THE PIRO OF THE URUBAMBA (1)

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The tribe

The Piro of the Urubamba are a linguistic group of mixed blood of various tribes of the Montaña of eastern Peru and the borders of surrounding countries. A large proportion of the Piro are mixed with the neighboring Campa. Other tribes represented in the preceding two generations are the Machiguenga, Amahuaca, Cocama, Amuesha, Shipibo, Chayahuita, and Quechua. Of the Piro inhabiting the largest village, Huau, there was not one who did not name a parent or grandparent of some neighboring tribe. The statistics were the same for representatives of various other villages who were questioned. About a half dozen individuals are known to be descendents of whites.

The predominant racial type is Mongoloid, with obliquely placed eye-slits, dark brown eyes, high and prominent cheek bones, and straight

black hair. The noses are flat, but less so than the noses of most Orientals. All of the babies examined so far have the Mongolian spot. The unexposed skin of some has a yellow rather than a brown tinge. In contrast with this type, some of the Piro have typical North American Indian features and coloring. There are various types. Hair frequently falls in deep waves and even in ringlets, and sometimes has patches of reddish pigment, as though faded. Beards are absent or scant. Body hair is generally scant, but a few men have heavy body hair. Newborn infants are frequently hairy, especially on the forehead and chest. Light brown and hazel eyes are found infrequently, and one small child whose father claims to be full-blooded Cocama has blue-brown eyes. Lips are usually thick. In height, men vary from five feet to five feet four and a half inches. The women average about two inches shorter.

In general the Piro are an intelligent, industrious, and progressive people, merry in play, though grave and quiet otherwise.

History

The earliest recorded contact of whites with the Piro was that made by E. Richter, a Franciscan who in 1685 published a vocabulary of Campa, Piro, and Conibo. The Franciscans of Richter's day named five Piro dialects: Cushinabas, Manatinabas, Mochoas, Upatarinabas, and Ipitos, names not identifiable with Piro forms, but somewhat reminiscent of the names of Pano tribes. The next published ethnographic and language material was that of a voyager, Francisco Carrasco, who on a trip in 1846 compiled a vocabulary of Piro and three other languages, giving a list of about 170 words. In June of 1879 a Franciscan mission entered Piro territory to reestablish a deserted project then called "the ancient mission of Lima Rosa". The Padre, Agustín Alemany, compiled a vocabulary of about 1775 words. He found the language study discouraging and the people unfriendly, and in August of 1881 the mission was abandoned.

In the early part of this century the rubber dealers attempted to enslave the Piro. According to Fuentes, one of them, Fiscarrald, "conquered the tribe by blood and fire". Rather than submit to him, they fled from the region and not until he had disappeared did they return to their accustomed forests. A little later there was reported an uprising of the Piro against the whites, ending with the capture and shooting of the Piro leader. Until quite recently most of the Piro of the Urubamba were serving patrons to pay off debts. In spite of their labor the debts continued to mount steadily as they received a pitifully small amount of trade goods. In the last few years a good number of the Piro have freed themselves from these debts.

During the past two decades Peruvian Seventh Day Adventist missionaries have had considerable contact with the Piro. In their schools, and in the Franciscan and Dominican schools, about two dozen of the Piro now living have learned to read and write Spanish more or less adequately. Though some pronounce the words fluently,

most of them do not understand a great deal of what they are reading.

Habitat

The population and locations of all the scattered communities of the tribe cannot be estimated at present. Asked by an outsider, the Piro of the Urubamba insist that they are the only surviving members of their tribe. They have, however, frequent intercourse with their close relatives of the Manu River in the Madre de Dios region near the frontiers of Brazil and Bolivia, and also with the Piro of the nearby Tambo and the several Upper Ucayali groups among whom they work and trade. Among intimates they list relatives in several communities far down the Ucayali, even to below Iquitos on the Amazon. Grandmothers and grandfathers mention the names of their brothers and sisters on the Purús River in Brazil, and on its affluent the Acre River which flows along the border between Brazil and Bolivia. Some claim to know other Piro in Bolivia, corroborating the statement by showing a Bolivian coin on a string worn about the neck of a child in the village of Miaría. The coin had been brought via the Manu River. Whites have reported Piro on the Napo, Samiria, and Tamaya Rivers. However little the Urubamba Piro may know of the scattered members of their tribe, they regard them as kinsfolk.

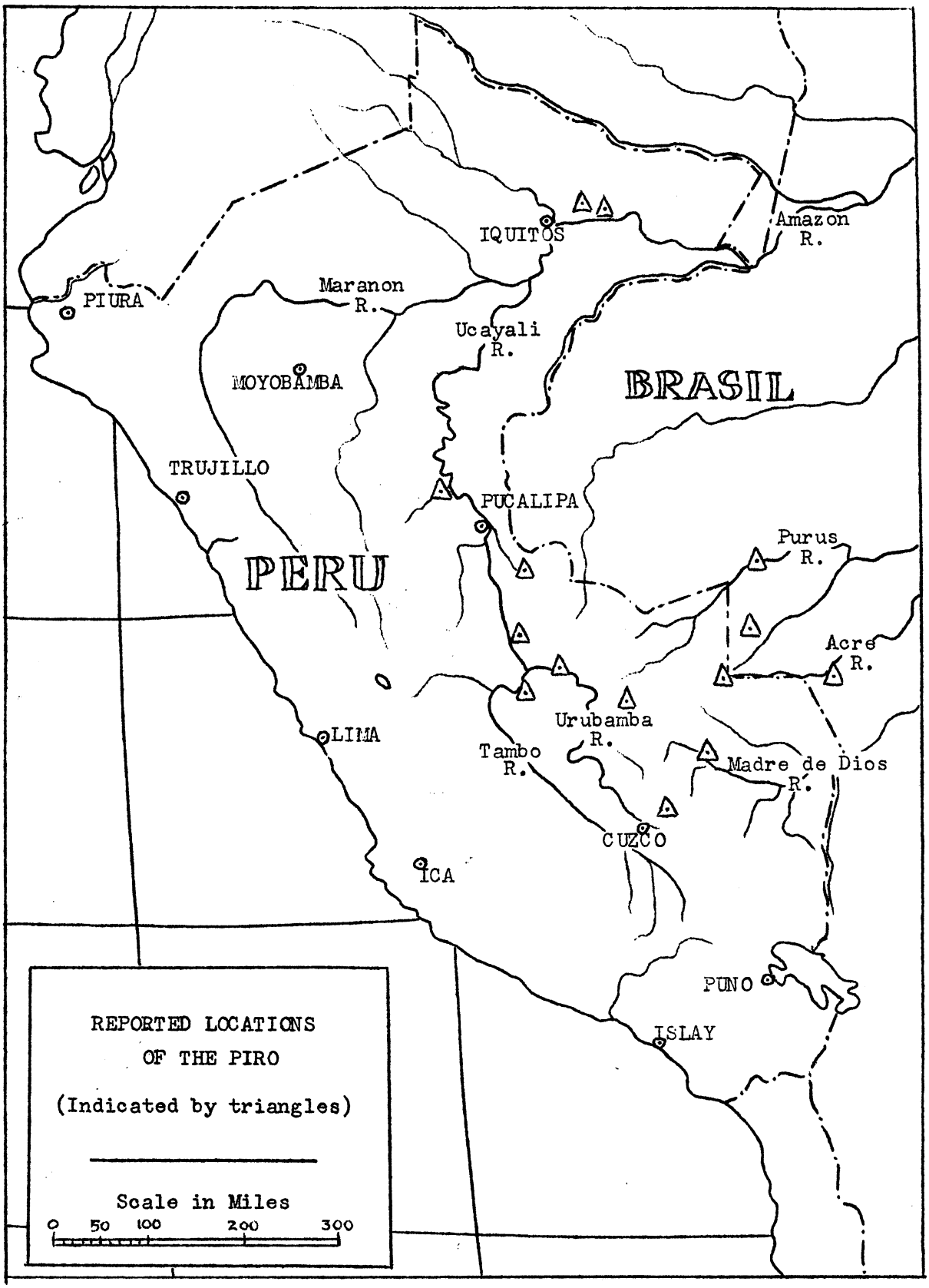
The Piro of the Urubamba number between four and five hundred, the number varying greatly because of the frequent migrations to and from the Manu and Tambo Rivers. The thirteen settlements existing at present are scattered along some ninety miles of winding river, beginning at the village of Mapchirga (Boa Creek) which is up-river from the Spanish-speaking village of Atalaya a day's poling by canoe as the Indians travel, or little more than five minutes by airplane. The most distant Urubamba settlement is that at the Pacría, founded in 1952. All of the thirteen settlements are at present on the banks of the Urubamba, except the Dominican Misión del Rosario, which is located just above the mouth of the tributary Sepahua.

The terrain of the lower Urubamba where the Piro live is broken by innumerable low ridges covered with tropical forest. The highest ridge rises to a peak visible from the Urubamba some ten miles downstream. The Piro call the peak Puyga Mriji. The banks of the river in places rise gently with scrubby willow or cane in the margin seasonally inundated, tall cane beyond, then usually the white-trunked cetico tree with its giant-fingered leaves, and the heavy, dark forest beyond. Occasionally a clay cliff, red, gray, blue or stratified, rises some hundred meters above the water. More typically the red clay banks are only a meter or two high in the rainy season, with a solid wall of jungle growth along them.

Rains become frequent in October. The river is usually high by December and does not recede until May. During the months of July, August, and September the gravel beaches are wide, dry, and glowing with heat as they reflect the blazing sun. The tropical forests along the banks are stifling and humid. Dust, settled every clear night by

PLATE II

Map of Piro Territory and Settlements



a heavy dew, dries in the early morning and blows in the clearings. Only the river is still breezy and cool. The evenings are always cool and pleasant.

The river itself averages about three hundred meters in width. The depth of its channel is unsounded. From rainy season to dry season the river varies as much as eight meters in depth, and frequently rises two meters in a single day.

Settlements

Village sites are selected with 'big water season' in view. Some of the settlements are high enough to be secure the year around, but many of them are flooded once or twice in the wet season. In the smaller villages the houses are in a single line along the bank of the river, either in the same large clearing, or else separated by plantings and bush, each with its own small clearing. The larger village of Huau has houses on opposite sides of a central clearing, but more than half of the homes are scattered along the river bank, each with its own clearing. The old village of Miaría, abandoned in 1950-51, had three streets with houses on both sides of the street, the streets forming three sides of an uncleared rectangle. This village was located two hours by canoe up a small stream which would average about fifteen feet in width during low water. Another recently abandoned settlement was hidden securely in the jungle, just a few moments by canoe back on an overflow which ran like a moat below the steep ridge on which the few houses were clustered. The Piro blandly denied the existence of this settlement until terms of the closest intimacy were established. The houses were, of course, clearly visible from the air.

The spacing of villages at intervals of some miles is necessary in order that the natural resources suffice for each village. Of utmost importance is the selection of a stretch of river in which the preferred species of fish abound, and the bank affords favorable soil for the growth of plantains. The river is also the principal means of transportation. It is the only means of travelling any distance, and is often the preferred means of going even from one end of a village to the other.

Settlements have varied in population from a single home with four residents to the old abandoned village of Miaría which had 127 inhabitants with twenty-one occupied houses and a half dozen vacant.

Villages are continually changing. Few of the Piro occupy the same house throughout the year. Frequent and lengthy visits are made to relatives; hunting and fishing trips take the whole family away for days; if planted fields are far from the village, the family may remain in the field for some days; when beans are planted the family usually moves to an island or wide sandy beach when the water has receded sufficiently for planting, and remains there in tunnel-shaped, palm-thatch tambos (2); the making of a canoe takes the family

into the woods to the location of the chosen tree for weeks at a time; and men go off to work lumber, or to hunt pelts.

Besides these temporary moves, there is a continual change of residence among the Piro. During the five years from 1947 to 1952 five old settlements were abandoned, and six new settlements opened. This corroborates the common estimate that the existence of a village of slash-and-burn agriculturalists such as the Piro is limited to from ten to fifteen years, since among ten to fifteen villages one is abandoned and and a new one opened each year. The new settlements are Pacriá, Sensa, a new Miaría, Misión del Rosario, Belén, and Mapchirga. Besides that, the settlement of Manco Capac underwent a hundred per cent turn-over in population from June 1949 to December 1951.

Travel

Travel is irresistibly pleasant. Breezes are cool on the water. Poling upstream by dugout canoe, the Piro keep as close to the bank as possible, even pushing through among the cane and willow when water is high, to avoid the resistance of the current. When a family travels the woman steers at the stern, directed by her husband who poles from the prow.

The pole is of cane, usually about 2.6 meters long and 7.5 cm. in diameter. A man may pole from either side of the canoe. The pole is always kept close to the side of the canoe. The hand toward the prow is the upper one on the pole. In average water the man's weight on the pole carries the canoe forward. In rough water or strong current the man runs to the point of the prow and thrusts the pole into the water as far forward as possible. When the pole passes him he runs a few steps toward the stern of the canoe moving hand over hand up the pole.

Poling is hard work, but the men seem to enjoy it, perhaps because they started it as play. Even two-year-olds may take a little rod and play poling as the canoe moves along. Men shout and laugh in the hard passes. "How do you know Pablo is upriver if you didn't see him?" "Oh, I heard him laughing on the other side of the island."

One of the delights of travel is that keeping close to shore we see the wild life as we never see it in the villages. Alligators splash quietly into the water ahead of us, and sometimes swim beside us, grinning; monkeys come jumping from tree to tree, curious; flocks of gaudy red, blue, yellow, green, and flame-colored macaws rise from the cliffs screaming as we approach; a shaggy brown peccary gets up from the muddy bank and loafs off; a tapir crashes into the brush. The men hunt and fish as they go along, their eyes constantly scanning woods, and sky, and water. In summer, women cut across the wide beaches and hunt turtle eggs in the sand, as the men pole round the bend.

Breakfast is early, and the mid-morning snack of boiled plantain drink and smoked fish is not sufficient for the keen appetite of a day in the open. By early afternoon the hunters and fishers, if they have

not caught sufficient food along the way, may stop and take off through the woods. Usually they come back with a wild turkey or some other game, which the women cook at once on the beach, carrying along the remains for supper and breakfast to supplement the supply of plantains brought from home.

At night, if we have not reached a village, camp is made on the beach. It is very important to judge whether the river is going to rise or fall in the night, not only in order that a dry site for the shelters may be secured for the night, but also so that the canoe may neither be set adrift nor grounded. Usually rising water laps loudly enough on the beach to rouse the sleepers, and they draw the canoe farther in to shore and tie it securely. Receding water, on the contrary, may be an unwelcome surprise in the morning. One evening they left our canoe tied to the pole which had been driven into the earth in almost knee-deep water, and we waded some 150 feet ashore to make our camp. In the morning the canoe was found stranded on the gravel 150 feet inshore from the water line. Driftwood logs were laid at four foot intervals across the path along which we were to drag the canoe. Once the canoe was up on the logs it dragged fairly easily. As soon as logs were left behind the canoe, the children ran ahead with them and placed them in the path.

The fire made on a beach during a trip differs from the hearth fire. On the beach drift wood is sought. Two logs are laid parallel about six inches apart. Heavy pieces of wood are laid in the bottom of the trench thus formed. They are necessarily nearly parallel, but are placed so as to allow air currents, and to bring into near contact the ends of several sticks in the middle. Lighter wood is placed above, and kindling splinters are sprinkled on top. If kerosene is available, a little is splashed on the wood. The splinters are lighted by a match. They fall burning down among the sticks until the whole mass is set afire. Pots are ranged along the fire, the two heavy logs serving as a frame. By the time the cooking is over the logs themselves are burning well enough to preserve embers until the morning.

