Aguaruna Jivaro
Gardening Magic in the
Alto Rio Mayo, Peru¹

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One of the major contrasts between Andean and Amazonian cultures is the degree to which the latter secularize horticultural activities. In the ethnographic literature of Amazon basin societies it is difficult to find cases of elaborate horticultural rites, and where such rituals do exist they are often associated with maize cultivation, not with manioc and other tuberous crops.² While horticulture is often considered unworthy of ritual attention, hunting is frequently the object of intensive ritual activity and regulated by complex taboos. The Desana (Reichel-Dolmatoff 1971), the Amahuaca (Carneiro 1974), the Yagua (Chaumiel and Chaumiel 1977), and the Barama Caribs (Gillin 1936) are among the many groups that use ritual means to induce hunting success while having no reported rituals associated with horticultural production. In his discussion of this phenomenon among the Amahuaca, Carneiro (1974:129) suggests that the supernaturalism surrounding hunting confirms the functionalist assertion that ritual tends to be associated with activities that are in some way unpredictable, difficult, or dangerous. Available evidence certainly supports the view that in Amazonia hunting success is unpredictable (Ross 1978), while the shifting agriculture characteristic of the region is a particularly reliable and productive (if nutritionally deficient) source of food, especially when the main cultigens are manioc or plantains (Carneiro 1963; Smole 1976).

The elaborate system of beliefs and rituals associated with horticulture among the Aguaruna Jivaro is a notable exception to the predominantly secular quality of Amazonian horticulture. The Aguaruna have developed a reliable, efficient system of horticultural production, yet they perceive it as being as fraught with uncertainty as hunting. To encourage the growth of their cultivated plants they sing magical gardening songs, perform a set of ritual acts when planting a
new garden, and observe certain taboos connected with garden work. Moreover, in attempting to manipulate garden productivity by magical means, the Aguaruna involve themselves with potentially dangerous spiritual forces, sometimes with fatal results. That is, the beliefs and practices surrounding horticulture among the Aguaruna create a feeling of danger and stress where, from a non-Aguaruna point of view, none would be expected to exist.

We present here a description and analysis of Aguaruna gardening magic in the Alto Rio Mayo, Peru. In this discussion we primarily address ourselves to two questions: (1) Why do the Aguaruna perceive horticultural production as being uncertain and therefore worthy of ritual manipulation? and (2) How do the concepts of magical causality expressed in gardening magic articulate with more general principles of Aguaruna cosmology and world view?

AGUARUNA SUBSISTENCE

The Aguaruna Jívaro, whose current population has been estimated at 25,000 (Uriarte 1976:39), live in relatively dispersed communities along the rivers Marañón, Nieva, Cenepa, Santiago, and Mayo, and their tributaries in the tropical forest region of northern Peru. Although the Aguaruna are skilled hunters and fishermen, horticultural activities—particularly the cultivation of sweet manioc and plantains—provide the bulk of their caloric intake (Berlin and Berlin 1977:16). Sweet manioc, boiled or roasted, is served by itself or with meat and fish at most meals. Manioc is also converted into manioc beer, the social lubricant of Aguaruna culture and the supreme symbol of hospitality. So close is the symbolic connection between manioc and food in general in Aguaruna thought that a visitor is frequently asked, "Máma máwàmí?" literally, "Have you eaten manioc?" but conveying the meaning, "Have you eaten anything yet?"

Manioc is cultivated in swidden gardens, the care of which is the major subsistence activity of women. A woman's husband, sons, or sons-in-law may clear the forest to make the garden, and they may plant maize in its center or plantains in its perimeter, but the garden is most closely identified with the woman who cultivates it. After the forest vegetation in the garden site has been cut, dried, and burned, a woman begins to plant it with numerous varieties of manioc and, to a lesser extent, with yams, taro, cocoyams, sweet potatoes, peanuts, and a number of other cultigens. Nearly every day she spends several hours in her swidden removing weeds, harvesting manioc tubers, and replanting manioc stems.

The preliminary findings of ethnobiological research conducted by Berlin and other fieldworkers from the University of California, Berkeley, among the Aguaruna of the Rio Cenepa reveal that Aguaruna women have an extraordinary knowledge of the varieties and growth requirements of manioc, and that they put this knowledge to work in their gardens. Berlin and Berlin (1977:13) conclude that
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Aguaruna women "produce—or have the potential to produce—much more [manioc] than they actually need." During our own fieldwork in the Alto Rio Mayo, we never heard of a catastrophic failure of a manioc garden, nor did any household suffer from a substantial shortage of manioc unless serious illness or relocation to a new village prevented a woman from pursuing her horticultural tasks.

While the Aguaruna communities of the Alto Mayo are still able to satisfy their protein needs by hunting and fishing, both of these activities have a strong element of unpredictability not associated with horticulture. This is particularly true in the game-poor communities near non-Indian settlements. However, even in more remote areas where fish and game abound, it is not unusual for the members of a household to go without meat for several days a week.

THE GARDEN AS A SPIRITUAL REALM

The swidden garden has great symbolic and spiritual significance for the Aguaruna. It is one of the few places where a woman can go alone without attracting curiosity and suspicion. It offers privacy from prying eyes and ears and is therefore the site of a certain amount of intra- and extra-marital sexual activity. Two women may go to a garden to exchange intimate information about each other’s lives, and it is there that one woman can teach magical songs to another without interruption. In mythological times the garden was the place where women entered into romantic liaisons with animals in human form (e.g., see Akuts Nugkai et al. 1977, Vol. II: 143), and where they were taught how to give birth by katip, the common mouse (Jordana Laguna 1974:107-110).

