Chapter 6

STRANGE BEHAVIORS

THE DUAL WORLD IN WHICH ASIAN WORK ELEPHANTS live—as members of a human community by day and of a wild ecosystem by night—can lead to some strange elephant behaviors. Some elephants can become difficult.

I met the mahout Mong Cho, and his tusker Neh Ong, at a tiny logging camp nestled in a glen in the southwestern hills of Kachin State. Far below lay Hpakant, the jade-mining area, and next to it was a huge placid blue lake, Indawgyi, the largest in Burma. The bumpy ascent by motorcycle to Mong Cho's hill camp had taken half an hour, the vehicle scurrying goatlike up the rockface along a route that could barely be called a footpath but that the motorcyclist had somehow mastered. I clung to his back. The driver was a Hkamti, like Mong Cho. In the motorcycle following us was J., a Kachin American spending her year after college graduation teaching English in Myitkyina. J. had helped arrange to get me to this spot.

We arrived at the camp, one of the smaller ones I saw during my travels. It contained a small group of six elephants: a large adult tusker, two adult females, two juveniles who were already taller at the shoulder than their mahouts, and one baby just a few years old. The youngest followed his mother around all day, observing her as she did light tasks. Usually the other adult female would attend to the calf as well, acting as an "auntie"—an arrangement borrowed from the family structure of wild elephants, where an infant is often raised and protected by two adult females. The older juveniles at the camp, around ten years in age, were able to do modest tasks like hauling smaller logs or piles of bamboo. Work elephants hit their prime at around twenty to twenty-five years of age and remain robust workers for about two decades.[1]

Mong Cho was the head mahout and owner of all the elephants here. There were three other mahouts to assist him: another Hkamti and two ethnic Burmese. The elephants were lounging under a grove of trees, munching on leaves. The three adults were tethered, while the young elephants were free to roam. The mahouts weren't paying close attention and trusted that the younger generation wouldn't wander too far from the adults. Next to the elephants was a small shelter for the mahouts, a green canvas roof suspended by several well-placed bamboo poles. A radio played traditional Burmese country music. The tinkling of the wooden bells worn by the adult elephants also filled the air. The camp would have been entirely secluded in the tree shade, but a small landslide from the rains had recently denuded a side of the glen, letting in streams of sunlight. A brook wound its way alongside the canvas tent, and the mahouts had built a kind of aqueduct for themselves, made of rubber and bamboo, transferring some of the running water into a basin. Next to the basin were also several smaller shelters protecting pots and pans from the rain and sunlight. The grounds looked comfortably lived in.

"He's looking at us so skeptically," J. remarked of the big male elephant. She called across the camp to Mong Cho, and then said to me, "The big one is Neh Ong. And that one there is his mate, Pwa Oo. They're both about thirty-seven years old."

Up until now Mong Cho had been on the other side of the camp with one of the juveniles, reciting command terms in a gentle voice and rewarding the elephant with cooked rice when it performed the right action. Now he approached us to talk. One of the other mahouts was readying equipment for the workday, which had been delayed to make time for my visit. The others were smoking and eating in the main tent.

"Mostly we do logging work here," Mong Cho explained. He had a boyish voice, though he was in his mid-forties. He spoke in a pleasantly relaxed cadence. "Later in the rainy season, the roads in these hills get bad, so at that time of year we also use the elephants to transport people's things. It used to be that we'd transport a lot of jade from the mining area down below." He gestured to a large wooden basket resting by a tree that they'd use for moving the gems. "Or we'd transport gold"—likely mined from the Uyu Valley. "That was lucrative. But then about a decade ago, the roads to Hpakant were improved. Even so, in July or August, the roads there still flood. I'll go with Neh Ong to help pull jade trucks trapped in the mud. A lot of the time, we'll just follow along behind a truck, which will get stuck every few hundred meters. The trucks can't go very fast on those roads when the conditions are like that, so it's not hard to keep up. It was more lucrative for us when we carried the jade ourselves, though."

Next to us the smallest elephant, the baby, was rolling around playfully in the dirt. The infant would stay extremely still, almost like a cadaver, then twist suddenly and happily into a new position, batting at pebbles with its tiny trunk. The two adult females looked on and ate leaves. The big tusker, Neh Ong, was off to the side facing away from the group, toward the wooded mountain pass up beyond the glen.

"Recently the logging work here has also been not so good," Mong Cho continued. "The valuable wood here is teak, but we logged most of the mature timber. A lot of mahouts in the area recently went with their elephants to Shan State, where there's some logging to do, while we wait for our trees here to grow back."

"Who are the other mahouts in the area?" I asked, attempting the question in Burmese. J. had to intervene and rephrase.

"Owners like me are all Hkamtis or Kachins. The helper mahouts, who don't own the elephants themselves, are mostly Hkamtis or Kachins too, but there are some ethnic Burmese helper mahouts. There is also a government-run elephant logging village beyond the lake. They have many more elephants than any single owner does here in the hills. But really, a lot of the elephants here are now in the mature logging area in Shan State."

Mong Cho described the route by elephant from here to Shan State. First the mahouts would trek with their elephants through the Japi Bum Pass. (I could not locate it on any map.) From there, they'd cross the large Kaukkwe forest, which has hardly any villages or human settlements of any kind. At this point they wouldn't be far from Katha, the town where George Orwell worked as a police official during the 1920s. Past the Kaukkwe forest, they'd get to the broad Irrawaddy River, which the elephants would swim across, with mahouts and supplies on their backs. Finally they would enter Shan State, which contains the provincial city of Lashio, an important hand-off point on the Burma Road during World War II.

I hoped to ask more about the routes the mahouts like to take to get to the surrounding regions in search of work—I'd heard about other logging areas in the Hukawng Valley, as well as large amber mines—but just then Mong Cho leaped up, shouting at Neh Ong. The tusker had quietly moved toward the main tent and was about to grab its canvas roof with his trunk. The other mahouts began shouting at the elephant as well. He squinted, then retreated back to eating his leaves.