A cane lean-to can be put up in about twenty minutes if necessary. Canes are stuck in the sand at about a forty-five degree angle. Their fan-shaped leaves are interwoven into a canopy, under which the Piro hang their mosquito nets. The bed roll is spread out on the sand. Often they find tunnel-shaped palm-thatched tambos left by travellers who made a longer stop-over. Neither type of shelter is rainproof, but both serve to keep off the heavy dew of early morning. If they hear a rain beating across the jungle or over the river toward them, they jump up, roll up their beds and nets and stuff them in rubberized bags. When the rain is past, they change their clothes, remake their beds, and sleep on until morning.

When rain overtakes them enroute, they make for any roof nearby, or lacking shelter, cut big leaves and hold them as umbrellas. Often each cuts a different kind of leaf. The tiny kiddies crouch on all fours and leaves are laid on top of them. One mother told with amusement how her two little girls knelt facing each other with their heads together and wailed, "We're going to die of cold. We're going to die of cold," as

PLATE III

Piro Scenes and Objects

(a) Drying a peccary hide. Shamboyacu village on the Urubamba River. September, 1953.

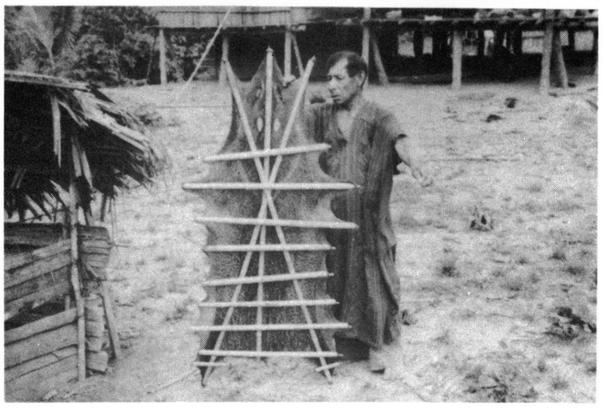
(b) Piro cane basket, Huau village. December, 1952.

(c) Preparing manioc, Censa village, Urubamba River. August, 1953.

(d) Piro objects: Palm basket with tump line for carrying produce from the field; mat for straining banana drink. Huau village, 1952.

(e) Woman weaving. Urubamba River. August, 1953.

(f) Drinking bowl and cotton bag. Huau village.



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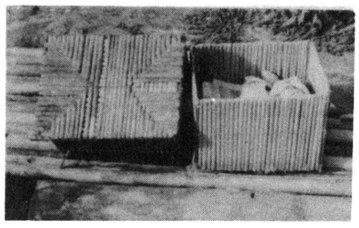

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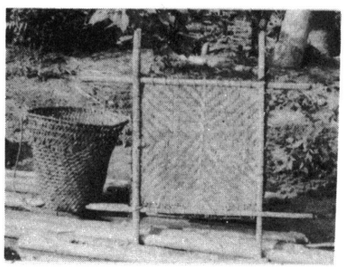

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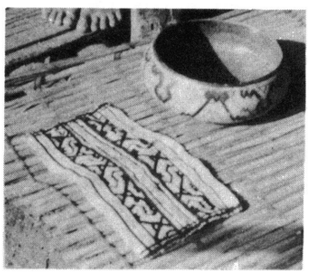

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their canoe was poled upstream in the rain.

Occasionally the going is rough. On a hurried trip with vaccine we were trying to keep fresh, we made our way for days against a swollen current, and finally resorted to skirting islands in the narrower channels and cutting across the overflows. Finally the water dwindled so that we had to carry our cargo and drag the canoe three quarters of a mile across the burning gravel. On such occasions the Piro exclaim, "Wsalewnapotuta!" 'We are suffering very much', but when the next trip is suggested, all are eager to go.

Travelling downstream we float easily in mid-channel at the rate of about nine miles an hour with the river at average height, and much faster in high water. As in the trip upstream, the woman steers at the stern, directed by her husband. The man paddles lightly from time to time. On a long clear expanse of water he may stretch out for a nap. There are usually no nights spent on the beach in travel down river, since the villages are not more than a day apart for downstream travel. When the canoe was overloaded with the goods of the whites on one trip downstream, balsa logs were lashed to the sides of the canoe to increase the bouyancy.

There is considerable travel by raft. The most frequent raft trip is that of the lumberman taking mahogany or cedar to the town of Pucallpa on the Ucayali River into which the Urubamba flows. The trip has been made in six days, and again, in forty days when the heavy logs partially submerged stuck in shallow water and the men had to wait until the river rose high enough to dislodge the raft. The raft is equipped with a raised platform, a shelter and a clay hearth. Sometimes when a man is to make a quick trip downstream alone, he binds balsa logs together, sets up his oars in the crotches of two branches, and travels without accomodations.

A raft on which a family is to spend several days is an agreeable dwelling. From fifteen to forty balsa logs may be used to form the raft. One raft on which we travelled had seventeen balsa logs, the longest outer logs being about thirteen meters long. Three outer logs on each side were about forty-five centimeters in diameter, and the intervening logs about thirty centimeters in diameter. The logs were spaced from fifteen to thirty centimeters apart. At each end was a cross-piece fifteen centimeters in diameter and four and a half meters long, of hard wood resting in shallow notches on the balsa logs and pegged in place by hard (pona) palm wood pegs measuring about two and a half by two and a half by twenty to thirty centimeters. The pegs were driven obliquely into the balsa logs, so that the pairs of pegs met or crossed above the cross-piece. Against the outside of the cross-piece at one end was a similar cross-piece only 2.3 meters long with pegs forty-five centimeters high supporting a small (ten centimeters in diameter) balsa trunk which served as a brace for the men handling the long oars. The pegs supporting the balsa brace were bound with bark for additional security. Upright palm wood (pona) sticks about sixty centimeters high were driven into the outer balsa logs and braced by diagonal palm sticks. Upheld by these sticks, cross-pieces running parallel to the balsa logs and bound by vine supported the oars.

Heavier posts and braces supported a platform a little less than sixty centimeters high, running about three and a quarter meters lengthwise of the balsa logs, and 2.6 meters across the raft, leaving two or three logs as a passageway on each side. At the back of the raft where the oars were placed, less than two meters of open space was allowed. On the front the logs extended from about four to seven meters, but some of the logs were slightly submerged, leaving about half a dozen logs to serve as a kitchen in dry weather. A shade of banana leaves was set up over the clay hearth.

Seventeen of us were aboard the one raft, ten children and seven adults, but small as the raft was, there was plenty of room because of the unselfishness and congeniality of the Piro. Everyone enjoyed the time aboard. Trips ashore were made from time to time in the small canoe tied to the raft, and the Indians fished from the canoe. Before leaving, the raft had been stocked with about ten big stalks of plantains, beans, rice, oranges, and papaya. We travelled from Huau on the Urubamba into the Ucayali River and on down to Pucallpa. Nights during the first part of the trip were passed on the beaches.

The men spent a good part of the day at the oars. One day a strong wind whipped the Ucayali into rough waves that made the raft shiver and drove us into the bank in spite of the laboring oars. Twice we were caught in whirlpools and actually went upstream by raft. In a small spinning pool we went around four times before the men could catch just the right eddy at the right moment to pull us out into the current. The last two nights of the journey we travelled by starlight. In one dark place we struck rough water, and the slighter of the oarsmen had to literally leap upon his oar. Each time he leaped shouting and came down laughing with delight at daring the river. In the little leisure time allowed them, the men told tribal stories, sang, or read.

For travel by raft or canoe, signal horns are used. This may be a deer horn saved from hunting, or a cow's horn procured from Peruvians; or a bamboo horn is improvised when needed. About two joints of bamboo, less than thirty centimeters in length, are used. A notch is cut through about five centimeters below the end. It takes about two minutes to hack out a bamboo signal horn, but it takes more breath than most whites have to give the blast which will notify villages hours ahead of the approach of a canoe and set the village astir with anticipation. If only Indians are coming, the signal is intended to keep anyone who might be expecting company from absenting himself from the village. If Indian peons are poling the canoe of a white, the blast of the horn is to alert the village to get choice livestock out of sight, and for anyone who does not care to transact business with the white to be occupied away from the village.

Airplane travel is becoming familiar to the Piro. At least fifty of them have traveled by air. It is cheaper for a patron to send back his lumbermen from Pucallpa by air than to send them by launch, paying their board from a week to three weeks enroute. Also, the Summer Institute of Linguistics has provided air transportation for the Piro on several occasions. The airplane is of course preferred by the Indians to long laborious trips by canoe or raft, but there never is

the bouyancy of anticipation before a plane trip that there is before a canoe or raft trip.

Subsistence

Not only is travel delightful, but it is essential to life in the jungle. Agriculture, fishing, hunting, and gathering, all involve travel.

The supply of plantains and fish is basic. It would be hard to say which is more important. No one would willingly pass a day without the boiled plantain beverage, whereas there are many substitutes for fish. On the other hand, after a day or two of vegetable diet children cry with hunger and bananas do not satisfy. Given plenty of plantains and fish, the Piro do not feel any lack, yet they provide for themselves a great variety besides.

They are very successful agriculturists. The jungle growth, including the giant trees, is cut away by machetes, supplemented by a very few axes. The cleared field is burned, the ash being supposed to counteract the acid of the leaf mold. Seed-planting is by means of a plain dibble stick. The Piro know but do not use the more elaborate taclla of the Quechua. Weeding, cultivation, and harvesting are done with the machete, and occasionally with a similar large knife with a curved blade. Usually the plantains and bananas are planted near the Urubamba or the large tributaries, partly because that is the most suitable soil for plantains, and partly because it is convenient to have the plantains nearest the house. Fifteen varieties of plantain and banana have been noted.

Next in importance is manioc, of which eleven varieties have been listed, including the bitter manioc used only in times of scarcity. The manioc field may be adjacent to the field of plantains, or may be far back in the jungle. Not only do the villages move, but planted fields of manioc and other secondary produce are moved from time to time about the village. Sites formerly planted close by the large village of Huau are now overgrown and many of the present planted fields are far back in the woods.

In the manioc field is planted a great variety of minor crops: sweet potatoes, of five distinct colors—black, white, red, yellow, and purple; a coarse wild potato and at least seven other tubers; yams; okra; three varieties of squash; peanuts; and a couple of coarse grains. There are also condiments such as seven varieites of pepper, the onion, coriander, and vanilla. The medicinal herbs planted in the field include sweet basil, elder, castor oil plant, verbena, saltwort, mallow, rib grass, datura, te limón (or hierba Luisa), and mint. The red dyes for the skin, annato and lancetilla are also planted. Seven varieties of gourds are planted. The tall cotton plants (some as high as ten feet) with their large yellow blossoms, are scattered through the field among the manioc and other plants. A few coffee trees may be found. There are usually a few tobacco plants. Occasionally a coca plant is seen. Children's favorites in the field are the ground cherries.

In the field and about the home clearing are planted various fruits. The more familiar ones are the orange, lemon, limón dulce, tangerine, zapote, guava, papaya, mango, star apple, cashew (the pungent fruit, not the nut, is eaten), avocado, and the chocolate, of which the Piro observe, "We eat the fruit and throw the seed away. The white makes chocolate of the seed." There are twenty-three planted fruits in all. The walnut is also planted. The Piro are sometimes criticized by the whites for not planting more fruit trees. Their comment among themselves is that if a site is made too attractive it will be taken away from them by lawless settlers.

Around the house may be planted four-o'clocks, roses, African marigolds, cox comb, bougainvillea, and plants of varicolored leaves. There are no flowers around most of the homes, but many villages have one or two residents who put out decorative plants. Some of the medicines are also planted near the home, and often a few legumes. One such is a very large bean called in regional Spanish pallares.

Apart from the main planted field of manioc, and the plantains and variety of plants in the home clearing, there are crops raised in special locations.

Rice fields are of course in low, level sites. It is the chief concern of the village from March through May to keep the birds from pillaging the crop. From daybreak to dark a continual bedlam of shouts goes up from those scattered through the rice field fighting off the birds. Scarecrows are used but are insufficient. Little boys with sling shots are more effective. Mothers often carry their babies to the field and station the older children at some distance, where they all shout themselves hoarse. Fortunately not more than two or three families attempt to raise rice at the same time.

Tephrosia toxicana, sugar cane, a large coarse grain, and corn usually have separate plots near the main planted fields. Watermelon is planted on the sand beaches after high water has receded sufficiently in the spring. The planting of the watermelon amounts to a sport of considerable interest, because each wants to have the first watermelon of the season, but if the planting is premature and the river rises before the crop has been harvested, all will be lost. Four varieties of watermelon are planted.

Other crops of the sand beaches are the chiclayo (a small white bean), and the brown bean. When a bean crop of considerable extent is planted at a great distance from the village, the family builds temporary shelters on the beach and remains there to care for the crop. Trips may be made to the home in the village from time to time but the family spends weeks on the beach.

The main harvesting is not seasonal but continuous. A family with five or six children uses about six very large stalks of plantains in a week. The plantains are cut green, the main stalk of the banana plant

being felled, and the fruit is stored in the house, usually hung by vines, to ripen. The Piro consider that one of their chief differences from their neighbors is that they like their plantains yellow and soft. In fact "a ripe one" is a common synonym for "plantain". The women, almost exclusively, carry the heavy stalks of plantains. A tump line is passed across the forehead, and tied to the end of the stalk. Little girls carry small stalks or half stalks. One day a grown brother walked behind his little sister about nine years old, and glowed with pride as she carried half a huge stalk of plantains. He helped her put the burden down.

When the manioc fields are separated from the village by a stretch of jungle, a woman will not go alone to harvest the produce for fear of the jaguar. Often all the women of the village go together, or a whole family goes, carrying food for a meal. The outing is generally regarded as a picnic, and anyone left behind feels quite abused. Produce is brought back to the village in large baskets suspended by tump lines. The whole family works in the seasonal rice and bean harvests. Usually only men cut the Tephrosia toxicana.

Fish is the main protein food. The Piro have given at random the names of forty-six kinds of fish beside shrimps and crabs. Favorites among them are the zungaro, paiche, boquichico, sabalo, and corvina. Best liked of all is one not identified in Spanish but called kolyo by the Piro. When the new leaf shoots of the cetico tree come out each year, the children shout excitedly and point to them, because the sheaths falling in the water attract an abundance of kolyo.

There are six principal words for fishermen, referring to the fishing method: the one who uses rod and line; a general term for fishermen, but used specifically of the one who uses only bow and arrow or harpoon; the one who uses hook, line, and balsa float; the one who uses a net; the one who uses Tephrosia toxicana or a machete; the one who builds a cane weir in a small stream and uses Tephrosia toxicana.

'Metal tooth' is the word for a fishhook. It may be beaten from a nail, or made of a needle heated and bent, or carved from hard wood, or it may have been bought from a patron or trader. The hook for the favorite boquichico is only about a centimeter and a half long; that for the zungaro is over seven and a half centimeters long. The cord is of finely twisted bark of the cetico or other tree. A roll of bark is frequently kept on hand for the purpose. Pitch is used to secure the cord to the rod which is usually about 1.6 meters long and .75 centimeters thick. Minnows from the rivulets, worms, ripe plantain bits, crickets, and a cricket-like creature living conveniently in the sand of the beaches, and grasshoppers serve as bait. A certain vine called sumasha with black berries and white blossoms is trailed in the water to attract fish. Hook-and-line fishing is of course the kind practised most by the little boys. Often little fellows of ten or eleven take the responsibility of providing for the family quite seriously, and when they are not too busy shooting lizards with bow and arrow, spend many profitable hours out in their little canoes.

For harpooning or fishing with bow and arrow a man's wife or his little son usually maneuvres the canoe. The man stands up on the point of the prow scanning the surface of the water, often able to spot and name a fish many yards away by the type of ripples on the surface. The canoe is deftly brought into line and the arrow or harpoon let fly. A harpoon is hauled in by cord, but the canoe must be swung round to catch a drifting arrow with or without a flopping fish. Many shots are missed, but on the whole fishermen usually come home with abundant provision. Loitering half an hour at sunset in the middle of a two hour trip the men with us harpooned eight fish, each about a meter long. Three escaped wounded. The others were landed in the canoe and slugged with the handle of a machete.

