ANNA LOWENHAUPT TSING

The Mushroom at the End of the World

ON THE POSSIBILITY OF LIFE IN CAPITALIST RUINS

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Discovering allies, Kyoto Prefecture. Clearing broadleaf roots from the satoyama to privilege pine. Volunteers work to shape woodlands that matsutake might love—and hope mushrooms will join.

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Matsutake Crusaders: Waiting for Fungal Action

"Let's go." "We can't." "Why not?" "We're waiting for Godot."

—*Samuel Beckett,* Waiting for Godot

Satisfaction in life comes from the fact that satoyama requires human intervention. This human intervention must, however, be in balance with natural successional forces.

—*Noboru Kuramoto, "Citizen Conservation of Satoyama Landscapes"*

Humans cannot control matsutake. Waiting to see if mushrooms might emerge is thus an existential problem. The mushrooms remind us of our dependence on more-than-human natural processes: we can't fix anything, even what we have broken, by ourselves. Yet this need not enforce paralysis. Some Japanese volunteers

make themselves part of perhaps-useful landscape disturbance as they wait to see what happens. They hope their actions might stimulate a latent commons, that is, an eruption of shared assembly, even as they know they can't actually *make* a commons.

Shiho Satsuka introduced me to groups who disturb the landscape as a way of stimulating changes in multispecies gatherings—and themselves. Kyoto's Matsutake Crusaders is one. The Crusaders offer the motto: "Let's revitalize the forest so we can all eat *sukiyaki*." The meal, a meat and vegetable stew best served with matsutake, evokes the sensual pleasure that emerges from woodland revitalization. Yet, as one Crusader admitted to me, matsutake might not appear in his lifetime. The best he can do is disturb the forest—and hope that matsutake come.

Why might working the landscape evoke a sense of renewed possibilities? How might it change volunteers as well as ecologies? This chapter tells the story of woodland revitalization groups who hope that small-scale disturbance might draw both people and forests out of alienation, building a world of overlapping lifeways in which mutualistic transformation, the mode of mycorrhiza, might yet be possible.

It was a sunny Saturday in June when Shiho Satsuka and I went to see how the Matsutake Crusaders were disturbing the forest. More than twenty volunteers had come out to work. By the time we arrived, they were scattered across the hillside, digging up the roots of the broadleaf trees that had invaded what once had been a hillside of pines. They had strung a rope and pulley down the hillside, and they lowered great bags of roots and humus to a pile at the bottom of the hill. They left only red pine—lonely survivors on an otherwise empty hillside. My first reaction was disorientation. I saw a forest disappearing rather than renewal.

Dr. Yoshimura, the leader of the group, was generous enough to explain. He showed me the tangled evergreen-broadleaf brush that had developed on the hillside after its abandonment by peasant farmers. It was so dense that one could barely reach a hand through the bushes, much less a body. In the dark shade, no understory layer could develop. Light-loving species were dying out, and the lack of understory left the slope vulnerable. In all the time that peasants had cared for the hillside, Dr. Yoshimura noted, there had been no significant erosion. The road at the base of the hill was just as it had been, in local records, for several

centuries. Now the dense and undisturbed forest, with its simplified structure, threatened the soil.[1]

In contrast, he showed me the next flank of the hill, where the Crusaders had finished their work. Pines greened the hillside, and spring flowers and wildlife had returned by themselves. The group was developing uses for this forest. They had built a kiln to make charcoal and made compost heaps to breed the beetles Japanese boys like to collect. There were fruit trees and vegetable gardens, fertilized by the humus they had removed, and plans for many more projects.

Many of the volunteers were retired people, but there were also students, housewives, and salaried employees willing to give up free weekends. Some had private forestland, and they were learning how to manage their own pines. One showed pictures of his satoyama forest, which had won several prizes for its beauty. In the spring, his hillsides were bedecked with the blossoms of wild cherries and azaleas. Even if no matsutake appeared, he explained, he was happy to be participating in this reconstructed woodland. The Crusaders do not aim for finished gardens; they work for still-emergent forests, which arrange themselves around the possibilities of tradition-sized disturbance. The satoyama becomes a zone where more-than-human social relations—including their own—have a chance to flourish.

At lunchtime, the volunteers gathered for introductions, jokes, and a celebratory meal. They prepared lunch: flowing somen, "noodles in the stream." A bamboo aqueduct was constructed, and I joined the line to catch the noodles flowing by. Everyone was having fun and learning as they saved the forest.

