-free, based on effectiveness and runs on renewable energy" (2019, 205). While Norris appreciates the potential of circular economies, she questions the closed-loop system by suggesting that resources and technological innovations are held within the grasp of global corporations that favor recycling over reusing and may let producers and consumers off the hook for overconsumption by establishing a guilt-free, moral economy. The introduction of new materials on a global scale can also impact society in unexpected but often quite radical ways (see Küchler 2018). Plastic pollution, for example, is routinely in the headlines, and microplastics, including those shed from synthetic textiles, are said to be doing unimaginable harm in the most pristine environments, from Antarctica (Aves et al. 2022) to the human placenta, entering our bodies and those of other organisms via environmental exposure (Prata et al. 2020; Carrington 2024).

For commissioning designers and consumers, an alternative to circular economies is to switch the scale of production and adopt traditional craft. Traditional craft suits sustainability narratives because practices have been developed over long periods of time within the environmental, social, and economic limits of a given geography. To be sustainable—to have lasted as long as they have—notions of care and regeneration have been essential, whether securing the continuous supply and health of natural resources, transferring knowledge to a new generation, or adapting to consumer trends to maintain a market. Using "craft" in the abstract, promotional literature references slow production, biodegradable materials, handmade quality, and associations with localism, community, and sustainability. By extracting this value, outside businesses frame themselves as preservers of culture and custodians of the natural environment, encouraging consumers to "care at a distance" (Trentmann 2007).

However, anthropologists have shown that this form of ethical consumption is not without its problems, and sustainable fashion can be seen within this lineage. "Emotional branding" (Trentmann 2007, 1083) promoting reciprocity and solidarity has been used to "mobilise political traditions and value systems that favor certain identities and relationships" for decades (1086). Shaila Seshia Galvin (2018) has demonstrated this inequality with her study of organic rice cultivation in India, where she shows how the Global North set criteria for producers that are not always suited to local realities. Her participant farmers struggled to adhere to the global bureaucracy that organic certification required, straining local social and economic relations. This demonstrates the difficulty of translating small-scale, responsible production to global commercial markets

with long supply chains embedded in the market economy. Despite often being established in good faith, ethical consumption is based on an ideal that "performs morality" (Galvin 2018), offsetting anxiety about the conditions of production. However, this action does not necessarily lead consumers to educate themselves on the social, political, or economic inequalities faced by producers or to grasp the extent of environmental pollution that might lead to their own behavioral changes. Rather, it might be said to replicate the same capitalist systems responsible for social and ecological damage in the first place.

While I appreciate that work carried out by governments, NGOs, academics, and corporate giants around the three pillars of sustainability is important and necessary, this book follows a different path, driven by a contrasting logic of scale. Existing at a universalizing scale, sustainability rhetoric has developed into a "catchall" to communicate a complexity of practices, materials, indexes, and goals that offer "solutions" compatible with economic growth while sustaining the status quo. This ideology has become widespread among the public, yet its rhetorical influence is all too often focused on ends-oriented change. While the impact of sustainability discourse can be seen on both individual and systemic behaviors, such shifts are often at the level of taking singular actions with definitive goals rather than promoting ongoing, adaptive change. The fashion and textile sector is a prime example, because despite best efforts to improve material components, labor conditions, environmental impacts, and carbon outputs, the mission is always flawed because commerce cannot function without the expectation of profit, which is difficult to achieve within such confines.

Problems lie between discourse and practice but also with what is realistic within the limits of existing frameworks, demonstrating that sustainability is just another ideology detached from lived experience. Anthropologist Kedron Thomas (2020) demonstrates this in her study with designers and business managers in small- to large-scale fashion companies in the United States and UK. While the individuals she interviewed were passionate about sustainability, she identifies implicit contradictions between sustainability, growth, and extractive tendencies of the industry (Thomas 2020, 733). She highlights, for instance, how sustainability requires long-term vision, but individuals are constrained by short-term profit and performance goals (727). In line with calls within anthropology to prioritize diverse and local understandings of sustainability (Brightman and Lewis 2017), the aim of this book is to place a more nuanced dynamic between the natural environment and cultural, material, and economic resource extraction at the heart of a discourse around textile production. This ethnography instead explores *sustaining processes*—those small actions my participants carry out on the ground in order to maintain resources, whether cultural, economic,

or environmental, while being subject to pressure from local hierarchies, municipal bureaucrats, or commissioning designers.

How Amami sustains its local economy and community via craft is certainly a concern for my participants. But opinions surrounding the environmental impact of craft production were not always so clearly voiced. This is not to say that concerns and resolutions did not exist, but rather they might be said to have been conceptualized differently from those of designers and makers who voice moral claims in their sales pitch that might be reflected in their product's mode of production. Instead, the sustaining processes that care for the local economy, community, and environment are embedded in everyday practices of Amami's craftspeople and are imagined through their work as dyers, responsibilities toward friends and family, respect for local customs, and education about the environment. Because limitations exist, concerns are played against one another, meaning that contradictions and complicities are certainly at work—as will be addressed throughout this book.