The arrow for shooting fish is unfeathered. It is of cane with a chonta point rounded or pointed. The arrow may be as long as 1.6 meters.

The total length of a harpoon is about 2.1 meters. It may be all of hard black palm wood, or for smaller fish there may be a 1.3 meter cane from which a 60 cm. foreshaft of black pifayo or other palm protrudes. The cane is 1.25 to 2.54 cm. in diameter. The handle end of the cane is bound for about 1.25 cm. with fine cotton cord or cord from the bark of the cetico. The same type of cord is attached to the cane and neatly wound around 7.6 cm. of it and 12.7 cm. of the pifayo foreshaft from which it passes to the point. The double-barbed point, about ten centimeters long, is beaten from chonta or from a nail with a stone, unless the fisherman is wealthy enough to purchase a metal harpoon. The joining of the foreshaft and cane is pitched. The attachment of the point to the palm wood foreshaft is the same. When the harpoon sinks into a big fish, the cord is unwound to allow five or six meters of play, and the fish wears itself out dragging the canoe.

The hook and line used with the balsa float are usually heavier than those used with the rod. The cord may be three millimeters thick, and the hook 7.6 cm. in length.

The fishing net is woven by the men or women of 00 size cord. It is the shape of an inverted cone, with lead weights around the circular bottom edge. The fisher may wade into knee-deep water and cast the net beyond him, or he may stand in the prow of the canoe. Often in fishing the men poise easily with one foot on the point and one on the rim of the canoe. When the river rises and the fish are leaping among the willow, fishermen often wade out among them with machetes and lunge at the fish.

Tephrosia toxicana may be used with or without a weir. The preferred method ds to build a cane weir across a small stream, and throw the crushed Tephrosia toxicana root into the water above the weir. Most of the men and boys of a village join together in such an expedition because the catch is too great for a few. Little boys dash along the bank, bending under the weight of fish draped across their shoulders. All rush to load the canoes with a variety of choice fish, but still they are not able to avail themselves of all the drugged fish floating on the surface and

there is a great waste. The Piro have responded with interest to the suggestion of game preservation, and say that if they are granted land as a reservation they will prohibit the use of Tephrosia toxicana and actually breed fish, but that so long as the whites fish their streams with Tephrosia toxicana they may as well do likewise. Fish are stunned also by ground huaca leaf, or a vine called in Piro malapitsa, which is beaten and thrown into the water.

Next to agriculture and fishing in importance is hunting. Close behind the village presses the jungle growth, a heterogeneous forest overgrown with shrubs, vines, and parasitical plants so numerous that some of the giant trees look like hanging gardens. The forest is criss-crossed with trails kept open by constant hacking with the machete as the Indians seek out the resources of the jungle. They hunt for monkey of several species, tapir, various kinds of peccary, armadillo, deer, various rodents, rabbit, squirrel, land turtles, and numerous fowls for food. The jaguar, ocelot, otter and boar are hunted for pelts to be sold. The pelts of the smaller animals are utilized in various ways, such as for drums. Among the favorite game fowl are the partridge, wild turkey, "chicken of the woods", duck, trumpeter, toucan, guan, and various waders, parrots, and doves. Even little birds are eaten if meat is wanting, or if children have brought them proudly home as game. The plumes are valued for ornaments and arrows. Pelts of especially beautiful birds are much sought to be hung up in the house, perhaps with a hope of selling them in some cases. The Piro have given the names of a hundred and twenty birds so far in a very superficial study.

The commonest form of hunting is to "beat the woods" with dogs, so that the game, routed through fear of the noise, will come out of hiding. However, if a traveler catches sight of an animal or fowl, he slips stealthily along under cover until within easy range. Knowledge of the habits of wild creatures, as of the attraction of certain large game birds or monkeys to certain fruit trees, is a real asset in hunting.

The main hunting weapons are the shotgun, and the bow and arrows. Often not one in a whole village possesses a shotgun, but it is usually preferred if available. However, the hunter usually takes along his bow and arrows with the gun. An arrow is considered entirely adequate even for the hunting of the ferocious jaguar which has killed three people in our region in the past six or seven years. The bow, though effective, is not at all impressive in appearance. Seldom more than 1.6 meters long and 3.2 centimeters wide in the middle, tapering to 1.5 centimeters near the ends, it is made of black pifayo wood about 1.5 centimeters thick. The ends are carved to blunt points leaving shoulders to engage the bowstring of cetico bark fiber. The bow is unadorned.

The arrow is of cane, about 1.6 meters long. The arrow for small birds has a top-shaped knob for a head. A corn-cob may serve as an improvised substitute. The head of another type of bird arrow has two prongs, and still another has three diverging prongs curved so that the tips in cross-section are arcs of a circle. One such arrow has a crude point with

one set of opposite barbs set in the center of the pronged head. The pronged heads are made of cane. The arrowhead for large fowl is made of hard wood such as the caimito, not so hard as the black palm woods. This arrowhead has twelve notches on one side, none on the other. The arrowheads for animals are in the form of two-edged flat blades of bamboo. That for the peccary and jaguar is 23 centimeters long; that for smaller animals, about fifteen centimeters long. At the other end of the arrow are two feathers, set opposite.

Traps and snares are used rarely for birds. One type of trap is a cage woven of cane, supported by two sticks which the bird trips. Some children made mouse traps by stretching cords on which corn kernels had been strung, between two stakes, and leaning a wooden basin on the cord over the corn. When the mouse would eat the corn, he was expected to cut the cord, letting the basin down over him. Before the traps were made, one little boy caught a mouse in his hands. The children ran outdoors and gleefully trampled it with their bare feet to kill it.

Gummed splinters of the shebon palm are used for catching birds which fly high in the tree tops. The splinters, about an eighth of an inch thick and one and a half feet long, are gummed with boiled rubber on all but the last four inches or so. A six-inch bamboo joint is used for a quiver. In the woods, the hunter places the splinter high in a tree, balancing it horizontally. A bird flies against it and becomes entangled so that it cannot fly. It falls, and the hunter, hiding nearby, catches and kills it or brings it home for a pet. One of the Piro songs celebrates the catching of a bird in this manner:

> Hail, you who are caught in the pitch!
> Ha ha ha ha ha ha!
> Hail! It is you there, is it?
> You who belong in the heavens
> are now in my hands.
> I will never let you go.

Gathering, though not so essential to existence as agriculture, fishing, and hunting, still provides many luxuries. More than sixty varieties of wild fruits and nuts, besides hearts of palms and mushrooms, are eaten by the Piro. Some are available only when the tall trees are cut down, as in clearing a field. Others are sought out in their season. When a palm with a cluster of ripening fruit has been noticed, the people count the days until the fruit should be ready, and make a group excursion to the tree with baskets and machetes. Children climb high for their favorite fruits or the boys shoot them down with arrows. They go out in their canoes to gather shimbillo, pods with pulp like moist white plush on small black seeds, from the trees which frequently overhang the water. Probably an important source of vitamins in the diet is the inconspicuous habit of snipping off and nibbling bits of plants. Certain snails, beetles, flies, and worms are eaten or used as food flavoring. The little streams of the forests yield crabs, crayfish, and tiny minnows which are gathered by the children.

The main yield of the forest, however, is not the food. The forest supplies material for houses, furniture, canoes, rafts, weapons, ornamentation, and medicine. Over a hundred and fifty useful trees have been noted by random observation, to say nothing of the numerous vines, shrubs, and herbs which serve the Piro.

The house

The Piro house is constructed entirely of material from the forest. Not even a nail is needed from the outside world. First the upright corner posts are sunk in the ground; they are made of a very hard wood, the black chonta palm being the favorite. The posts may be up to a foot in diameter. The length of the post depends upon the plan of the house. If the house is to be without flooring, as a kitchen, the posts may be only about two meters high. If there is to be a palm-bark platform a meter above the ground, the posts must be a meter longer, etc. If the house is to be more than the length of one beam, more uprights are spaced between the corner posts, lined up by a cord passed from one corner post to the other.

The tops of the uprights are grooved to receive the beams, which are long poles, not so hard a wood as the uprights, but still usually too hard to receive a nail. The builder may select his beams and timbers from more than thirty varieties of hard woods, among them being the espintana (which the Piro say will never rot), cumala, palo de sangre, pájaro bobo, genipa, and several trees of differing Piro names but translated by the Piro as quinilla. The beams may have shallow notches where they rest on the upright posts, to prevent slipping. If the length of the house is more than that of one beam, then two beams may be used, being shaved down to fit snugly together where they overlap above an upright post. They are tied in place by vine or bark. The preferred vine for this purpose is tamshi.

On these beams rest the crossbeams of the house, placed over the uprights and at intervals between, usually not more than about three and a half meters apart. Rafters run from the long beams up to the ridgepole at intervals corresponding roughly to those of the crossbeams. The rafters are called 'scissors'. The pairs of rafters cross, extending 30 cm. or less beyond their intersection, and are tied together, providing support for the ridgepole. The ridgepole of a small house is a single beam; that of a long house is made of two beams joined as are the beams resting on the uprights.

Lengthwise of the house runs a thin pole resting on the ends of the crossbeams. It is above and outside of the beams and its purpose is to support the cane "ribs" of the house. Parallel to this and half way up the roof is a similar pole bound to the rafters. Thirty to sixty centimeters toward the center of the building may be a parallel "companion" pole. Tied to these poles are horizontals running across the gable ends of the house, and to these in turn are tied additional poles running the length of the house. To the ridgepole and the horizontals are tied the

canes upon which the thatch rests, and to which it is lashed. The beams and rafters are not squared or dressed.

There is a great variety of palms which provide thatch, among them the shapaja, yarina, shebon, aguajillo, and palmichi. The common way to prepare thatch is to bend the opposite leaves so that they run parallel and interweave the leaves of two or three fronds together.

Among the Urubamba Piro two houses with rounded gable ends have been noted. The rest are of the basic construction described above. The details of arrangements vary. The palm bark platform may be from three meters high to flat on the ground. It may provide barely space enough for the bed mats to be spread out, or it may serve as the floor of the entire house. It may occupy a half or two thirds of the house, leaving some earth floor to serve as a kitchen. The house may be without walls; half may be walled in; the entire house may be walled and divided into small partitions.. Each is built according to the taste of the builder and his wife.

A few board ladder-like stairways have been built up to the platforms. More often a notched log, or two logs close together and notched, are used to ascend to the platform. A few of the more agile do not even bother to notch the thin logs, but cling with their toes and run up and down easily even when the log is wet with rain.

A common arrangement is to have a separate small hut without platform to serve as a kitchen. Usually the kitchen is enclosed and a low barricade is kept across the doorway as protection against pigs and chickens (dogs and other pets are admitted). In a few homes crude earthen hearths have been formed on the platforms.

Furnishings

The home is equipped mostly with materials taken from the jungle. The man of the house makes the wooden furniture for his household, usually by carving. The cedars, the mahogany, a tree said to be an almond, and the palo de sangre are hardwoods of choice for furniture. Other furnishings are made by the women.

Mats of palm or cane serve as beds, often covered with a bark cloth. The bark of the llanchama is used. The trunk and big limbs are pounded to loosen the bark. It is then peeled off in a large sheet. The outer layer is removed. It is pounded again, washed and sunned. The bark provides quite a soft cover for the bed.

The family may have a cheap blanket or two, or may have only the heavy homespun cloth and rags for covering. On cold nights they huddle together, or get up and build fires to warm themselves. During the day the bedding is rolled up in the mosquito net, and set up on the beams of

the house. Mosquito nets of material thick enough to give privacy to the occupants are used by all the Piro of the Urubamba. Children six years old and upward have nets apart, either individual nets or nets shared by two. The smaller children are taken under the big family net. The mosquito net is rectangular. A large net is about 1.8 by 1.2 by 1.2 meters. A fold of the netting extends beyond the top edge of each end of the net, and a stick is passed through the fold to spread the net. Through an eyelet in the middle of the fold a cord is tied to the stick so that the net can be suspended. Thus a net can be hung up in a moment.

Hammocks are usually improvised for babies. A hammock for the older members of the family to rest in during the day, or for the aged and helpless, is frequently woven and beautifully designed. It is simply a large rectangular homespun cotton cloth, perhaps fringed, and gathered and tied near the ends with the rope by which the hammock is suspended.

Near the place of the bed in most homes is a quaint little trunk of ancient make, or a heavy wooden chest in which the few treasures of the family are kept: trinkets, new cloth, almost any type of paper, and money. By the trunk is the lamp, which gives an open kerosene flame. Some of the lamps are purchased from traders; some are made by punching a hole in the top of the screw cap of a can or small jar, and inserting in it a tube of rolled tin through which the homespun wick is passed. One family displayed an unused lamp of clay, made on the same general plan, which is the kind they say they used to use. Suspended vines serve for clotheslines, those inside for storage, and those out of doors for drying.

Against the wall stands a flat wooden basin, seventy-five centimeters in diameter, and having two little handles. It is carved by machete and chisel from a single big plank. The basin may represent a borrowing from the whites. It is not found in all the houses. Men who can obtain nails make crude tables and benches which are little used except in social gatherings. The usual type of seat is the low turtle-shaped stool. There is also a crude wooden reel for making rope. This reel has the only wheel noted in Piro culture.

Shelves are frequently hung indoors. High, out of the babies' reach, are kept the baskets of cotton, spindles, and parts of the loom. In many houses a shelf or platform of palm bark rests on the beams overhead. If the household is crowded, the beds of a couple of the boys may be up on the platform. Drums, bottles, gourds full of seeds, and even the chest or trunk may be kept overhead. Feathers to be kept for ornaments or for arrows are stuck in the thatch of the roof. Surplus supplies of cotton, beans, rice, or other imperishable produce is kept stacked or suspended in loosely woven baskets lined with banana or bijao leaves, or rolled in bark cloth with the ends twisted and tied.

The kitchen may be completely separated from the general living quarters, or may overflow into it. Frequently the supply of plantains is too great for the kitchen. Stalks are hung or stacked in the living quarters. Outside the kitchen is usually a high shelf on which food can be kept out

of the reach of animals. It is often so high that the housewife climbs up on a stool to reach it. A pole passes from one forked upright to another, supporting the palm bark or canes which form the shelf. Over a post hang baskets used in transporting produce.

Usually just outside the kitchen door stands the mortar and pestle, used chiefly for mashing boiled plantains to make the beverage. The mortar is made of a log about forty-five centimeters in diameter and less than a meter long. It stands on end, the upper part hollowed out with a cone-shaped hollow, leaving an edge of from 2.5 to 3.7 cm. in thickness. The hollow reaches a point about two thirds of the way to the bottom. To form the mortar, the log is set upright on the ground, and a small hole is carved in the center of the top. Coals are placed in the hole. The shaping of the hollow is accomplished by blowing through a reed on the coals where the wood is to be removed, and dampening the rest of the wood. As ashes accumulate they are cleaned off, and fresh coals are put in the hole. The burning requires about five days. A woman tends to the burning. The man shapes or smooths the mortar on the outside with his machete. The wooden pestle is about five centimeters in diameter at the handle end, and increases to seven and a half centimeters diameter at the base of the conical end which is shaped to fit into the mortar. The pestle is about 1.2 meters long.

The center of activity within the kitchen is the hearth fire. The firewood, which may be from five to fifteen centimeters in diameter, and from .6 to 2.7 meters long, radiates from the glowing embers. On the fire is usually a big black clay pot, its contents covered with banana leaves. Against a stick of firewood leans a fan. It may be of even-trimmed black chicken feathers with quills impaled on a splinter of hard wood and kept in place by tying, or it may be of feathers whose quills are woven into a palm-leaf handle, or the whole fan may be woven of palm leaf.

Beside the fire are seats - the low turtle-snaped wooden stool, an actual turtle shell, or a small palm mat. Within reach is an ornate wooden paddle thirty-eight centimeters long, which is used for stirring. About the room are several black clay cooking pots, and at least two waterjars, full of water and covered with bowls made from globular gourds cut in two. On a shelf are half a dozen serving bowls: red ones with the design in white for drinking bowls; and ivory-colored bowls with the design in black for food to be eaten by hand. There is also a shallow clay bowl or griddle forty-five centimeters in diameter. It is used for toasting, and sometimes serves as a pot cover.