Another important characteristic of the garden is that it is the point of contact between women and certain kinds of spirits not commonly found elsewhere. The most important of these is Nugkai, a supernatural being who has been variously identified as the “earth mother” (Harner 1972:70) and the “feminine under-soil master of garden soil and pottery clay” (Whitten 1978:843). The Aguaruna say that in ancient times their ancestors had no cultivated plants, and subsisted on an unappetizing mixture of mashed balsa wood and a few fruits and tubers, most of which are now regarded as inedible. A woman came upon Nugkai (who in most Aguaruna accounts is described as an ordinary looking woman) washing manioc in a river. The Aguaruna woman tried to convince Nugkai to come with her so that her family would have food. Nugkai refused to come but sent her young daughter instead. The daughter of Nugkai could summon magically all the plants of the garden, and even meat and fish, so that the ancestors of the Aguaruna suddenly found themselves with a superabundance of food. The little girl also produced miraculously various kinds of clay pots in which the food could be served. After Nugkai’s daughter was mistreated by the mischievous children of the household, she tried to return to her mother’s home. She hid in a
segment of a bamboo stem and was converted into an infant who entered the anus of one of the members of the household. The infant then transformed herself into flatus, which has plagued human beings ever since. The plants that Nugkui had given became deformed and unproductive, leaving the ancestors again without a source of food. Eventually, Nugkui took pity on their plight and, appearing in a woman’s dream, directed her to a cache of plants that the woman subsequently propagated and shared with other people. Now, however, the plants required human toil in order to grow.5

The Nugkui of the myth still lives in the present, inhabiting the topsoil and helping the cultivated plants to grow quickly. The Aguaruna do not make a sharp distinction between Nugkui and ordinary human beings—both can be described as aents, “people”—but Nugkui is attributed wonderful powers that give her control over the plants of the garden as well as over certain game animals. In his discussion of Nugkui beliefs among the Jívaro proper of Ecuador, Harner (1972:70) notes that in some contexts the Jívaro think of Nugkui as a group or family of beings rather than as a single individual, a concept that is shared by the Aguaruna. Following Harner’s example, however, we will continue to refer to Nugkui in the singular.

After Nugkui, the most important spirits with whom a woman has contact in her garden are those of the plants themselves, especially the spirits or souls of manioc. The story of how the Aguaruna learned that manioc plants have souls was told to us as follows:

Long ago people did not make gardens as we do today. Instead of waiting until the entire garden was cleared of brush and large trees, women began to plant manioc as soon as a small part of the garden was cleared. [Presumably, this was because forest clearance was much slower before the introduction of steel tools.] Thus the manioc was sometimes mature in some parts of the garden before the entire garden had been cleared.

One day a man who was clearing a garden said to his wife, “If I cut down this big tree, it might fall on the manioc that is already growing. Shall I leave it standing or cut it down?” He decided to cut it down and instructed his wife to make manioc beer so that he could invite his kinsmen to help him.

A few days later the men came, and after drinking manioc beer they began to chop down the large tree. Suddenly the souls of the manioc plants arose; they were people, lots of people. The manioc people said, “We will help cut the tree so that it won’t fall in our direction.” When the manioc people arose, all of the men fell asleep.

Some of the manioc people began to pull a vine growing on the tree, while others cut the tree with axes. They pulled the tree so that it would fall away from them. As they pulled, the old manioc people sang, “Sons, pull hard so that the tree won’t crush our children. When we’re done we shall eat the head of a spider monkey . . .”

When the tree had been felled, the manioc people disappeared. Among the sleeping men, the man who had called the work party could hear the songs of the manioc people in his sleep. . . . Because of this, we know that manioc has a soul, that it has people.

Though Karsten (1935:123) reports that the Jívaro proper of Ecuador regard the soul of manioc as being a woman, the Alto Mayo
Aguaruna reason that since manioc plants are "people," there must be both male and female plants, as well as adults and children. The largest "adult" plants tend to congregate in the perimeter of the garden where they protect the smaller "child" plants in the center. When a woman is harvesting manioc, she should leave a few of the very largest plants unharvested so that they will call new plants to replace the ones just removed. Of the plants that she does harvest, not even the tiniest tuber should be left behind lest this "baby" begin to cry because it has been abandoned. As one woman told us:

The other plants come and take the baby tuber saying: "Why did our mother leave you behind? If she does this, how will the manioc grow so that she can make manioc beer for our father?" To avoid this, one must always collect every tuber when digging up manioc.

Baby manioc plants that cry a great deal are consoled by the bird sukuyá (unidentified), which is a messenger of Nugkui. Women sometimes sing songs asking the bird sukuyá to devote special care and attention to their plants.

The souls of manioc plants are extremely dangerous during the first few months after planting. The Aguaruna say that the young plants become thirsty, and if their thirst is not quenched by ritual means they may drink the blood of someone who is passing through the garden. The drinking of blood is also referred to as "eating one's soul," and as far as we could determine the two expressions are used interchangeably. A person whose blood has been drunk gradually becomes pale and weak, and easily falls victim to fatal illness. To prevent children from becoming victims of the thirsty manioc plants, Aguaruna women discourage them from playing in gardens (Harner 1972:75).

It is in this spiritually-charged atmosphere that a woman performs her daily horticultural tasks. To perform effectively as a gardener, she must acquire the knowledge necessary to meet the metaphysical as well as the physical needs of the cultivated plants, and at the same time protect herself from their potentially harmful powers. Apart from strictly botanical knowledge of the properties of manioc and other cultivated plants, women's gardening lore can be divided into three broad categories: (1) gardening songs, (2) the use of magical gardening stones (nantag), and (3) miscellaneous techniques and precautions associated with cultivation.

**GARDENING SONGS**

Aguaruna tradition is rich in magical songs (anen), which are used for hunting, warfare, and courtship, as well as horticulture. Magical songs are distinct from common social songs (nampét) in form, content, and manner of acquisition. Social songs are often made up on the spur of the moment at parties and are regarded as public displays of wit and verbal prowess. Magical songs, in contrast, are thought of
as ancient and powerful, and are acquired secretly. They employ unusual items of vocabulary, including obscure animal synonyms and words borrowed from other Jivaroan languages. Furthermore, the words must be sung exactly as learned, without improvisation or error. To be taught a magical song, the one who wishes to learn the song must first become slightly intoxicated by drinking tobacco juice mixed with the saliva of the teacher of the song. Then the words and melody are memorized as the person teaching the song sings it over and over again. Subsequent to learning a magical song, one must maintain a period of sexual abstinence and observe various food taboos to prevent the song from “escaping” from the body.