As such, my decision to research small-scale traditional craft processes is driven by the argument that such sites are not hangovers from a preindustrial era but important registers of contemporary developments around how natural resources are valued, used, and sustained by communities. On the surface, these sites do not appear so prone to the profit-driven standardizations of global textile commerce, but at the ground level they offer an entrance for the ethnographer to understand these evolving forces, as they tangibly impact people, processes, and ecosystems. This research aligns with more recent industry developments that see local textile producers as a part of "bioregional fashion ecosystems" (Branwell et al. 2020), where producers of fibers, materials, dyestuffs, and garments are engaged in short, local supply chains that encourage regenerative agriculture, waste reduction, soil restoration, and "soil-to-soil" circularity. This is well recognized in the US-based nonprofit organization Fibershed (Burgess 2019), which brought together networks of producers in California and spread across the United States and into affiliate networks in countries such as the UK (Norris 2019), Denmark, India, and Australia. Rather than only *sustaining* resources, these producers seek to go further and *regenerate* the health of local ecosystems and communities (Wahl 2020). Regenerative-systems thinking therefore seeks to be net positive, with businesses expected to contribute more than they extract.

Scholarship in fashion and textiles has advocated for "slow," "local," "circular," and "regenerative" cloth and clothing that replicates these values, while increasing the social significance of the item and stretching its lifespan (Fletcher and Tham 2019; Klepp and Tobiasson 2022; McHattie and Stewart Sherrod 2023). These approaches align with the movement of degrowth that promotes the

reduction of energy and resource consumption (Hickel 2021), a concept even being picked up by designer brands (Paton 2022). Yet as Thomas's (2020, 736) study highlights, significant gaps in knowledge and awareness persist among design professionals and consumers about the conditions under which clothing is made and the challenges producers face. The question also arises of how one contributes more than one extracts when craftspeople are struggling to sustain themselves. Whether the discourse centers on sustainability or regeneration, I suggest that the same complexity of issues arises, and, as this book demonstrates, the best intentions often have unintended consequences and compromises to ideals must be struck. Ethnography therefore allows one to ask what a study at the mesoscale of an ecology of textile production might contribute to larger discussions about resource extraction and sustainability as opposed to the reverse.

Sustaining Tradition and the Environment in Contemporary Japan

Industrialization arrived relatively late in Japan, meaning the micro and macro effects of industrial capitalism and globalization on local communities and ecosystems can still be located geographically or drawn from the memories of fieldwork participants. This is the case in Amami, where residents lived a subsistence lifestyle until the 1960s and development and modernization arrived rapidly with an influx of government funding; Japan was the world's second largest economy by 1968 (Kuwahara 2001).[15] Oshima tsumugi (figure I.6) played a major role in developing the economic and social infrastructure of Amami—where between the 1950s and 1980s many residents' mothers and grandmothers were the main breadwinners, weaving on home looms, which can today be found discarded in backyards. Although tsumugi is not the focus of this study, the remnants of this boom-and-bust industry are the foundation on which *Dyeing with the Earth* is built. In the context of Amami, where nature and culture are intimately linked and tied to the social, economic, and material fabric of the island, it is essential to consider the preservation strategies implemented at the national level in response to rapid development and how these contrast with local approaches such as those taken by craftspeople at Kanai Kougei.

Japan is world-renowned for its government-led Intangible Cultural Property (ICP) scheme (*mukei bunkazai*), with policy first enacted in 1868 but expanded and formalized in 1950 to protect cultural properties—that is, performing arts and craft techniques—that were feared to be disappearing under the pressure of industrialization (Goto 2013, 572). The ICP program provides infrastructural

Figure 1.6 *Oshima tsumugi woven in the Tatsugo pattern on the loom.*

and financial support to protect the skills of Japanese arts and crafts of outstanding artistic value, and its most infamous feature is its Living National Treasure recognition, which provides holders with the prestige, finance, and support to continue their work and pass on the techniques. The Japanese scheme preceded the global initiative of UNESCO by more than fifty years, which adopted its own intangible culture heritage policy in 2003 to further sustainable development goals (567). Yet there is a common misconception that because Japan continues to invest heavily in culture, the livelihoods of craftspeople are secure. While the reputation of this scheme is good for Japan, promoting a strong national identity deployed as a form of soft power globally, it is not without problems and has in some ways proved unpopular with craftspeople, as will be discussed in chapter 1.