Thrust into the thatch above the fire are the arrows of the man of the house, and a coil of bark from which cord is to be made, and a fishing rod. The fishing rod is snatched down many times a day for chasing chickens and animals from the hut, and seems to be a very important piece of household furniture when not in use out of doors.

There are wide, flat hanging baskets littered with the few metal knives and spoons which the family possesses, bits of peppers and other

condiments, soap wrapped in leaves, a gourd full of seeds, and a grater or two. One type of grater is a section of thorny branch or palm trunk with the thorns truncated to serve as a rasp. This is used chiefly for manioc and sweet potatoes. Another type of grater is a flat paddle somewhat resembling the big wooden spoon, but having rows of one-centimeter cuts of wire driven into the wood of one side.

A tiny woven basket of peppers hangs by a bit of vine from the ceiling. Beeswax wrapped in leaves is similarly suspended. Hanging from the roof or stacked in the corners are half a dozen stalks of plantains of different varieties. On the floor near the wall is a stack of manioc roots, a few sweet potatoes, a couple of squash, and a few papayas and other fruit.

Against the wall stands the broom, either corn cobs lashed to a rod with the husks turned down, or a bundle of palm stem splinters about fifty centimeters long and tied near the top. Woven palm brooms with short ends extending to form a brush are made as gifts, but never found in use. Beside the broom is a mat of yarina or other palm, about seventy-five centimeters square and slightly depressed in the middle. It may be woven with design or plain. It is used for straining, especially for straining boiled plantains to make the popular plantain beverage. Somewhere in the kitchen or just outside is a clutter of tall, corked bottles. In a few homes some contain liquor purchased from the whites. Others contain kerosene, or cane syrup, or salt. Many are empty.

An article of great interest to the whole household, but belonging to the community rather than the individual, is the sugar-cane press. It is usually centrally located. Two types of press are in use. One has two wooden rollers turned against each other by revolving crosses. There is a wooden spout which receives the juice from the rollers. The other type is simpler. An upright stake has a hole carved in the middle. A smaller pole passes through the stake. The cane is placed in the hole under the pole, and the pole is brought down upon the cane like a lever. The juice runs down carved grooves into a tin-can spout. A bowl is placed on the ground underneath.

Housekeeping

The preparation and preservation of food is the first task of the woman, even as the provision of it is her husband's first responsibility.

As has been stated, the most important vegetable food is the beverage made of the ripe plantain. The plantains are boiled until soft, mashed in a hollowed-log mortar, passed through a palm mat, and then scooped by hand into a bowl of cold water and stirred in with the water. Once the housewife was seen grating green plantains into the pot of boiling ripe plantains.

During fiestas and on special occasions other beverages are prepared. Dry corn husked and shelled with the fingers is boiled about three hours. Raw ripe plantains are mashed in the mortar with the boiled corn, and the mixture is cooked. The ripe plantains sweeten the corn drink. Masato, the fermented manioc drink, is used very little among the Piro of the Urubamba now. Its use probably was commoner a few years ago. However, an unfermented or slightly fermented manioc drink is common. The manioc is cooked into a soft thin mash. Raw sweet potatoes are grated and pressed into little balls from which the juice is squeezed into the manioc drink. The mixture is kept in the clay pot overnight.

Roasted plantains are eaten daily. Again the sweet, ripe plantains are favored, though it is not uncommon to eat roasted green plantains as a substitute for bread with meat. Green plantains are always peeled for roasting. Ripe plantains are roasted either in the skin or peeled. They are laid in the coals, and snatched up and turned by bare hands. Most of the fruits are eaten raw. The fruits of the aguaje, pifayo, and sometimes of the shapaja palms are soaked for an hour or two in warm water.

Boiled or roasted manioc is served nearly every day. The manioc root to be boiled is peeled with the machete and cut into chunks. The manioc to be roasted is sometimes peeled before being placed in the coals, but more often is placed in the coals for a while with the skin on, and then peeled and browned when it has begun to soften. Only in times of scarcity is the bitter manioc made into cakes.

Rice is not a favorite food of the Piro, though it is eaten when manioc is scarce. The rice is considered ruined if boiled until soft. While still quite hard, oil is poured into it, and it is eaten. Beans are even less favored in the diet than rice, but are kept on hand when convenient.

Fish and game for immediate use are usually boiled in a sort of stew with manioc as a base. Other roots or vegetables may be substituted. One stew consisted in caiguas, red pepper, and onion leaf with meat. Occasionally small choice cuts of meat or tiny fish are roasted to be eaten fresh. Children sometimes wrap giblets or entrails in leaves and roast them.

Meat and fish are preserved by salting or by smoking. Salted meat is said to keep for months. The meat is salted and dried. The following day it is washed, and dried again. Smoked meat keeps for only about five days; however, smoking is much more common than salting, especially for fish. Usually a wooden frame is built over a fire, and a rack of sticks not easily flammable is laid on them. One rack, however, was composed of three sticks laid across a large clay pot on the fire. The fish is cleaned and wrapped in leaves tied with vine. The leaves are folded over the heads of the fish, but the tails are left exposed. Banana or bijao leaves are often used, but the leaves of the cordoncillo are said to give the fish an excellent flavor. The leaf of the mishqui panga is also used to wrap fish. They are set on the grate over a slow fire and baked an even brown all over. No more delicious fish is served anywhere.

Some effort is made to preserve vegetable foods. Raw green plantains are sliced and spread out on high racks in the sun to dry. When they are crisp they are pounded to a fine powder in the mortar and sifted through a coarse cloth. The banana flour which results keeps indefinitely. Fresh plantains are much preferred for the beverage, but for trips or other occasions when scarcity of food is apprehended, plantain flour is prepared.

Manioc is preserved in the form of fariña, which is very well liked. Children, especially, like to take up a handful of fresh fariña to eat as they go out to play. Men poling canoes find it satisfying too, and do not fail to take it along when available. It is prepared less frequently than might be expected, considering its popularity. Perhaps the reason is that surplus manioc is not often available, or perhaps the long process of preparing fariña discourages its use. The manioc is peeled and soaked four days in water in a canoe, until it smells sour. The water is drained off, and the manioc is kneaded by hand. To press the water out of the mashed manioc before cooking, it is packed in baskets set on a board shelf. Bijao or banana leaves are put over the manioc to keep it clean and protect it from rain. Stones or logs are placed on top as weights to press the water out. After the water is pressed out, the manioc is passed through a mat. It is toasted in a large clay pot, being stirred constantly with a wooden paddle.

In the harvesting of rice, the heads are cut and carried home in baskets. Usually they are dumped into old canoes pulled up beside the house. The kernels are flailed from the head with sticks. Hulls are removed by grinding with mortar and pestle, a process which breaks almost every kernel without cleaning off the hulls very well. Rice is usually raised for sale to the whites, though a small supply is kept for emergencies.

Pods of beans brought home to the village are spread out on mats or blankets in the sun. When dry, the beans are shelled by beating with a stick. The shelled beans are again spread out in the sun until well dried. During the frequent showers they must be carried indoors. When the beans are dried they are packed in big baskets lined with leaves. The more enterprising take raft loads of them to Pucallpa for sale. Sugar cane juice is made into syrup by boiling for fourteen or fifteen hours. When possible, rock salt is bought in fifty-kilo sacks. It is pounded in the mortar, and stored in bottles. Lack of salt is considered a great hardship, not only for the sake of the diet and flavor, but also because of its use in the preservation of meat.

Meals in the home are served at six or seven in the morning, again at about eleven, and in the evening at sunset. However, the plantain beverage is always available and snacks between meals are common, especially as the various fruits are in season. Dishes may be rinsed by splashing the water from the waterjars over them, or they may be taken down to the river and washed.

The gathering of firewood is the responsibility of the woman, though a man will occasionally bring wood for her if she is busy. In a new village where fields nearby have recently been cleared and the fallen trees in the woods have not been used up, the wood is specially selected for each particular use. The wood for smoking fish or for toasting peanuts or fariña should be of a kind that will burn slowly and steadily, but a quick hot fire is preferable for preparing the meals. A heavy, slow-burning log will preserve embers through the night, but light, easily flammable wood is wanted to start the blaze in the morning. If embers are lacking they are borrowed from the neighbors. New fires are started with matches and a splash of kerosene.

The woman carries the water for her household in a waterjar on her head. Usually a hand steadies the waterjar, probably because of the steep banks. Most homes are not far from water.

Clothing is washed in the streams by beating with stones. Whenever possible soap is bought from patrons or traders. There is a crude soap made by the Piro. The fruit of the avilla has pithy white sections which are grated, and put in a pot. The pulp is covered with about five centimeters of water, and cooked. When the avilla has softened, ashes are added, and the mixture is cooked again. It is strained through a mat, and then through a cloth, and cooked again. Each day the process is repeated for nearly a month. During the last week of boiling, lemon juice is added. Still later the pulp of the papaya fruit is added, and the mixture is boiled again. Finally the leaf of an herb, called in Piro chawayli, is boiled separately, the juice is added to the soap, and the mixture is reboiled. The soap is sticky and does not harden, but is of considerable aid in washing clothes.

The house and yard are ordinarily swept each day except during a rainstorm. The ground of the clearing is scraped bare weekly with machetes. This is usually, though not always, the work of the women, who prefer to do it in the cool morning hours, beginning before sunrise. An unused part of the village clearing may be allowed to become overgrown until the village is cleaned up for a holiday. Then the men make sport of clearing it all together, shouting and racing in their work. The river is the chief means of garbage and sewage disposal. Scraps which the livestock will eat are tossed out of the house and quickly gobbled up. Often in eating fruit the peels are thrown carelessly on the floor or on the ground by the house, but they are never allowed to remain very long. Little children help with the housework, washing, sweeping, and caring for the younger brothers and sisters. A little boy or girl, hardly too old to be carried in a sling, goes around with the baby of the family dangling almost to the ground in a sling.

A day's activities must often be determined by the weather, and once or twice in the year by the water level. When a village floods, the discomforts seem to be offset by the excitement of the swirling waters, the novelty of living in the stream, and anticipation of the gay stories to be told afterward. A clay base for the hearth fire is improvised on the

platform of the house, or in rarer cases when the waters rise above the platform, in the canoe. Sometimes a section of the platform is raised and tied higher on the posts of the house to provide sleeping quarters. Otherwise the occupants of the house make their beds in the rafters. Domestic animals and pets must share the emergency accomodations or be carried to higher ground. Game animals trapped on narrowing islands provide an unusually abundant supply of meat, adding to the festal spirit. Only in an exceptionally high flood is there a considerable loss of plantings to cause regret, since the Piro anticipate high water. The floods are brief, usually of just a few hours duration.

Dress and ornamentation

Many of the Piro now copy the dress of the whites around them. The women cut out dresses, shirts, and trousers without even a pattern to guide them, and the results are quite equal to that of their white neighbors in most cases. Often the men are able to purchase shirts and trousers ready made. The Piro have a word which means 'to exactly fit'. Sometimes their clothing fits a little more closely than that of the white, but more often, when the type and color are suitable, one is inclined to comment that the Piro know how to dress. However, there are still a few features amusingly primitive. One is a predilection for pink. I have seen a grave and very muscular chief dressed in a pink shirt, and wearing football shoes. Colorful little caps with visors are also in great demand. In the haircuts which the men give one another, they most successfully imitate their white neighbors, even though the task is often performed with very old and broken scissors.

Even though most of the adult Piro now possess clothing of European type, one still sees the native costume frequently. The men's robe is worn in cold weather and at night. It is of heavy homespun. Two 2.6 meter lengths of cloth a little over sixty centimeters wide are sewed together lengthwise, leaving about forty-five centimeters unsewed in the middle for the opening for the head. The cloth is then folded double. Beginning about thirty centimeters below the fold on each side to allow for armholes, the side seams are closed. Women take great pride in the weaving and painting of the men's robes.

The woman's skirt is similar in material and painting to the robe of the man. It is of a single piece of cloth, with the ends sewed together. The seam is folded underneath as the skirt is wrapped tight around the body, overlapped and tucked in on the left side. This is the only garment of native weave provided for the women. However, with purchased material they make blouses of a quaint gypsy type, long in the back and short in the front so that five or six centimeters of bare skin show above the skirt. The sleeves are long and full, being gathered above a ruffle at the wrists. Around the

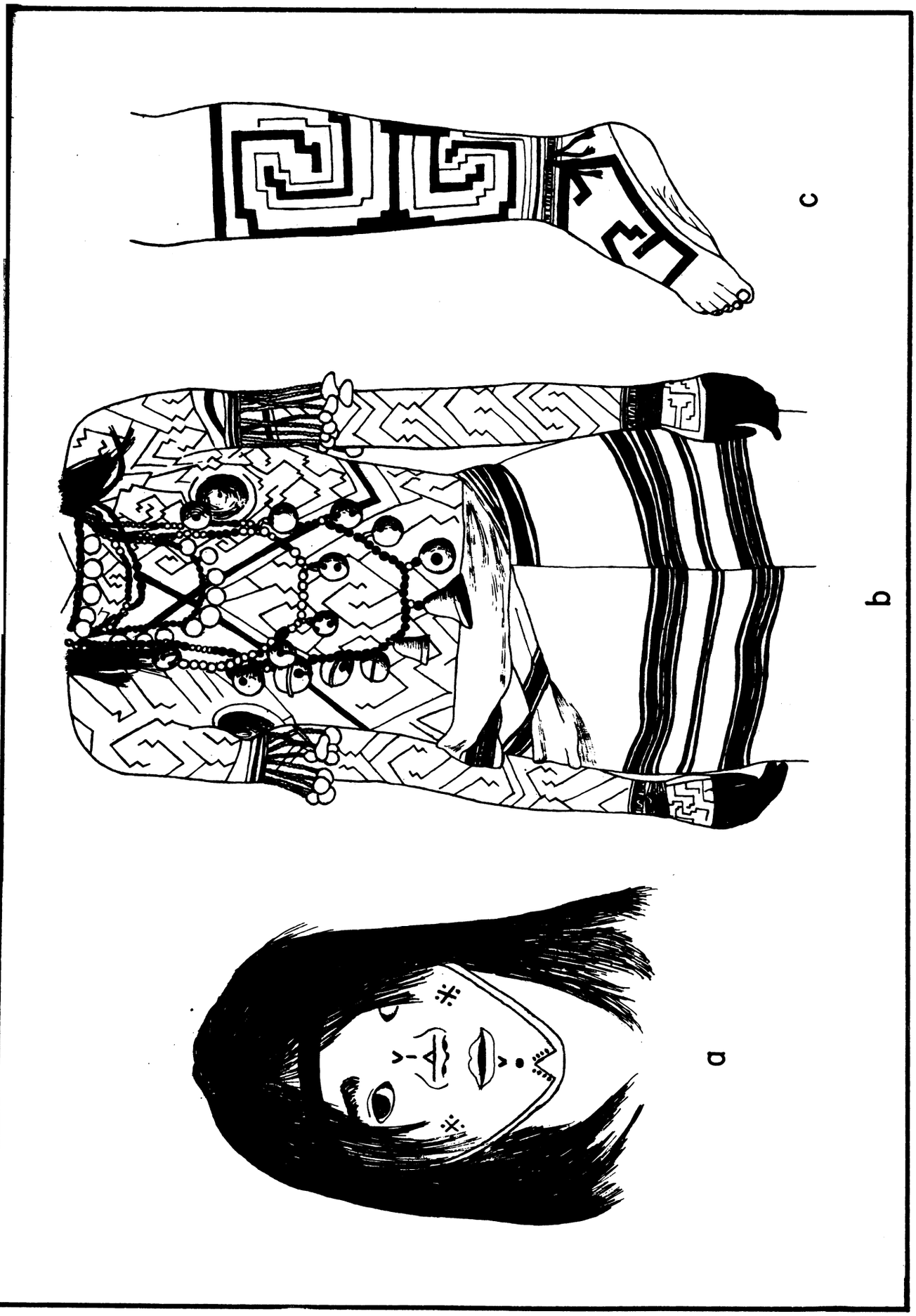
PLATE IV

Piro Body Decoration

(a) Face painting of a girl about eight years old going on a trip to visit relatives. Covered eye is blind. Shamboyacu village, Urubamba River. September, 1953.

