

Chapter Two

Setting

It is a fact of which European botanists are perhaps not aware, that a tropical forest which has once suffered by the hand of man never recovers its original splendour, even were it left to itself for a century. Some will say that this indelible mark is the seal with which man, as king of creation, impresses his conquest; others will be inclined to think that this miserable biped has, like the fabled harpies, the sad faculty of soiling and withering whatever he touches. (Marcoy 1872: 480)

The Matsigenka inhabit a marginal environment in which they have tried as far as possible to avoid their more powerful or ferocious neighbors. But this isolation has come at the cost of great scarcity of their most favored foods, game animals and fish. Good land for horticulture is ample, however, and the low population density and widely scattered small settlements has meant only minimal competition between family groups for what wild foods do exist. Although they have, perhaps for

millenia, occupied a historically important crossroads, it appears to have been their practice to minimize contact with the larger world rather than confront and try to control it.

Amazonia

In the beginning, say the Matsigenka of Shima, all of existence (timatsi, “what exists”) was covered with water (oani). Then a being came and said, “Why are there no gardens here, why no soil?” He mounded up the earth (kipatsi). He told the people who lived there to wait. After many weeks, the earth was ready: no hills yet, only pure flat earth, without plants. He told them, “Now, I will go home. This earth is for you to live better.”

Formation--. In a curious parallel to the Matsigenka legend, our scientific knowledge of the origin of Amazonia also begins with a tale of a flat earth being formed in a vast waterscape. Before the rise of the Andes Mountains some 15 to 20 million years ago, the Amazon River flowed westward out of the Guiana and Brazilian highlands into a western sea. These eastern highlands are composed of ancient, heavily weathered rocks that yield meager supplies of the sedimentary minerals needed to make good soils.

With the Andes’ rise, the old river’s path to the west was blocked, causing a vast brackish lake or interior seaway to form (Webb 1995). By the time this body of water had carved an outlet to the east, its bottom had become so flat with sediments that today the Rio Amazonas courses east 4,000 kilometers from the city of Pucallpa in Peru to its mouth at Belem while dropping only 150 meters in

elevation, or about one meter every 25 kilometers. Its flatness and vast expanse led early Portuguese explorers to call the Amazon O Rio Mar, “The River Sea” (McIntyre 1972: 456).

Traveling west from Pucallpa, however, one encounters an entirely different landscape, the montaña. The terrain shifts first to rolling foothills and then, at an altitude of 600-900 meters, to abrupt rises and massive escarpments split by cascading rivers. Whereas to the east, broad rivers wind sedately through thousands of kilometers of selva baja, (“low forest,” or lower floodplain [Moran 1995]), the rivers of the montaña plummet through selva alta, (high, or montane, forest), with its “steep slopes, near vertical cliffs, V-shaped valleys, deep gorges and ... angular landscape” (Drewes and Drewes 1957: 6). Still farther west, 2,000 meters up the Andes slopes, the selva alta in its turn becomes cloud forest (ceja de la montaña, “eyebrow of the montaña”), where the Amazon rain forest finally meets a cold and clammy end.

The Matsigenka of Shimaa live in such an angular landscape, along river valleys surrounded by forested mountains. Although they do draw a distinction between east (ikontetira poreatsiri “his-arrival sun”) and west (iatira poreatsiri “his-departure sun”), they rarely speak in these terms. Rather, they use the four cardinal points of katonko “upstream,” kamatikya “downstream,” oaku “at the river,” and inkenishiku “in the forest.” These define the practical, everyday Matsigenka compass (Figure 2.1). Implicit is the knowledge that moving away from the river and into the forest entails steep ascents on slippery trails through dense rainforest. Intaati “across the river,” is also an important direction, and good places to ford the river are well known. Major trails run parallel to the river (upstream and

downstream, either at the river's edge or along the crests of the watershed), and perpendicular to it (from river to forest). The resulting network of trails constitutes the basic grid along which the Matsigenka trek in search of food and raw materials.

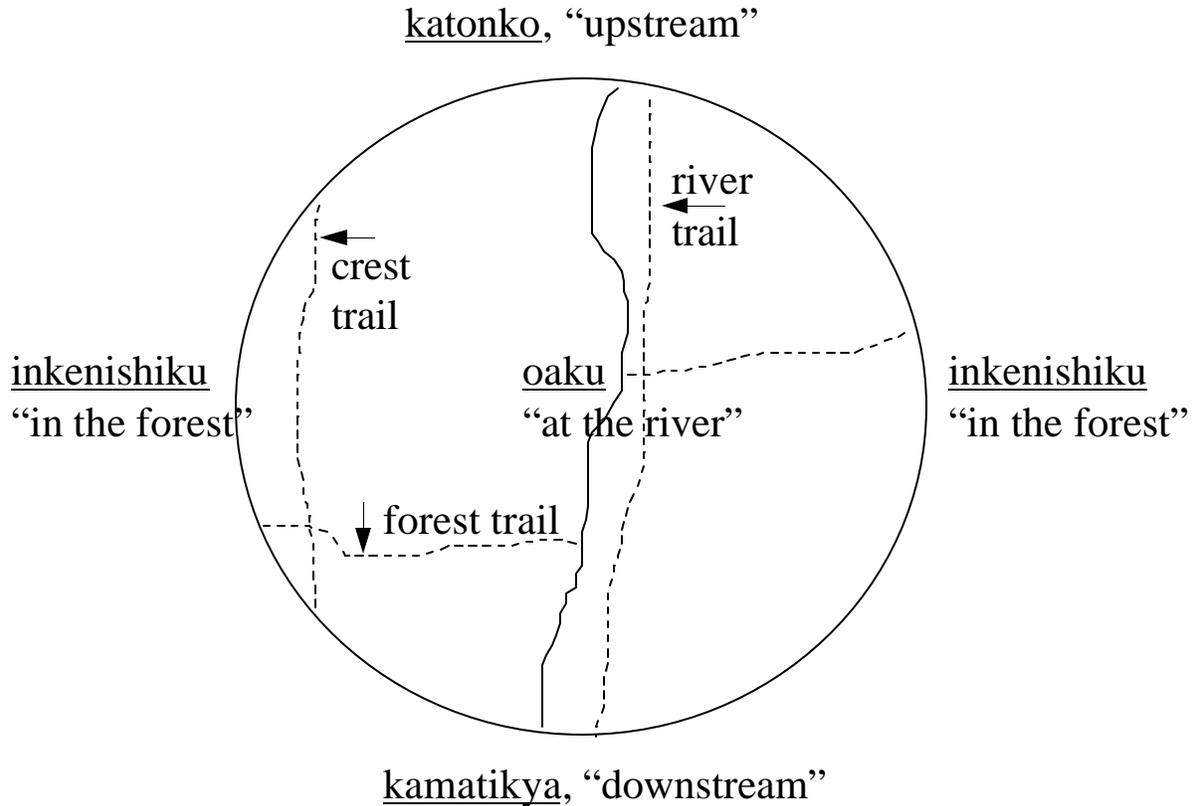


Fig. 2.1. The Matsigenka Everyday Compass

In describing a location along a river--say a house site or fishing spot--narrators commonly indicate whether it is nearer the river's source (ogiashiaku) or its mouth (otsitiaku). They further

distinguish nia, “river” from niateni, “stream.” Nia, like the Rio Kompiroshiato (Map 1) permit travel by balsa raft, and, occasionally, canoe. Niateni are small watercourses that are good sites for homesteads, even though they yield few fish and may even dry up for part of the year.

From the standpoint of Matsigenka raftsmen, the flow of the river alternates between carefree gliding along smooth water (amonkia) and strenuous paddling to avoid capsizing in rapids (anonkaatakara). In the dry season, beaches (imparage) appear, still pools (osamponaa) form where the river flow is cut off, and islands (ovogeshi) stand in tufts high above the water line. In the wet season, streams and rivers grow to swirling brown torrents that obliterate these features and are nearly impossible to navigate.

Large rivers (omaraapageni) like the Rio Baja Urubamba (Map 1) are not found in the selva alta. They are no more than a distant rumor to most of the Matsigenka of Shimaa, who have never seen them at first hand but nonetheless know about them--especially their great abundance of aquatic life--from stories.

[Map 1 about here]

Soils--. Many of the most remote tributaries of the Amazon River originate in the Andes, in mountain streams and tiny lakes, attracting explorers who vie to be the discoverer of the great river's most distant source (McIntyre 1972: 457-8). The Andes, geologically young and largely composed of marine sediments, weather into nutrient-rich runoff that regularly delivers mineral-laden deposits to the

floodplains (várzea) that line the major tributaries (Junk and Furch 1985: 9-11), accounting for their high fertility as compared with the generally lower fertility of the terra firme lands away from the várzea.

Map 1. Matsigenka Territory. (Source: Baksh 1984: 25)

In general, Amazon soils sustain a verdant forest only through rapid uptake of nutrients from decaying organic matter by shallow roots matted in a thin topsoil. Clearing the forest exposes the soils to degradation from agriculture, leaching, and breakdown in the crumb structure (Richards 1952; Roosevelt 1980: 79). Most of the soils available to the Matsigenka of Shimaa would be lumped together as terra firme, yet they are unusually rich owing to their Andean parentage, a challenge to the view that terra firme soils are uniformly poor (see also Moran 1981, 1995; Fearnside 1986: 38, 56; Culotta 1995: 31). Nonetheless, as we shall see, the soils of Shimaa still degrade under cultivation and benefit from the long fallows characteristic of Matsigenka horticulture.