In contrast to the investment poured into cultural properties, it wasn't until the 1990s that the government turned its attention to its natural properties, which have experienced widespread and destructive environmental change resulting from industrialization. This damage has been far-reaching, with little land left untouched by industrial or infrastructural projects; 50 percent of Japan's coastline, for example, has been altered by concrete. Throughout this book I seek to understand how natural resources have historically been treated in Amami and across Japan for economic gain. I show how the Japanese government has consistently prioritized its economy above the life of its subjects, a habit that has also filtered down to practices performed by ordinary citizens who may choose

economic efficiency over environmental responsibility. This counters the popular argument that the Japanese people are fundamentally "close to nature" through the traditions of animism embedded in Shinto, Buddhism, and Amami's own religious culture. Nevertheless, because of its geography and relative isolation, Amami's environment has fared better than that in other parts of Japan.

In 2003 UNESCO announced that Amami's virgin rainforests, mangrove forests, and coral reefs, home to thousands of rare and endemic species of flora and fauna, were of "outstanding universal value," making them a "major focus" for conservation (UNESCO, n.d.) In 2016 the Japanese government registered Amami's forests as a tentative UNESCO World Natural Heritage site, and together with neighboring Tokunoshima and northern Okinawa it was awarded this recognition in 2021. Although organizations such as UNESCO claim their primary aim is conservation, the Japanese government has been open about how World Natural Heritage can boost tourism (Brasor 2019)—and from my observations in Amami, businesses' and local authorities' desire to produce revenue appeared to be the motivating force behind the application, while wildlife protection was seen as a bonus. By demarking the intangible—unique skills, natural landscapes, and endangered species—as forms of property, the government is able to impose a level of control and appropriate and repackage these entities to increase their economic potential using the rhetoric of preservation as draws for domestic and international tourism.

This has been particularly relevant for Japan's depopulated, economically depressed rural regions that have for decades been propped up by the state but play host to "traditional" Japan through crafts, landscapes, nature, foodstuffs, and festivals. These rural regions are areas where land has little value as property, with its value in decline across Japan since 1992. Although urban land prices recently began to recover in response to the rise in international tourism, they have continued to decline in rural locales where depopulation has led to the closure of local facilities such as schools and hospitals while the uptake of farming remains low (Kyodo News 2018a). The role the ICP scheme plays in rural areas is perhaps an ultimate outgrowth of Japan's adoption of a Western capitalist economic model after the Meiji Restoration (around 1868)—a period of political and social change impacted by the United States forcing the country to open to trade—and its simultaneous strengthening of national cultural identity as a resistance to Western colonizing forces. Within this logic, state intervention to preserve cultural identity, located for example in a textile or an environment, is based on the cultural "property's" ability to cohere value and, by extension, to be economically productive locally while also performing in international commodity markets. Both ICP and World Natural Heritage are schemes that make

global appeals to protect the unique properties of nation-states to *sustain* the "local" for perpetuity but also *promote* it for prosperity.

Amami's cultural and natural properties continue to be exploited by an "ideology of improvement" (Bhandar 2018, 8), making them subject to appropriation by the government and the market as assets. This ideology, whose origins can be found in the agricultural land improvement of the European Enlightenment, justifies the ownership and adaptation of the natural environment so it may be "put to profit" (Drayton 2000, 52). Legal scholar Brenna Bhandar's work in exploring the role of this ideology in settler colonial narratives shows how existing communities living on the land become bound up within the logic of improvement: "Communities who lived as rational, productive economic actors, evidenced by particular forms of cultivation, were deemed to be proper subjects of law and history; those who did not were deemed to be in need of improvement as much as their waste lands were" (2018, 8). Human and cultural capital is here intertwined with both the use and exchange value of land—outside of this framework, there is just waste. If imperial Japan's nineteenth-century resistance to Western colonialism led to the adoption of capitalism's imperative to improve and make profitable both land and its occupants, the tendency for the state to internally claim both the natural environment and the cultural production of its citizens "for the nation" is deeply tied to such an economic logic. With the World Natural Heritage recognition, I asked Yukihito-san whether the local authorities had considered investing in local businesses to make their operations more sustainable, whole-systems thinking that would boost the island's environmental credentials. Yukihito-san said not at all, but the local government had asked whether he would accept tour groups focused on Amamian nature and culture. Bringing tourists to Kanai Kougei would emphasize how Amamian culture is linked with nature and how its outputs are therefore sustainable (figure I.7). Yukihito-san refused, saying the local authorities were simply following government instructions and organized such activities with "no heart." One therefore needs to ask, How can economic thinking and the preservation of natural and cultural properties coexist without such extractive (and therefore ultimately corrosive) conditions?