(b,c) Body painting of a girl for a puberty celebration. Censa village, Urubamba River. August, 1953.

[Drawings by Joyce Nies]



neck and shoulders, across the swallow-tail, and at the wrists are bindings of contrasting colors, or of prints. Sometimes zigzag designs are embroidered or appliqued down the front of the blouse.

For everyday wear palm hats are woven by the women. The woman's hat has a wide brim that slopes downward. The brim of the man's hat is narrower, and rolls upward slightly. Women do not too frequently wear their hats. A cloth over the head, or in the hot sun a bundle of rags balanced on the head seems to be more convenient. At least it serves a few extra purposes when babies are being tended.

Many of the Piro have shoes which they wear for a few hours on Sunday and other special occasions. They take them off to walk, and often inconspicuously slip their feet out of them even while seated. For work in the fields or on the river, old ragged clothes that are more than half patches are worn. New clothing is very carefully kept for occasions worthy of it.

Only in his efforts to imitate the white is the taste of the Piro ever gaudy. Black and white are basic to the native Piro design, and the added touches of color are restrained.

For a dance a Piro girl dressed in the native costume wears the wrap-around skirt with a fringe of tinkling seeds or small nuts. The standard coloring of the skirt is a black geometrical design on white cloth, with certain figures of the design dyed mahogany. The girl wears a collar and bracelets of beadwork of the typical geometrical design. A heavy twisted cord of the white beads serves as a belt. She wears a crown of white bark painted with the same design in mahogany or black dye, or a woven crown stitched with the design in black cotton thread. At the back of the head two tall macaw feathers rise from an ornate wooden base in the crown. Earrings are used, and an ornament beaten from a coin or delicately carved from wood is thrust into the pierced lower lip. The face, arms, and legs are painted with geometrical designs in fine lines of black genipa, applied with a seven and a half centimeter cane splinter.

The man wears his long robe painted with the geometrical design and carries a baton of black palm wood topped with the black and white plumes of the blue heron, with flame-colored feathers of the guacamayo or toucan at the tip. He wears a head band of short broad-tipped black feathers, as of the guan, which make an even fringe across the forehead. The feathers are held in place by a woven cotton band. Around the throat is a bead choker, three to five centimeters wide.

Men often have bead bracelets for everyday wear. Both the men and women frequently paint themselves with genipa without the stimulus of any special occasion. Various explanations of the practice are offered. "We paint our feet so that the water will not crack them." "I painted my scalp to get rid of the lice." "The genipa keeps the insects off." "We do it just for adornment." "We don't

know why. It's just a custom." No superstitious motive has ever been admitted. The everyday painting is usually not in the fine lines and geometrical designs applied for a fiesta, but in wide bands or splotches. Often the feet and legs, hands and arms, are dyed completely black. Sometimes the entire face and scalp are dyed. Most often a band over 2.5 cm. wide is painted across the forehead.

Most families possess one or two combs purchased in Atalaya, but homemade combs of bamboo serve when other combs are lacking. Girls who care to copy the whites turn the black hair back from their faces in a very pretty upsweep. Others let the hair hang as it will from a part in the middle. Mirrors are common in the homes nearest Atalaya; very rare farther upriver.

All Piro have lice. There is a single word which means 'to pick and bite a louse'. Lice picking is a real form of fellowship among intimate friends and relatives. However, apart from the lice, and stains and marks of toil and soot, the Piro are a very clean people. Unless it is raining, all go down to the river or streams at dusk to bathe, but that may be the fourth or fifth bath in the day for many of the people. Little babies are given frequent baths by splashing the water from clay bowls over them. Clothing is soon darkened from washing in the muddy streams without soap, and from mildew, but it is frequently washed. Children play for hours at a time in the water.

Handicrafts

Unlike the daily routine labor in which all share a part, there is specialization in the handicrafts. Many women know how to spin and weave, to make baskets, pottery, and fine beadwork, but certain ones are considered the specialists in each line of work.

The most painstaking work is the production of cloth for robes, skirts, baby slings, bedding, hammocks and bags, and of cloth straps for shoulder bags, tump lines, and belts. The cotton is brought in from the planted fields, seeded and carded by hand, and spun by whirling a spindle between the thumb and first two fingers of the right hand while the left hand holds the tuft of cotton at just the right tension. The spindle usually spins in a clay bowl or gourd.

For weaving, the warp strands are looped back and forth over two polished sticks, which for the weaving of a man's long robe are two and a half meters or more apart. One of the sticks is tied to a post, the other to a rope about the weaver's waist. She sits on the floor or on the ground. Draw threads are attached to a beam in such a way that by turning the beam up on edge a series of threads is raised, allowing the shuttle or ball of cotton to be passed beneath them. Each time after the shuttle is passed, the woof threads are pressed firmly into place with an old blunt knife, or with a polished wooden blade.

The weaving is done with white cotton except for two lines of black or occasionally red dyed thread near the outer edges of the warp, so that the cloth has two vertical stripes. The geometrical designs are painted on with a small stick. For black dye the juice of a vine called in Piro tlipi is used, and it is covered with a black mud which is afterward washed off. The colored dyes used for filling in figures of the design may be from mahogany juice, or may be any of several red or yellow vegetable dyes.

The basketry of the Piro provides mats for beds, seats, and strainers, hats, fans, broom handles, and a variety of baskets: the round carrying basket, of very open to very close weave, to be suspended from a tump line; the rectangular basket of fairly close weave used to store spinning and weaving supplies; a rectangular cane basket with cover of equal depth; a variety of carrying and storage baskets of very loose weave, often improvised at the moment needed. The women make the mats and hats. Men make most of the baskets, but women occasionally make baskets also. The most important materials used in basketry are the fibres of the shapaja, yarina, ungurahui, and bombonaje palms, cane, the tamshi vine, and barks, especially of the carahuasca tree.

The cane-leaf mat used in the bed (averaging 1.6 meters by 1.3 meters) is the simplest weave. Cane leaves are laid parallel on the ground, and flexible bark strips are interwoven. The bark of the carahuasca is preferred. The bark strips nearest the two ends (7.5 to 10 cm. from the end) are in pairs, one below the other, with the lower wrapped over the upper at the crossing of one or two cane leaves. In the central portion of the mat the bark strips are passed under one and over one cane leaf, curving at the edge and recrossing the mat at intervals of about fifteen centimeters.

The mat used as a strainer is up to a square meter in size. It is of twilled work, often in two shades of palm, and is lashed by the palm fibre to a rigid cane frame. Mats for seats, carrying baskets, and miscellaneous woven items are of twilled work, varying in detail. The cane baskets are built over rectangular frames. Parallel canes run up the inside of the basket, double back against themselves, cross the bottom, pass up the outer opposite side and are doubled back against themselves again terminating at the bottom inside of the basket. The canes which form the other two sides are placed similarly. Meeting at right angles on the bottom, the two sets of cane are interwoven. The first cane passes under all but the first, middle, and last of the perpendicular canes. The second passes under all but the first two, middle one, and last two of the perpendicular canes, etc. The canes are stitched in place by a cotton cord running horizontally around the basket halfway up the sides.

When an unexpected supply of some desirable commodity is found, such as some fruit, or a quantity of excellent clay in the woods, or a nest of turtle eggs on the beach, a basket is improvised out of material

available: vine, bark, palm fibre or big leaves. One secure container was make of banana leaves. The leaves were torn from the edge to the stem in opposite two and a half centimeter strips, the ends of which were tied together as the leaf wrapped the bundle.

The beadwork of the Piro generally exhibits good taste, though occasionally a clashing color is added at the edge of the beadwork. Seed beads are used. The geometrical designs typical of all Piro handicraft are worked in contrasting colors, usually white, black, and one other color. To a 15 cm. by 1.3 cm. board is attached a loop of thread which is hooked over the big toe to hold the loom in place during weaving. To a larger loop of thread from the board are tied the desired number of strands. The ends of the thread are stiffened with beeswax. Consecutive strands are intertwined at intervals of one, two, or three beads by passing the thread of one strand through a bead in one direction, and the other thread through the same bead in the opposite direction, and by twisting converging threads together with a half turn.

The pottery of the Piro is considered by themselves to be inferior to that of the neighboring Shipibo, but although the Piro recognize certain differences in technique (as the Shipibo custom of mashing the ashes of a certain bark and mixing it with the clay), they do not care to change their methods. The Piro mix crushed old pottery into the clay to temper it. The base of the clay vessel is molded by hand. Strips of clay are rolled to be coiled upward from this base. The pottery is shaped and smoothed with a fragment of a gourd or a stone, and dried in the sun before painting. Drinking bowls are "painted" with a red clay, and serving bowls with a white clay. On the red surface is drawn the geometrical design in white clay. On the white bowl is drawn the geometrical design with a chunk of black clay. Water jars may be of either red or white clay, or a combination of both. The cooking pot and toaster are not painted but are blackened by burning. The pottery is baked in an open fire. It is well covered with ashes, and small pieces may be covered by large pieces of discarded pottery. After baking, the pottery is varnished with the sap of the lacre tree, or of either of two other trees. The making of pottery, as well as the other handicrafts of the Piro, are being taught to the children of this generation. Two little girls of less than thirteen years have showed me very excellent water jars which they themselves made.

The making of rope, and of cords for the bow, fishline, fishnets, etc., is an important handicraft of the men. They also secure rubber from the woods, and rubberize bags. The rubber tree is felled, and is bled by cutting gashes half way round the trunk at intervals depending on the length of the tree. Gourds are placed in small hollows excavated in the ground beneath the gashes. The sap drains in about half an hour. For rubberizing one bag, a sapling providing two gourd bowls is sufficient. For more extensive projects of rubberizing, a larger tree yielding up to two waterjars of sap is felled. The sap is

carried home and strained through a rag. Two tablespoons of sulphur are mixed with one clay pot of sap. The bag is stretched over a frame, and the sap spread on with a large feather. The bag on its frame is set out in the sun during the day for five days, after which it is washed and is ready for use.

The frame which holds the bag is ingeniously made. A two-meter cane is stuck upright in the ground. From the ground and for a meter upward the cane is wrapped with tamshi vine. From the termination of the vine the cane is split into four. About ten centimeters above the vine is a hoop of horizontal plane, about sixty centimeters in diameter formed of a vine 2.5 cm. in diameter tied into a circle with the overlapping ends tapered to conform to the curve of the circle. The hoop is supported by two straight pieces of the same vine passing through between opposite forks of the cane so that they form four spokes, tied to the hoop with bark, and supported where they pass through the split cane by a spiral of the tamshi vine. At the top of the diverging forks of cane is a hoop of split cane a centimeter wide. The hoop is about thirty centimeters in diameter. It is tied to the forked cane with bark. A rectangular board about 86 cm. wide, and 2.5 cm. thick, rests on top, secured with bark which passes around it and the hoop.

The tools with which the men make furniture are nothing more than the machete, a crude knife, a chisel, and an adze. The previous generation used split bamboo for knives, and axes with stone heads. The axes were little used in woodwork, serving rather for cracking open turtle shells, and for weapons. If a Piro lad acquires a large nail, he beats it into a knife blade between stones, and binds it to a handle with cotton thread hardened by pitch. In the last five years two or three hammers and saws and one plane have been brought to the Piro, and have been loaned from village to village and very much used. However, the furniture described in this paper is nearly all carved with the machete. A certain stone called 'the sharpening stone' is used to grind machetes. The stone has a smooth light green top. The man squats over the stone, pours water on it, and rubs the machete back and forth upon it, gently pressing the blade down with the left hand.

Spoons have carved ornamentation. Paddles often have the geometrical designs carved or painted. There are two forms of paddle. One is a long blade. The other is shaped like a broad leaf.

The biggest item in woodwork is the dugout canoe. The selection of an appropriate tree for the making of a new canoe is very important. The preferred woods are cedar (kanawa, the word for canoe), mahogany, and catahua, the tree whose white sap causes sores and blindness. The cumala, copaiba, lagarto caspi, palo de cruz, cedro blanco, and another cedro with a distinct name in Piro are also used for canoes, as well as two trees not identified with names in Spanish. Canoes made of one of the latter are said not to last long. Not only is the type of wood important, but also the size, shape, and health of the tree. Often the tree selected is at such a distance from the village that the maker and his wife, and perhaps

friends who are to help in the work, live in a temporary shelter near the tree. When the tree is felled, it may not lie with the desired side up, and must be rolled over. If it is a very big tree, the whole village must be called to roll it—men, women, and children. Poles are cut for levers, usually used by the men, while the women push directly on the log. Little boys get smaller poles and imitate their fathers. Timed by a grunt word used only in pushing ('mmm'), the row of workers rock the log back and forth and then with a big heave roll it over.

The outside of the canoe, called its "bosom", is shaped first, and then the canoe is hollowed out. The greater part of this work is done with the adze. If in the course of hollowing the canoe a serious flaw is found in the wood on the inside, the objectionable part is cut away and a closely fitting block inset. One to several weeks may be spent in shaping the canoe, depending upon its size, and upon the number of helpers.

The canoe, having been shaped where the log fell, must now be dragged to water. The same poles used as levers in rolling the log may be laid across the path. If the canoe is large, the whole village is again called to help, and again they grunt 'mmm' and push together until the canoe is on the poles. It then slides easily as the poles revolve. The young people snatch up the poles as the canoe passes them and run to replace them in the path ahead. With a great deal of shouting and laughter the canoe is brought down to the river. There dried thatch is stacked against the sides and set afire. This is called "tempering the canoe". The saps of the caucho mash, lechecaspi, and another tree called pyoji in Piro, are used to repair cracks in canoes.

Usually every family has at least one good large canoe. The young fellows have in addition small, narrow canoes for hunting and fishing. Little boys of ten or twelve may cross the wide river in their own little canoes five or six feet long.

Livestock and pets

The domestic animals of the Piro are dogs, pigs, chickens, and ducks. The dogs are much better kept than those of many American Indian tribes. Some are thin enough so that the ribs show, but most of them appear quite well fed. They are used in hunting, and also serve to guard the settlement from nocturnal prowlers. Most of the women have learned to cope well enough with the dogs of their own families, but many of them fear the neighbors' dogs and often pick up heavy sticks to defend themselves in passing. The attitude of these women, in turn, provokes the enmity of the dogs so that there is continual barking and beating. If a dog is not considered a good hunter, the owner forces him to drink the irritating sap of the catahua or either of two varieties of sanango. If the dog survives the ordeal, he is expected to be a good hunter. If the results are not satisfactory, the treatment may be repeated. In spite of the general antagonism between some women and the dogs of other households, families usually are very fond of their own dogs. They frequently yield to the dog's pleading

to get into the canoe and go along on a trip, even though they had planned to leave the dog to guard the house. Hunters especially talk proudly of a good dog's successes, and in all the stories of their activities they talk of the dog as if he were quite a member of the family.

Chicks are treated with real affection. Often they are carried about like pets under the woman's dress in the bosom. While we were waiting to roll a log for a canoe in the woods, one young woman pulled out two baby chicks and entertained herself by letting them walk up and down the log, catching them up and kissing them as they went by. The Piro commonly chew up hard corn and raw manioc to soften it, and spit it to the chicks or ducklings. Full grown chickens are more often exasperating than pleasing, since the livestock live so close to the family. It is always a struggle to protect the food from them. One old woman became so annoyed with her hen that she caught it up and spanked it with a stick. Corn is raised especially for the chickens, and they are also fed manioc, and scraps. Chicken houses are of pona and thatch, or are low tunnel-like structures of cane and thatch. When chickens or ducks are to be transported by canoe, split-cane cages tied together with bark and shaded with banana leaves are often made.