With traditional shifting cultivation, secondary growth flourishes once the garden has been abandoned, restoring soil fertility and laying the foundation for forest restoration (Jordan 1989: 102). Sustained use like cattle ranching, which has been introduced in many Matsigenka communities in recent decades, degrades the soil so much that the forest may require centuries to recover (Fearnside 1986: 56; Salati 1985: 44).

The Matsigenka distinguish soils according to their capacity to sustain horticulture. As we shall see (Chapter 6), although they may be blessed with among the richest soils in all Amazonia, they complain of scarcity. Their comparative framework is local, and--reflecting their outlook in general--is intrinsically moral: Good things are more scarce and life is much harder than it would be had people and powerful beings behaved better when the world was created (Chapter 7).

Climate--. Being near the border between selva baja and selva alta, Shimaá is hot during the day (25°C - 30°C), but cool at night (16°C - 19°C). It is often chilly enough at dawn, especially on foggy mornings in winter, that Matsigenkas will complain about the cold and stand over the fire, the rising heat billowing their cushmas. They are fastidious about lifting their cushmas when walking through dewy weeds, to avoid the discomfort of damp skirts.

The general pattern is for the day (kutagiteri) to warm rapidly until late morning, when breezes begin to blow upriver. The temperature peaks in mid-afternoon, approaching 30°C, but, with a steady wind (tampia), any shady place is usually comfortable. Except for extensive periods of rainfall (inkaani) in the wet season, heavy clouds and rain pass quickly, followed by the prevalent intense blue skies and drifting white clouds. Breezes die down by evening (pavatsaana), when temperatures range from cool to warm but rarely muggy or stifling. Such days are described as "good days" kametiri kutagiteri (or, in contraction, kametigite).

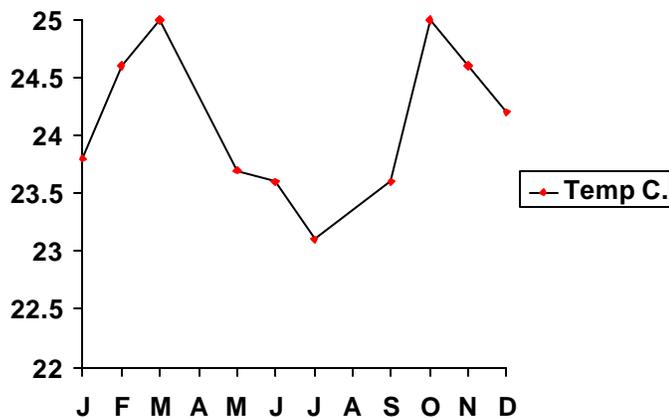


Figure 2.2. Daily Average Temperatures at Shimaá, 1972-73

Because the sun (poreatsiri) is usually visible, people use its trajectory as a kind of sundial. To set an appointment, they simply point to the place in the sky where the sun will be at the time proposed. I found that once I coordinated this system with my habit of using a wristwatch, the Matsigenka and I were rarely off by more than 15 minutes in keeping appointments. Although the moon (kashiri) changes position each night, the same system can be used for some nighttime references, as when a man reported having seen a snake the previous night at kaatinka kashiri, “straight-up moon.”

The weather in Amazonia moves generally from east to west. The humid, unstable air, heavy with moisture, is liable to turn to rain at any time and place. As it moves against the Andes and starts to rise, the orographic cooling increases the likelihood of rain. Thus, whereas Pucallpa in the selva baja receives about 1500 mm of rainfall per year, communities in the selva alta receive from 2,500 to 5,000 mm, the amounts declining at higher altitudes after peaking between 400-700 m (Drewes and Drewes 1957: 7). Variability from year to year and across short distances can be quite large. For example, in Shimaa (alt. 680 m) in the fieldwork year of 1972-73, 2700 mm of rain fell; in Camana (alt. 450 m) , less than 80 km away, the annual total in 1979-1980 was 5,800 mm (Baksh 1984: 27).

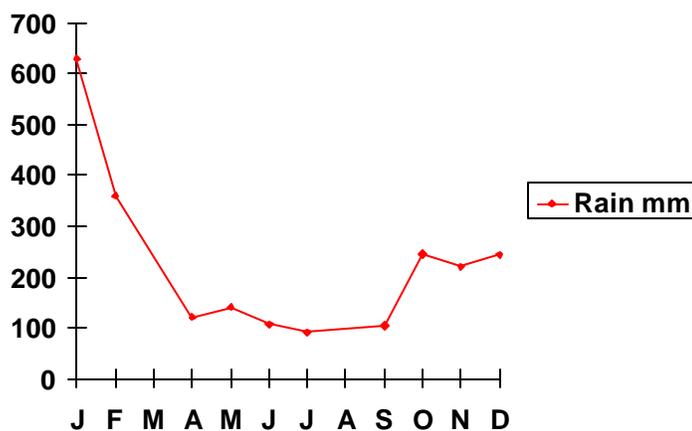


Figure 2.3. Monthly Rainfall Totals for Shimaá, 1972-73

The typical pattern in the Amazon south of the equator is for rainfall to be heavy in the summer months of November through February, and light to moderate during the winter months of May through August. In Shimaá, this translates into a wet season from October through February (Fig. 2.3). During the January peak it rains nearly every day and may drop 50-75 mm of rain in a few hours. Big storms are often accompanied by strong winds that topple trees and drive people into the secure cover of their houses. In summer the river level rises over a meter and swells to several times its low-water width. In this season of high water (kimoariniku “grown water”) muddy trails and sudden downpours make the traveller’s progress difficult. Many planned hunting trips are cancelled due to rain, and fishing is limited to the use of nets by the opaque turbulence of the water. Indeed, another term for this season is oshintsiatanaira “rushing-water.”

Even during high water, there are dry periods when the river recedes somewhat and clears from muddy to a murky green. It is possible to burn a garden during such dry spells, as I have witnessed on several occasions. And, except in the rainiest periods, the rainfall only lasts a few hours before clearing to bright sunshine.

In low water (shiriagariniku) the river retreats to its central channel, exposing a large beach of rocks and driftwood, and turns very clear. It still rains over 100 mm per month in low water, however, and the forest floor is seldom dry. I only saw it dry for a period of a few days one August, and noticed how much easier it was to get around when my feet were not constantly slipping out from under me. But low water is dry enough that the little streams that supply household needs during high water dry up, forcing people to lug river water in heavy, sloshing gourds up steep trails to their houses. And dry spells occur of long enough duration that crops in well-drained fields begin to wilt under the intense sun and Matsigenkas anxiously watch the skies for welcome signs of rain.

It is also during low water that Shimaa is subject to the frios (cold spells) that afflict the whole of Amazonia in winter, as frigid air masses sweep north from Antarctica. During frios the temperature drops to 14°C at night and does not rise above 22°C or 23°C during the day. It is difficult to stay warm, with the sun obscured by clouds and stiff breezes blowing through well-ventilated houses and cotton garments, and people complain of the cold (katsinka). Cold drizzles (mararo) add to the misery. People get up several times during the night to add wood to the fire and warm themselves (a fact used to comical effect in the tale of Peccary, Chapter 5). On such occasions it is easy to understand why the

Matsigenka of Shimaa devote such a major part of their time and energy to the production of cotton cloth while their fellows at lower altitudes eschew clothing. A *frio*, however, will usually last no more than a week or two and the season for *frios* generally ends by mid-August.

Most of these variations in weather are not regarded by the Matsigenka as having spiritual significance. The heavens themselves are a location of spiritual interest, although I saw little evidence that the people of Shimaa paid them much attention, apart from the central importance of Sun and Moon, to which we will return. In their cosmology, the sky is a superior level (actually, several levels) of the universe, where the Unseen Ones and other spirit beings reside free of suffering (just as the level beneath us, underground, is an inferior, undesirable place peopled by demons). Some believe that the stars (impokiro) are the campfires of these beings, as thunder is the sound of their shotguns. But the Matsigenka of Shimaa do not assign names to the stars, and seem rather incurious about them.

On only one occasion did anyone ever spontaneously discuss the stars with me: one evening, Maestro asked me in some agitation if I had noticed a new star above the western mountains. I replied that indeed I had noticed the new star in recent evenings because of its diamond-like flashes of color, from ruby to emerald to sapphire. Maestro was fearful, he told me, because some people say that a new star signifies the appearance of the demon katsiporerini.

Apart from that, all my interviews and casual conversations about the stars never turned up a single name for a star, let alone a constellation. On the contrary, most people I talked to regarded the

stars simply as lights in the sky, without spiritual or personal significance. Some men knew what satellites were, however, and pointed them out to me matter-of-factly as they passed overhead.