"He is a difficult tusker," Mong Cho confessed as he returned to J. and me. "Very difficult. No one can ride him except for me." Our attention was now on this huge gray mass of flesh. The tusks on the large male elephant had been trimmed down to roughly a foot, the length preferred by logging mahouts so that the elephant can "scoop" the tusks under a log and hoist it upward, a bit like a fork-lift.[2] The trimmed tusks also provided some supplemental income. Most elephants permitted the trimming to occur, provided their mahouts were seated overhead, muttering words of encouragement into their ears. The important thing was not to cut through the interior nerve, near the base of the tusk.[3] Elsewhere I heard stories about forest mahouts who, greedy for an extra few inches of ivory to sell, trimmed the tusk right down to the nerve, which then became infected. Mong Cho had trimmed these tusks expertly. They were growing back at the rate of roughly an inch per year, and a new trimming was still several years away.[4]

J. was right that Neh Ong appeared to be looking at us "skeptically"—though this might have been an effect of the tusker's peculiar eyes, which were very small, nearly lashless, and orange. These eyes, combined with the pyramid-like shape of his forehead, gave the elephant an imposing, beastly appearance. He was not a "beautiful" elephant like the female Pwa Oo, who had larger, darker eyes, long lashes, a pleasantly plump trunk, and a mouth that curled upward in the shape of a gentle smile. Some of these features, of course, signified nothing about the elephants' actual personalities—they merely had shapes, colors, and proportions onto which an observer might project human qualities. Yet other features, the eyes in particular, seemed to reveal something real in an elephant's personality.

"He's a very good work elephant when I ride him," Mong Cho explained. "He can carry heavy loads, and he's very good at handling the timber. He's also very smart and agile when we're on these slopes"—Mong Cho gestured to the landslide next to us—"getting out of the way of falling logs, boulders, things like that.

"But he is a killer elephant. Last year we hoped to mate him with a new female, but when she wandered over this way during the night, he became territorial and killed her." For a male to attack another elephant during the nighttime roaming period wasn't entirely unusual, but Neh Ong's hyperprotectiveness of the other elephants in his camp was a bit strange. "They're his family," Mong Cho continued with a trace of exasperation, "so when strange elephants approach them, he becomes very aggressive, even when the strange elephant obviously means no harm or simply wants to mate."

By now we were back in the tent. The mahouts, who had never had a foreign guest at their camp before, were enjoying their role as hosts. They showed me the various tools they used for disciplining the elephants. There was a metal-tipped hammer-like tool—an *ankus*—that could be struck into an elephant's ear. There was also a smaller metal pointer used on an elephant's back. I'd seen tools like these, in the Moran area of the Dihing Valley, with elegantly carved, decorated handles, but here the instruments were less adorned. A mahout fetched tea for us, as well as a strong alcoholic drink they'd been brewing, a rice wine mixed with wild sun-dried tubers.

Mong Cho continued to talk about Neh Ong. "It's more normal for someone like me, the owner of the camp's elephants, to be able to spend more time down in the valley, in the village with family," he said, pouring his tea. "So, for a while my nephew was Neh Ong's mahout instead. But he killed my nephew. That was about a year ago."

The revelation was startling, both to J., who had been translating, and to myself. In other conversations with mahouts, I'd heard about the dangers of the trade: about falling off an elephant, or encounters with enraged wild elephants during the capturing process, mela shekar. Sometimes a mahout or fandi would vaguely allude to incidents where an elephant had killed his rider, but he would say very little about it. This was my only field interview where a mahout openly discussed one of his own elephants killing a person. Moreover, the person had been a close relative, and the elephant in question was standing just fifteen feet away. The Hkamti mahout went on: "So now I always ride him, and he has no problem with me. He always obeys me and cooperates with me. But it keeps me up here in the camp a lot of the time. I'm here even more than my helper mahouts. And since I'm the owner, that's a bit unusual."

The dark cloud hanging over the elephant Neh Ong indicated the psychological toll that captive life could take on these elephants, even when they had competent, caring mahouts like Mong Cho. The mahout-elephant relationship, in these work environments in the forest, was not morally or emotionally simple, for either human or animal. I recalled the words of a song that the Moran fandis, like Miloswar, sing to elephants they've caught out of the wild:

O wild elephant:
Earlier you were in the mountains eating green grasses,
But then we fandis caught you to take you farther down into the plains.
Do not mind when I tie these ropes around your neck and feet,
They are like necklaces and bracelets in your honor.
Though sometimes we'll have a hard time, I will give you the best food,
And life will be better than before.
You will change your heart.
Though once you were in the jungle,
Now you will adopt the heart of a human.[5]

Miloswar sang these words for me in a melancholic, minor key that almost resembled Appalachian bluegrass. He said the song was "something between a lullaby and a love song."

Many elephants clearly do wind up "adopting the heart of a human." But an elephant's instincts and loyalties then become caught between two worlds. A fandi in the Trans-Patkai told me about an elephant who had been caught only recently and was still "rogue," in the sense of being very difficult to control. He was a tusker, and as with Neh Ong, mahouts had died while working with him. The job of handling him was eventually divided among several mahouts, all brothers. One day this rogue elephant angrily shook and jerked his head to free himself of the mahout on top. The mahout fell. He wheezed in pain, and the other brothers gathered around to help him. The rogue elephant, seeing the rest of the group's concern, immediately perched himself over the fallen boy to shade him from the sun. Then the tusker picked a broad leaf with his trunk and began fanning the young mahout, who was catching his breath.

And yet this elephant had already killed several people. "The elephants are amazing creatures," the fandi said to me. "Even when they are rogue or raw, they still have kind hearts."[6]

This story spoke to a core confusion at the heart of that elephant's life. In some ways the lives of domesticated elephants could be grim. Getting caught could itself be traumatic for the elephants. "Mela shekar is like war," another fandi once remarked to me.[7] Usually mela shekar marks the last day an elephant ever sees its parents, offspring, or anyone else in its original herd. The targeted elephant finds itself surrounded by imposing khoonkies and tangled by rope. Then a sometimes-brutal training process begins. Training can last for many months, and during part of the time, all four of the animal's legs are fastened with ropes to nearby trees.[8]

The government-run logging camps in Burma tend to have gentler training methods, built more on positive reinforcement—food treats and the like—though this approach takes longer.[9] The Trans-Patkai fandis more often mix positive with negative reinforcement. Thwacking the elephant over the forehead with the blunt edge of a machete seems to be a common disciplinary device. The higher-quality fandis and mahouts do this gently, so as not to injure the elephant or leave a mark. But in the Trans-Patkai, I saw a number of elephants with several parallel machete scars on their foreheads. To relax or reinvigorate their elephants, the Trans-Patkai mahouts sometimes give them marijuana, rice beer, or opium. Again, the more skilled elephant drivers know how to do this in moderation. But sometimes the elephants become addicted to the opium, which has long-term consequences for their physical and psychological well-being.