While the people are fond of eggs and of the meat, it is so hard to raise chickens that both are kept for special occasions and for the sick. Pigs are easier to raise, though in a period of a year, the jaguar killed four large pigs from one community. The pigs are more often sold than butchered for the Piro themselves.

In 1950 one family decided to experiment with cows and turkeys. Up to that time, only the men who had travelled had ever seen cattle of any kind, but the people have tasted milk from cans and have a great craving for it. The family who bought the cows had moved to an isolated spot in the village of Belén so that no difficulties would arise with the neighbors over the innovation. It was most fortunate that they had moved, because the initial problems of having cows around the home were almost insurmountable. The cows walked through the cane walls of the kitchen, ate up the family's food supply, smashed the pottery, terrified the children, and trampled the baby chicks. As the cows grew, they became more and more destructive. At the same time, their increased size made transportation by canoe almost impossible, so that the owner could not dispose of them. He could not afford to kill them and lose his heavy investment. There was nothing to do but learn by experiment how to keep cows in the jungle He first cleared sufficient land so that the cows did not lack pasture nor water away from the dwellings; then he moved the kitchen up into the house, making a clay hearth for the fire. That solved the problem until the cows reached such a size that when they walked under the houses, their backs scraped the palm bark floor and shook the whole building. He has now enclosed a yard about the dwellings with a fence of cane lashed to heavy posts. The cane has to be replaced frequently, but the family now lives in peace. They have had very little milk due to a defect in the bags of the two mature milk cows. The defects were not apparent at the time of the purchase. However, calves are being raised and there may eventually be a supply of milk.

The raising of turkeys has been a much more agreeable experiment, though the turkeys are somewhat belligerent because the small boys, living so close to them, cannot resist the temptation to keep them gobbling. So far no brood of turkey chicks has been successfully raised, though the eggs hatch well.

Three or four cats were bought by the Piro during the past six years. They were greatly prized as a means of eradicating rats, but the cats do not live long in the Piro villages. Evidently they have not sufficient resistance against intestinal parasites to survive among the Piro.

The Piro take great delight in capturing and taming wild creatures. The most successful method is to kill the mother, and take home her young, or, in the case of birds, to rob the nest. Among their pets, the Piro have had various types of monkey, a rabbit (short-eared), a jabali, peccary, tapir, turtles, and a great variety of birds, including the owl, the wild turkey, the guan, the trumpeter, the toucan, various doves, two varieties of macaw, parakeets, and some eight other types of parrots. Even more affection is lavished on these pets than on the domestic animals. Little monkeys are frequently called 'shte', the form of address used for relatives of a younger generation. Great pains are taken to procure the right food. One old grandmother caught grasshoppers, pulled off their whiskers, and poked them whole down the throats of her newly hatched birds.

Wild creatures are taken for pets, not to be raised for food, except for the turtle. The tortoises of the forest and the various river turtles are captured and penned in circles of upright palm-bark stakes, where they are fattened to serve as food.

Predatory animals and pests

Poisonous snakes are a continual menace. No death from a snakebite has been recorded in the last six years, but three serious bites were noted. One by the snake called jergon resulted in the loss of a hand and half the forearm. An older man in the tribe had previously lost an arm in the same way. Another bite in 1950 by the same type of snake was treated immediately and for over fifteen consecutive hours with a suction snakebite kit. It resulted in two weeks of inability followed by complete recovery. Another snake less than a foot and a half long, not identified by name in Spanish, caused severe vomiting of blood, but the patient recovered. The Piro take pains to hunt out and kill a poisonous snake that has been glimpsed, even clearing land in order to rout it. Snakes recognized as not having a deadly bite are allowed to escape even when it would be quite convenient to kill them.

The boa, while not actually a serious menace to safety, is considered to have supernatural power, and especially to be the cause of whirlpools. "The boa draws down the canoe....Deep in the water he leaves it. Outside the water appears good, but down in there is a great hole from

which nothing can go up to the surface. If the medicine men are called, then the people who live in the water are seen. They talk. They are like those who live in the outside air, but they stay far off. A strong medicine man could seize them, but now they are not accustomed to the outside air. They are accustomed to be within the water. In two months one who has been seized is acclimated. They say it is very good. When children go down into the water, in five months they are grown big....." Stories of the ancestors involve monstrous boas, and heroic feats against them. There has not been an opportunity to observe an actual encounter between a Piro and a boa.

For waders the ray fish is a constant danger. It grows to a meter in diameter, and the barbed spine of the tail cuts a gash several inches long on the feet and legs. The ray fish are struck and killed with the poles as canoers notice them. The piranha, which bites, and the canero, a fish which penetrates the body, are a menace to swimmers.

The jaguar has already been mentioned as the enemy of the Piro. It is not only a man-eater, and the subject of many terrifying stories of actual experiences, but is also the object of superstitious fear. A girl described the encounter her older brother had with a jaguar while she sat petrified with fear in the canoe. Finding himself without shot for his gun, and his axe out of reach, he took up his harpoon and advanced toward the beast who was coming to meet him. Before letting go the harpoon the man spoke respectfully to the jaguar, "Grandfather, where are you going?" When 'grandfather' did not answer, but continued to approach menacingly, the harpoon was hurled into his side. The jaguar took off, and the Indians, equally frightened, shoved the canoe out into the current.

When a jaguar has been heard at night in the forest nearby, or when his tracks have been found near slaughtered pigs, the men take time out for a jaguar hunt. These hunts are very often unsuccessful, probably because the jaguar covers such great distances in a comparatively short time, even swimming the river back and forth in the course of his wanderings. The Piro seek to obtain poison from the whites of Atalaya, but say the whites are very reluctant to furnish them with it. When the poison is obtained, it is put on the flesh of a pig that a jaguar has killed and left, in the hope that the animal will return to finish his meal. On one occasion a jaguar attacked a pig within a hundred meters of the village. The squeals of the pig attracted the people, and as they all ran shouting into the forest the jaguar escaped. Two men with shotguns hid for hours behind a screen of leaves by the pig, which lay on its back complaining. However, the jaguar did not return to its prey. Shortly before dark the men gave up, killed the pig, and returned to the village with the meat.

A more frequent, though less fearsome, thief of the livestock is the ocelot. The Piro say it can kill a dog, but no one seems to particularly fear it. In fact, women with their babies in slings at their sides, and without even a stick to use as a weapon, ran into the woods to frighten one away from the chickens.

The zorro (similar to the opossom) kills chickens by night. When a zorro is detected in the henhouse, the little boys are called for practice with their bows and arrows. Hawks perch on the high tree tops around the clearings, watching for chicks to stray from the houses. If they remain long enough within bowshot they are killed.

Within doors, bats are the most annoying and filthy of the pests. Brambles are frequently hung from the ridgepole near the opening at the top of the gable ends, since that is a favorite entrance for bats. No amount of effort keeps a home entirely free from them, but they provide targets continually for the boys' arrows. No one risks sleeping without a mosquito net, and some even keep lamps burning throughout the night because of the bats. The cows in Belén are often bitten and bled by the bats. Rats also are numerous, and in spite of the crude traps made for them and the constant effort to seek out and destroy their nests, no village ever seems to be free from them.

The most common insect pest is the cockroach, which overruns the food in every dwelling. Spiders preying on the roaches flourish. Their eyes can be seen gleaming all through the thatch by lamplight. Little effort is made to eradicate roaches and spiders. Wasps, which in turn prey upon the overgrown spiders, also seek to hang their mud daubs under the shelter of the houses. Swarms of wasps on wax nests are burned out by a bit of blazing thatch on a pole. The tarantulas are not numerous, but do occasionally invade the living quarters. They are smashed with poles.

Mosquitoes are thick in certain villages. Babies cry with annoyance from them, and all who are old enough keep moving constantly while out of the net in the evening. Many of the Piro, however, refuse to live where mosquitoes are numerous. Gnats and a small triangular gadfly with a vicious sting prevail all along the Urubamba. In seasons when the swarms are most numerous, the legs of some are a mass of sores. The smoke of certain leaves gives momentary relief, but no real solution to the problem has been found.

Termites fight tenaciously for their share of the buildings which they choose. The most effective treatment noted for them was that of pouring boiling water down the holes which the insects make at the base of a post by which they have chosen to invade the house. This treatment must be repeated several times in order to eradicate one swarm of termites. There are besides other wood borers which penetrate and hollow out the beams and rafters of the houses. These leave holes where they have entered, and the Piro attempt to plug up all of the holes by pounding hardwood splinters into them

Out of doors the most troublesome insect is the izula, an ant-like creature more than 2.5 centimeters long. The bite is so painful that even an adult cries with pain. The bare feet are frequently bitten on the trail. Hands grasping branches for support, or contacting plants in the labors of the field are exposed to the poisonous bite.

Disease and medicine

The Piro have native words for malaria, whooping cough, tuberculosis, influenza or colds, asthma, oxyuriasis, anclostomiasis, rheumatism, paralysis, pinta, dysentary, yaws, leprosy or syphilis (one word), gonorrhea, tropical ulcer, boils, and burrowing of a worm under the skin. They have borrowed words for smallpox, chicken-pox, and measles.

While grateful for medical help from the outside, the Piro have considerable confidence, not only in their own medicine men, but even more in their herb remedies. No attempt is made here to evaluate the medicines.

Boiled datura is taken for tuberculosis and also to produce visions. Guava shoots are boiled and given to children for whooping cough. Té limon, a grass, boiled with sugar-cane syrup is given for malaria. The raw sap of a climbing vine is rubbed on the splotches of pinta. For venereal diseases a drink is made by boiling any of four kinds of fern, or by boiling the root of the herb cortadero, or the bark of the cascarilla tree. For retention of urine a drink is made by boiling hataco root. The hataco resembles pigweed.

For worms a drink is made of the juice of boiled saltwort, or the raw, strained sap of the ojé tree. The latter, taken also for any abdominal pain and for anemia, seems to be drastic treatment. The patient is in bed for days or even weeks afterward, and loses weight.

To reduce fever, the leaves of different herbs and trees, including the elder and the sanango tree are boiled and the juice given. The bulb of the lancetilla is grated and boiled, and also the seed of the piri piri. For fever with jaundice, the bark of the catahua (avoiding the sap) is boiled for a drink.

The leaves and roots of the sanango tree are boiled to provide medicine for various stomach ailments and the wood is grated and mixed with water. "When one feels weak, he grates the wood and drinks it in water. He vomits and for two days he is weak and has no appetite." The seeds of the castor-oil plant are ground and allowed to dissolve in water for a purgative. For distress from eating too much of the uvilla, the old woman who was serving as herbalist first administered the juice of boiled leaf buds of a wild potato, and when that was not effective, the juice of boiled cetico leaves. Severe abdominal pain, resulting from the eating of a pineapple with unwashed hands after working with tephrosia toxicana, was treated by striking the abdomen with nettles until it was covered with a rash.

There are several medicines given for diarrhea. Copaiba seeds are boiled and the juice taken. The seeds of the cacahuillo tree are grated and taken in cold water. The bark of the palo de cruz is ground, boiled, and eaten. The trunk of the ipururu bush is scraped, and the scrapings are given in water to babies.

For influenza and colds, the leaf of either the llantén or ñucño pichana is cooked and the juice given, or the seed of the okra is mixed with urine and given as a drink. The bark of the pucacuro caspi is shredded, and the juice pounded out for a drink.

Headache may be treated by crushing sweet basil by rubbing it between the hands; then dipping it in water and applying it to the face and head. Castor-oil leaves also are put on the head for headache. For sleeplessness day or night the eyes are covered with the leaves of a certain herb.

Wild garlic is grated, mixed with water, and drunk to increase the possibility of conception. There is also a contraceptive commonly used, but not identified by name in Spanish. The juice of boiled cotton leaves is supposed to prevent abortion.

Broken or dislocated bones are bound with the itininga vine. There are many remedies for wounds, which are supposed to hasten the healing. The sap of the patquina blanca or of another herb is rubbed on the wound. The bulb of a plant not identified in Spanish, is grated and heated with a little water, taken up on a stick while still warm, and spread on the wound. The trunk of the chirisanango is grated and put in warm water with which the wounds are washed. The bark of the cascarilla is powdered and put directly in the wound. The bark of the coral-blossomed amasisa tree is ground, burned, and put in wounds to stop hemorrhage.

The sap of the castor-oil is smeared on sores. For boils, plasters are made of the boiled leaves and stem of three varieties of minch, and of an unidentified herb, and of the grated wood of genista. The brush-like spikes of a certain grass or foxtail are used to remove the core of a boil.

The sap of the patquina blanca is rubbed on spider bites. For snake bites, the juice of the huaca bush (used to stun fish) is boiled and given repeatedly as a drink. White blotches, probably fungus, on the skin are rubbed with the sap pressed out of the yanacaspi.

Saltwort leaves are sometimes put in the water for bathing. The leaf of the Santa Maria herb is put in warm water for the bathing of infants, and the fruit of the añuje huasca is grated and rubbed on the baby.

Eyedrops are made from the juice of the piripiri, and of the tobacco plant. Also, the shoot of the cane is heated in the fire, and the juice squeezed directly into the eye. The pith of the oquera herb is wrapped in bijao leaves and heated in the fire. The juice is squeezed out for eye drops.

The Piro say that they chew the raw stalk of the cordoncillo to blacken their teeth; however, the practice has not been observed and must be very uncommon nowadays. It is probably done for ornamentation rather than for medical purposes. When toothache becomes intolerable, the sap

of the catahua tree is boiled and put in the tooth. This greatly hastens decay, so that the tooth is soon removed. The Piro suffer a great deal from toothache. One young woman told how her mother, maddened by the pain, held a nail against a tooth and insisted that she pound the nail with a stone until the tooth broke off.

Some of the medicines have definitely magical purposes. One is the mashu shillo, a clinging vine. "It causes madness. It has 'fingernails'." The huachasanango sap is taken by men, and also given to their dogs, to make them good hunters. One vine is named "That which causes deceit". The "viper's herb," a plant with large soft leaves with dark mottling, is dipped in hot water. With the crumpled leaves the baby's knees are patted so that the little one will learn to walk early.

The cure for the bite of one specific snake is to scrape an alligator's teeth, or scrape the skin off the under side of an iguana, and roast the scrapings. From either source, the scrapings are to be put in water and drunk. Otherwise the snake bite may be deadly.

Knowledge of natural phenomena and intellectual interests

The Piro have a fair knowledge of human anatomy. Their list of external members of the body is about equivalent to ours, and they name at least two dozen internal organs, probably more. They name the bones by specifying the part of body and adding the word for bone, a system that should make it easy to designate any bone in the body, by adding appropriate form or location words, of which there is a large class. The trunk of the body is divided into three parts: from the throat to the breasts; from the breasts to the umbilicus; from the umbilicus down. There is also a word for the waist. There is a word for taking the pulse, but what the significance of it is to the Piro has not yet been learned. There are words for 'right' and 'left', and the 'right-handed' method of working is recognized as normal.

Directions are not cardinal. They are principally designated as 'up river', 'down river', 'this side of the river', and 'across the river'. With regard to hunting 'entering the woods' refers to leaving the river, and 'going out of the woods' refers to returning to the river.

Knowledge of geography is very limited. Three or four of the men have been to Lima, but evidently the strangeness of the sights and sounds left such an impression of bewilderment, and the trips were so brief, that they did not give very informative reports to their fellow tribesmen. Interest in the outside world is very keen, though their conceptions are limited. All water must be conceived of as flowing, unless it is a small lake or swamp. Those who have travelled say that "there are not two people in Pucallpa", the superlative Piro expression for a great number. They cannot imagine a crowd of more than two or three hundred. Those who have not travelled as far as Pucallpa have never seen wheels turning on the ground. Machinery in general is called 'metal', and one girl asked, "Do they pick up metal from the bottom of the very big water (sea)?"