Flora and Fauna--. Among the most fundamental distinctions the Matsigenka make regarding timatsi “what exists,” is between living things that have breath (aityorira iraniane “there-is its-breath”) and the nonliving (terira ontime aniane “not exist its-breath”). The two terms for “its-breath” differ grammatically between animate (iraniane) and inanimate (aniane). What we have considered so far, the rocks and soils, water, air and stars, are nonliving. Although they are sometimes inhabited by spirit beings, they are themselves lifeless, mere inert matter. The living (breathing) world includes all biological life forms, as well as all kinds of spirit beings, including Sun and Moon, both of whom once lived on earth. Living things have feelings (okemakero okatsitake “it-feels it-hurt”), including not just animals, but plants and spirits. Only the unseen ones (terira ineenkani) are immortal and beyond pain and suffering.

The Matsigenka have a certain ambivalence toward the living world around them. On the one hand, they are kind toward pets and believe that living things must not be killed unnecessarily. They make offerings to the spirit rulers of the animals they hunt. On the other hand, they are frequently indifferent toward the suffering of animals, and sometimes torture them with evident pleasure. Their calm, courteous demeanor belies a subterranean mean streak (Chapter 4).

The grammatical animate vs. inanimate distinction creates a de facto separation between plants and animals, even though Matsigenkas lack cover terms for these two great natural divisions. In general usage, animals (and spirit beings) “have breath [animate]” (aityorira iraniane), whereas plants “have

breath [inanimate]” (aityorira aniane). Similarly, if we ask whether something is edible, for an animal the answer will be yogagani (“edible [animate]”) and for a plant, ogagani (“edible [inanimate]”). Most nonliving things are grammatically referred to as inanimate, but, interestingly, stars are animate. Figure 2.4 summarizes the two basic dimensions Living vs. Nonliving and Animate vs. Inanimate.

EXISTENCE (<u>timatsi</u>, “what exists/is”)		
	HAS BREATH (living)	NO BREATH (nonliving)
INANIMATE	<u>aityorira aniane</u> plants	<u>terira ontime aniane</u> rock, water, etc.
ANIMATE	<u>aityorira iraniane</u> animals, spirits	<u>terira ontime iraniane</u> stars

Figure 2.4. Basic Matsigenka Categories of Existence.

In The Forest (Inkenishiku). The Amazon rainforest is known for its great diversity of species (Gentry 1988; Chesser and Hackett 1992), but what impressed me most was the stillness. The daytime silence is in part a reflection of the scarcity of birds and mammals in the selva alta. The main work of the forest is bound up in plant life. Animals are a small proportion of the biomass, and most of these are insects. Since insects are for the most part herbivores and no freezing winters slow their activities, they are a constant threat to the vegetation, which has evolved various defenses that affect human use of the environment. Many palms, for example, have developed extremely hard, dense outer

woods against burrowing insects (Pires and Prance 1985: 118). These woods, when shaped and polished, make sharp, durable tools. Rubber (latex) is another plant defense that humans have found useful, although the Matsigenka make limited use of it themselves.

Many other plants have developed biochemical defenses against predators (Janzen 1985); these supply humans with a pharmacopoeia of poisons, medicines and hallucinogens (Peru 1987: 68-70). This makes gathering honey something of an adventure for the Matsigenka, since whatever pollen the bees are working with will impart its properties to the honey. Many men have stories about how, while foraging, they became disoriented after eating honey and had to be sought out and guided home by relatives, or had to make their own way home a day or two later after recovering their senses.

Some forest plants are useful to humans in other ways. Many palms produce oil- and protein-rich fruits, and others produce fruits inedible for humans but popular with game animals like monkeys and peccaries. Most palms also yield a favorite vegetable, the palm heart, which can only be obtained by killing the tree. Matsigenka use of palms will be examined in more detail in Chapter 6.

Although the Matsigenka can name hundreds of trees, and seemingly enjoy nothing better than naming all the trees in sight faster than an anthropologist can write, they consider most of them to be of little use. It is the fauna of the forest that are most eagerly sought by humans. Their main distinction among animals is between inkenishikunirira “forest dwellers,” and oakunirira “water dwellers,” recapitulating the basic distinction in spatial orientation between river (oaku) and forest (inkenishiku).

Among inkenishikunirira, the most abundant and important in the Matsigenka diet are not game animals but insect larvae. The larvae of moths, butterflies, beetles, bees and wasps are year-round sources of dietary fats and protein. Caterpillars tend to be seasonal, but grubs, which are most often found in rotting wood, are available year round.

Larger animals--game birds, monkeys, peccary and tapir--are favorite foods but are very scarce and difficult to obtain in the selva alta. In the montaña the abundance of game declines with a rise in elevation. Except for one hunt with men who were tracking a group of peccaries that had already been sighted, I never saw peccary or tapir in the forests around Shimaá, although peccary spoor, at least, was common. Only one tapir and a handful of peccaries were killed by the Matsigenka during my fieldwork in Shimaá. When they were encountered, peccaries were to be found in groups of four or five, in contrast to reports from the selva baja of great bands of peccaries running together.

The main game monkeys are spider monkeys, who live from scattered fruits and are constantly on the move, and howler monkeys, slow-moving leaf eaters. Guans, tinamous, toucans, parrots, and curassows are the most important fowl, with occasional catches of Andean Cock-of-the-Rock, kingfisher, and diverse herons and doves rounding out the supply.

A number of other species are present in the forest, but rarely encountered. These include deer, spectacled bear, anteater, sloth, and armadillo. Most of the men I talked to had never actually sighted these animals, although they had encountered their spoor in the forest. Other animals are slightly more

common, but are rarely taken for food either because they are considered inedible or because they are nocturnal and difficult to hunt: tayra, añuje, paca, squirrel, rat and bat are prominent among these.

Although in ordinary conversation the Matsigenka generally name individual species rather than categories of fauna, they do group species together in some contexts. The forest fauna (inkenishikunirira) can be subdivided according to specific habitats within the forest. For example, ground dwellers (kipatsikunirira) are distinct from tree dwellers (inchatoshikunirira), as well as from those that dwell in reeds (chakopishikunirira) or dense foliage or thickets (pankomaikunirira). These and similar distinctions help foragers keep track of where they can expect to find particular species, and what techniques they should use to capture them. For example, traps for ground-dwelling birds are distinct from those for tree-dwelling ones.

We will see that it is characteristic of Matsigenka classification that the same animals can be classified in different ways according to the purposes of the discussion. For example, many forest dwellers are identified as koveenkaripage, dangerous-ones. These include carnivores (sekatantacharira) like matsontsori “jaguar” and maeni “spectacled bear,” as well as sinister animals like shiani “anteater,” who is believed to circle back on a hunter and lie in wait for an opportunity to slash his throat with razor-sharp claws. Such animals are considered by some to be inedible (terira ironkenkani “not he-is-eaten;” or, simply, tera inkametite “no good”). This category blends over into a larger set of spiritually dangerous animals that can convert into humans and jaguars and kill through spiritual attack; hunters fear these animals, and hunt them with proper precautions (Chapter 7).

Of enormous importance to the forest ecosystem, but little value to humans, are ants. Some ants are plainly destructive to plants, like the leaf-cutter ants that the Matsigenka believe are transporting roofing materials below-ground to build their houses. But other ants defend the trees that support them, attacking and eating herbivores, as anyone who unthinkingly touches such a tree quickly learns.

Whenever I was with Matsigenkas and we saw one of the gigantic black ants maiini (Grandiponera sp), my companions would always point it out to me. Maiini deliver a potent poison and will be killed when spotted. Chickens, however, as they forage near the homestead, will enthusiastically scratch a maiini anthill apart and consume its inhabitants, providing valued pest control.

Perhaps owing to the altitude, or to a government eradication program using DDT spray, there were no mosquitos in Shima. That Marcoy (1872: 540) noted this absence of mosquitos among the Matsigenka of the selva alta in the 1860's would tend to favor a non-technological explanation. The small bloodsucking pium flies (tsigito), however, left everyone covered with tiny red spots that itch. As the old bites fade away after a few days, new ones are constantly appearing. A characteristic scene with the Matsigenka is for someone suddenly to interrupt whatever they are doing to slap at an exposed part of their body--arm, lower leg, neck--and then examine their palm and fingers for traces of tsigito. It is a genuine blessing that these pests disappear each evening at sunset.

Headlice (mamperiki) are common and a major preoccupation of grooming, when the groomer can be seen to slap the subject's head sharply then immediately root around in the hair, picking lice out between the nails of the thumb and first finger. Sometimes, the groomers bite (and may eat) the lice.

More frequently, they crack them between fingernails and line them up on a handy surface, keeping count. Cockroaches and termites are ubiquitous, in every container, but termites at least are edible.

The selva hosts several deadly snakes, including rattler (Crotalus durissus), bushmaster (Lachesis muta), and “loro machaco” (Bothrops bilineatus). The latter may be the feared terori--blamed for the death of Oscar’s father--that hides on branches and strikes from above, inducing almost immediate hemorrhaging and death. In Matsigenka belief, snakes are the arrows of an unseen hunter who views humans as his peccaries (Shepard 1999: 141). After wounding a human, the snake can mobilize his relatives to come help him finish off his victim, whose soul is then eaten by the spirit. The Matsigenka respond to these horrific dangers by reasonably considering all snakes to be poisonous and killing them whenever possible. Ideally, the dead snake should be buried deep in the ground, or better, thrown in the river to be carried so far away it will be unable to inform its kin of the whereabouts of the human who killed it.