In opposition to the motives behind these "globally hegemonic concepts of sustainability" (Brightman and Lewis 2017, 6), I consider how the desire to control both traditions and resources via the global circulation of ideas has both positively and negatively influenced government rhetoric and legislation to impact local communities and ecosystems. These global movements are what anthropologist Michael Hathaway calls "environmental winds," a metaphor coined by scientists

Figure 1.7 *Yukihito Kanai and Kazuko washing yarns at the river. Note the rocks stained red by techigi dye.*

and conservationists based in Yunnan Province, China, which "describe times when political movements brought life-changing consequences." Hathaway's fieldwork with conservationists shows how the adoption of Western environmentalism brings global ideas "into being," but locally they may transform "into something quite different from their origins" (2013, 3). This demonstrates a two-way knowledge exchange showing how global ideas, if they are to take root, must be adapted to local contexts. For residents in Amami, there is little public engagement with ICP or World Natural Heritage, which are considered money-making schemes for the prefecture lacking "heart" rather than movements that will positively impact their lives. I suggest instead that the sustaining processes carried out by ordinary people in Amami are more flexible and responsive than those instituted from above and might be framed as an unintended consequence of anxiety about the unknown.

Uncertainty as a Catalyst for Change

Feelings of uncertainty hover precariously throughout this ethnography, but I argue that they are also present at a level that transcends the individual or the community, tied to the sense of a universalizing drive to *sustain* various aspects of nature, society, and culture through their harnessing as generators of capital. Bhandar after Cedric. J Robinson writes that "racial representations of preexisting cultural forms . . . and capitalist infrastructure" are produced in times of "uncertainty and flux" (2018, 15). Although this statement relates to the fact that violent racial regimes become more entrenched in times of uncertainty—through the rise of nationalism, the dispossession of Indigenous peoples, and the strengthening of borders, for example—governments and communities also draw on difference and appropriate it for identity-building in periods of economic, social, political, and environmental flux. Craft historian Tanya Harrod writes, in relation to the exhibition of traditional crafts in 1930s Britain, when the nation experienced a time of global economic and political volatility, that "craftsmanship in the broadest sense was invariably invoked to reassure" (2001, 37). Scholars of Japan have also shown how historical culture—from landscapes to rituals and crafts—have been monetized in periods of uncertainty (see Robertson 1991; Brandt 2007; Aso 2014). I engage with this literature throughout this book, especially as I explicate the rise and fall of the Oshima tsumugi industry after World War II. But what I am also able to show is that culturally valuable kusakizome is being promoted as a sustainable fix to damaging mass production at a time when environmental uncertainty permeates our lives. In this new configuration, the resourcefulness of rural societies, those left behind by economic progress, is now being turned to for answers in times of uncertainty.

Uncertainty is often seen socially as a negative phenomenon that has increased with the rapid and mutable nature of modernity. But if it is understood as part of everyday lived encounters, as it is for my participants in Amami, it may provide opportunities for reflection and positive action. My fieldwork consistently demonstrates how uncertainty about the future can be seen as a catalyst for change, since it allows one to become aware of and confront dominant structural systems that may have previously seemed monolithic. Over the centuries, Amami has been subject to the "ideology of improvement" with its land, people, nature, and traditions exploited for capitalist gain. Yet Amamians have consistently shown they are both literally and metaphorically able to weather a storm. The function of uncertainty as a productive and sustaining force can be traced back through Amamian history, particularly in the way it has been embedded in nature and

spirituality. As American anthropologist Douglas G. Haring puts it: "Educated Amamians often asked me . . . 'How does science explain the obvious facts of witchcraft and death by magical cursing?' 'How does one explain the frequent disappearances of villagers seduced by tree-spirits?' Personally I invoked the *habu* (vipers) and other poisonous snakes to explain disappearances, but this reasoning left hearers cold. . . . No one could believe that I took no stock in witches and black magic; they reasoned that my ignorance required protection" (1952, 70). Haring was dispatched to Amami to carry out an ethnographic study for six months between 1951 and 1952 at the behest of the occupying US Allied forces. His report (Haring 1952) and archive of visual materials kept at the University of Syracuse holds invaluable data that capture a moment in Amamian history that I reference frequently. The excerpt above is especially poignant because it captures a feeling of doubt that is difficult to locate, one that can be found throughout this book. Although Haring "invoked the *habu*" to explain disappearances, doubt is also embedded in his answer—after all, how would he know?

Amami's Indigenous religion has been compared to Japanese folk Shinto, which centers around spirits or kami (gods) residing in nature. It was led by a powerful theocracy of female priestesses called the noro and yuta, who followed orders from Okinawa's Ryūkyū kingdom. Although Amami was claimed by the Satsuma clan (modern-day Kagoshima Prefecture) in 1609, the spiritual authority of the noro and yuta remained. This meant that wantonly logging trees in Amami's sacred mountains was prohibited, with the population fearing retribution from forest-dwelling kami or interactions with local *yōkai* (supernatural beings). Today the wrath of the spiritual world has been largely replaced by the threat of retribution from local environmental authorities. Yet the anxieties of the past and of the present collide in the forest, meaning many residents avoid leisure in the mountains. In addition, the forests continue to be home to those same deadly habu that elevate the threat level of safe entry. Uncertainty, whether caused by kami, authorities, or snakes, has therefore acted to sustain Amami's forests (figure I.8).