The magical songs associated with horticulture are used to help cultivated plants grow faster, attain a larger size, and remain free of weeds and disease. In the words of one Aguaruna, “If you plant a stem of manioc next to the stem of a plant of the forest, the manioc will always grow faster because songs help it to grow.” Each stage of the horticultural cycle—clearing, soil preparation, planting, weeding, harvesting, and the washing of tubers—has its own characteristic songs. There are also songs for the preparation of manioc beer so that when it ferments it will be sweet yet intoxicating.

The following are portions of three gardening songs that we recorded in the Alto Rio Mayo. For illustrative purposes, we have chosen relatively simple examples.

**Song 1.** (If a woman happens to see leaves falling from a tree being felled by her husband in a new garden, she sings this song so that the sight of the falling leaves does not later cause the leaves of her manioc plants to fall.)

Doves, doves [i.e., the leaves]
Manioc is falling
It is not leaves which fall
Sweet potatoes are falling
Yams are falling
I am a little woman of NugRui
I never fail

**Song 2.** (This song is sung when a woman brings manioc stem cuttings to plant in her garden. The central conceit of the song is that the woman has so much skill that her manioc will grow in any kind of soil, no matter how poor.)

I go, I go
Your father [i.e., the woman’s husband] has seen some poor soil
I go there
Taking my machete, I guide you [i.e., the manioc stems]
I plant in any kind of garden
In what kind of garden can’t I plant?
In the Marañón land I will plant
I will plant in a garden of poor soil
In the thick bramble, home of the bird chuchumpiu, I will plant
Being a woman of Nugkui, I cannot fail
Song 3. (This is a fragment of a song used to increase the size of the developing manioc tubers. In the song the tubers are likened to objects of great thickness.)

The tail of the cayman is lying there
The root of seekemu [a plant with a large root] is lying there
The pig is lying there
On the other side of the garden
Let there be wampu [a large tree, Ficus sp.] on the other side
The root of seekemu is lying there
The pig is lying there
On the other side of the garden

Magical gardening songs may be sung aloud or silently in the thoughts of a woman as she goes about her daily chores. In the early stages of a new garden's development, a woman ideally should be singing or thinking gardening songs constantly. In this song, the singer hyperbolically states that she sings her songs without respite:

I don't sleep, I don't sleep
As you sleep [i.e., the manioc]
You become as large as mente [a large tree in the family Bombacaceae]
I don't sleep
You grow like the branches of wampūsh [a large tree, possibly Ceiba sp.]
"My mother sleeps" you say
Why do you say it?
I don't sleep

These gardening songs bear an uncanny resemblance to the Trobriand garden spells reported by Malinowski in Coral Gardens and Their Magic (1935) and recently reinterpreted by Tambiah (1968, 1973). Both the Trobriand spells and the Aguaruna songs make strategic use of analogy with the idea of transferring certain desired qualities from one thing to another. In Song 1, for example, the leaves falling to the ground—which through one analogical line of thought are believed to cause horticultural failure—are likened to garden tubers falling in great quantity, thus metaphorically converting something undesirable into something desired. In a similar fashion, the tremendous growth of the cayman's tail, the pig, or the Ficus tree is symbolically transferred to the manioc tubers in Song 3.

Mythology is the source of many analogies in Aguaruna gardening songs. Nugkui, the mythological giver of cultivated plants and a powerful symbol of fertility, is the most frequently mentioned myth figure. Gardening songs also make frequent allusions to the child Uwancháu, who is described in the following grisly myth:

Long ago, a woman whose newborn child had recently died came upon an infant in the forest. It had been brought by the wind. The baby cried uwa, uwa; because of this it was called Uwancháu. It had very fat lips. The woman took Uwancháu home and began to nurse it. It sucked and sucked until the woman had no more milk. Then it kept on sucking until it drank all of her blood and the woman died. Her husband killed the baby Uwancháu with his machete. The baby was full of blood.
In gardening songs, Aguaruna women often sing, “I am a woman of Nugkui, I am a woman of Uwancháu.” The persuasive intent of the identification of the gardener with Nugkui is obvious, but why the comparison to the vampire-like infant Uwancháu? We feel that the significance of the phrase “I am a woman of Uwancháu” is two-fold. First, by saying that she is like Uwancháu, a woman establishes an affinity with her “children,” the manioc plants, which are also beings capable of sucking blood. Second, a woman who is full of blood like Uwancháu has demonstrated that she is able to control the dangerous thirst of her manioc by using the appropriate songs and rituals—that is, she has retained her blood because her manioc plants have been unable or unwilling to take it from her owing to her ritual knowledge. By invoking the image of Uwancháu in this way, the gardener implies that she is close to her plants and that, like a mother controlling her children, she prevents them from misbehaving.

Women in the Alto Mayo are rather vague about how magical songs help their plants to grow. In general, the Aguaruna explain the efficacy of magical songs in terms of communication between the invisible, spiritual aspects of beings. When a man sings a magical love song, for example, it is heard by the soul of the woman who is the intended recipient; the soul, in turn, affects her feelings toward the man. Gardening songs apparently are directed toward the various kinds of souls or spirits of the garden: Nugkui (the ultimate source of garden fertility), the manioc souls, and the souls of magical gardening stones, to be discussed shortly. In any given song, the intended recipient may be any or all of these spiritual forces. Though the spirits are conceived of as independent, sentient beings, the attitude of the singer is less supplicative than imperative. A woman tells the souls of her manioc plants to grow, and they do, as long as she has not broken any of the taboos associated with their cultivation.