A subject of fascination for the Matsigenka, although I would say ultimately less a source of anxiety than snakes, is matsontsori, a category that includes jaguar (Felis onca), puma (Felis concolor), and ocelot (Felis pardalis). Although several people were bitten by snakes during our fieldwork (none died), none were attacked by jaguar. Indeed, when Oscar came across a puma killing a deer, he calmly killed it with bow and arrow, then finished off the deer as well, bringing both back home where I came across the meat smoking and elicited the story. The main complaint against the big cats was that they broke into the pens where fowl were kept at night. Jaguar, snake, deer and certain other creatures are

of special importance in Matsigenka religious beliefs because their spirit rulers have power to kill humans, in some cases by metamorphosing into demons with human shape.

At the River (oaku). The rivers of Amazonia often contain a diverse fauna that ultimately play a larger role in native diet than wild forest foods (Carneiro 1995: 63; cf. Roosevelt 1980: 118-159). But many Amazon tributaries are very poor in fish, among them the cool, swift mountain streams of the selva alta. Large species found in the selva baja simply disappear here. The Machiguenga of Shimaa were harvesting roughly one-half kg of fish per hour of labor in 1972-73, comparable to yields of other native fishermen in the Amazon (Jordan 1989: 39). But their yields declined rapidly as they remained in Shimaa for several years instead of moving elsewhere as they would have done in the past. Using only traditional fishing techniques, they were able to reduce the fish populations of the accessible portions of the Rio Kompiroshiato and Rio Shimaa nearly to zero.

River-dwellers (oakunirira), like forest fauna, can be further distinguished by their specific habitats. For example, creatures that live in deep pools (omonkiakunirira) are contrasted with those that live under rocks (mapukunirira) and those who live in still waters (osamponakunirira) or along shale outcrops (imperitakunirira). Such a typology can be expanded according to the many microenvironments the Matsigenka identify in rivers and streams.

The river itself is a source of real danger. Many life histories include tales of relatives who died in the river, generally when a raft overturned and its occupants were dashed against boulders or drowned before they could reach shore.

The Cloud Forest--. A broad rule in the montaña is that, from a human standpoint, the higher the elevation, the poorer the environment in wild animal foods (Denevan 1980: 18-21). Camaná (elev. 450 m), some 230 m lower than Shimaa (elev. 680 m), had a much greater abundance of fish, although game were equally scarce. Camisea in the selva baja (elev. 390 m) has sustained a concentrated Matsigenka community for over thirty years and still is able to supply its needs for fish. On the other hand, it used to astonish me when men came down to Shimaa from their homesteads at still higher elevations, like the community at Mantaro Chico (1000 m) or the headwaters of Pogentimaari (ca. 1100 m), where fauna are even scarcer, and exclaimed eloquently on the excellence of game and fish at Shimaa.

The range of forest the Matsigenka normally exploit does not rise much above 2500 m. The families at Shimaa do not plant gardens above 1000 m, although families who live far up the headwaters of the Kompiroshiato and other tributaries of the Urubamba do plant up to 1800 m. Observers who have flown over the area say Matsigenka gardens are never found above 2000 m.

The reason for this is the cloud forest, a cold, wet region between 2000 and 3000 m where dense cloud cover prevents much sunlight from penetrating. Climbing the ridge trails out of Shimaa, the trees become progressively smaller and more heavily draped in lichens. In general,

The cloud forest presents a distinctly weird appearance with twisted, crooked, deformed trees and shrubs, the branches of which are festooned with Bromeliads, epiphytes, bryophytes and lichens. The trees are generally less than 50 feet tall....

It is almost impossible for a man to penetrate this vegetation because the trees and shrubs grow very much intertangled, and the ground is a mass of wet, spongy, decaying vegetation into which a person's foot sinks. Water drips from the leaves even when it is not raining. In addition, the cloud forest is usually associated with exceedingly steep slopes. Visibility through the vegetation is never more than 10 to 15 feet. There is practically no human occupation in the zone (Drewes and Drewes 1957: 14-15).

This means that historically, rather than competing with hostile neighbors for land, the Matsigenka border a difficult region of low-density settlement at the higher elevations. Doubting this, a group of explorers from the National Geographic Society parachuted into the Cordillera de Vilcabamba (the watershed between the Urubamba and Apurimac drainages), not far from the headwaters of the Kompirosiati River, in 1963 (Baekeland 1964). From the air they had spotted vast grasslands they assumed would be fertile for agriculture (presumably overlooked by native populations), but what they found was tall grass on top of a deep layer of moss covering a substratum of soft black mud into which they sank up to their thighs. Icy rain and clouds enveloped them, and they saw neither fish nor game. Having planned 15 days for their descent of the Apurimac to areas known to be inhabited by Campa Indians, they required 61. They record with joy their emergence into warm sunshine at about 1400 m, when they began to notice signs of game of all kinds.

Shimaa--. The settlement at Shimaa is centered on a cluster of houses around the schoolhouse at the confluence of the Rio Shimaa and the Rio Kompirosiati (Map 2). In 1972 a narrow flat in the bend of the river had been cleared as a landing strip for single-engine planes, primarily those flown by SIL pilots. A few houses were built on the slight rise just at the edge of the flood channel, while the

others occupied a natural shelf some 15 m above the level of the river, on the ridge rising between the R. Shimaa and R. Kompiroshiato. The trail that follows that

Map 2. Households at Shima, 1972-1973

ridge is well-maintained and runs far beyond any human habitation, many kilometers up into the cloud forest.

[Map 2 about here]

Other extended family clusters or hamlets are scattered up the R. Shimaá and down the R. Kompiroshiato from the school community at Shimaá. Most of the households from these hamlets send their children to school, even though in some cases this entails up to an hour walk each way. Yet the adult members of these communities remain rather distant from adults in other hamlets, tending to conduct business separately with Maestro rather than with one another. Although social relations are peaceful and courteous, in private there is a good deal of suspicion and accusation leveled against members of other hamlets. Individuals are reluctant to pass casually along the smaller paths that link unrelated households with their gardens, where one's motives for intruding might be questioned.

Compared to many other Matsigenka school communities I have visited, Shimaá, therefore, is fragmented and somewhat aloof. Most school communities, especially those along the R. Baja Urubamba, are larger, more compact, and appear to be more socially integrated. Visiting between households is more common, and the frequency of exchanges much greater, perhaps because of the greater abundance of meat and fish at the lower elevations. Life in those communities seems more

casual and relaxed; people can be heard singing at almost any time, a rare occurrence in Shimaa (cf. Marcoy 1872: [Vol 1., p 587; Vol 2, p. 19]).

Perhaps not all of these differences reflect an upstream-downstream contrast. In fact, all sorts of differences in cultural detail are found between one Matsigenka community and the next. But, in some ways, life in Shimaa and other high elevation Matsigenka communities is more difficult than at lower elevations, and this is reflected in the smaller effective community size and a certain closed-off, inward-looking attitude found in the separate hamlets along the Kompiroshiato and neighboring watersheds.

Despite this attitude, or perhaps even because of it, I found Shimaa and its surroundings a wonderful place to live and do fieldwork. If people there are less sociable in large groups, they are more courteous and thoughtful in individual interactions. They are less attracted to the lure of commerce and new value systems. Their commitment to the freedom of the family unit is truly remarkable.

They are also blessed to live in a setting of astonishing natural beauty. I indicated in Chapter 1 my belief that the popular culture imagery of the Amazon rainforest--of a dense and secret jungle alive with bird calls, mating dances, and a frenzy of life and death struggles--is greatly exaggerated. Certainly, the selva at Shimaa, classified as "montaine rain forest," is rather open under a canopy perhaps 25 meters high:

(Fieldnote 9-29-72) "... [The forest here] is a fantastic play of light. The sun manages to penetrate and reflect an array of greens of every shade. Also, it is full of flowers of blue, yellow, orange, and red, ... butterflies and occasional colored birds"

For the most part it is also extraordinarily quiet. Once, when I had occasion to be alone several kilometers up a mountain trail west of Shima, I noted complete silence. Although a stiff breeze had been blowing upstream along the Rio Kompiroshiato, the air here was still. After sitting quietly for perhaps a quarter of an hour, my attention was drawn by a distinct crackling sound and I turned to look. A leaf had detached from a branch some 15 meters away and was drifting to earth; I clearly heard it rustle as it landed. That was the most distinctive sound I heard for some time after that, except for an occasional faint movement in the underbrush, until the Matsigenka companion for whom I was waiting came along the trail, sounding to my sensitized ears like a crashing elephant.

This daytime silence was a complete contrast to the levels of noise reached at night, especially at the edge of the forest near the river. Here, as dusk settled in, a great wall of sound rose, made up of the quavering tones, rattles, gongs, croaks, buzzes, hoots, and whistles of frogs, insects and birds. Each sound had its own unique rhythm, so that the roar rose and fell with the degree of synchronicity among the various voices, phasing into symphony, out to cacaphony, and back into symphony again. On different evenings, depending on temperature and humidity, different voices would dominate. Matsigenkas sitting outside on mats after dark would listen to the chorus and could, if asked, imitate the sound and name the animals responsible for each separate contribution. Some animals make sounds so distinctive the Matsigenka have given them onomatopoeic names, like papapani, the frog that cries papapapapapapapapa... in the night, and the bird kavari (kavavavavava...).