While historical threats to life and livelihood have been natural or supernatural, concerned with snake bites, typhoons, fires, wars, or even black magic, since the postwar period Japan has increasingly been subject to man-made threats resulting from industrial capitalism—those that are somehow more unpredictable. These threats initially seemed place specific, but advanced telecommunications and media networks have created an impression that emerging themes might be shared globally. Anxieties about one's career, the availability of work, the future of local crafts, one's standing in the community, national security, the health of ecosystems, consequences of chemical use, the quality of the drinking water, polluted seas, threat to property by damaging weather, dangerous particulate

Figure 1.8 *A sign depicting red snakes reads, "Beware of habu! Elementary School PTA."*

matter 2.5 blowing in from China, access to sufficient childcare, the safety of foodstuffs—these *many* and *varied* concerns seemed all too familiar.

As members of what sociologist Ulrich Beck (1999) calls the "World-risk society"—a state encapsulating risk that goes beyond geographic boundaries—(cited in Yoneyama 2012) Japan's citizens have been subject to economic instability, the breakdown of social norms, and environmental destruction in the pursuit of economic growth. What became apparent through an analysis of my ethnographic data was that the spirits of the past, who I argue continue to grace everyday life in Amami, have been joined by what anthropologist Nils Bubandt (2017, G137) calls the "secular spirits of the Anthropocene": those unknowns that "ask us to notice the magic of the forces, human and nonhuman, that shape the atmosphere, biosphere, and lithosphere." Bubandt uses the example of a vast mud volcano that erupted in East Java swallowing twelve villages and displacing almost forty thousand people (G121). The volcano's eruption is thought to have been triggered by nearby oil drilling, although it was also attributed in some quarters to an earthquake. Bubandt explains that it is becoming increasingly difficult to "[distinguish] human from nonhuman forces" (G122) because human impact on geology can have as great an impact as a natural earthquake. This was the case in Japan during the triple disaster that began on March 11, 2011 (known hereafter as 3.11), when a 9.0 magnitude earthquake struck the Pacific coast off

Tohoku in northeast Japan, causing a tsunami with waves over forty meters high, which led to a radioactive spill at the Daiichi Nuclear Power Plant in Fukushima. Disasters of this kind are instances "where the forces of nature and human politics act to exacerbate each other," combining to become uncontrollable "secular spirits" (G124).

Before taking on the Anthropocene, Bubandt (2014, 35) examined the idea of "aporia" as an "analytical entrance point" to discuss the uncertainties and doubts that arose within his study of witchcraft in Indonesia, where witches called *gua* cause "social terror." *Aporia* is a complex term, with a history stretching back to Aristotle but rising again with poststructuralist philosophy and the work of Jacques Derrida in the 1970s. Peter Geschiere (2016, 244) helpfully summarizes an aporia as "a phenomenon that undermines all fixing parameters of knowledge," with witchcraft being "aporetic" and "so unsettling because it brings a confrontation with what is unknowable" (254). Bubandt explains that aporias are "those concerns that chafe the heels of the central dilemmas of how self, sociality, and time are made and unmade." They are invisible forces, "blind spots" of doubt, uncertainty, and anxiety that "grow out of and feed upon particular conceptions and practices of being" that are "embedded in particular historical, political, and cultural conditions" (Bubandt 2014, 38).

Bubandt's participants in Indonesia are particular because their belief in witchcraft fuses with modernity, exemplified by the mud volcano. But the "aporetic" is an interesting concept because it can be applied to those instances where nature collides with modernity through politics, economics, science, and technology. Satellites can predict the path of a typhoon, but the typhoon can change direction or gather strength, impacting an area in ways residents can only imagine. Measures can be implemented to limit the damage caused by earthquakes, but one cannot control the bureaucratic failings of states that provide essential infrastructure. The world is still recovering from the social, physical, environmental, and economic uncertainty and suffering of the COVID-19 pandemic, a coronavirus thought to have originated in bats captured for bushmeat. These collisions, or "secular spirits" (Bubandt 2017, G124), "[undermine] all fixing parameters of knowledge" (Geschiere 2016, 244), swerving our attempts to control or explain them through science, technology, or politics. But what comes to light in moments of crisis is that the institutions we trust also construct their own realities that include an embedded element of doubt.