Knowledge of the universe is even less. The men thought they were being quite foxy to guess the size of the stars to be an armsbreadth, instead of calling them tiny chips such as they appear to be. The sky is generally thought to be solid. The sun and moon are said to travel, and there are legends personifying them.

The heavens at night appear somewhat different to the Piro's eye than to ours. They see and name the dark spots in the milky way. A monkey has his head to the south, and there is a devil in the north. A number of strings of three or four faint stars each, east of the north end of the milky way, are named for a feature of the common geometrical design. The magellanic clouds are noticed and called 'the tomb'. There are also constellations named, but most of them do not coincide with the constellations which we see. The Piro point out a cross in the north. It includes Denab, Sadr and two other stars of Cygnus. There is a very big constellation called the 'anteater' which sets in the southwest. Another combination of stars is 'the turtle coop'; another (including Altair) is the 'jaguar's paws'. The 'crocodile's chin' is a triangle including Markab (in Pegasus). The Pleiades are called kachkegirine; Arcturus, kolupa; and a morning star, gonsagi from gogi 'day' and sagi, a form word used of a ball or a large fruit.

The phases of the moon are noted and used in fixing dates. The day and the night are each divided into three periods with corresponding names: sunrise to eleven a.m.; eleven a.m. to about four p.m.; four p.m. to sunset; sunset to about eleven p.m.; eleven p.m to earliest cockcrow; cockcrow to morning.

All the Piro, including women and children, can count up to three. Beyond that women indicate the numbers by naming fingers, and by holding up the appropriate fingers in a set order. "This day I'm going" (first finger held up); "This day I'm coming back" (fourth finger held up). Many of the men, however, using the names of the fingers for the numbers from four to nine inclusive, and 'one person' for ten, form higher numbers by compounding, and fluently discuss large figures. The Piro had previously used 'ocho' and 'nueve' from the Spanish for 'eight' and 'nine', but in 1947 they deliberately standardized names for the ring and little fingers, and established their use as 'eight' and 'nine'. The Quechua words for hundred and thousand are borrowed in the form of pacha and waranka. Formerly, the main use of counting was to report the number of logs cut in a particular location. Now, since the Piro are becoming literate in their own language, they are learning to keep accounts and interest in arithmetic is at a high pitch.

Determined efforts to master the principles of mathematics had brought them little results in the past, and an effort to utilize Spanish numbers with Piro terms for add, subtract, etc. was also unsatisfactory. We discovered by experiment that the literate reacted to the figure 4 by saying "cuatro" in Spanish, and to the idea of four objects by saying "gepkoxamkoje" in their own language. Assuming that it would be easier

to associate their own word with the figure than to develop number concepts in Spanish, we transferred entirely to the use of Piro words for numbers. The results have been most gratifying, though discipline was required at first to keep from reverting to Spanish in tables memorized in Spanish. At present several of the men are beginning to learn long division, and probably will continue to make progress indefinitely.

Money is called 'big disc' (a sol);'half disc' (fifty centavos); 'a little bit' (ten centavos); and 'the very little disc' (five centavos). Gold is called kori from the Quechua word. Silver is money. Copper is 'cent'. Tin is 'can'. All other metal is grouped together under the word for iron.

The ability of some to read Spanish was mentioned earlier. It indicates an intense desire for learning and progress, since the advance made was in Spanish-speaking schools where the Piro appeared stupid, and were ridiculed and scolded. They persisted until many of them could sound out the words quite fluently, but in a majority of cases without very full understanding of the content. One young woman was found poring over a paper, sounding out the words and muttering them to herself. The paper was "The International Journal of American Linguistics." She had not discovered that the language she was "reading" was not Spanish.

In 1947 under the auspices of the Summer Institute of Linguistics, a Piro orthography was prepared and primers and booklets were presented to the people. They were received enthusiastically. Well over a hundred and fifty have undertaken to learn to read, and of them about forty read well at present.

In January of 1953 the government of Peru established a training course for Indian teachers, and appointed those who successfully completed the course to teach in experimental schools in their own villages. The courses are conducted in the Indian language but with an ultimate goal of bringing the Indian children to a mastery of the Spanish language. Seven Piro teachers have been appointed, and the schools are now in session.

The Piro's knowledge of the flora and fauna surrounding him is exhibited in his ability to avail himself of the natural resources. That has already been described. Beyond the practical knowledge, however, is a delightful play of fancy associated with objects of nature. Where the fancy is closely linked with the serious system of superstitions or with the mythology, it will be treated under those headings, but fancy, recognized and enjoyed as such is as important a part of Piro culture as of our own.

The very names of the objects are often highly fanciful. A vine which grows in natural links is 'the turtle's stairway'; a tiny wild gourd is called 'the mouse's gourd'; the blossom of the granadilla, resembling the passion flower with its pallid tendrils, is called the 'fish's beard'. One little red bird is the 'sun's pet'; the daddy longlegs is the 'devil's clutter'; a coal black midget monkey is called the 'aunt of the maquisapa', a big monkey.

Fanciful habits are ascribed to wild creatures. While a baby is being born, the owl out in the woods is saying, "It's going to be a girl.... It's going to be a boy....It's going to be a girl.... It's going to be a boy...." Otherwise the owl simply says 'pom'. The bird which they call 'wapra' is said to sit on a branch facing the sunrise and stare and stare at the sun without shifting its gaze. As we sat in the house singing one rainy evening, we heard the hum or rattle of the viper jergón. "He's asking for our blood," they said. "He sings, 'Uncle, uncle, uncle, Feed me honey,' because our blood is honey to him." Animals and birds are frequently personified. Their moods and emotions are interpreted.

The Piro discuss the subject of intelligence. They have a word shinikanu which means 'soul, emotions, memory, mind, love, intelligence'. Kshinikanu 'having a soul, etc.', is the standard expression of high approval of a person. Not uncommonly, the negative is used even of members of the tribe, although the Piro feel that they differ from other tribes in being more thoughtful. Without real acquaintance with the surrounding tribes, one might guess that they are right.

Art

For the natural beauty surrounding them, the Piro have a keen appreciation which is reflected in their art. When possible in the selection of a home site, consideration is given to a sweeping view of the river. Trips to the woods and out on the water are anticipated for the beauty that will be seen. The design on the fur of the ocelot or the skin of a snake, the mottling of a fish, and the markings of a leaf are noted appreciatively, and likened to the geometrical designs with which the Piro decorate pottery, cloth, woodwork, and even their own bodies.

The geometrical design of the Piro is distinguishable to them from the similar designs of neighboring tribes such as the Shipibo. There does not seem to be a systematic difference, unless it be that the angles of the Piro designs tend to be more open than the angles of the Shipibo design. The distinction seems to be rather in the inclusion of certain favorite features, such as the particular curve mentioned previously as compared to the curve of certain strings of stars, and the "double", as they call it, a parallel of 'M' forms, usually one a thin and the other a wide line.

The music of the Piro is described by Lucile Altig of the Summer Institute of Linguistics in an unpublished article:

> The Piro are a musical people, having many traditional compositions and at times creating new ones. Melody maintains more prominence than rhythm. Both are intricate. Range is great, averaging about two and a half octaves. The singers are able to reach all registers. The European ear senses changes in key in some songs.

A five-tone scale is used, corresponding to the first, second, third, fifth and sixth tones of our major scale. Infrequently an additional tone, the flatted seventh, is employed also.

Word content touches on many phases of the daily life of the tribe. Mood changes, but is generally mild.

Flutes are used, playing melodies more simple and of smaller range than those sung.

Whereas the music of many jungle tribes is predominantly rhythmical, the melodies being monotonous, that of the Piro is melodious, varied and more pleasing to the European.

The musical instruments are the flute, panpipes, musical bow and drum. The flutes are made of the hollow cariso stem or of the leg bones of an immense wading bird, called in Piro 'yawuro'. Panpipes are of closed joints of cariso cut in tubes of graduated length and diameter, and are bound together by vine. The musical bow is made of cane or palm strung with a fine fiber. The bow is held between the left hand and the teeth, string up, and is played with a palm straw. The drum is usually small; one a little over a foot in diameter is the biggest drum noted so far. The drums are usually of monkey hide stretched over a bark cylinder.

All Piro music and songs are supposed to have been derived from contact with the gods. Sometimes a witch doctor in a trance hears the gods sing praises to the goddesses, and answers. Sometimes the medicine man with frenzied rhythm pleads with a god to embody himself and appear. Only the simple lullaby Wa wa wa wa wa ... 'Go to sleep', is not assumed to be associated with the supernatural and with drugs or liquor.

Each song has a number of lines which are in themselves almost invariable. However, the order of the lines, and even the total number of lines in the song, vary at the pleasure of the singer. The following simple song of three lines has several variations:

1. Be careful of that which is my very own,
2. My own dove.
3. He is now my own.

The same singer asked to repeat the song, sang it with the following arrangement of lines: 3-2-2-3; 1-2-2-1; 1-2-2; 1-3-3-3.

A few sample songs in Piro with free translations follow:

Sergakaka chinini	When the water was red,
Sergakaka chinini	When the water was red,
Rujrukamtanatkale	He fell then,
Mapchiri wgene jiji	The boa's little baby.

Ge ge ge ge ge ge ge ge ge	Ho ho ho ho ho ho ho ho,
Ge ge ge ge ge ge ge ge,	Ho ho ho ho ho ho ho ho,
Kayonmenmaklano,	Doubtless this beauty (painting) is for me.
Kayonmenmaklano,	Doubtless this beauty is for me.
Nwugenene, nwugenene.	My children, my children,
Kigle gapowaka.	It is a beautiful path.
Nuchrishikalenanumta,	I reel along, singing.
Nwugenene, nwugenene.	My children, my children.

(Alternate lines:)

Kayonalu nogapo	My path is painted,
Nuyakatya.	That from which I have come.
Pjemshikaletanno.	Hear my song.
Walako tumuknu	Her own beautiful figure
Tyopyokamta,	Comes into view,
Goyakaloli,	The dear goddess,
Goyakaloli.	The dear goddess.
Mgenoklulan gita,	I am a jaguar,
Mgenoklulan gita.	I am a jaguar.
Giyagni wa xawakni	Therefore now
Piklewanatana	You are afraid of me
Tye pshini nanuko	This very minute
Pyaplewanatyana.	As you are going along.
Xawaknikle xawakni	From today on, today,
Gita metyakanyi	You will be where I cannot see you.
Nachpetanatyanatka.	You are going to see hunger now.
Sato kocharitapje	One little teaspoonful
Puranatyanatka.	Now you are going to drink. (of feeding the plantain drink to a pet bird).

In the last song above, notice the Spanish loan-word 'kocharita' from 'cucharita' 'a small teaspoon'. Both in their songs and in their folktales loan-words from Spanish, Quechua, or even Campa are featured.

The Piro have a form of drama which they call 'yimlu'. It has not been performed on the Urubamba for some years, and so cannot be described in this paper. However, an opportunity to study the Piro drama is expected in the future.

The dramatic recital of folktales is an art in itself, making the old familiar stories as fresh and vivid as the imagination of the teller. I have seen an old woman sit cross-legged on her palm-bark platform, and by the light of a flickering little kerosene flame act out the legends as she told them. Grown sons with their wives, and a grown

daughter lay about the platform, raised up on their elbows and watching with sparkling, laughing eyes, as though they had not heard the same story over and over from childhood.

Incidents of the day are told with equal zest and artistry. Here is an example from an old man's conversation:

> ....When the sun was here, the day cleared; so we went on up river again. We arrived at Pagoya and slept there. The next day my son had fever. We slept right there. Late in the afternoon the rain thundered and the day became dark, very dark. In the late evening the rain came. "Look, it's going to rain hard tonight."
>
> At dawn the river rose. We were in a flood. Here, up high (on the beams) we went in the house. There was a platform. There we would have slept in the evening. Our companion told us it was a flood. "We're in the big water," she said.
>
> Therefore my son said,"Let's climb and sleep high up." So we climbed up. First they climbed up, and afterward I did. I climbed, and when I got there I looked down. It was threatening, very dangerous. Then I spread out my bed, and lay down, and shut my eyes. Just a moment I lay there. Suddenly "Tooooo, toooo."
>
> Then, "Boy I believe the house is going to go," I said.
>
> "Haa," he said, "Haa, maybe the house is going to go."
>
> Just as I would have gotten up, it went. I felt it going. We landed in the water, and the house arrived with us in the water. "Mpooooo." We were inside the water. It was dark, very dark. There was no place to go.
>
> My son grabbed his machete and cut away the thatch. There we climbed out.
>
> The bag was wet. All our beds were wet. We were soaked. There was no dry clothing. Every piece of cloth was wet. There was nothing to put on. It was cold, very cold.
>
> We jumped into the canoe, and there met the dawn. When it was daylight we went on up river. In a high place we cut a clearing for ourselves. There we built a fire and cooked plantains, and ate them. The woman had put matches in a bottle.

The translation is insipid compared to the vivid picture given by the old man in his own language. His hearers shriek with laughter, especially as they see him drenched with nothing dry to put on and no place to go.

Joking is a literary art with the Piro. Certain standard jokes are told along with the legends. One is about a girl questioned carefully by the man she wanted to marry concerning her ability as a cook. She assured him she was an excellent cook and he trustingly married her, but when he brought home fish she was so dumb that to cook it she made a little fire on each of its eyes.

Another is about a cricket being roasted by a bird. "Are you done, little cricket?" "No, I'm just turning myself." "Are you done now, little cricket?" "No, I'm just turning over on the other side." The bird swallowed the cricket and asked again, "Are you done now, little cricket?" "Oh, I don't know," said the cricket. "Here I am."

A great joke that will keep the whole village laughing throughout an evening is the longer story of a glutton who went hunting, brought home a big supply of game to smoke, and promptly ate it all up. He still was desperately hungry; so he ate his wife. Her sister replaced her, and he repeated the performance. The third and youngest sister was taken, but she suspected him and hid. The poor glutton was so desperately hungry, after his voracious meal of game, that he finally sliced a piece off his own side and ate it. It tasted so good that he cut off a leg and ate it. Then, when he discovered he could not walk, the little wife came and killed him.

Certain forms of obscenity are considered hilariously funny. Puns and real wit also delight the Piro. An example of the latter was provided at my expense. A Piro girl travelling with me was afraid to go out of the house were we stayed. She said, "There's a waka (cow) out there." I looked, and seeing that it was a mule decided to have some fun with her. She was an excellent language informant, and used to repeating conversation I had missed. Eventually the mule brayed, and I asked her, "Hote, what did he say?" "Oh, I don't know," answered Hote. "Maybe he was speaking English."

Mythology

The Piro myths begin with the birth of the god, Tsla, hero-trickster, and creator. His mother was married to a tiger with three younger brothers. The tigers demanded of her the wifely service of picking and biting their lice. She obliged, but since a human being cannot swallow the bug-sized louse of a tiger, she choked to death. Thereupon the tigers pounced in and tore her to pieces for a meal. Under the pretext of wanting her share, the old tigress mother-in-law snatched away the uterus and hung it up in an annato tree. Ten days later out came Tsla and his three younger brothers, the 'muchikajine' who performed lesser feats and miracles. Tsla revenged his mother's death by killing the four tigers, but his effort to snare the wary old tigress failed, and from her tigers multiplied upon the earth.

Tsla, served by the muchikajine, created the Indian from red clay and the white from white clay. He "blew" the breath into them, a significant expression as will be noticed later in the description of the medicine man's incantations.

Many of the legends tell of Tsla and his enemy, the hideous devil Scha with his blind helper, and his man-eating pet, the 'jijiya'. Often the legends tell of their cruelties to the 'Kochmalotone', a race of women only who live in the forest, fragile women who could be killed by the falling of a bijao leaf.

Metamorphosis of human beings to creatures of the forest, and of beasts to men, is common. A recurrent subject is the belated discovery of a young woman, that the husband she had married was a deer, tiger, bird, reptile, or some other creature. Usually the discovery is made when her baby changes before her eyes to animal form, or when the formerly loving husband sudderly bares his teeth and prepares to devour her.