Viewed from a boulder near the mouth of the R. Shimaá, the forest rises massively in every direction, shimmering with the reflected light of countless leaves turning in the breeze, a panorama energized by the rasping of birds and insects and the constant white noise of the river. Or, the whole place is transformed by an early morning mist, dominated by the strange powerful roars of the howler monkeys. Matsigenkas crossing the clearing, their bare feet hidden from view by the low weeds, seem to float like shadows before suddenly disappearing into a house whose presence was only hinted at by its column of smoke, faintly blue against the surrounding fog.

My strongest memory is of sunny days in clear mountain air, with occasional white clouds, fresh breezes flowing upstream, exuberant vegetation, a warm aroma tinged with decay rising from the damp earth. I loved to hurl down the Kompiroshiato River on a balsa raft, shooting the rapids like the world's greatest rollercoaster--alert to the genuine danger yet emboldened by the enthusiasm of my fellow raftsmen--surrounded by sheer cliffs or spreading forest, spectacularly untamed.

That I had the privilege of enjoying all this owed most to the Matsigenka themselves, generous and tolerant hosts whose unselfconscious exuberance and skill made them the best of companions. The following anecdote, reported by Marcoy (1872: 469-70) along the Rio Alto Urubamba, captures a characteristic moment:

[At a point] remarkable for a succession of frightful rapids whose waves mingled together, rolled over each other, and whirled about as if they had been made to boil by a blazing furnace beneath, the Antis [Matsigenka] Simuco, who had attached his canoe to a raft manned by his brother, and was standing up holding by its side to assist if necessary, executed before our eyes a veritable tour de force. At the moment

when the raft, towing the canoe with the two women seated in it, passed between the rocks, the sharp eye of the savage discovered in the midst of the tumultuous waves a sabalo or shad (Salmo andensis), which was mounting the current. Stooping down he seized his bow, placed an arrow in it, aimed at the fish, and pierced it through and through, and all this with such rapidity that had it been night the whole action would have been visible in the gleam of a single flash of lightning. If the danger that surrounded us had not counselled prudence, I could have sprung to my feet, clapped my hands, and cried “Encore,” so superb was the Indian in artistic verve and activity of movement, with his hair streaming in the wind, his sac inflated by the rapidity of the course down the rapid, and flapping in the air behind him.

“Verve” is a good word for the Matsigenka, part of what makes them such fine collaborators and mentors.

Prehistory and History of the Matsigenka

Contemporary understanding is that the Americas were peopled by migrations from the northwest of North America starting at least 11,000 years ago (Agenbroad 1988), but possibly in waves reaching back more than 20,000 years ago (Bryan 1983). Despite much controversy (Gibbons 1996; Nichols and Peterson 1996), many scholars believe that most of the New World was populated by peoples sharing a common language history (Willey 1971: 12; Matteson 1972a), blood type (Newman 1958) and dentition (Turner 1983: 147; Greenberg et al 1986). Their extreme genetic similarity may tragically have contributed to their universal susceptibility to disease following European contact (Black 1992).

We can only speculate concerning how this migration came to fill the Americas. The weight of opinion has favored the idea that bands of hunters, preferring open country occupied by large mammals, spread across the landscape in search of game (Lynch 1978). Evidence of large mammal extinctions by “explosive overkill” suggest that this population expansion occurred rapidly around 11,000 BP (Long and Martin 1974). Such hunters may have avoided tropical forest due to the overall scarcity of wild foods there (Lanning 1967: 39; Bailey et al 1989).

Recent discovery of occupation of a tropical forest site at Monte Alegre in the Brazilian Amazon dating to between 10,000 and 11,000 BP, however, has established that rich riverine environments could sustain early settlement in the rainforest without horticulture (Roosevelt et al 1996; cf. Gibbons 1995). Even if, therefore, the interior of the Amazon rainforest may have been poor in wild resources, the floodplain was another matter. Roosevelt (1991; et al 1991) has found 8,000 year old pottery in the lower Amazon. This community of potters was a stable, settled pre-agricultural people who depended on rich shell-fish supplies along the river. Their pottery pre-dates by 3,000 years the earliest pottery found in the Andes and Mesoamerica, reversing an earlier view that pottery was invented in the highlands and diffused later to Amazonia. It is likely that people similar to these early potters spread along the banks of the larger tributaries, and took the first steps to domesticate or experiment with borrowed crops suitable for cultivation in the Amazon rainforest (Lathrap 1987: 355). The presence of domesticated crops in Central and South America 8-10,000 years ago indicate that an incipient

horticultural adaptation to the tropical forest had at least become possible (Bruhns 1994: 86, 91; Kaplan et al. 1973; Roush 1997; Smith 1997).

The Arawakans--. At the time of the Conquest, Arawakan was the most widespread of all language families in the Americas. It was spoken from Florida to the Gran Chaco and from the Pacific to the Atlantic, making it “probably the only linguistic family that was represented in the three parts of the New World” (Pericot Y Garcia 1936: 614). During the Age of Discovery, Europeans came to know Arawakans primarily as the Caribbean Islanders who lived in towns with elaborately feathered chiefs, lounged in hammocks smoking pipes, and travelled throughout the islands in large dugout canoes. Among the words they contributed to our vocabulary were canoe, tobacco, barbecue, hammock, yuca, maize, papaya, iguana, savannah and hurricane. They portrayed themselves to Europeans as noble and warm-hearted in contrast to their enemies the Caribs, who, partly owing to this ethnic bad press, became the prototype for cannibalistic savages (Leon-Portilla 1992).

But these Arawakan speakers were relatively late arrivals, having migrated into the Caribbean around the time of Christ. The origin of the Arawakan family of languages is obscured by a lack of linguistic records prior to European contact. It is a sign of our ignorance of linguistic prehistory in Amazonia that the origins of Arawakan have been put in such various locations as northwestern South America near the Caribbean coast (Schwerin 1972), the central Amazon (Lathrap 1970), and present-day Matsigenka territory (Noble 1965; Migliazza 1982; Urban 1992: 95).

This latter theory is of obvious importance to Matsigenka history. According to Noble (1965: 107),

By applying lexicostatistics and methods of determining probable geographical locations for earlier languages, [the differentiation of Proto-Arawakan into the seven main language groups of Arawakan] most likely occurred near the headwaters of the Ucayali and Madre de Dios in what is now southeast Peru some 3500 to 5000 years ago. It is more plausible to suppose that they spread from a central point than that they travelled independently any distance in the same direction.

Matsigenka, Campa and Piro, the languages spoken in these headwaters today, are all members of Pre-Andean Arawakan (Wise 1986), which is part of the Maipuran language group, generally considered to be the main branch of Arawakan languages (Matteson 1972b).

Migliazza (1982) argues that the period 6,000 - 4,000 years ago, during which Noble supposed the differentiation of Arawakan to take place, was a dry period when much of the Amazon Basin was savannah and only pockets of tropical forest persisted. One of these pockets ("refugia") is believed to have been in the typically wetter montaña of southeastern Peru (another may well have been in the northwestern area identified by Schwerin as the Arawakan homeland; but see Kerr [1996]). As the climate turned wetter in the period from 4,000 - 2,000 years ago and tropical forest expanded, diverse Arawakan speaking groups--now adapted to a tropical forest subsistence with a range of appropriate cultigens--would have spread out in different directions, accounting for the vast distribution of Arawakan seen at the time of the Conquest.

In this respect it is significant that the eastern slopes of the Andes, and in particular the Urubamba region, have been identified as likely sites of early crop experimentation and domestication, including maize (Lathrap 1987: 354), coca (Goodspeed 1961), and tobacco (J. Wilbert 1973: 440). Also, the headwaters of the Rios Urubamba and Madre de Dios are known as one of the more extensive areas of petroglyph clustering in the Amazon Basin: the petroglyphs that have so far been described show a clear affinity to Amazonian motifs as opposed to Andean motifs, but whether Arawakan-speakers specifically carved them cannot be determined, nor have they been dated (Baer 1984: 288-91).

In any case, it seems likely that by four or five thousand years ago the first proto-Arawakan speakers already possessed the basic Amazonian culture pattern. A flow of information and crop varieties extending from coastal Peru to the northern Amazon seems likely (Lathrap 1987: 356). The most economical assumption would be that direct ancestors of the Matsigenka were living in the headwaters of the Urubamba and Madre de Dios at that time and participated in these momentous prehistoric developments. Certainly, contemporary Arawakans of the area, such as the Piro (Matteson 1954) and Campa (Denevan 1974; Weiss 1975) are strikingly similar to the Matsigenka in a broad array of economic, social and cultural details.

The Matsigenka at the Time of the Conquest--. According to Steward and Metraux (1949: 535), "... the [Matsigenka and Campa] culture may be Proto-Arawakan and probably represents an early migration into the Montaña." They call the region a "refuge zone," with the implication that the

Campa/Matsigenka fled or were pushed there because they could not stand the fierce competition along the main rivers (see also Lathrap 1970: 73). But it is just as likely that Arawakan originated in the headwaters among groups like the Matsigenka, and that subsequent developments like expansionist warfare and complex social organization occurred downriver following migration out of the headwaters.