In sociologist John Law's *After Method: Mess in Social Science Research* (2004), Law states that "ethnography lets us see the relative messiness of practice. It looks behind the official accounts of method (which are often clean and reassuring) to try to understand the often ragged ways in which knowledge is

produced in research" (18–19). Law's work comes from science and technology studies, so many of his examples stem from laboratories and hospitals, where "science *produces* its realities as well as describing them" (13). He references Bruno Latour and Steve Woolgar (1986), who claim that "the tribe of scientists . . . are not very different from any other tribe": "Scientists have a culture. They have beliefs. They have practices. They work, they gossip, and they worry about the future. And, somehow or other, out of their work, their practices and their beliefs, they produce knowledge, scientific knowledge, accounts of reality" (Law 2004, 19). Problems arise when different "tribes" of scientists, but also societies with distinct cultural practices, produce "multiplicity"—different accounts of reality—as was exemplified in Douglas Haring's account of habu and tree spirits among Amamians in the 1950s. Law turns to anthropologist Annemarie Mol, whose ethnographic work draws attention to multiplicity in medical research. Law, after Mol, asks: "If there are different realities, then lots of new questions arise. How do they relate? How do we choose between them? How should we choose between them? . . . If truth by itself is not a gold standard, then perhaps there may be additional *political* reasons for preferring and enacting one kind of reality rather than another" (2004, 13).

What my ethnography was able to show are the methods by which societies seek "resolutions" (Pelkmans 2013, 3) in order to come to terms with their own doubts. But it also shows their "*political* reasons" for trusting one version of reality above another that "energizes" (4) them into taking a particular action. This is a point that connects uncertainty with sustainability, because sustainable commodities rely on the social imaginary of uncertainty, or the "fix" that allows uncertainty about the future to dissipate and consumption to continue as normal. The fashion industry uses its own version of reality, in what might be seen as an ideology of improvement, by identifying a threat to its economic foundation and "putting it to profit" (Drayton 2000, 52). A non-Japanese menswear designer based in Tokyo, for example, who dyed his garments with Kanai Kougei, had built his brand of luxury workwear by appropriating, to quote from his website, the "primitive techniques" of natural dyeing that "used as ingredients" the "natural biology of . . . plants and minerals" and the slow, skilled, hand labor of the craftspeople of Amami.[16] These references supported the designer's aims to "not further add to the unnecessary waste and stress already produced by this industry" and construct an imagined ideal that appealed to his customers. Yet despite these claims, he was well known at Kanai Kougei (and much gossiped about) for sending garments that were difficult and extremely heavy to dye, resource dense, and sent with short turnaround demands and for not paying his invoices and then asking for discounts.

Rather than only bringing to light these contradictions, which question the ideals of those commissioning natural dyeing, ethnography teases out the "messiness of practice" to show that fixes are not simple and, importantly, explicate the reasons why. Ethnography can also demonstrate instances in which societies deal with uncertainty on their own terms without engaging in consumption practices, as ethnography can "[catch] doubt in midair" because it "tends to vanish with articulation" (Pelkmans 2013, 4). Although some anthropologists have focused on the negativity of "precarity," documenting those who have become paralyzed by the sense of prevailing uncertainty (see Allison 2013 for Japan), anthropologist Mathijs Pelkmans in his *Ethnographies of Doubt* (2013) states that "even in the direst situations people will find new points of orientation and aspiration" (3). While aporia doesn't dissipate, resolutions are a way to keep anxiety at bay through an attitude, action or reformulation, catalyst for change, or way of seeing the opportunity that emerges from threat.

Habu snakes (figure I.9), called "the gods of the forest" by Amamians, are a recurring motif of risk in Amami, highlighting the paradox that from threat emerges opportunity. It is widely thought that Amami's forests would have been cleared and their land developed more widely if the number of habu was kept under control—evident by the many failed schemes to eradicate their numbers over the decades. But habu have emerged as staunch protectors of their habitat through the anxiety they induce in humans. Habu have therefore inadvertently protected other species that today are deemed worthy of World Natural Heritage recognition. In this reformulation, sustainability becomes an unintended consequence of anxiety about the unknown. If uncertainty forces resolutions, it also has the potential to prompt sustaining processes.

This optimistic outlook was seen again when Kanai Kougei's buildings seemed to be destroyed by a strong typhoon that tore through the island in September 2018. Half of the roofs had been ripped off the dyeing workshops, while the doors of the sales gallery had been blown in, causing flooding. A team of friends and relatives arrived to help with the cleanup. The buildings were turned inside out, the contents washed and spread in the sun to dry. I sat with Kazuko, who had moved to Amami with her family from Tokyo in 2015 to escape the threat of radiation in the wake of 3.11. We were depressed by the extent of the damage, but the Shachō was unfazed. He explained that this had happened many times before, it was part of life in Amami, and when the damage is bad people gather to help him for free. It was a chance to clean and tidy the workshop and fix anything in need of repair.