We found that women were often reticent about recording gardening songs in the presence of people other than close female relatives (e.g., their sisters or daughters). This is because the songs are viewed as valuable personal possessions that need not be shared freely. Indeed, women traditionally obtain at least some of their songs by purchasing them with cloth, beads, or other goods. Songs obtained without payments are usually taught by an older kinswoman with whom a woman has close and friendly relations. The secrecy surrounding the songs reflects a certain competitiveness in gardening, such that women are pleased when their gardens produce more than those of their co-wives and neighbors. A woman who knows many powerful gardening songs is sure to produce a bountiful crop of manioc, which in turn raises her status in the household and the community.

**Magical Gardening Stones**

The most closely guarded personal possessions of Aguaruna women are magical gardening stones called nantag.6 There are other
kinds of stones that the Aguaruna use for magical purposes, but only *nantag* are employed in horticulture. They are exclusively the property of women.

Aguaruna women conventionally describe *nantag* stones as red and shiny (cf. Karsten 1935:127; Harner 1972:72), though from our own observations the stones resemble riverbottom pebbles of about two to ten centimeters in diameter, of various colors. A few Alto Mayo women state that *nantag* come in different colors and that the color indicates the cultigen with which it is associated (e.g., red stones are for manioc, black stones are for yams, etc.), but this opinion is at variance with general belief. Most women seem to feel that the actual color of the stone does not substantially affect its powers, though as we shall see it is significant that the archetypal color of *nantag* stones is red.

*Nantag* stones possess a fecundating power that causes plants to grow swiftly and abundantly when brought into contact with them. This contact is achieved in a short ritual that a woman performs in a new garden when it is planted for the first time. The following is a description of this ritual as it is carried out by the women of the Alto Rio Mayo.

Prior to planting a new garden, a woman collects stem cuttings of manioc as well as tubers or cuttings of other root crops—taro, yams, cocoyams, achira, and sweet potato. Peanuts are sometimes also included. When she is ready to plant a section of the garden, she rises early in the morning, carefully washes her hands, and goes to the garden without eating. She takes with her the tubers and manioc stem cuttings in a basket, her *nantag* stones wrapped in a piece of cloth, an old ceramic or metal pot, enough water to fill the pot, and a number of pods of red-staining achiote (*Bixa orellana*). She may also bring one or more of the following plant substances: the roots of *wampuṣh* and *mente* (both of which are trees), the root of the herb *seekemu* (source of a native soap), and the roots/bulbs of the medicinal herbs *pijipig* and *kampānak* (see Table 1.) In some cases the bowl, water, *nantag* stones, or plant substances are stored in a small shelter in the garden in preparation for the planting ritual.

Upon arriving in the garden, the woman crushes a pod of achiote and uses the red pulp to paint lines on her cheekbones and on those of other people who may be accompanying her, e.g., her children. This is done because the *nantag* stones (and the manioc plants, if some have already been planted) are potentially dangerous and it is important that the woman and her companions identify themselves as friends by being painted.

The woman unwraps the *nantag* from their cloth and puts them in a bowl. Then she mashes the rest of the achiote pods and puts the red seed pulp in the bowl, mixing it with water to form a red liquid. If the other plant materials mentioned earlier have been collected, they are now mashed and mixed with the liquid in the bowl. The root of the
Table 1
Plants Used in Manioc Planting Ritual

<table>
<thead>
<tr>
<th>Aguaruna name(s)</th>
<th>Scientific name</th>
<th>Part used in ritual</th>
<th>Key attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ipák, shampu, pisu</td>
<td><em>Bixa orellana</em></td>
<td>Fruit, seeds</td>
<td>Source of red dye.</td>
</tr>
<tr>
<td>wampúsh</td>
<td><em>Ceiba sp.?</em></td>
<td>Root</td>
<td>Large, fast-growing tree of great girth.</td>
</tr>
<tr>
<td>mente</td>
<td>Unidentified member of Bombacaceae</td>
<td>Root</td>
<td>Large tree; repository of shamanistic powers.</td>
</tr>
<tr>
<td>seekemu</td>
<td>Unidentified</td>
<td>Root</td>
<td>Has a thick root, similar to manioc tuber; also used as a soap which produces foam similar to that of manioc beer.</td>
</tr>
<tr>
<td>pijipig</td>
<td><em>Carex sp.</em> or <em>Cyperus sp.</em></td>
<td>Root</td>
<td>Has diverse magical/medicinal powers.</td>
</tr>
<tr>
<td>kampának</td>
<td><em>Eleuthrine bulbosa</em></td>
<td>Bulb</td>
<td>Medicinal powers?</td>
</tr>
</tbody>
</table>

(Principal source of species determinations: Berlin and Berlin 1977.)

Soap plant *seekemu* is cut up with a machete and the pieces rubbed together in the red liquid to form a sudsy mixture. All the ingredients are then stirred with a manioc stem. Although Aguaruna women handle *nantag* freely in other contexts, they say that when stirring them with other ingredients one must not touch them or the stones might lose their power.

In one of the planting rites which was recorded, the gardener sang the following song while stirring the red mixture of stones, water, and plant substances:

My child has hair cut in bangs,
My child has blood
The enemy's child has an oval face,
Drink his blood
My child has blood
Drink, drink the blood of the paca [a large rodent, Cuniculus paca]
Drink, drink the blood of the agouti [a large rodent, Dasyprocta aguti]
Don't drink the blood of my child
Let the manioc of my enemies come to me,
Come, come

The red liquid is then poured over the manioc stem cuttings and other tubers which are to be planted. While pouring, the woman is careful not to pour out the stones and mashed plant substances. To give them luck in planting, the woman and her daughters may wash their hands in the red liquid as it pours out of the pot onto the pile of cuttings and tubers. Then the manioc stem sections are planted by lifting the soil with a palm wood spade and inserting the stems in the ground. If manioc planted on previous days is already growing in the garden, the woman reserves some of the red liquid and later sprinkles it over the young plants, saying “drink, drink.” After the entire garden has been planted, a process which may take several days, the nantag are placed in a covered pot and hidden somewhere in the garden, usually at the base of a large tree. This is done so that the stones will be close to the developing plants but invisible to potential thieves.