At the time of the Conquest, the Matsigenka occupied approximately the same territory as today, although perhaps at several times greater population density (Denevan 1980: 20-21). Centered around 12°S latitude and 73°W longitude, they extend

as far north as the Rio Mishagua, as far south as the Koribeni Mission on the Upper Urubamba, as far west as the Rio Apurimac and the Rio Alto Picha, and as far east as the Madre de Dios and Manu rivers (O. Johnson 1978: 24; Baksh 1984: 26; see Map 1).

Downriver to their north and east were the Arawakan-speaking Campa, Piro and Amuesha. Farther downriver were a number of Panoan groups, including the Cashinahua, Amahuaca, Conibo and Shipibo. Ethnohistorical evidence is that these downstream groups were engaged in frequent warfare, had a local group level (village) social organization, and tended to dominate Matsigenkas whenever they met. Of these groups, the Matsigenka of Shima only spoke of the Campa, whom they called Ashaninka. Baer (1984: 31) reports that Urubamba Matsigenkas also recognize Piro, to whom they refer as Simirinchi. The Piro presence in the R. Alto Urubamba is probably ancient because the Piro were long-distance traders linking the Inka with downriver Amazonian communities (Myers 1983: 70; Camino 1977). Whatever the states of war or peace among these various groups, it is likely that they

were still part of a vast net of exchange relationships that was intact at the time of European arrival (Lathrap 1981; Myers 1983).

To the south and west, above the barrier of the cloud forest, were the Inkas. The Inkas, building upon the statecraft of earlier empires, had integrated the Andean highlands and coast for thousands of kilometers along the mountain chain and traded regularly with the montaña. But the exchange of technology and products between the Peruvian Amazon and the Pacific coast long predates the Inkas, going back at least 3,000 years (Lyon 1981: 293). Still older is the Temple of the Crossed Hands at Kotosh, built at 1800 meters above sea level on the montaña-highlands border nearly 3500 years ago, one of “the earliest monumental buildings of any kind known in the Americas” (Lanning 1967: 189).

The trade linking the montaña and the highlands, though important, did not bring about political integration (Lanning 1967: 186). The Inkas, as presumably their predecessors, had only partial success penetrating the tropical forest. To be sure they had descended several mountain ridges and river valleys, most notably the province of Vilcabamba (Lyon 1981: 4), to elevations around 1800 m, below the upper limit of Matsigenka foraging, “leaving platforms and terraces of obvious Andean workmanship behind them” (Lathrap 1970: [p?]; Isbell 1968). In these comparatively warm elevations they could plant crops like maize for harvests that would ripen weeks or months before their highland counterparts, or raise coca, cotton and chili peppers that would not grow at higher elevations.

As the distances were often great, requiring many days of travel, highland villages would establish outposts (Parsons and Hastings 1988: 214-15) at the margin of the tropical forest, on the “archipelago” pattern (Murra 1956; Raymond 1988). Well-worn footpaths--“In many places the trails have cut so deeply into the hillsides that they form V-shaped valleys twice the height of a man” (Isbell 1968: 114)--indicate an ancient pattern:

In only four days on foot, one can travel from jungle villages where canoes ply the slow waters to the plateau of Lake Titicaca where nightly frosts permit the cultivation of only the hardiest crops. In a single day’s walk, along the valleys of many tumbling rivers, the climatic transition is so dramatic that the traveler passes from cold, potato and oca producing country, down through corn and racacha fields into manioc and taro zones ... [indicating] a considerable antiquity for the symbiotic relationship between the highlands and the Montaña and for the trade of dried meat, desiccated potato (chuñu) and other highland products for tropical yuca, fruit and the all important coca. Coca is among the earliest plant remains recovered from the distant Peruvian coast, and along with other plants of apparent Montaña origin, verifies the great antiquity of trade in Peru. (Isbell 1968: 109-110; cf. Stocks 1987: 2)

Archaeological evidence is that these outposts traded with tropical forest Indians. In exchange for forest products, including feathers, monkeys and tropical crops, the Indians of the forest received stone and bronze tools, pottery, highland crops and alpaca wool (Lanning 1967: 186).

Differences in style and technique, however, clearly show that this was not an area of cultural blending, but a zone of contact between the fundamentally distinct Andean and Amazonian traditions (Hastings 1987). Two different Quechua loanwords are suggestive of contact with a stratified society: poñarona “highlander,” referring to the poor mestizo immigrants from the highlands, and virakocha “lord”

or “ruler” (< Wira Kocho, an Inka creator god), referring to Euro-Americans. As we shall see, the Matsigenka believe both groups to be of evil origin.

Despite their power and civilization, the Inka could not control the montaña politically. They viewed the Indians there as wild and dangerous, and built the great fortress at Machu Picchu for protection. Admiring their fierceness, the Inkas did sometimes press warriors like the Cashinahua into military service. But according to a Cashinahua legend, one such group feigned loyal service until they had lulled their Inka rulers into complacency, then hosted a dance at which, when the party was well underway, they killed them all (Reynard-Casevitz and Saignes 1988). The native Amazonians could simply melt into the forest afterwards, and were obviously not suited to become loyal subjects of the realm.

The Amazon Indians closest to Cuzco, where the Inka's court was located, were the Matsigenka. The Inka called them Anti and named the eastern quarter of their realm Anti Suyu after them (Steward and Metraux 1949: 535; Reynard-Casevitz and Saignes 1988). The Inka did exert control over the forests of the Cordillera Vilcambamba, which includes the headwaters of the R. Kompiroshiato, where Inka ruins have been reported (Reynard-Casevitz and Saignes 1988). Inka ruins have also been reported in the headwaters of the R. Mantaro Chico, adjacent to the R. Kompiroshiato (Matthiessen 1961: 263). The Inkas controlled a peasant population of perhaps 160,000 along the R. Alto Urubamba downstream past the fortress of Machu Picchu to Quillabamba, but not much farther (Gade 1967: 24-25). W. Snell (1964: 2) mentions a Matsigenka legend that Inka soldiers often

attempted to conquer them, but that they fearfully chose to disappear into the jungle where the soldiers could not follow them.

The Rio Paucartambo, one valley to the east of the R. Urubamba, also offers direct access to the selva alta from Cuzco. Far down this valley Inka terraces and roads are in evidence, though no longer in use. The Peruvian explorer Jorge von Hassel (1907) travelled down the R. Paucartambo well past Chunchusmayo, reputed at that time to be the farthest reach of Inka influence, and discovered a ruined Inka road continuing nearly to the confluence of the Rio Yavero, in a region inhabited at the turn of the century by scattered Matsigenka families.

Still farther east begin headwaters of the Rio Madre de Dios. Inka ruins are also evident along these valleys, perhaps associated with coca plantations under direct Inka control. Near the confluence of the Rios Mameria and Callanga, adjacent to the R. Paucartambo drainage, ruins of an Inka “city” some 2 km by 12 km in extent have been reported. Mameria (“nothing-water”) is a Matsigenka word, and these ruins may be the city of Opotari (presumably an Arawakan name; Reynard-Casevitz and Saignes 1988). The French explorers who describe it, however, believe it to be the Lost Empire of the Inka, Paititi (Cartagena and Cartagena 1981).

The Inka were known as superb road-builders who used strong bridges to cross impassable ravines. Their roads are often believed to have gone to the edge of the tropical forest and stopped owing to difficulties of construction and maintenance (Hyslop 1984: 264-5). It is much more likely, however, that their roads continued into the forest but have been lost because they were made of earth,

not stone, and have grown over. In the upper reaches of the R. Mantaro Chico at about 1500 m altitude I have walked with Matsigenkas on a smooth graded trail two to three meters wide, in places carved out of the surrounding hillside and made flat and broad, cleared of brush and branches overhead, that my companions told me runs “far, far” (samanika) up into the mountains.

The trail running up the watershed crest between the Rios Shimaa and Kompiroshiato is similarly wide and clear, and heads far up into the mountains, probably well above 2000 m. In contrast to the typically tangled and overgrown paths Matsigenkas use for actual hunting, walking these major access trails is more like a stroll along the avenue. If valued trade were at stake, such thoroughfares would have linked to Inka roads above the rainforest in the past. The more likely limit to Inka transportation was not tropical forest but the beginnings of canoe transportation along the lower elevations of the main rivers: here the Inka were out of their element and would have confronted much more dangerous fighting forces than those the Matsigenka could muster (Lyon 1981: 8).

Reconstructing, we can easily imagine that the Peruvian montaña was, at the time of the Conquest and long before that, a frontier of contact, with rough edges, between the “Amazonian Cultural Tradition” (Willey 1971: 496) and the Andean civilizations of Peru. In the Matsigenka case, there was a zone between 1800 and 2500 m altitude where they foraged but did not clear gardens, and where outposts from highland communities found pockets of farmland where they could supplement their economies with production of warm-climate crops.

These contact zones were valuable enough economically and politically to the Inkas to justify major investments in fortresses and roads, as well as local investments in platforms and terraces. It is likely the roads followed longstanding prehistoric trails (Raymond 1988: 297-98). These allowed them a reliable zone of production over which they had control and an interface region where regular trade with Amazon Indians could be conducted.