Saving an abandoned forest? As I suggested earlier, in American sensibilities an "abandoned forest" is already an oxymoron. Forests flourish without human interference. The greening of New England after its farmers moved West is a point of regional pride. Abandoned fields turn into forests; abandonment frees forests to reclaim their space. What happened in Japan to make people see abandonment as a loss to the liveliness and diversity of the forest? Several histories intertwine: forest replacement, forest neglect, forest disease, and human discontent. I turn to each.

Following World War II, U.S. occupying forces reduced land holdings, further privatizing common woodlands that had shrunk in the

Meiji reforms. In 1951, national forest planning began, which meant standardizing the timber milling industry to make wood scalable. New roads were built, allowing more harvesting. As Japan's economy revved up, the building trade demanded more of the now-scalable wood. Chapter 15 discussed the consequences. Clear-cutting was introduced; deforested lands were not allowed to grow back. By the early 1960s, what had once been peasant forests across central Japan had become sugi and hinoki tree plantations. Satoyama groups reacted to people's sense of alienation from forests, derived from the dominance of plantations.

At the edges of the flourishing cities, developers took a look at remaining peasant landscapes and grabbed them for suburban complexes and golf courses. Some satoyama conservation groups developed out of struggles against developers. Ironically, these eager volunteers were sometimes the children of migrants from the countryside, who had given up rural life. These are the satoyama defenders who call up the villages of their grandparents as the model from which rural landscapes should be reconstructed.

Even in the countryside, things were changing, and this is the second story of what happened to the forests. In the 1950s and 1960s, Japan went through a period of rapid urbanization. Farmers left the countryside behind; rural areas once used for peasant livelihoods became spaces of neglect and abandonment. Those who stayed in the countryside had less and less reason to maintain satoyama forests. Japan's abrupt "fuel revolution" meant that even remote rural farmers were using fossil fuels to heat their homes, cook, and drive tractors by the end of the 1950s. Firewood and charcoal were abandoned. (Charcoal retained a residual use for traditional practices, such as the tea ceremony.) Thus, the most important uses of the peasant forest disappeared. Coppicing was discontinued as firewood and charcoal use sharply declined. Raking for green manure disappeared with the advent of fossil-fuel-based fertilizers. Grassland maintenance and cutting for thatching also died out as grass roofs were replaced. The neglected forests changed, becoming dense with shrubs and newly established evergreen broadleaf trees. Invasive species such as *moso* bamboo crowded in. The understory of light-loving herbs was lost. Pines were smothered in the shade.

Activist farmer Kokki Goto explains the situation in his memoir.[2]

> The forestlands frequently used by villagers of Ishimushiro, or what we call satoyama, were close enough that we could make four round trips a day on foot, two in the morning and two in the afternoon, carrying bundles weighing 60 kg on our back. If we walked farther into the forest, we would find it too burdensome to carry home bundles of raw wood, so we had to make them into charcoal. . . . In Ishimushiro, we have approximately 1,000 hectares of iriai [common] forestlands that cover most of the satoyama forestlands. The iriai forestlands are jointly used by 90 households that belong to the Ishimushiro Common Forest Association. . . .
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> In the old days when there were few ways of earning cash income, it was indispensable for villagers to have iriai rights in order to live here. We had to rely on the forestlands around the hamlet for most of the necessities of life. Those without the right to gather firewood and brushwood for use as fuel, or the right to harvest fodder in the iriai forestlands, could not have survived in the village. . . .
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> For a branch family like ours, which was in possession of a very small tract of forestland, the hamlet's iriai forestlands were indispensable for gathering firewood, brushwood, and other necessities for living. Sometime in the 1950s, the wave of modernization began to make an impact on Ishimushiro, changing the life-style in the hamlet at an increasing pace. Villagers began to use kerosene and electricity, replace their thatched roofs with galvanized iron sheets, and adopt tractors, rendering firewood, brushwood, fodder, and thatch grass increasingly unnecessary. Consequently, many people stopped entering the satoyama except on rare occasions. . . . Mushroom hunting is the only economically viable activity these days. Things have changed drastically from the days when the blessings of the iriai forests meant a lot to the community.

Later in his story, he speaks of his efforts, and those of others, to revitalize village landscapes. He explains group efforts to clean waterways and open forests. "When people say 'Things were better in the old days,' what they have in mind, I believe, is the joy of doing things together with many people. We have lost that joy."[3]

Pines as well as farmers no longer flourished. As described in chapter 11, pine wilt nematodes have killed off most of central Japan's red pines. This is in part because satoyama neglect and abandonment have

put pines under stress. Walking through neglected satoyama forests, one sees only dead and dying pines.