The principal purpose of this ritual, from the Aguaruna point of view, is to convey the growth-promoting powers of the nantag stones to the manioc stem cuttings and other cultigens. The medium for this transfer is the red liquid made of achiote and water in which the stones are immersed. Aguaruna women state that the red liquid satisfies the dangerous thirst of the manioc plants; some women explicitly refer to the liquid as “blood.” The plant substances added to the “blood” further increase its power by transferring their desirable qualities to the liquid and, through the liquid, to the manioc. The root of wampūsh, for example, is mixed with the liquid “so that the manioc will be thick like the trunk of the wampūsh tree,” and so on. These plants and the attributes that relate them to the planting ritual are listed in Table 1.

While the primary purpose of the planting rite is to encourage the growth of manioc and other tuberous cultigens, it has a secondary function of a prophylactic nature. We mentioned earlier that without blood the young manioc plants might surreptitiously begin to devour the blood of the garden owner or some member of her family. The Aguaruna state emphatically that nantag stones have this same propensity, perhaps even more than the manioc plants. Nantag stones are classified as yukágün, “things that eat us,” a distinction that they share with the jaguar and the anaconda. By putting the nantag stones in the achiote and water “blood,” the gardener satisfies their dangerous thirst, at least temporarily. The song sung when mixing the nantag with the “blood” further protects those present by directing both the souls of the manioc plants and the nantag to drink the blood
of an enemy’s child, or of the rodents pacá and agouti, which are common garden pests. As an additional precaution, the participants in the planting rite paint their faces with achiote as they enter the garden. This marks them as “friends” of the manioc plants and nantag stones.

There are many different tales about the origin of nantag stones, both in mythical times and the present. The ancestors of the Aguaruna often found nantag in the forest after being directed to them in dreams by Nugkui or one of her animal helpers. While women today usually inherit many of their nantag from their mothers, there are still cases in which someone is led to nantag in a dream. The following account, given to us by a middle-aged woman, illustrates this kind of nantag discovery. The circumstances are somewhat unusual in that it is the woman’s husband who dreams of the stones, though in all other respects the story is typical of many that we heard during the course of our fieldwork:

This stone is the tapir’s nantag. Long ago my husband found a tapir’s trail. He followed the trail and came upon a curassow sitting in a tree. He shot the curassow and returned home. That night he had a dream in which a person came to him saying: “Where you were yesterday, in the tapir’s path, there is a log which crosses the trail. There I am going to leave a stone. Tomorrow you should go there and get it. This is a stone for manioc and yams. I never suffer from hunger [i.e., because the stone is powerful]. Don’t neglect the stone. Give it achiote to drink, because it killed my sister. Take care of it.” The next morning, he went to the spot and found the nantag stone on the log across the tapir’s trail.

Apart from inheriting nantag stones from female relatives or being led to them in dreams, women sometimes find them in the entrails of fish or game animals, in the soil, or on the riverbottom. One of the authors (Van Bolt) witnessed the discovery of a potential nantag while helping a woman cultivate her garden. The woman came upon a shiny stone in the soil next to a manioc tuber, a sign that the stone was a nantag specifically for manioc. The woman kept the stone, remarking that she would later test it to determine whether it really was a nantag. To test a stone, a woman uses it to prepare various cuttings or tubers for planting and watches to see if their growth is in any way exceptional. If the stone has no effect on manioc, it may be tested with some other cultigen. Plants that have nantag include manioc, taro, yams, cocoyams, sweet potatoes, achira, and peanuts. There are no nantag for plants such as bananas, maize, and squash. The obvious common element among nantag-assisted crops, then, is that their edible portions grow in the soil, the domain of Nugkui.

Nantag have several characteristics that distinguish them from ordinary stones. They tend to move by themselves and will run away if not carefully wrapped in cloth and kept in a covered bowl or storage basket. Nantag have a soul (wakán), which may appear to their owner in dreams. In the most commonly reported cases, the owner of nantag stones dreams that a young girl is saying to her: “Mother, I am
suffering from thirst. Please give me something to drink.” This is interpreted as a sign that the stones are thirsty and need to be given achiote and water to drink. The stones are allowed to sit in the mixture for a few hours or perhaps overnight, then they are wrapped in their cloth and put away. The Aguaruna say that from time to time a woman discovers some human hairs wrapped around the stones when she removes them from their protective cloth. This means that the stones have “drunk the blood” or “eaten the soul” of the owner of the hair, whoever it might be. Some people insist that the death of the victim can be prevented by immediately scorching the stones in the fire, then smashing them with a larger stone, but this opinion is not universally held. A prudent woman feeds her nantag stones about once a month with achiote and water “blood” so that no untoward incident can occur. She is also conscientious about learning and using magical gardening songs, since these are believed to have a controlling effect on the nantag stones.

In terms of their relative efficacy and potential dangers, Aguaruna women distinguish between dekas (“true”) nantag and wainak (“false”) nantag. True nantag stones are usually those that have been handed down directly from a woman’s ancestors, passing from mother to daughter for many generations. These are the most effective in horticulture but are also the most dangerous to own because of their propensity to drink blood or eat souls. False nantag are those that a woman has found herself in the soil, in animal entrails, etc. They are thought to have some positive effect on plant growth, but not as much as true nantag, nor are they as prone to harm human beings. As far as we were able to determine, most women in the Alto Rio Mayo have a mixture of true and false nantag stones.