All around Toguchi village, where the workshop was based, insurance assessors wandered with clipboards. After a few days, when the electricity supply lines

Figure 1.9 *A young habu. Amami is home to eight species of snake, but the habu is the most poisonous.*

had been restored, the workshop was back up and running, cleaner and tidier than before. Yukihito-san explained, "It's really hard to fix everything and go back to normal after typhoons. But on the other hand, all it is is a matter of time. . . . In times like natural disasters, I can rest. It's a chance to stop, to look at your feet [*ashimotomiru*, have time for reflection]." Kanai Kougei rarely stops production, with only a few days during the New Year holidays that the workshop is officially closed. Rather than seeing the destruction caused by typhoons as negative and uncertainty as a barrier, instead they are absorbed into the everyday and used productively. The Shachō and Yukihito-san are future thinkers, always considering better ways of doing things or cooking up new plans. The disruption caused by uncertainty is reformulated as time for reflection, to allow them to better consider how they might continue to sustain their business. What might be learned from this permeable attitude to uncertainty? How might this creative thinking generate sustaining processes for the local economy, the health

of the community, and ecologies of production? Is it even possible to address the concerns that impact them all, or will some be prioritized over others?

The Dyeing Cosmology

This book might be conceptualized as being structured in halves. The first three chapters are concerned with the lives of the dyers who work at Kanai Kougei—both the older craftspeople and the younger ones who have returned or migrated to Amami. The second half of the book focuses on how nature is conceptualized in Japan and locally in Amami. It uses particular species and landscape elements to tease out the complexity of relationships with the land and with nature to put textile processes within a larger context and temporal period. One of the first questions I had when I arrived at Kanai Kougei was the last question I answered: Where does the *techigi* (yeddo hawthorn) wood, which provides the color constituent of dorozome, come from? The book structure reflects this, as I start by getting to know the wider context of Amamian textile infrastructure and end with establishing how dye materials used for dorozome are obtained.

In chapter 1, "The Mud Dyers of Amami Ōshima," I describe the geopolitical background responsible for Oshima tsumugi's economic rise and fall and present the challenges experienced by craftspeople who must sustain their industry through preservation or innovation. Oshima tsumugi is likely to become an ICP, but I document an alternative route pursued by a younger generation—that of making craft relevant to contemporary lifestyles and concerns. I suggest this latter response is a grassroots approach to preservation that advocates for an exchange of ideas, materials, technologies, and people, both locally and globally, allowing traditions to thrive.

Chapter 2, "The Alchemy of Producing Color," begins with this grassroots approach and focuses on the younger generation of dyers, many of whom have migrated from mainland Japan. They have left behind conditions of precarity, and I explore the appeal for them of acquiring skills in color-making and how this connects the craftspeople with a community of practitioners and ecosystems. This chapter argues that in order to be a successful craftsperson today, one also has to be an entrepreneur. Yet negotiating the balance between craft and business is challenging, because the process of natural dyeing conflicts with the demands of contemporary commodity production. Kanai Kougei must compromise to satisfy the market. But, I ask, at what cost does this come?

Chapter 3, "'*Mottainai*!' What a Waste!" explores how my participants who have dropped their income to pursue craft labor creatively reformulate waste

and repurpose excess resources by drawing on skills and networks that revolve around the dyeing workshop. I conceptualize this using *mottainai* (what a waste), a Japanese term that reflects a tradition of frugality practiced during times of hardship. I argue that the adoption of mottainai is a consequence of postmaterialism driven by instability in the labor market but also a result of recent natural and environmental disasters. Focusing on the uncertainty around food security, I question whether the adoption of food activism, where the repurposing of waste, good nutrition, and environmental responsibility are built into production, might be seen as a precursor to more considered regimes of care surrounding textile production, use, and consumption.

While the first three chapters focus on human sociality, chapter 4, "The *Mejiro* Bird," is a starting point for examining multispecies engagements more closely. I delve into the history of Japanese bird conservation by engaging with the mejiro, a wild songbird kept as a caged pet at Kanai Kougei. Drawing on the photographs and writings of American ornithologist Oliver L. Austin, I show how the movement to protect birdlife was begun by Japanese elites but established by the Americans during the post–World War II occupation. I class the mejiro as a "totem" to understand how generational shifts in economics, politics, and international relations have influenced the ways nature has been considered a resource or companion. This historic case study demonstrates how attitudes to nature are influenced by the global circulation of ideas, but if lasting change is to occur, these ideas must adapt to local contexts. The chapter allows one to imagine how environmental responsibility and the sustainability of textile production might increase in the future, impacting the issues explored in the following chapter.

Chapter 5, "'The Industrious Way of Doing Things,'" aims to understand practices of wastewater and chemical disposal at Kanai Kougei, an issue of contention proving difficult to resolve. I argue that the "industrious way" resources are used has been influenced by historical and cultural practices and hybrid belief systems, with Amamian spirituality at the core. But I also suggest that modern attitudes are the result of an approach to government-supported industrialization that has favored economic growth and innovation at the expense of people and the environment.