Add to this the pressures of the work itself, and the physical frustrations caused by the nocturnal fetters. And add the slow march of modernity that everywhere fills the elephants' lives with the roar of engines and deprives them of their forestlands. All this can result in a number of macabre behaviors. An elephant at a government camp in central Burma had a reputation for charging off to the nearby human graveyard during his period of musth. He would maniacally dig up graves and chew on the remains of human bodies. He preferred the more recent graves. Families in that village had learned that if they held a funeral immediately before the onset of this male's musth season, he had to be watched, even chained if necessary. Nonetheless, during most of the year, the elephant was a fine work animal, with a close relationship with his mahout.[10]

I heard an awful story of another elephant, a mother, found dead one morning. She was still standing, her forefeet crushing her own trunk. Evidently she had committed suicide. I didn't understand how this was possible. Surely, as she lost consciousness from lack of oxygen, she would involuntarily breathe through her mouth, or the trunk would jerk free. Maybe this was just a story the mahouts tell to convey, both to the listener and to themselves, their mixed feelings about the work they do.[11]

James Howard Williams tells a story from the Shenam Pass evacuation during World War II. He was walking along the path toward Imphal with the elephant convoy, when he suddenly saw a "riderless elephant, with its pack gone, coming up the slope towards me at a fast stride. Her ears were forward, and she had an expression on her face that, I thought, meant that she was off back to Burma." Mahouts scrambled behind her to grab her chain. To dodge them, she took a running start and jumped over a ravine—"an action I had never seen an elephant make"—injuring her legs in the landing. Investigating the affair, Williams discovered that her mahout had tried to get her to cross an especially rickety bridge. The elephant had snapped, kicking the bridge down in anger, and this motion had thrown the mahout and saddle from the elephant. Then she fled: "Like a convict making a bold bid for liberty, she had stampeded up the hill, hoping to the return from the barren hills to a land of bamboos." But having injured her legs in the jump, she was easily caught. "She stood quietly to be saddled"—but after that point, she walked with a limp.[12]

Though forest-based work puts elephants in a better position to mate than elephants in tourist camps or in zoos, sometimes the stress and situation of the work can undermine healthy mating patterns. I encountered a tusker elephant in the Trans-Patkai, who, I was told, had mated with his own daughters. This was an area where there were few wild elephants left.[13] I met the offspring. To my nonveterinarian's eye, they seemed healthy enough, but such cases of inbreeding are obviously not what mahouts hope for, and a male elephant in a psychologically and environmentally healthy situation would be unlikely to engage in such behavior.

Thinking through such stories and scenes, it's hard not to wonder whether the practice of keeping elephants as work animals is defensible. Animal rights proponents concerned for the elephants' welfare may argue that these elephants really ought to be released, to join or form wild herds. To be sure, this idea holds a strong moral appeal. But such an idea also misses the real danger facing the elephants, which is not the stresses of working life but rather eradication of forest cover.

Advocacy of expanding forest preserves, and improving legal protections, is another morally intuitive rallying cry for outsiders hoping to see the elephants (as well as other animal and plant life) here flourish. But effective protection of forest ranges requires economic resources, and the more developed countries inside the Asian elephant's natural range—Thailand, Vietnam, and Malaysia—have all developed to a point where forest cover is scarce. Indeed, this is a large part of *how* such countries became more economically developed: by stimulating agricultural output through expansion of farms into former forest. Less developed countries—Burma, Laos, much of India—have more forest area but fewer financial resources to establish and sustain wildlife preserves.

The situation of elephants in South India provides a counterpoint to that of the work elephants in Burma and northeastern India. In South India, elephants are almost entirely wild, and they are relatively numerous: roughly a quarter of the world's Asian elephants live in South India. (Together, Burma and northeastern India have about a third.) They live primarily in forest preserves that are reasonably well protected. And there are official "elephant corridors" that, at least in theory, allow elephants to migrate from forest to forest. In reality, these forests are isolated from each other, enveloped by areas of incredible human density.[14] Indeed, no other region on earth has significant numbers of Asian elephants and human density levels even approaching those of South India. South India's system of wildlife preserves exists only with support from tax revenue generated through intensive human settlement and development in surrounding areas: that, in turn, constrains the size of the parks and fills the intervening elephant corridors with towns, villages, roads, and farms.

The Trans-Patkai forest is far less fragmented than the remaining forestlands in South India, and it is well positioned along major surviving elephant migration routes. There appear to be several major "trunks" in this system of natural migratory corridors: one is a north-south route following the Patkais, from the Rakhine and Chin hills in the south to the Kachin Hills around Putao. Another begins around the Kaukkwe forests near Katha. From here, the wild herds proceed along the Kumon Range past the Hukawng Valley, then into the Patkais in the Chaukan area. Two major routes branch westward from Chaukan: one along the foothills of the eastern Himalayas toward Bhutan; another straight along the Lohit River toward the Brahmaputra River. Some wild elephants migrate all the way to Kaziranga National Park, hundreds of miles away in central Assam, either directly along the Brahmaputra's floodplain or by a southern route across the Naga Hills and then the Karbi Hills. During the wet season, the elephants tend to stay in high areas, drawn to salt springs there. During the dry season, as the hills run out of water, the elephants come into the river valleys, where there are fresh bamboo shoots. This alternation between highlands and lowlands happens annually. Mahouts in both Burma and India told me the wild herds sometimes cross the international border, but nobody was sure how often.[15]

Some of these migration routes are becoming disjointed. I learned of a herd of wild elephants in the Patkais whose males were "all *mokona*"—that is, all born tuskless. This indicates that the herd had become isolated and was deprived of the tusker gene over time (likely due to poaching, but perhaps also due to loggers' heavy demand for tuskers to hoist beams of wood).[16]

Yet overall the wider Trans-Patkai area, encompassing much of Upper Burma and northeastern India, is the last place on earth where Asian elephants can at least approximate the mobility they had before humans conquered and cleared much of the Asian forest. For the most part, these forests have not been preserved by governments (though small sections of the wider system of migratory routes, like Kaziranga National Park in Assam, are indeed protected parklands). They remain intact because the forests in the Trans-Patkai generate value: profit from trading forest commodities like timber and minerals; refuge for local militias or other political fugitives; and support for "off-grid" ways of living based on forest ecology.