The R. Urubamba was a main conduit of trade between highland Quechuas and the Amazon rainforest peoples (Gade 1972). Evidently, the Piro were the principle traders linking the two zones, “the merchants of the montaña” (Camino 1977: 127). Each dry (low water) season they made annual trading voyages, requiring weeks or months, from the Rio Bajo Urubamba through the Pongo de Mainique to trading posts such as El Enquentro and El Carmen. In this contact zone downriver from Machu Picchu and Quillabamba, Quechuas came to exchange metal tools, gold and silver, and other highland goods for such tropical products as coca, monkeys, feathers, woods, dyes, medicines, resins and, perhaps, women and children. These trading entrepots were in various locations at various times. Marcoy (1872: 425) placed the “frontier-line which separates civilization from barbarism” in the 1860s at Chahuaris, some 50 km upriver from El Enquentro, and perhaps 200 km by river upstream from the mouth of the Kompiroshiato. Evidence is that prehistorically the trading centers descended even closer to the mouth of the Kompiroshiato, perhaps below the confluence of the Rio Yanatili (Lyon 1981: 9).

Reports of early European travelers indicate that the Piros completely dominated the Matsigenkas, driving them from the banks of the Urubamba at least during low water season. When

they encountered Matsigenkas, Piros marauded their gardens and captured women and children to be traded to highlanders. The Matsigenkas did not resist the Piros with force, but may have allowed powerful leaders (curacas, a Quechua loanword) to negotiate deals to provide Piros with food and trade goods, minimizing their disruption of ordinary Matsigenka families (Camino 1977: 133-36). Apart from the Piros, the Matsigenka maintained their own low-key but steady trade with Quechuas (Gade 1972: 210).

Perhaps in this sense the Matsigenka can fairly be said to have occupied, since the indefinite past, a “refuge zone” where they were protected from some of the fiercest military struggles of both the Inkas and the downriver tribes. They could occupy marginal foraging areas, benefit possibly from an umbrella of peace held over the region by the Inkas (Reynard-Casevitz and Saignes 1988), and trade directly with the Inkas, unlike the Piros who would have had to brave hostile Campas upstream to obtain Inka goods, then hostile Panoans downstream to complete their trades. By threatening in neither direction, and occupying a marginal ecological zone that more powerful peoples did not covet, the Matsigenka appear to have found a quiet backwater in which to pursue their relatively tranquil, if somewhat frugal, existence.

After the Conquest--. According to Matsigenka lore, Euro-Americans (virakocha) originally lived underground on an inferior, evil plane of existence. One day, a Matsigenka, digging for gold against a shaman's advice, out of greed dug too deep, opening a passage to this world from below. Whites came swarming up out of the opening in the ground like ants. Roberto, who told me this story,

was clearly concerned that my feelings might be hurt by hearing it. The Matsigenka word for gold (koriki), incidentally, is, like *virakocha*, a Quechua loan word.

Francisco Pizarro invaded Peru in 1532 and in six years had driven the last of the Inka resisters into exile in the *montaña*. Although the Matsigenka do not refer directly to Conquistadores in any of the folktales I have heard, they do have one suggestive belief: the shamans (seripigari) who occupy the next plane of existence above ours wear shining armor and carry large guns that, when they have no *ayahuasca* to drink, they fire in anger, causing thunder.

According to Peruvian history (or legend), after Pizarro murdered the Inka ruler Atawallpa, the empire collapsed and various Inka princes gathered their wealth and fled into the rainforest. In the early years of this century, Campa Indians told Von Hassel (1907: 297) their legend that 4,000 Inka soldiers, led by a “prince of the royal house,” had descended the R. Urubamba fleeing the Spanish. Some believe they built Paititi, the City of Gold, somewhere near the headwaters of the R. Madre de Dios (cf. Gray 1987: 308-9). The expedition that photographed and reported the ruins at Opotari (Cartagena and Cartagena 1981) is among the latest of centuries of “extravagant adventures of exploration” of the *montaña* in search of El Gran Paititi (Haskins 1943: 93), which in some versions is the ancient wealthy empire from which the Inkas themselves originally came (Ferrero 1966: 26-30).

Whatever truth may lie at the origins of such legends, we must see them in light of a larger history. Throughout the Americas since the beginnings of European conquest, explorers have been motivated by rumors of Eldorado or some local variant of it. At the core of the rumors lies the deeply

ingrained European mythic motif of finding buried treasure. Following the conquest of Peru, the Spanish gathered all the gold they could find for shipment home, and then pursued all available means to find and develop gold mines (Goodspeed 1961: 103-104). By no means all searchers were motivated by gold; many would have been fulfilled by being recognized as the discoverers of a wonderful ancient city (Savoy 1970). But whether the treasure they seek is fortune or fame, explorers still venture into inaccessible and often dangerous corners of the montaña in search of Paititi or some other elusive Eldorado.

That the lure of gold makes for credulous explorers does not mean that ruins, even quite important ones, may not yet lie undiscovered in the headwaters region occupied by the Matsigenka. Rumors abound of Inka ruins in a region where little systematic archaeology has been conducted down the Rio Urubamba from Machu Picchu (Raymond 1988: 297-298). In time, with new research, we should be able to describe the patterns of interaction between Matsigenkas and Inkas, as is already being done for areas occupied by the Campa and Amuesha (Parsons and Hastings 1988).

It is difficult to gauge what effect the collapse of the Inka might have had on the Matsigenka. With irrigation systems and roads falling into disrepair, Quechua populations would have declined in the montaña. They probably still would have found ways to trade: the Matsigenkas von Hassel met along the Rio Paucartambo in 1900 could speak Quechua quite well. Along the larger rivers powerful tribes were completely eliminated from the major rivers in the 18th and 19th centuries (Myers 1972), and even the neighboring Campa were heavily missionized, though at the price of many martyrs for the

Catholic Church. By 1667 some 8,500 Campas had been missionized, and towns grew in support of commercial farms that produced sugar cane, coca, tobacco and cacao (Peru 1987: 74). But, the Matsigenka were spared much of this early contact. According to Ferrero (1966: 42-43),

“the followers of the Inca Huascar took refuge in the Vilcabamba region, acting as a barrier to direct contact between the colonists and the forest peoples. To be precise, we have the report that, in 1571, Martin Garcia Loaisa penetrated deep into the lands of Manaries in pursuit of Tupac Amaru, whom he captured and brought to Vilcabamba, where the judge was the future explorer of the Madre de Dios, Juan Alvarez Maldonado.”

In those future explorations, Maldonado described the Matsigenkas as “friendly” (Grain 1939: 239).

Later, according to this history, Manko Inka organized resistance among the Quechuas and dominated much of the Urubamba, including the valley of La Convención. Although Manko Inka’s movement was destroyed, it was not until a persistent growth in the number of haciendas in the area from the late 17th century through the 19th century that the general resistance of the descendants of the Inkas to Spanish rule was steadily undermined in favor of commerce.

For a period in the 18th century, Campa resistance also hardened around the messianic figure of Juan Santos Atawalpa, who claimed to be descended both from the Inkas and from God (Varese 1973). The Campa, who had begun by befriendng missionaries and ranchers and adopting plantains and sugar cane, suffered so much from disease and exploitation that they rebelled. Santos Atawalpa and his followers sought to drive out the Spanish and restore the Inka empire to its former glory. They

killed or drove out missionaries, ranchers, and townspeople and seized control of their territory. But by then they had already adopted such introduced crops as plantains and sugar cane. Even after 100 years of isolation from the Spanish, Campas still had smithies using bellows and forges for making iron tools (Steward and Metraux 1949: 537-539).

Dominican, Jesuit and Augustine missionaries became active in the Matsigenka area after the beginning of the 18th century, usually without the violent outcomes that hindered their work among the Campa. But it is also clear that their success with the Matsigenka was superficial. They only managed to contact Matsigenkas along the banks of the major tributaries, and these were so reluctant to change their ways that in the 1960's Padre Ferrero (1966: 85-87) wrote in frustration:

... the Machiguenga permits neither repression nor criticism. Should someone, even the missionary whose moral authority he recognizes, try to orient, correct or prevent his behavior, he departs immediately with the phrase: 'Here one can't live; nothing but gossip and rumors; I'm going where no one will bother me and I will bother no one.'

Following Peru's independence from Spain, missionary activity in the montaña was sharply curtailed by the secular government, but commerce increased as new roads were built. Downriver, Iquitos began to emerge as a major shipping port for moving forest products to European and North American markets. During the late 19th century rubber boom Iquitos transformed from a small village into a town of 20,000 (Guinness 1909: 214), and by World War II, after successive booms in fine woods, petroleum, animals and hides, barbasco, chicle and cascarilla, to a city of 30,000 (Martinez 1983: 11). But its orientation remained downriver: when the citizens of Iquitos decided to pave their

streets, for example, 2,800 tons of gravel were loaded on a ship in the port of Callao near Lima, and sent sailing 7,000 miles through the Panama Canal and up the Amazon because no overland route existed covering the 650 miles between the Pacific coast and Iquitos (McIntyre 1972: 465).

Goods flowed down the Ucayali to Iquitos, but the treacherous rivers and trails of the selva alta made it difficult to control the area politically or economically to the degree possible along the Ucayali. The rebellion of Juan Santos Atawalpa, in fact, was only one in a series of resistance efforts by the Campa that have continued into the present day (Varese 1973: 356; Brown 1994; Brown and Fernández 1991).