The powers and dangers of nantag are at the root of the secrecy which surrounds their possession and use. Women fear that their neighbors, covetous of the bountiful harvests that come from the possession of nantag, will attempt to steal their stones from the garden. Fear of nantag theft is almost an obsession among Aguaruna women, though we were able to document few cases in which it has actually occurred. When asked, Aguaruna women often deny that they own nantag, partly from fear that their stones will be stolen and partly to avoid the possibility that their nantag might be blamed for someone’s untimely death. However, women readily identify other women who own the stones, often naming an enemy or at least someone with whom they do not enjoy friendly relations. In this one can see elements of envy—so-and-so has a fine garden because of her powerful nantag—and criticism, since these same nantag pose a danger to the entire community. In one village that we visited, women stated publicly that their dislike for a certain woman (a new arrival from another region) was based on the fact that she owned exceptionally powerful nantag that might eventually kill someone. The fear of true nantag stones is so profound that one young woman
admitted giving hers away during her first pregnancy because she was worried that the stones would kill her baby. She decided to keep only her false nantag, which are less efficacious but safer to handle.

**OTHER GARDENING TECHNIQUES AND PRECAUTIONS**

Besides employing magical songs and nantag stones, Aguaruna women use several additional techniques to promote the growth of their garden plants. As we mentioned earlier, one of the perceived attributes of young manioc plants is that they tend to become “thirsty.” We were told that when thirsty, the souls of the young manioc plants cry out, “Bring us water before we drink the blood of our mother.” To prevent this from occurring, women interplant the manioc with the cultigens arrowroot, cocoyam, and achira. These plants are described as “people,” just like manioc, and they are attributed the ability to bring water to the thirsty manioc plants.

One woman described this phenomenon in the following manner:

> Arrowroot is a woman adorned with a snail-shell dance belt. She carries water to the manioc. Cocoyam brings even more water because she has big leaves to carry the water in. Achira has a twisted arm [an allusion to the bent leaves of this plant] and when she brings water it sloshes out as her arm hits branches, but she always arrives with a little water. If a woman doesn't have these plants in her garden, manioc won't grow there.

The belief that manioc will prosper only when planted with other cultigens provides a culturally compelling reason for maintaining a mixed planting strategy in the swidden garden. It also expresses the degree to which Aguaruna women see the relations of the plants within the garden as approximating human social relations. Many of the plants are “people,” with husbands, wives, and children. They speak to each other, help each other, and under certain circumstances may communicate with the woman who cultivates them. The gardener is their “mother,” who must care for them while maintaining order in their relations. By creating and maintaining a harmonious environment for plant growth, a gardener in effect becomes the “woman of Nugkui” mentioned in magical song texts.

There are at least two other species of plants worth mentioning that are sometimes planted with manioc to promote its growth: a variety of the sedge pijipig (*Carex* or *Cyperus* sp.) and a papaya-like plant called tsampaunum (possibly *Carica microcarpa*). Pijipig is one of the most important medicinal and magical plants used by the Aguaruna, its powers ranging from the promotion of a woman’s fertility to the ability to confer witchcraft powers. However, we are unable to find any clear symbolic connection between pijipig and manioc except that in both plants it is the underground parts that are regarded as most important. The papaya-like tsampaunum is frequently seen in swidden gardens in the Alto Mayo, planted near
manioc stems so that it grows almost intertwined with them. *Tsampáunum* has no uses other than as a magical plant since its fruits are considered inedible by the Aguaruna. We found no one who could explain why or how *tsampáunum* helps manioc to grow more swiftly. Several people remarked that the bright red fruits of *tsampáunum* resemble *nantag* stones, so it may be that the power attributed to the plant has its origin in this property.

There are various precautions and avoidances that women observe when planting manioc stem cuttings or working in a newly planted garden. During planting, a woman must abstain from sexual intercourse. However, it was unclear from our questioning whether sexual intercourse is felt to be directly damaging to the plants, or indirectly damaging through a lessening of the power of the *nantag* stones. A woman should not roast manioc in the coals of the fire immediately before or after planting, as this would make her hands hot and cause the new manioc stems to be burned. The smell of a menstruating woman or a new-born infant can also burn the plants, making them turn yellow and sickly, so women avoid the garden during their menstrual periods or immediately after childbirth. Women should not eat any kind of bird’s foot (e.g., of chicken, guan, or curassow) on days when they are planting a new garden, lest the growing tubers stay thin and unpalatable. Neither should they comb their hair in the garden, because this prevents the development of the dense tangle of stems characteristic of a mature manioc garden. Finally, while engaged in gardening tasks women do not drink water when thirsty, as this is believed to bring bad luck to the manioc crop; instead, a woman should drink only manioc beer. These precautions seem most important when the manioc plants are approximately waist high or smaller. Contact with mature manioc plants requires no special precautions.

**DISCUSSION**

Existing works on Jivaroan religion (e.g., Karsten 1935; Harner 1972) stress the degree to which the Jivaro conceive of the spirit world as a part of reality with which each person must establish some kind of direct, fruitful communication. In this kind of world view, events do not happen by themselves but rather through the interaction of spiritual forces that can be understood and controlled, to some degree at least, by those who have sufficient knowledge. While shamans are thought to have the greatest familiarity with souls and spirits, all adult men and women try to develop their own understanding through the consumption of plant hallucinogens at various points in their lives. As Harner (1972:135-142) has shown in his discussion of the Jivaro vision quest, a person’s chances of survival—to say nothing of health, happiness, and prosperity—are considered
to be minimal without this personal involvement in the spiritual aspect of reality.9

The attitude that human beings cannot succeed in an activity without understanding the spiritual reality lying within or behind it is clearly at work in Aguaruna gardening magic. Aguaruna women know that cultivated plants can grow without benefit of ritual activity, but they are convinced that this growth would be capricious and insufficient to meet the substantial daily needs of their households. To insure a regular and abundant harvest of tubers, women sing to their plants, try to prevent them from becoming "thirsty" for blood, bring them into contact with sources of animistic power, and in general attempt to establish a harmonious relationship between themselves and the souls or spirits that influence garden productivity. The principal components of garden magic—magical songs, taboos, and the use of nantag stones—are three refractions of Aguaruna theories of how people can favorably affect future events by means other than physical intervention, i.e., technology.