The work elephants of Burma and northeastern India are thus in a peculiar situation. On the one hand, they have been conscripted by forest-oriented humans; on the other, they "buffer" their wild counterparts deeper in the forest, helping the humans hold off potent economic, demographic, and political forces that have destroyed enormous swaths of forestland elsewhere. This vexed situation places the work elephants under varying degrees of psychological duress. Hence the elephants who are "difficult," and hence the mahouts who deal with this dilemma, which is in part a moral one, as best they can.

"ARE YOU EVER afraid of the big one?" I asked Mong Cho, referring to Neh Ong.

"I try to be careful. But really, it wouldn't make sense to be afraid."

"Do you think of him as your friend?"

At this, the other mahouts laughed. "No!" cried one. "You're not supposed to think of them as friends."

Mong Cho smiled, ignoring the others. He looked thoughtfully at some tools in the tent and reached over to sharpen one. "Well, I've been with him for a long time—since he was very little. It's been nearly thirty years now. He is more like a son than a friend."

I thought of what the Vietcong mahout Xuan had said about Pak Chan: *"I had the feeling he was something of a prodigal son."*

"Would you miss Neh Ong?" I asked.

"Of course!" the other mahouts exclaimed, laughing more.

"Of course," Mong Cho said too, while sharpening the ankus in his hand and smiling sentimentally.

At night, I learned, the other mahouts usually went home to their families in the village below, but Mong Cho more often slept up here in the hill camp. At first, this seemed odd to me. Mahouts usually exit the camp at the end of each workday because the elephants have been released into the forest for the night. Even if Neh Ong got into trouble in the forest—which from everything I'd heard about him seemed likely—it would probably happen far from the tent itself, deep in the woods; having a mahout at the camp area wouldn't achieve much. I considered the possibility that Neh Ong was actually kept chained up at night, and Mong Cho slept nearby as a kind of warden. But if this were so, then someone would have to gather hundreds of pounds of fodder for the giant elephant every day. Neh Ong was well fed, and none of these mahouts were preparing to gather six hundred pounds of bamboo leaves that afternoon. Clearly Neh Ong was free to forage at night.

Then it occurred to me: perhaps Neh Ong wanted Mong Cho nearby. Mong Cho was one of the few creatures Neh Ong had in his life who put the huge tusker at ease. Perhaps he preferred to forage at night knowing that Mong Cho was nearby, in the tent. In that case, Mong Cho was sleeping up in the hills to soothe and comfort his powerful but troubled lead tusker, to whom he felt such paternal affection.

Mong Cho also had a young human son, back in the valley. Despite the recent doldrums in elephant work in his area, Mong Cho hoped his son would grow up to become a mahout like him.

Chapter 7

CAMPS AND VILLAGES

ARE WOMEN EVER MAHOUTS?

I'd been asking this question for months, in both the Trans-Patkai area and in central Burma, always receiving a firm no. Some told me it went against custom for women to be mahouts. Others claimed it was against religion and spiritual instruction.[1] Still others said that the elephants themselves will not accept a female mahout—that a male elephant in particular will never permit it.[2]

Such responses never satisfied me. In James Howard Williams's World War II memoir *Elephant Bill*, women demonstrate excellent elephant handling skills. Williams, a British teak wallah in Burma, was doing construction and transport work with the mahouts and elephants of the upper Chindwin Valley. One day Williams found himself with more elephants than mahouts. Many of the Burmese mahouts had gone missing that morning, apparently absorbed into a Japanese work camp beyond the front lines. With no one to drive the elephants, Williams considered releasing the giants into the forest. But the mahouts' wives (or their "women," as Williams puts it, which could mean sisters, daughters, and so forth) were residing in a nearby village and heard of Williams's predicament. Anticipating the eventual return of the missing mahouts to the British side, they volunteered to "ride the riderless elephants" back into a section of the forest under British control. The women did so successfully, under tense circumstances. This surprised Williams, who like me had been told that the women could not be mahouts.[3]

I knew of a few contemporary cases where highly educated women in the elephant conservationist community had learned mahout skills.[4] But did village women ever become mahouts? I learned of several. In central Burma, in the woods beyond a government elephant logging village, I visited a charcoal camp, comprising a few makeshift bamboo shelters amid several smoking heaps of ironwood that would later become saleable charcoal. Some mahouts lounged on matted floors inside the main shelter. Several elephants passed by, carrying ironwood logs upon their tusks and crossing the stream that snaked past the camp. The hike here from the road had taken some thirty minutes.

A woman named Nyo was at the camp with her husband, Win, who was repairing a bamboo pipe for the main cistern while Nyo stirred rice over a campfire. At first I directed all my questions to Win, as I'd been advised, but gradually I directed more to Nyo. Smiling at my inquiries, she pointed out that even though everyone says women don't drive elephants, she used to do it all the time.

We were sitting in a group, some eight men and three women in all, and everyone was laughing. The topic was apparently a source of great amusement. Nyo had grown up in a farming area and learned how to ride and give commands to elephants when she first married Win. She had a few favorite elephants in her life, but in the government-run timber industry, elephants can change hands abruptly or be sent off to different logging areas, and that was what happened with the elephants she remembered best. She never did logging work, only the transport work, like moving bags of charcoal, or supplies for village life. Then Win became a head mahout, and she became pregnant, and she never worked as a mahout after that. That was twenty-five or thirty years ago.[5]

I asked whether, during that earlier period, she had been an official salaried mahout, receiving a wage from the government as the male mahouts did. She said no, the government paid wages only for the logging work, not for the transport work that she was doing. The government's timber enterprise has never shown much interest in using elephants for transporting anything other than its primary commodity, the teak logs. Anything else is "not its department" and winds up on the margins of the village's economic life.

Looking around this tiny charcoal-making camp, I realized why I had never seen women like Nyo—that is, women with mahoutship experience—in the tribal logging camps. At this camp, as in the elephant logging village to which it was a satellite, wives and daughters and other family members worked alongside male mahouts. Most human family members here, male or female, spent their days near the elephants. Some of the women, I was told, would sleep here overnight, while others would return to the main village a short hike away.