Chapter 6, "Dyeing with the Earth," brings the book full circle and documents the source of trees that are essential for dyeing textiles in Amami. I use post–World War II forestry reports produced by the occupying US Allied forces as an entrance point for examining forest management and land access in Japan today. I ask how the dispossession of residents from their land and the desire for control of resources by the state and privatized entities has degraded local

ecological knowledge and the creative, industrious, and sustainable ways residents use resources. I argue this dispossession has made access to trees difficult in the present, threatening the future of craft traditions and dyeing processes that have the potential to sustain the island's economy. I conclude the book by summarizing the main findings and questioning what impact the desire to control both traditions and resources has had. As the opposition of an epistemics of uncertainty, I consider how this might inform future narratives around sustainability.

Notes

Introduction

1. Kanai Kougei refers to its name using this romanization. But as a rule, this book follows the Hepburn system when anglicizing Japanese.

2. All participants mentioned or quoted throughout were aware of my position as a researcher and gave consent to record their words and real names, unless stated otherwise.

3. Although the "fashion" and "textile" industries are two distinct entities, I use them interchangeably because their dependence makes them difficult to prize apart.

4. The levels of global water pollution that the fashion and textile industries are responsible for is difficult to quantify, but it is thought to be high (Wicker 2022).

5. Kelly et al. (2019) document how auditing and compliance via corporate social responsibility policies has swelled into a multimillion-dollar industry. Yet the report's authors show these policies are motivated by the mitigation of reputational risk rather than a desire to protect workers or environments. See De Neve and Prentice (2017) for a comprehensive discussion on the health and well-being of sweatshop workers.

6. Although *shachō* translates as "company president," more colloquially it can be understood as "boss." Kazuhito Kanai was known by this term at work, and even his family used it.

7. In Japan, the honorific *-san*, using either first name or surname, is equivalent to *Mr.*, *Mrs.*, or *Ms.*, while *-chan* is used for female children, friends, or pets and *-kun* for male counterparts. When participants were acquaintances or people for whom I wish to stress a level of respect, I have used *-san*. However, my friendships with Koki, Kazuko, and Akiyo, for example, moved beyond honorifics.

8. Previously part of Okinawa's Ryūkyū kingdom, Amami is today bureaucratically attached to Kagoshima Prefecture.

9. I use the term *community* interchangeably to refer to residents bounded by geography—in this case, the island of Amami and the villages of diverse people who share local issues and concerns—and groups within those communities, i.e., those who have migrated to Amami who share a lived experience (see chapter 3). But I also use it when

speaking of dispersed individuals, both in Japan and internationally, who share a passion for craft and are motivated to develop their practice for similar reasons.

10. Alternatively, manufacturers are pursuing innovative and sustainable solutions such as waterless dyeing or dyeing with microbes (Willis 2023).

11. Anthropological research on textile dyeing is scarce, and what exists tends to take a historical perspective focusing on materials and cultural impact (see Schneider 1987; Taussig 2008). Indigo dyeing, however, has been documented ethnographically (Hoskins 1989; Balfour-Paul 2011; Douny 2015).

12. It should be noted that mass production using natural dyes was also environmentally damaging and used exploitative labor practices. See Nenadic and Tuckett (2013) on Scotland's nineteenth-century Turkey red industry.

13. See Luckman and Thomas (2024) for an extended discussion on the community of craft practice.

14. I studied Japanese for one year prior to my fieldwork, and although English was common given the international education and experiences of my fieldwork participants who were happy to translate, including during interviews, a basic level of Japanese was required for taking instruction at the workshop, communicating with visitors, and getting by in daily life.

15. Japan was overtaken by China, which took the number 2 spot in 2010.

16. To maintain anonymity, I have purposely not referenced the designer's name.

1. The Mud Dyers of Amami Ōshima

An earlier version of chapter 1 appeared as "'Making It for Our Country': An Ethnography of Mud-Dyeing on Amami Ōshima Island," *Textile: The Journal of Cloth and Culture* 18, no. 3 (2020): 250–77.

1. The ages given for participants reflect their ages in January 2018.

2. There is evidence to suggest that sericulture existed in Amami until the 1950s, but today silk yarn is imported from China.

3. Kanai Kougei recently began selling bags of dyeing liquid in its gallery under the label Dye It Yourself, meaning that one can also do Amamian dorozome at home.

4. By this I infer the Shachō means patience and willingness to commit to one thing over many years.

5. Kurume gasuri was used for workwear called *monpe*, a style of women's (and later men's) pants made popular during World War II, when women were encouraged to break from kimono to assist the war effort (Horikiri 2016, 129).

6. During Douglas Haring's (1952, 42) time in Amami, a tanmono cost around ¥6,000 (forty dollars).

7. *Orimoto-san* is a local term combining two kanjis: 織 (*ori*), meaning to weave, and 元 (*moto*), taken from *iemoto*, meaning a family company. The honorific *-san*, used to show respect to individuals, is also extended to tradespeople.

8. The shima system is a "co-op" but differs significantly from my understanding of a co-op because profits are not evenly distributed. Rather it follows the *Oxford English Dictionary*'s definition of "working together or with others to the same end."