These dying pines have condemned the matsutake harvest; without its host trees, matsutake cannot survive. Indeed, it is records of matsutake decline that make the loss of Japan's pine forests clearest. In the first part of the twentieth century, satoyama forests produced plenty of matsutake. Rural people took matsutake rather for granted; they formed one element of a suite of foraged autumn foods that complemented wild spring foods to mark the seasons. The big fuss only came later, when the mushroom became scarce and expensive in the 1970s. The drop was steep and abrupt. Pine trees were dying. In the 1980s, as Japan's economy continued to boom, Japanese matsutake became rare—and very valuable.

Imported matsutake crowded into the market, and even these, through the 1990s, were shockingly expensive. It is the cohort who came of age between the 1970s and the 1990s who remember the fine aroma of a thin expensive sliver in one's soup—and who react with shock and joy at the dream of plenty.

Matsutake help peasant forests remain in the working landscape. With high prices, the mushroom sales alone pay the taxes for the land and support maintenance. In areas where iriai rights still exist, villages harness matsutake benefits for communal use by auctioning off the right to harvest (and sell) the mushrooms. Auctions are held in the summer before anyone knows how good the mushroom season will be; villagers hold a feast at which, lubricated with drink, they urge each other to submit higher bids. The winner pays the village a hefty sum but later recoups by picking the mushrooms.[4] Yet despite communal and financial benefits, the work of maintaining the forest does not always get done, especially as villagers age. In neglected forests, pines die and matsutake disappears.

Satoyama movements attempt to recover the lost sociality of community life. They design activities to bring together elders, young people, and children, combining education and community building with work and pleasure. There is more involved than helping out peasants—and pines. Satoyama work, volunteers explain, remakes the human spirit.

In the economic boom that followed Japanese recovery from World War II, urban migrants left the countryside behind to pursue modern

commodities and lifestyles. Yet when economic growth slowed in the 1990s, neither education nor employment seemed so easy a route to progress-based well-being. The economy of spectacles and desires flourished, but it became detached from life-course expectations. It became harder to imagine where life should lead and what, besides commodities, should be in it. One iconic figure called public attention to this problem: the *hikikomori* is a young person, usually a teenage boy, who shuts himself in his room and refuses face-to-face contact. Hikikomori live through electronic media. They isolate themselves through engagement in a world of images that leaves them free from embodied sociality—and mired in a self-made prison. They capture the nightmare of urban anomie for many: there is a little bit of hikikomori in all of us. It is this nightmare that chapter 13's Professor K saw in the glazed eyes of his students. It sent him to the countryside as a site for remaking students—and himself; and it has sent many other advocates, educators, and volunteers there also.

Satoyama revitalization addresses the problem of anomie because it builds social relations with other beings. Humans become only one of many participants in making livability. Participants wait for trees and fungi to associate with them. They work landscapes that require human action yet exceed that requirement. By the turn of the century, several thousand satoyama revitalization groups had emerged across Japan. Some focus on water management, nature education, the habitat of a particular flower—or matsutake mushrooms. All are engaged in remaking persons as well as landscapes.

To rebuild themselves, citizens' groups mix science and peasant knowledge. Scientists often take leadership roles in satoyama revitalization. But they aim to incorporate vernacular knowledge; here, urban professionals and scientists consult elderly farmers for their advice. Some volunteer to help farmers with their work or interview elders about disappearing ways of life. Their goal is to restore working landscapes, and for this they need working knowledge.

Mutual learning is also an important goal. Groups are candid about making mistakes—and learning from them. One report about satoyama work by a group of volunteers includes all the problems and mistakes of their efforts. Without coordination, they cut down too many trees. Some of the areas they cleared grew back even thicker with undesirable

species. In the end, the report's authors argue, the group developed a "do, think, observe, and do again" principle, elevating collective trial and error to an art. Since one of their goals was participatory learning, allowing themselves to make and observe mistakes was an important part of the process. The authors conclude, "To be successful, volunteers have to participate in the program at all levels and stages."[5]

Groups such as Kyoto's Matsutake Crusaders take advantage of the mushroom's allure to make it the symbol for their commitments to renewing the working relations of people and forests. If matsutake do emerge—as they did in a Crusader's well-worked hillside in the fall of 2008—they bring a surge of excitement to the volunteers. Nothing could be more thrilling than this unexpected entanglement with other participants in forest making. Pines, humans, and fungi are renewed in a moment of co-species being.

No one thinks matsutake will bring Japan back to its pre-bubble glory. Rather than redemption, matsutake-forest revitalization picks through the heap of alienation. In the process, volunteers acquire the patience to mix with multispecies others without knowing where the world-in-process is going.