By contrast, in the Trans-Patkai region, the tribal logging camps like Mithong (Air Singh's camp) in the Lohit Valley, or like Mong Cho's camp in the hills of southwestern Kachin State, were almost entirely male environments. A Kachin mahout in the Trans-Patkai's Dihing Valley told me that wives occasionally came along to the logging areas to help load elephants or to give commands. But mostly the women attended to things in the village. Indeed, in the Trans-Patkai, the mahouts hail from villages far removed from the world of elephants. These villages have main streets with motor traffic and shops; farms growing rice and potatoes; and pigs, cows, goats and chickens roaming about. They look "normal"—one could pass through them and never know that many of the families here are mahouts' families. Go up a dirt side road, and on the outskirts of the village, one might occasionally see an elephant brought from the forest to a mahout's village house. Perhaps the mahout is load-ing the elephant. Likely, he is bringing food up to his comrades at the logging camps. His wife might be there to help, packing bags or giving a command or two to control the elephant.

But most of the elephants aren't here, they're at the logging camp, many miles up the road and deep in the forest. At Mithong, this road ends at a sawmill. No women work there. The rest of the way to the actual logging area follows difficult forest and mountain paths. The array of camps, like the sawmills, are entirely full of men. A geographer or sociologist might say that when visiting elephant camps in the Trans-Patkai, one passes through a series of processional "stages," from village center to village edge to timber mill to elephant camp. Women are more present at the earlier stages; elephants are more present at the later ones; men are present throughout.

By contrast, the government elephant logging village in central Burma collapsed these different processional "stages" into one. The village had a main street and shops and several hundred huts full of families, but it *also* had elephants, some five dozen of them. All family members, of both species, were in one place. The village was the "hub" from which elephants and mahouts could reach many kinds of outposts connected to village life. Paths to the teak-logging areas passed by satellite camps for charcoal, or sites where villagers were gathering bamboo and cane to reinforce their homes in preparation for the coming monsoon storms.

There was an endless march of elephant traffic through the village to and from these sites, going up and down the main road and its many side paths. Elephants dragged huge, heavy heaps of bamboo piled on wooden sleds; elephants went off to the teak-logging areas for the day; elephants carried nine or ten large bags of charcoal at a time to some hut or depot; elephants headed to a stream for their daily bath; elephants delivered sacks of rice to the huts of mahouts. There was even a kind of "rush hour" effect in the morning, when the mahouts had all fetched their elephants and were coming out of the forest seated on the giants' necks.

Everywhere the lives of the mahouts' family members were visibly intertwined with the elephants and the elephants' work. Family members helped unload the elephants or tied up the elephants' dragging ropes. The mahouts' wives handed tools up to the mahouts on the elephants' necks or backs. One woman ordered an elephant to kneel by a section of her bamboo hut that was elevated so she could haul the cargo directly from the elephant's back onto the hut's main landing. I occasionally saw children playing with calves. There was a special satellite outpost for "retired" elephants, who were too old for logging work. These elephants, in their fifties or sixties, were attended to by gray-haired mahouts, who had some family members with them as well.

I was at a campfire one night with the mahouts of this complex logging village. While drinking rum and eating rice, several of the mahouts recalled female mahouts in the area besides Nyo. A Karen woman, Naw Ko, had lived in the village some years ago. She was unusual. Not only had she had done the logging work, she had received regular government wages for it. Unfortunately she had died young. Another mahout recalled a woman who was a kind of "tomboy." She would do everything the men did. She worked with the elephants, dragged the teak, and slept in the group tent in the forest during the peak work season in August. This woman would even work with the large male tusker elephants, something the other female mahouts I learned about never did.[6]

Such examples of female mahoutship seem to stem from the spatial organization of the Burmese government's elephant logging system. In other words, in these villages where the elephants, the mahouts, and the mahouts' family members all share space, more opportunities open up for women to become mahouts. Yet other factors could direct the flow of mahoutship skills to women as well as to men. I met an elderly woman, Timeh, who lived with her husband, Imow, many miles down the road, at the former site of the logging village, which had since migrated to follow the mature teak. This elderly couple had moved to central Burma during the 1990s, from the town of Homalin on the upper Chindwin River, between the Chin Hills and the Kachin Hills. We sat outside their hut on a sunny afternoon, a cat circling us throughout the conversation and meowing.

Timeh and Imow were both born in Homalin. Imow had a Hkamti mother and a Kachin father and learned his elephant skills from both sides but especially the Hkamti side. My guide P., who was half Shan, was able to converse in Shan with Imow for a portion of the conversation. Imow knew as little Kachin as I did, having not used it in many decades. Timeh, his wife, smoked a cigar throughout the conversation. She was an ethnic Burmese and was locally nicknamed "the Shan lady" (after her Hkamti-Shan husband) or "the Chin lady." This latter nickname seemed to be based on a local misperception that she was Chin rather than ethnic Burmese, or perhaps it simply referred to her origin in Homalin, which is near the Chin Hills. Like Nyo, whom I'd met at the charcoal camps, Timeh learned her mahoutship skills from her husband, when they were first married.

"Homalin had a lot of female mahouts in those days," Imow explained. "There was a lot of gold panning work to be done on the Uyu River"—which joins the Chindwin around this spot—"and men who were mahouts would go off up the river to do this work." Gold panning is mostly barge work, not elephant work. Sometimes while approaching a forest river in the Kachin Hills, one happens upon a little floating village of bamboo rafts carrying heavy dredging machinery and conveyor belts, with workers sorting through the machine parts, sifting through piles of rocks encased in mud, or lounging inside the rafts' canvas shelters. While the male mahouts of the Homalin area were on these excursions up the Uyu, in search of a commodity more valuable than teak, someone had to carry on with the elephant work, and this responsibility often went to the women. Women also sometimes owned elephants in this area. Timeh and Imow remembered a woman who owned a dozen elephants, having inherited them from her father. Her hired mahouts, though, were mostly male.[7]

Homalin is in the same general area along the upper Chindwin where James Howard Williams had been so surprised to see the women take control of the elephants. Perhaps this area has an unusually strong tradition of women mahouts, which might be connected to the boom and bust cycles of the nearby gold-panning industry that periodically draws many of the men.