Magical songs act on the world through two parallel paths. Those Aguaruna who express any opinion at all about how such songs work tend to emphasize the way that the songs influence the diverse spirits of the garden, especially Nugkui and the souls of the manioc plants. The songs are thus seen as an appropriate medium for getting at the essence of things and making contact with the invisible life of the garden. We feel that there is also considerable evidence that the songs are thought to have a creative power in themselves, similar to that which the Aguaruna associate with dreams and visions. The Aguaruna frequently assert that when people see something in a vision, either under the influence of hallucinogens or precipitated by some cataclysmic event, the act of seeing that particular vision will bring it into existence at some time in the future. Young men and women traditionally take hallucinogens to seek a type of vision called niimagbau in which they see an image of their future spouse, their many healthy children, the future abundance of their domestic animals, and so on. Having seen this vision, they are assured that this happy state of affairs will eventually come to pass (Brown 1978:122). In a similar vein, an Aguaruna myth discloses that a shaman created the infectious diseases that now plague the Aguaruna by drinking vast quantities of tobacco juice and then "dreaming" the diseases into existence one by one.

We would like to argue that the evocative, highly metaphorical language of magical songs has an effect similar to that of the visionary experience. When a woman sings, as she does in Song 3, that "the tail of the cayman is lying there . . . the pig is lying there" she conjures an image of her manioc tubers that, by its very conjuration, compels the desired result to occur. The fact that magical songs are regarded as most powerful when the singer is slightly intoxicated with tobacco juice confirms the similarity between songs and visions. The idea that
images have creative power does not necessarily contradict the Aguaruna statement that the songs are addressed to spirits. For the Aguaruna, both mental images and spirits are capable of bringing things into being, and both of these sources of power are tapped in gardening songs.

Aguaruna explanations of gardening avoidances or taboos are generally limited to the comment, “This is the way that it always has been.” From the perspective of the outside observer, however, many of the taboos can be seen as an inversion of the logic (or analogic) of magical songs and the manioc planting ritual. The planting ritual, as we have noted, is based on the transfer of desirable qualities from certain objects to the cultivated plants; the taboos exist to prevent the transfer of undesirable qualities to the plants. By eating a bird’s foot on days when she is engaged in planting, for example, a woman would convey its scrawniness to her manioc tubers. Water is a liquid drunk by the Aguaruna only when manioc beer is not available, that is, when they are in a state of temporary poverty. The gardener, therefore, avoids drinking water during planting lest the poverty symbolized by the water be transmitted to her plants, stunting their development.

The power attributed to nantag stones is based on another principle of Aguaruna thought, namely, that certain objects may be repositories of animistic power. Harner (1972:72) reports that, among the Jivaro proper, gardening stones are thought to be “babies” of the earth mother Nugkui, thus deriving their power directly from her. While the Alto Mayo Aguaruna also make an association between nantag and Nugkui, their thoughts with respect to the stones seem more akin to those of the Canelos Quichua, whose culture has recently been described in considerable detail by Whitten (1976). He (1976:42) states that the Quichua conceive of stone as a material that can “bottle up and release animistic substances,” thereby offering a source of power to those Quichua who know how to use it correctly. The Aguaruna, like the Quichua, believe that some stones, especially those of an unusual shape, texture, color, or provenience, are endowed with the power to attract game animals, promote the growth of cultivated plants, arouse the passion of members of the opposite sex, or weaken the will of enemies. Such stones are encountered frequently in the course of daily activities, but only observant people attuned to the invisible, spiritual aspect of reality can distinguish them from the ordinary pebbles that abound in some parts of the Alto Mayo. When a person finds a stone that gives evidence of having special power, he or she tests its efficacy by employing it in various tasks while paying close attention to dreams and omens that may hold clues to its true nature. A stone that proves effective in horticultural activities is classified as a nantag and used as such. The Aguaruna do associate nantag with Nugkui in a general way, since both the stones and the earth mother have an effect on the development of
cultivated plants. However, the growth-promoting quality of *nantag* stones is only one form of the animistic power found in lithic materials.

Blood and blood drinking are dominant metaphors in gardening songs and in the practices associated with *nantag* stones. The almost obsessive notion that manioc plants and *nantag* stones need blood (or its symbolic equivalent) to survive is consonant with a series of deep-seated structural oppositions in Aguaruna world view, deriving ultimately from the contrast between hunting and horticulture. These oppositions form the now familiar litany of structuralist analysis: male activity/female activity, forest/garden, animal/vegetable, and so on. Relevant to the present discussion is the fact that hunting is an activity that takes or destroys life while horticulture is oriented to the promotion of life. In hunting, people take the blood of animals whereas in horticulture plants take the blood of people. Blood is a key symbol of vitality for the Aguaruna, as indeed it is for many cultures throughout the world. We also found that blood has a symbolic connection with human conception and gestation: many Aguaruna women say that menstrual blood appears “because a woman is going to become pregnant,” that is, because postpartum amenorrhea has ceased and a woman is again ready to conceive. Blood is thus a sign of potential fertility in this case. By feeding “blood” composed of achiote and water to their crops, women impart a vital substance that helps their plants grow faster and more robustly than the weeds with which they compete.

Blood has another connotation related to its role as the medium by which thought is conveyed within the human body. In Aguaruna, there is a close linguistic association between the heart (*anentási*) and the thought process itself (*anentáimat, “to think”). Older Aguaruna who have been relatively uninfluenced by non-native theories of human physiology insist that people think with their heart and that the blood then transmits the thoughts to the rest of the body through the circulatory system. As it is used in the planting rite, the achiote and water “blood” symbolizes, and gives palpable evidence of, the transfer of growth-promoting thought (in the form of magical songs, which are often repeated in the thoughts rather than sung aloud) from the gardener to her plants.