Major changes have occurred in the montaña in the past half century. A road from Lima to Pucallpa, completed in 1943, opened a floodgate of population into an area viewed by the government as underpopulated. Between 1940 and 1981 the population of the Peruvian Amazon grew from 400,000 to 1,800,000 (Butts and Bogue 1989: 165-166).

During the 1960's a progressive, growth-oriented Peruvian government commissioned a study for future economic planning. The consultants, a group of North American economists and engineers, wrote:

For generations farsighted Peruvians have looked east to the green lands beyond the high sierra and had visions of great development that could open vast new areas to productive farming, mining, and forest use. They have seen what is obvious even to a casual [sic] observer--that the eastern slopes of the Andes are a rich region covered with luxuriant vegetation, in striking contrast to the desert areas of the Peruvian coast and the bleak sierra of the high Andes, where more than three quarters of the people of Peru now live. (Krebs 1960:59)

The consulting team went on to offer a host of specific suggestions, including construction of a hydroelectric power plant on the Mantaro River, agricultural development on family farms of 20-30 ha in the tropical forest, construction of penetration roads that colonists would follow voluntarily if government would limit its intervention to supplying advice and services, and expansion of forestry industries.

There is something naive, verging on tragic, about these hopeful plans of an earlier generation. Typical of their time, and not yet completely absent today, was a technical approach, informed more by mathematics than by ecological wisdom. Appearing eminently practical, they focused on what they knew about, like what kind of materials to use in building a dam on the Mantaro River. Knowing nothing about the practicalities of farming on Amazon soils, they were free to glide past the tough realities and imagine a happy future of development, as though no one before in history had ever had the bright idea of farming in the rainforest.

These plans were implemented with the explicit goal of relieving the intense population pressure in the sierra by encouraging it to spill over into the montaña. The tropical forest, viewed as uninhabited and containing untold riches, was opened up by building new roads and instituting colonization schemes. It is estimated that by the year of this publication this unprecedented migration of sierra farmers without knowledge of tropical horticulture will have destroyed 24 million ha, or about one-third of the tropical forest of Peru (Martinez 1983: 12-13).

Like other forest communities (Varese 1972: 123-25), the Matsigenka of the Urubamba valley were subject to slave raids during and after the rubber boom of the late 19th century. A Peruvian, Justo Pereira, dominated the Urubamba until, according to legend, his son Fidel Pereira (b. ca. 1888), who was half Matsigenka, killed him in a dispute over a woman and took over his territory. By World War I, Fidel Pereira had over 500 men working the rubber avenues and was greatly feared and held in awe throughout the region. He enforced his will through his control over local leaders (korakas) to recruit labor and coordinate trade.

As he aged, he began to set his children up as rulers of a string of communities along the Urubamba upriver from the Pongo de Mainique. The Matsigenka families living in these communities were dependent upon the Pereiras and it is said they would be tracked down and beaten if they tried to run away. Linguists with the SIL found these Matsigenkas to be passive and somewhat browbeaten by their Pereira masters when they began to work in the area in 1953 (B. Snell 1973). Rosengren (1987b: 160-9) documents a history of harsh control and exploitation by these potentially violent rulers (gantatsirira).

When we first arrived among the Matsigenka in 1972, these communities were still in place, and the Pereiras, while most courteous, were also protective--or, perhaps, defensive--of their communities. Far from indifferent, they were careful of the well-being of the Matsigenkas in their communities, but in a paternalistic way, and they did not welcome outside scrutiny. Orna and I did meet and have a talk with the 84-year-old Fidel Pereira, a slight man with light brown skin and a thin white beard. An

educated man, he was a gracious and knowledgeable conversationalist, discussing the role of communist China in the United Nations and the policies of former U. S. president Lyndon Johnson. It was difficult to credit this frail old caballero with all the hard acts attributed to him.

The Matsigenka did not take these intrusions upon their freedom lightly. Their resistance, which has most often taken the form of flight from exploitation, left the regions of the Tigompinia and Timpia rivers unpopulated until the last few decades. This is the most likely explanation for why overall population density in the Matsigenka area remains below pre-Conquest levels. There are, however, other limiting factors that help explain why population growth in the area has been slow until quite recently, and these will be explored further in Chapter 6.

Matsigenka resistance was not always peaceful, however. Evidently they had resorted to violence in resisting Fitzcarraldo when he came after them with Piros and Campas armed with Winchester rifles in the 19th century (Ferrero 1966: 39). And as recently as the 1960s, possibly coinciding with a guerilla uprising in the Valley of La Convención (Quillabamba), a Matsigenka man associated with one of the Pereira communities had reportedly killed a white man as part of a millenarian movement aimed at killing all whites (including the Pereiras) and restoring a utopian rule by mysterious beings from downriver (see Pereira 1944). The movement fizzled out as soon as it began and the man was never punished for the homicide (B. Snell 1973).

In myth, Kogapakori was a hero or deity who tried but failed to kill all whites. Today, the term kogapakori applies to a distant group of warlike Matsigenka. Since the term derives from the word

kogapai, “for no reason,” it carries the connotation of “wild man.” From the relative peace and distance of Shima, it may serve as a label for an imagined or projected group of semi-human wild creatures. On the other hand, along the eastern margins of Matsigenka territory, even recently the Matsigenkas faced homicidal raids by Panoan groups like the Yora (Shepard 1999: 34). Characteristically, and to the apparent surprise of the Yora, the Matsigenka did not attack Yora settlements, or even seem to do much to defend themselves but flee when attacked (MacQuarrie 1991: 222-227).

The Matsigenka pattern is and has been, therefore, to avoid violence and express their resistance by hiding. Even in areas remote as the Rio Kompiroshiato or Rio Mantaro Chico, brutal slavers were a threat until mid-century (Davis 1994: 76, 81). In order to avoid capture and forced labor, families would locate away from the river, disguising their trails so that slaving crews travelling along the river would pass them by. From their locations on bluffs and hillocks they could watch up and down along the river without being seen, hidden from below by vegetation. Even during our fieldwork in the 1970's the fear was so great that when, on long trips through the forest, we would happen upon a homestead, we would usually find it empty, often with food smoking over the fire: the inhabitants had heard us coming and fled silently to some safe place in the forest.

Although living scattered and well-hidden was certainly adaptive during the slaving period, it was also profoundly in character. Rosengren (1987b) describes the Matsigenka of the Upper Urubamba as

highly atomistic and amorphous.... They do not live in nucleated villages and have no fixed notions of territoriality. They are not divided into clans, lineages or moieties.... Their society is loosely structured and

they themselves are generally individualistic. People are not arranged in hierarchies of any sort. (q. in Davis 1994: 80)

All evidence indicates that they have been this way for the indefinite past. Neither explorers' reports nor the Matsigenkas' own traditions indicate that they ever lived in more complex societies than Rosengren describes. All signs of intensification and social elaboration--terracing, roads, monumental architecture--are clearly of Andean origin. Even the outgoing sociability and frequent group rituals reported for some Panoan groups (Shepard 1991: 85) are largely absent among the Matsigenka.

That many Matsigenka families remained isolated for generations is attested to by the devastation caused by measles, influenza and other epidemics that struck Matsigenka communities in the 1950's and 1960's upon first contact with Peruvians and Euro-Americans (Wieseke 1965: 12; 35). Surely, their fear of disease was a powerful motivation to remain isolated. In fact, disease may be an indicator of the degree of success with which different groups maintained isolation. Wieseke's (1965) medical study of Camisea included migrants from the Urubamba, Camisea, and Manu rivers. Those from the Camisea showed least exposure to contact-related diseases (2.8% positive for tuberculosis, 5.5% for measles), whereas those who had come from the Urubamba had the highest exposure (54.5% positive for both diseases); the Manu immigrants were intermediate (33.3% positive for both). This might be evidence that the Urubamba group, closest to the old areas of trade with the highlands, had experienced more continuous contact with the outside than the hinterlands of Camisea and Manu. Although on a tributary of the Urubamba, however, the Matsigenka of the Rio Kompiroshiato tended to

avoid the big river, just as travellers along it passed by the mouth of the Kompiroshiato with scarcely a thought.

The old isolation is moderating as Peruvian laws, especially the Agrarian Reform Law and the Law of the Selva, protect the Matsigenka from the exploitative practices of the past, and as new generations with immunities replace those lost to disease. Government offices and programs are available for the Matsigenka, as for other forest tribes, to allow them to register land titles and form “Native Communities” with official standing (Peru 1987).

As difficult as these laws are to enforce, they do indicate change. The sierra farmers who descend the mountain valleys and take up residence alongside Matsigenka families bring not only population pressure but also greater savvy about how the national political system works. And the growing density of farmers with products to sell encourages both infrastructural development and a greater government presence. For the most part, the Matsigenka in 1972 were welcoming these new opportunities and the security they afforded.

In their school communities one generally found an airstrip and a soccer field. Men and boys, and often girls, play soccer with cries of enthusiasm, and are fiercely competitive in games with other communities. Schools with rows of desks impose new standards of personal comportment and hygiene, as well as the unfamiliar disciplines of study and homework. Corrugated metal roofs mark the exhaustion of the more comfortable palm leaves, and the sounds of Peruvian music on radios and tape

recorders give further evidence of the growing commercial and cultural integration of the Matsigenka to the greater outside world.