At one point earlier in their lives, Timeh and Imow wound up working for one of the Burmese government's timber enterprises on the upper Chindwin. In 1995 government logging officials announced that a number of elephants, including two of Timeh and Imow's, were to be transferred to the teak forests of central Burma. The married mahouts decided to follow their elephants from Homalin to the central Burmese forest, leaving two of their four children behind. The journey took several weeks. Seven elephants in all made the trip. By chance, I had already met two of these seven. Gunjai, the elephant I'd seen being fetched the previous morning by the mahout Otou—the elephant who disliked me because I was wearing pants—was one of the Homalin elephants. Another, Latai, had carried me down a large hill to a forest outpost earlier in that day.

At mention of Latai, Timeh's face brightened. "That was my favorite elephant," she said. "Though I couldn't ride him, since he was a male and a tusker. But I'd always bring Latai food treats."

I asked Timeh what kind of work she normally did with the elephants. "Always transportation," she replied. "Food, canteens of water, charcoal, stones, bamboo and timber, things like that. I wouldn't do the logging work; that was Imow's job."

The two had retired from elephant work some years ago, which was why they didn't follow the logging village when it moved nine or ten miles up the road. The two children who moved with them to central Burma were still in the area, but neither had become mahouts. Timeh and Imow hadn't seen their other two children in many years.

The Burmese government's teak-logging system is in many ways an updating of managerial organization put into place by the British colonial teak wallahs, who themselves mostly formalized methods of elephant-based logging they observed among the Karen and Mon mahouts in the hills around Moulmein in the nineteenth century. Present-day logging and forestry bureaucrats have inherited from this earlier period a strong preference for "roadless" logging, seeing trucking roads as prohibitively expensive, ecologically destructive, and damaging to the quality of the teak.[8]

Currently, there are about three dozen government-run elephant logging villages in Burma, scattered among the best Burmese teak forests in the Rakhine Hills, the Bago Hills, and the upper valleys of the Irrawaddy and the Chindwin.[9] Once or twice per decade, these elephant logging villages change location, following the teak harvest. The dwelling structures in these villages are usually built of biodegradable forest materials—bamboo, cane, and timber transported by elephant from the surrounding woodlands—in anticipation of these periodic moves. Visiting these teak-harvesting villages, one cannot help but be impressed by their unique organizational genius.[10]

The Burmese government's elephant logging system is also rife with problems, and its future looks uncertain. From one point of view, the villages are just large work sites—factories for roadless logging. But these are also places where people are raising families and building lives. With the economic liberalization of Burma in recent years, these families now have access to a wider array of consumer items and are investing more in their homes, turning them into permanent structures.

I visited a particular central Burmese logging village once in 2013 and again in 2016. During the first visit, the villagers were busy gathering bamboo from the surrounding forest to reinforce their homes in preparation for the coming monsoon storms. The homes were built of materials that anticipated eventual abandonment: thatched roofs, skeletal structures and divisions made entirely of bamboo, beams held in place by pegs and rope rather than with screws and nails, and so on. In 2016, by contrast, many of the homes had noticeably changed. There were more metal roofs now, made of corrugated iron sheets. The bamboo stilts were sometimes reinforced with metal rods or concrete. People's gardens looked more elaborate, with more fruits and vegetables growing and with decorative flowers.

The logging officials, in the meantime, who live in far-off cities, had declared the area overlogged in 2015 and had already built a brand-new logging village many miles away, in an area with plenty of mature teak. Exploring the forestlands around the currently occupied village, I could see why officials announced it should be abandoned. There were trees everywhere, including some teak, but the streams and springs in the area were drying up, a consequence of diminished tree density. When I followed the mahout Otou to watch him fetch his elephant Gunjai, the only usable watering hole in which Gunjai could take his morning bath (an important part of the morning ritual for both elephant and mahout) was barely a foot deep. Soon it too would run dry.

The new village the government had built was on a wide river with a good current: a fine location from the perspective of an elephant. Already a few mahouts had moved here, having been offered a premium in their wages. I spent an afternoon with some of them.

Pointing to various corners of their new homes, they observed that the government had done a poor job building the new dwelling structures. Rather than weaving the bamboo slats together in a full latticework, to create firm flooring and insect-resistant walls, the builders of the new village had used a faster but less effective construction method, where only a few perpendicular slats held all the parallel slats together.

There were huge gaps in the flooring and in the walls. The government had also cut corners when finishing and treating the bamboo, which in places was attracting termites. Joints had been fastened with nails, which were rusting, rather than with bamboo rope. The new village was also many miles up the river, far from the nearest road. For the most part, neither the mahouts nor their family members wanted to move here, even if the wages were better.[11] Comparing this new work site with the older village, with its main street and its shops and its well-built homes and pleasant gardens, I thought no one in their right mind would move their family from the old setting to the new one. And yet the forestlands around the old village were drying up, and the new village site sat adjacent to tracts of mature teak.

By contrast, the tribal logging areas in the Trans-Patkai region do not have this conflict. Loggers follow the harvest from tract to tract, and their families settle in a single village around which they build their lives. The Trans-Patkai mahouts are also more autonomous, making decisions about when to move a camp from one glen to another among themselves. Given their location deep in the forest, in places only they (riding their elephants) can access, no outside bureaucratic authority could possibly control the harvest schedule. But this system has its social disadvantages too: the tribal loggers must spend long periods of time away from their families.

From the perspective of government logging officials in Burma, the camp system would also have the disadvantage of being extremely difficult to administer from a central bureaucratic office. The government-run timber industry's village system gives outside administrators a kind of lever over the logging mahouts' lives. The villages usually have at least one main road and so are accessible to administrators or to veterinarians making surprise visits.[12] The villages are also where educational and medical services are provided and where wages are disbursed. The mahouts are still able to gather resources from sections of the forest beyond the administrators' view—the charcoal camps, for instance, are not condoned by the industry officials—but overall, the village system keeps the mahouts connected to a formal bureaucracy in ways that the camp system in the Trans-Patkai tribal areas does not.