Since blood and blood drinking are such important metaphors in gardening magic, why do the Aguaruna employ achiote and water in the planting ritual instead of real blood obtained, say, from a sacrificed animal? Although we failed to ask this question while in the field, in retrospect we feel that achiote has symbolic qualities of its own that make it more appropriate than blood for the planting rite. A long Aguaruna myth explains that achiote was once a woman who wandered through the forest in the company of her sister genipa (*Genipa americana*, source of a blue-black dye). The two sisters suffer many humorous misadventures as they find, then reject, various hus-
bands. Finally they decide to remove themselves from the cares of the world by changing into useful trees; thus they assume their present form. As a garden plant of feminine origin and the source of the most important coloring used in pottery manufacture, achiote is strongly associated with the earth mother Nugkui, the latter being the primeval giver of cultivated plants and pottery (Whitten 1978: 844). The use of achiote, which symbolizes blood by virtue of its color and Nugkui by virtue of its mythical origin and its role in pottery making, serves to link together and add meaning to the diverse symbols of gardening ritual.

CONCLUSIONS

We have described here some Aguaruna Jívaro beliefs related to root crop horticulture and the various means Aguaruna gardeners employ to promote the successful development of their crops, particularly sweet manioc. Because it is their major source of carbohydrates and the main ingredient of the beer that is indispensable to the traditional system of feasting and hospitality, manioc has an extremely important role in Aguaruna society. There is a tremendous demand for manioc in the household, but available evidence suggests that gardens easily produce enough tubers to satisfy this demand and could even generate a surplus with little additional effort. Nevertheless, the Aguaruna themselves perceive manioc production as highly uncertain. They feel compelled to increase the chances of an adequate crop by using magical techniques to encourage plant growth and development. These techniques include the establishment of harmonious communication with the souls and spirits of the garden, the strategic use of images (especially those embodied in the metaphorical language of songs) as a fecundating force, and the harnessing of the animistic power residing in special stones.

As far as we have been able to determine, the notion that horticultural success is uncertain has its origin in Jívaroan world view, not in an empirically verifiable scarcity or unpredictability of garden production. The Aguaruna gardener feels that technology alone cannot guarantee an adequate supply of manioc and other tubers; and as functionalist theory predicts she responds to this situation through recourse to the supernatural. However, the stresses associated with Aguaruna horticulture are the result of cultural rather than natural realities.
APPENDIX

Identification of Plants Referred to in Text

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Aguaruna Name(s)</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>sweet manioc</td>
<td>mama</td>
<td>Manihot esculenta</td>
</tr>
<tr>
<td>yam</td>
<td>kegke</td>
<td>Dioscorea trifida</td>
</tr>
<tr>
<td>cocoyam</td>
<td>sagku</td>
<td>Xanthosoma spp.</td>
</tr>
<tr>
<td>taro</td>
<td>pituk</td>
<td>Colocasia esculenta</td>
</tr>
<tr>
<td>arrowroot</td>
<td>chiki</td>
<td>Maranta ruiziana</td>
</tr>
<tr>
<td>sweet potato</td>
<td>kamüt, inchi, îdáuk</td>
<td>Ipomoea batatas</td>
</tr>
<tr>
<td>achira</td>
<td>tuju</td>
<td>Canna sp.</td>
</tr>
<tr>
<td>achiote</td>
<td>ipák, pisu, shampu</td>
<td>Bixa orellana</td>
</tr>
<tr>
<td>sedge, piripiri</td>
<td>pijipig</td>
<td>Carex sp./Cyperus sp.</td>
</tr>
<tr>
<td>papayilla</td>
<td>tsampáunum</td>
<td>Carica microcarpa</td>
</tr>
<tr>
<td>balsa, topa</td>
<td>wawa</td>
<td>Ochroma sp.</td>
</tr>
<tr>
<td>kapok?</td>
<td>wampúsh</td>
<td>Ceiba sp.?</td>
</tr>
<tr>
<td>soap root</td>
<td>seekemu</td>
<td>unidentified</td>
</tr>
<tr>
<td>ojé</td>
<td>wampu</td>
<td>Ficus sp.</td>
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<tr>
<td></td>
<td>mente</td>
<td>unidentified member</td>
</tr>
<tr>
<td>genipa</td>
<td>suwa</td>
<td>Genipa americana</td>
</tr>
</tbody>
</table>

(Principal source of species determinations: Berlin and Berlin 1977.)
NOTES

1. The research on which this article is based was conducted from December, 1976 to October, 1978 in several Aguaruna Jivaro communities in the Department of San Martin, Peru. Financial support for this research came from the Doherty Foundation, the Wenner-Gren Foundation for Anthropological Research, and the Centro Amazónico de Antropología y Aplicación Práctica, Lima. We would like to thank William L. Merrill, Richard I. Ford, Aram Yengoyan, Gary J. Witherspoon, and C. Wesley Cowan, who were kind enough to comment on an earlier draft of this paper.

2. Among the few exceptions to this pattern that we have been able to find are the Trumai (Murphy and Quain 195 j), the Timbira (Nimuendaju 1946), and the Quichua (Whitten 1976, 1978), the latter group sharing many cultural traits with their Jivaroan neighbors.

3. Spelling of Aguaruna words follows the system used by the Summer Institute of Linguistics (Larson 1966) and now by the Aguaruna themselves. All letters are pronounced more or less as in Spanish except e (which represents the high central vowel i), g (which is pronounced like ng as in ring), and b and d (pronounced like mb and nd, respectively). All accents fall on the first syllable unless otherwise noted.

4. The scientific names of plants mentioned in the text are listed in the Appendix. For a more detailed inventory of plants cultivated by the Aguaruna see Berlin and Brown 1976:22-26.


6. The terms dukúcb (literally, “grandmother”) and kaya (“stone”) are also sometimes used to refer to nantag.


8. Some women mentioned the existence of a special kind of nantag used to make manioc beer sweet and intoxicating. This stone is reportedly kept in the large pots in which the manioc mash ferments. We never had an opportunity to see this kind of nantag during our fieldwork.

9. In the Alto Mayo the traditional vision quest has recently been abandoned in response to the introduction of state-controlled schools, rapid changes in the economic and social environment, and the efforts of Christian missionaries. This situation is described in greater detail in a forthcoming ethnographic report (Brown, in press).

BIBLIOGRAPHY