Mounting tensions between administrators and mahouts over village location has strained the Burmese government's teak-logging system. The system has also encountered a new, more challenging issue in recent years. The economic design of the government's timber industry assumes that the best and most valuable teak will come from forests with very few roads scarring the soil. From this assumption flow two further premises: that logging done with elephants can be just as profitable as logging done by motorized machinery, and that a portion of these profits can then be directed toward the elephants' welfare. Yet in recent years, the foundational assumption—that teak grown in "roadless" forests is more valuable—seems to have held true only when Burma's economy was closed and protected. Of late, the Burmese teak industry has had to compete with its counterparts abroad, especially in Central America. This new market pressure, and the increased availability of machinery, has led to the motorization of larger and larger swaths of the Burmese teak industry.[13]

This in turn has contributed to overlogging. The situation is nowhere near as severe as in Thailand, which once had a thriving teak-logging industry but so deforested its hills that erosion and calamitous downriver flooding ensued, leading to a sweeping logging ban in the early 1990s.[14] But the Burmese situation is still serious enough that Burmese forestry officials have recently instituted temporary limits on logging, allowing mahouts to harvest only about a quarter of the timber tonnage they were harvesting before—a cutback that should, the forestry officials hope, give the forest time to recover.[15]

The cost is borne, in large part, by the mahouts themselves, whose wages are paid per ton. The timber enterprise has no plan to compensate the mahouts for their lost income. A number of mahouts have responded by gathering ironwood trees from the forest, to make charcoal. Charcoal is nowhere near as valuable as teak, of course, but it gives the mahouts a commodity to sell, to make up for their lost earnings, which are significant (and entirely avoidable, if the government would simply pay them more during the tonnage limitation period).[16]

The mahouts' charcoal-making camps, though surely not an optimal use of forest resources, can be fascinating in action. The scene is full of smoke and steam and elephants carrying great ironwood logs upon their tusks. Sometimes the logs are simply burned in piles. But in another method, large cavelike rooms are hollowed out from nearby bluffs, and a chimney is dug upward until it reaches the hillcrest above. Logs are loaded into the cavern through a hillside door, then lit, and the door is filled in with clay, except for a few small holes that allow oxygen to flow into the subterranean chamber. I saw several of these structures in a row along a steep incline by a forest stream. Elephants were unloading logs at open doorways. Other chambers had already been sealed, and smoke was puffing out through the chimney openings above. The sight was lovely and strange: cozy and funereal at the same time.

THE MAHOUTS of the main government-run logging village I visited in central Burma were mostly ethnic Burmans. The village was characterized by this relative homogeneity in spite of a large nearby population of ethnic Karen mahouts. The Karen mahouts worked on private logging tracts. I would see their trucks pass by the government area frequently. The trucks were easy to pick out because they had a crucifix hanging behind the windshield. The government logging village had no church and was intended to be a Buddhist-only community: it had a Buddhist religious building near the main road and several shrines for the worship of forest spirits, or *nats*.

By contrast, the elephant logging camps in the Trans-Patkai allow people from multiple religious and ethnic backgrounds to work side by side during the day and to return to their respective villages at night. Thus, in the southwestern hills of Kachin State, Hkamti, Kachin, and ethnic Burmese mahouts worked in relative harmony together, even though the Burmese and Hkamtis return every night to villages whose main religious structure is a Buddhist stupa or monastery, while the Kachins return to a village with a large church.

Tenam, the long-haired mahout who brought me into the Mithong logging forest to meet Air Singh, was Hkamti, but he preferred to wear a traditional Kachin hat. I asked him about it over lunch. He laughed and answered that a Hkamti hat is too ornate and impractical for logging work; the Kachin hat was simpler and more comfortable. The choice was pragmatic but also signaled the sort of social intermixing that occurred in this work milieu. Tenam had many Singpho-Kachin mahouts working under him and in some cases alongside him.[17] Air Singh's mahout was a

Kachin teenager, Gam, whose fellow mahouts hailed from a wide array of groups: Hkamtis, Singpho-Kachins, Nepalis, Assamese, and Adivasis. The lead mahouts and tract owners were all Hkamtis and Singpho-Kachins, who'd divided the forest between themselves using a streambed as a border.[18] But the workers under them were a mix of all five groups, if not more. The lingua franca among the mahouts was Assamese.

Of these groups, the Hkamtis have played the most important historical role in diffusing forest mahout skills throughout this part of the world. Even the proudest Kachin mahouts I spoke with conceded, with a grudging smile, that the Hkamtis were in effect the core group, with the longest-lasting traditions, within the Trans-Patkai's mahout culture. The elephant skills seem to have originally come from the west—from Bengal and Assam. Nobody is sure when this was exactly. Apparently it was well over a thousand years ago, before today's ethnonyms (Hkamti, Kachin, etc.) show up in any historical record. Up until the nineteenth century, the Hkamtis had their own tiny kingdoms in the Hukawng Valley and the Putao Plain, political nodes that aided the spread of elephant skills eastward and southward. The Kachins, who originally migrated from Yunnan, became associated with elephant work much more recently, in the nineteenth century, learning the art of mahoutship from the Hkamtis.[19] The Morans seem to have been engaged in elephant work for as long as the Hkamtis but did not play as prominent a role in diffusing the culture.[20]

These groups have a history of struggling over territory, yet they share in common the experience of having fled powerful, expanding kingdoms and empires. The Morans were pushed into the Trans-Patkai when the Ahom kingdoms expanded up the Brahmaputra River. The Kachins fled Mongol and Han invasions in Yunnan. The Hkamtis migrated from larger Tai polities to the southeast. Once they reached the mountainous refuge of the Trans-Patkai, these groups became intermixed, though in ways that preserved certain distinct languages and cultural traditions.[21]

Imow, we should remember, was half Kachin and half Hkamti. Miloswar, the elderly Moran fandi who told me the story of the khoonkie elephant Sokona, had a Hkamti daughter-in-law. Intermarriage between Morans and Kachins in the Lohit and Dihing valleys seems to be rarer, perhaps due to the groups' topographic ordering: the Kachins are associated with a relatively high contour line up in the hills, the Hkamtis with a transitional area between hills and plains, and the Morans are mostly in the lower Dihing Valley. The scheme has lots of exceptions, but it generally helps an outside visitor make some sense of the dizzying network of interfamilial and intertribal ties. Nevertheless, some social scientists have reported a kind of ethnic "shape-shifting," in which individuals or clans shift from "Hkamti" to "Kachin" under certain political circumstances, or vice versa.[22]

Such an interpretation is disputed, but tribal fluidity and heterogeneity would perform a useful law-evading function as well. Forestry officials might hear that an illegal activity is taking place in a certain sector of the forest (illegal elephant capture, illegal logging, smuggling of goods, etc.). If the investigators know that the mahout they're seeking is, say, a Hkamti, then they go directly to the nearby Hkamti village and begin their interrogations there. But if the sector of the forest is associated with mahouts hailing from many different groups and villages, the investigation has no obvious next step. People at the Hkamti village will say that a Moran mahout must have done it; people at the Moran village will say that a Kachin mahout must have done it; and so on.[23]

In the Lohit and Dihing valleys, mahouts are also Adivasi, Nepali, Assamese, and occasionally Chakma. All these groups migrated from elsewhere. The Adivasis came from central India during the nineteenth century to work on the tea plantations of

Assam, which were rapidly expanding up the Brahmaputra Valley during the British colonial era. The Adivasis are sometimes called, simply, the "tea tribes" because of their association with tea harvesting. However, many of them farm other crops, and a few are mahouts. I once met a young Adivasi mahout at a sawmill camp in the Lohit Valley named Gudu. He was eighteen years old and fed his elephant bananas as we talked. Gudu came from a family of farmers, but the nearby farming areas had become crowded, and wages for agricultural work had declined.

By contrast, wages in the logging industry stayed strong, so he headed to the Lohit logging area. At first, he worked at a sawmill, where logs dragged in by elephants were cut up and then trucked out for eventual sale. Most of the sawmill workers in the area were young Adivasi men like himself. The Hkamti sawmill owner saw that Gudu had good rapport with the elephants bringing in the logs, so he offered Gudu a job as a mahout's assistant. Gudu thrived in the new position and was now in charge of this elephant eating the bananas. (The elephant had given me a ride to the mill some fifteen minutes earlier and nearly tossed me off.) His wages, he said, were significantly better than they would have been had he stayed on the farm. Furthermore, "I like the sense of adventure, of being out there in the forest with my elephant, who is really like a best friend who understands me in every way." Gudu added that his mother was unhappy about his chosen profession and wanted him to return to the farm.[24]

I encountered another Adivasi mahout, below the Lohit Valley, in Assam, in an area of huge tea plantations. The domesticated elephants here dated from the days when the tea plantations used elephants for draft labor and were interpenetrated by forest. Nowadays those forests are gone, and the industry is organized around motor transport. But many of the big tea estates still keep elephants as a mark of prestige, and they keep mahouts on the payrolls as well. The elephants have relatively little to do all day and have no forests in which to roam or mate, but they still have rivers and tree groves in which to spend their days.

This tea plantation mahout and his elephant had wandered up from the nearby river, to a cluster of shops alongside the main highway. Cavalierly, the elephant was reaching his great trunk into a shopkeeper's window for a loaf of bread. The shopkeeper jumped in his seat with surprise. The mahout looked on nonchalantly, arms crossed, from high on the elephant's neck. A boy stepped out of the shop with a box of crackers and fed them to the elephant. Then on the other side of the market lane, another shopkeeper said something with a scowl. The mahout took offense, leaped down from the elephant, and ran up to the shopkeeper with a menacing grin on his face. The shopkeeper was smaller, and the mahout had no trouble picking the poor man up and dragging him toward the elephant. With the agility of a playground tyrant, the tea plantation mahout then turned the shopkeeper upside down, so that his feet were pointing upward. The elephant promptly wrapped his trunk around the unfortunate shopkeeper's ankles. At this point the victim said something that I took to mean, "I take it back!" He was released from his misery. This absurd scene gave me a sense of the power wielded by a man whose best friend weighs five tons. And yet at the forest camps up in the hills, I had never seen anything remotely like this display. This bullying behavior was, perhaps, what happened when an elephant and mahout pair functioned as mere status symbols for a powerful estate in the plains, rather than as work partners at a site in the forest.

DOES AN ELEPHANT care whether its mahout is a man or a woman, a Hkamti or a Kachin, an Adivasi or a Moran? Likely not. Do the social relations and distinctions among the humans at the camps and villages make no difference at all to the elephants, then? They likely do, primarily because many of these relations trace back to a village system or a camp system as the chief spatial principle organizing the elephants' lives. An elephant logging village is a planned, bureaucratically managed environment where an elephant is likely to cross paths with veterinarians or with professionals who have a broad sense of the methods in many regions. An elephant might perceive intervention from this "professional" world as negative if it senses that its mahout tenses up when the "man with the trousers" approaches with his report book. Or an elephant might be glad to get attention from trained veterinarians or from forestry managers who are planning a new village site on a broad river with an attractive current.

Similarly, a domesticated elephant might have good reason to prefer the camp system, which keeps it in constant proximity with wild elephants. Furthermore, the mix of tribal groups at the forest camps increases the likelihood that the elephant will change hands a few times during its life, thus passing through different forest areas and encountering different wild herds. That said, from the elephants' perspective, the camps may also have drawbacks. Tribal mahouts' training and daily treatment of elephants in the Trans-Patkai region tends to be harsher than in the government-run villages, where elephant officials have systematically pushed the mahouts to do training based on positive rewards rather than punishments.

Another drawback of the Trans-Patkai area—though the elephants are likely not directly aware of this problem—is that modern, weather-resistant roads are gradually snaking their way into the region, and will likely bring forces of agricultural and urban development with them. Signs of change are especially noticeable on the Indian side of the Trans-Patkai where, slowly yet surely, the government has been constructing expensive all-weather road infrastructure to link the Lohit and Dihing valleys with the motor traffic network in Assam. Large concrete viaducts, sometimes many miles long, are rising in the jungle. If completed, they will turn torrential monsoon river courses like the Sissiri into geographic features to be merely passed over rather than moved through. These road projects will not reach every village and inhabited monsoon island. But once the new infrastructure is completed, it will permanently alter the spatial organization of the region. Likely, the local political balance will tip away from forest-based economies. If this happens, it's not clear what will become of the elephants or who will protect them. Perhaps the Indian government can set up wildlife preserves. But the same state forces that built the expensive new roads might need to open previously forested areas to new development in order to generate the revenue needed to pay for the infrastructure.[25]

The Burmese state bureaucracy, by contrast, has a proven track record of directly managing elephant-based labor in the forest, through its unique system of teak-harvesting villages. But the future of the government elephant logging villages is also uncertain. As Burma's economy opens and becomes more susceptible to global market forces, the Burmese timber industry seems likely to become more mechanized. If elephants no longer contribute to the industry's profitability, then industry profits will likely stop flowing toward elephant welfare, instead going toward better machinery and improved hard infrastructure. In such a future, logging will not be able to support the human-elephant working relationship in the forest. As we'll see in the next two chapters, a different model, built on the use of elephants for transportation rather than for logging, may be more promising.