The boa fathered the child who brought the flood on the earth to punish his grandmother for pushing him in the fire in the horror of her discovery that he was not human. The child spared his mother, by advising her to build a platform in a magical genipa tree which rose above the water as she struck it. Others sought to escape by climbing up on their houses, but the houses were swept away by the raging waters. Some tried to keep afloat in their canoes, but giant crabs cut up the canoes and they too were drowned. As the waters of the flood receded, the depth was tested by dropping the genipa fruit into the water. It came to the surface muddy, indicating that the water was shallow.

Immense boa constrictors with insatiable appetites for human beings, and voices like the blast of a great horn, make shuddering stories. So do the depredations of the many grotesque demons.

Some of the legends are of historical interest, showing previous endogamous divisions of the tribe into the Nachineru (Hungry People), Gimnuneru (Snake People), Koshichineru (Bird People), Geteneru (Perhaps Seeing People); Manxineru or Jemaneru (Tapir People); and Kosopane (not translated).

The Hungry People had nothing to eat, while the bird people stuffed themselves all day long, and so the Hungry People kept begging the Bird People for food. It was not that the Hungry People lacked plantings. It was just that their king, himself one of the Hungry People, was stingy with the produce. He wouldn't let them cut a plantain, not even a plantain leaf. He would not even eat enough himself, nothing but thin plantains, while the good plantains spoiled. All the people had to eat was the eggs of the pwapwa (a fictitious bird), and when they quit laying the people were hungry a long time.

They hated their king, and wanted to kill him. They watched for a chance to steal his excrement to mix with poisonous herbs so that he would

die, but he did not eat enough to make that possible. Finally the Hungry People pled with the king of the Bird People to war against their king and kill him. The two kings had never visited, but the king of the Bird People was so sorry for the Hungry People that he agreed to try.

The kings met, each with his macana (club with sharp blade), and a small knife. The king of the Hungry People was a big man, and the king of the Bird People was small. All day long they fought. Finally the king of the Hungry People died. The king of the Bird People was so exhausted he fell on one ear, bleeding. After that the Hungry People were his subjects. They rejoiced, and ate abundantly, and began to multiply.

Religion

As indicated by previous reference to the gods, the tribal religion is a polytheism with innumerable gods and goddesses living in heaven. The words 'heaven' and 'sky' are synonymous, meaning 'the upper expanse'. Tsla, the creator-god so prominent in the mythology, receives neither homage nor petitions. Rather, invocations are addressed to the general name goyakalu (from the adjective goyaka 'lasting'), 'an eternal one'. A synonym for 'god' and for 'ghost' is kashichjeru 'the one who seizes (us)', because the gods are conceived of as those who snatch away the life of a human being.

Any individual whose sins are comparatively few, and all powerful witch doctors, go to heaven and become gods. They receive their goyaknu 'eternity', which carries the added thought of splendor and majesty.

If it is known quite surely that an ordinary individual has gone to heaven, then his spirit is not feared. Indications may be clear weather for the funeral, or better still, faint thunder directly overhead on a sunny day. Otherwise the village shudders in dread, especially throughout the night after the burial. The ghost of any witch doctor is dreaded, because the witch doctor is supposed to go back and forth at will from heaven to earth, embodying himself in whatever form he chooses.

The Roman Catholic religion, first introduced to the Piro in the seventeenth century, has never been very fully accepted. Semanez and Ocampo, 1885, reported that in extreme cases the medicine man resorted to 'holding mass' in the woods, mixing a little ritual with the smoking and sucking usually practiced. There is no indication that such 'mass' is held anywhere on the Urubamba today. Apart from the group living on the premises of the Dominican Mission on the Sepahua River, there is practically no apparent influence of Roman Catholicism on the beliefs and culture of the Piro. Practices of witchcraft are unaffected. Neither pictures nor figures of saints are found in the homes, nor is the baptism of children common practice.

The Seventh Day Adventist missionaries have exerted considerably more influence. Their abstinence from certain meats, and observance of a

period of inactivity fit in well with the taboos of the Piro. The chief contributions of this group to the tribe have been a definite decrease in drunkenness, and instruction in Spanish in the mission schools. A few years ago a group of Piro were visited by a representative of the indigenous Evangelical Church of Peru and some sort of affiliation was initiated.

Since 1949, translations of portions of the Bible without sectarian teaching have been supplied them. This has met with enthusiastic reception on the part of some 300. In fact, most of the Piro of the Urubamba relate their recent marked advance in education and economic status directly to this source. Without question it has had far more effect on the Piro culture than the superficial religious influences previously mentioned.

The supernatural

Apart from the supernaturals religiously regarded, there are a great number of demons and powers with which the Piro feels that he must cope.

The commonest is the soul of the dead, already mentioned. The soul, which is considered to live in the heart, goes wandering and has the experiences of dreams at night. The soul wandering about during sleep cannot be seen, but it becomes visible in human form at death. If the Piro hear the sound suu suu at night, they know a ghost is abroad. "We say to each other, 'That's not just an ordinary little ghost. He has a real soul.' Maybe we hear it touch the dishes, or a dog barks at it. If you see it, you will surely die. If it points at you, the next day you will be sick. No one knows a remedy. There is no devil medicine. You will die. If we don't hear the ghost's 'suu suu' at night we say, 'Maybe he's gone up. God has received him above.' Then he won't be a troubler. He will be quiet." The word 'demon' is used as a synonym for 'ghost' or 'soul'. The expression 'his soul went out' is used of death.

Uglier than the soul ghost is the ghost of the bones, a clattering skeleton in rags, which suddenly appears gleaming white to terrify those who go out in the dark with its cry, "Yooooooomm' Yooooooooomm'" "It is very dangerous to see a ghost of the bones."

Among the demons particularly named is Ginkanro. By day he appears to be a stone in the water, but at night or in a low morning fog he comes up out of the water in the form of a red-eyed dog, or of a jaguar. A person who meets him will die. Another demon is Matsotso, the heart-eating demon. "The young man, Feliciano, slept in a canoe at night. The Matsotso blew in his mouth. Feliciano did not see him, but others heard it happen. The next day Feliciano was sick, and he died." The matsotso is supposed to fly whimpering overhead at dusk.

The demon mamyotu is sometimes mentioned, but is supposed to have left the Urubamba River. One of the Piro's ancestors cut off the water demon's white hand, as the demon reached up and grabbed a canoe.

The demon moved off down river leaving a wake of foaming water. Another demon, reputed to be no longer feared, is the pagotko. At a certain stream farther down the Urubamba than any Piro now live, the demon used to emerge from the forest to spank children with nettles, and to steal women who went off alone for firewood. This demon is now impersonated for holiday sport.

Besides the named individuals, innumerable demons inhabit the forest, and water, and air. The boa, crocodile, manatee, iguana, frog, lizard, and chameleon are classified as demons. Once as we were being poled up river we went in among the reeds to keep out of the current, and passed a tiny lizard swaying on a reed. The man poling on the front started, and then bent on the pole with all his might to push rapidly past the tiny creature. "That's not a lizard," he said in a low voice. "That's a witch doctor."

A little boy explained that the abused dog that used to howl under the house was really an embodied ghost prowling around to bewitch someone. Therefore a man bound the dog and threw it into the river to drown.

There are supposed to be demons that live in the water. They come out in the form of human beings, and deceive, saying that they are men, but they give a person a demon or a sickness.

"Anything that whistles 'fii fii fii' in the night is a demon and will harm a person. When one who has met the demon returns to the house he vomits and wants to die."

Asked why she made her children sit motionless in the house, a young woman answered, "The day is dark. If they walk in the darkness a demon will eat the child's heart. Then he will be sick. There are many demons. They are invisible, but there they are in the wind. We do not see them, but they eat out the heart of the child."

An old woman visiting blew out the kerosene flame because it was attracting insects. Then, half afraid in the darkness she began to talk about the demons. "In darkness such as this they come up close and shoot sicknesses. (Here she gestured as though holding a tiny bow and letting fly an arrow.) A ghost threw mud at Gustavo and hit him on the chest with it; so he thinks he is going to die soon. Also the ghosts have been making noises under his platform. He looks to see what has made the noise and finds nothing."

Children born with deformities are called 'devil' all their lives. Usually they are treated with the same affection as well children. However a girl told how her little mute sister became very sick with a fever, and the mother shoved her into a corner crossly, saying, "Die. You're a demon." In contrast, there is a little cross-eyed girl with an impish expression who is the delight of all her relatives. When showed a snapshot of her they remarked affectionately, "It's the little bird of bad omen."

Sickness is frequently ascribed to a demon in a particular form. "A tiger bewitched me," or "a manatee caused his death" or, even more frequently, "A Campa (Indian) shot an arrow at him."

There is a word kagonchi which refers to a man to whom is ascribed supernatural power, both with regard to his function as a medicine man, and with regard to his function as witch doctor, causing sickness, death, or disaster. There is another word kayinretakleru which refers only to the malicious witch doctor. Either word may be used synonymously with "demon" and with "ghost", or it may be stated that a demon has entered the body of the witch doctor. The spirit which enters or accompanies the witch doctor is said to protect his person. A medicine man of less power than a kagonchi, a sort of lay practitioner, is called a monchi. Any of them may be also called 'one who sucks' or 'one who blows'. A polite way to speak of bewitching is to say that the witch doctor is making a god of his victim.

The practice of drinking ayahuasca is supposed to make a witch doctor. The juice of other vines, called gorowa, kawniri, and waytonori in Piro, or the juice of datura is also taken by the witch doctor. The Piro say the gorowa is chachrona in Spanish. After the witch doctor has drunk ayahuasca, he drinks tobacco juice.

Tobacco is used, as far as I have been able to observe, exclusively for superstitious purposes. The juice of the cashew fruit is mixed with wine, and with this mixture the leaves of tobacco are sprinkled before being rolled. Also the bark of a certain tree called 'tobacco mixer' is powdered and mixed with tobacco. The pipe which the witch doctor smokes has a bowl about five inches long, carved in the form of a cone from hard black palm wood. The stem is a monkey's leg bone, about the same length as the bowl.

When the sick one is supposed to have been shot with sharpened splinters or thorns by a demon or by another enemy witch doctor, the medicine man sucks to remove the cause of the sickness. An old woman on the platform of a hut had diarrhea and abdominal pain, and a baby on another platform of the same hut was sick. The medicine man came at dusk. He was dressed in blue overalls (rare among the Piro), and smelled of tobacco. He spent about three quarters of an hour with each patient, in the semi-darkness. He lighted a match in his pipe, puffed, and exhaled the smoke, puffed again, rubbed the abdomen with slow, rhythmic, downward strokes, bent over and sucked once loud and long, and spit over his shoulder. While he treated the baby, he talked with the mother and laughed. In the morning improvement was claimed for both patients, though the improvement was not evident.

If the patient's soul has been seized, the medicine man hunts it among the demons of the woods, water, or air, and when he has found it he returns and puts it back in the patient's nshinikanu 'mind, emotions, etc.'. The patient is expected to regain strength at once.

Not only does the witch doctor suck, blow, and practice magic, but anyone may attempt it, though with less expectation of success than a qualified witch doctor. A young girl with no special power stood on her platform overlooking the river and blew toward some suspicious looking, gloomy clouds. There was no tobacco involved. A man explained his absence from the evening gatherings of the village by saying that he had been staying home to suck the demons out of the abdomen of his sick little daughter.

Exuvial magic is practiced. Reference was made in the mythology to the mixing of poison with exuviae to cause death. At the death of a woman, the mother of a large family, immediately she had breathed her last, the favorite daughter took a knife and pared off bits of the calouses on her feet, and of her toenails and fingernails, and put them with her spittle and clippings of the hair from her temples, in a bottle. The son later told the purpose of gathering the exuviae. The bottle was kept two days within the house. In the meantime the woman was buried. The clay in the grave was trampled down firmly, but that on top was pulverized and spread smooth so that the faintest footprint would show in it. The family waited a night or two until a print was found on the grave, a footprint they knew to be that of the demon which had caused her death. The clay containing the imprint was lifted up carefully and added to the contents of the bottle. With the bottle, a cooking pot, and material for a fire a member of the family then went into the forest. Close by the side of a catahua tree he kindled the fire, and put on the mixture from the bottle to cook. When it began to boil, he heard high up inside the tree a shriek of the demon. Abandoning the pot the man fled home as fast as he could run, because he knew he had killed the demon which had bewitched his kinswoman.

A regular schedule of taboos is observed by fathers in order to prevent stated sicknesses from overtaking the children. The taboos apply both to eating and also to killing. If the father of a child less than four months old kills a peccary, the child's abdomen will become rigid, and it may die. If the father of a child under one year of age kills a tiger, the child will start and cry out as if frightened, showing signs of anxiety, and will very quickly die. If a father eats land turtle, the child will have diarrhea, but will not die. If he kills a lizard, the child's arm and body will swell and he will be sick, but will not die; however, if the father kills a chameleon the child will die of diarrhea. Until his child is four years old a father must not kill a rattlesnake, or the child will die.

There are certain birds of omen which seem to be regarded merely as signs, not as demons which cause disaster. The cries of certain birds are a warning of death or sickness. In fact, the god Tsla was supposed to have left the Urubamba and moved off permanently down river because he heard the call of a certain bird. There is one bird which is said to sing at night to warn the people that a white will reach their village the next day. Weather is frequently considered portentous, but since the darkness of a cloudy day is considered to be due to the presence of demons in the

air, it is difficult to determine whether the weather conditions are ever regarded as signs rather than as active agents. A sudden clap of thunder followed by silence is taken to mean that someone has died.

The life cycle

Children are greatly desired, and to have no children is a heavy though not uncommon sorrow. Economic security depends upon the growing family, and, moreover, family ties are so stressed in forms of address and in designation of an individual that it is awkward to be without children. There is an herb which is supposed to encourage conception. It is not thought to cause conception, the true cause being understood.

A contraceptive, a bitter brew, is sometimes given by mothers to their daughters who have had extra-marital relations. However, even in those cases the children are wanted. The father often forcibly takes the child from the mother as soon as it is weaned, and though mother and child never cease to seek each other's company, the child grows up in the father's home. When a couple separates, the father usually claims the children, unless the couple is still residing with the bride's family, in which case the family may defend the woman's right to her little ones. Women with many children sometimes take the contraceptive through fear of pain. It has not apparently been effective.

Details of delivery vary. According to the account of a young woman, the mother may go out into the woods alone and kneel. After the baby is born she calls her mother, who comes with another woman called 'her watcher'. The 'watcher' cuts the cord, and takes the baby to the house to bathe it. Stories picture mothers bathing new-born infants in the river. The informant explained that the mother may prefer to stay in the house under her mosquito net with her mother and the 'watcher' present in the hut. If delivery is difficult, the midwife may grasp the mother around the waist and lift her up, and may massage the abdomen heavily. According to this informant the father sleeps in a hammock and does not see his wife or baby for five days. This is contrary to the details observed during five births.

On only one of these occasions the father absented himself. He and nearly all the men of the village with him went off on a fishing trip. A little boy and girl, six and four years of age, were asleep under the mosquito net where the mother passed the earlier hours of labor. Toward the end she spent some time sitting outside. Finally she slipped around behind the net where she would not be seen, and knelt. Before the cord was cut she roused the two little children and called them out of the net to see their baby sister. The mother-in-law, who had not been present before, came in when the baby cried. She brought a heavy stone and set it on the end of the cord. Banana leaves were brought for carrying the placenta. The mother-in-law dug a hole about a foot in diameter and a foot and a half deep under a tree. I was holding the placenta, and when she was ready, plumped it unceremoniously into the hole. The old woman picked

it up respectfully, turned it, and spread it out carefully before filling the hole. The mother rested in bed until the next day, when she went down the steep bank to the river alone to bathe and wash clothes. Her own mother was not in town.

The men do not always leave the village. One night about twenty men, women, and children all sat around in a walled house conversing, as they awaited a birth on the other side of a cane partition. A young father who had been working away from home was careful to return to his own village well ahead of time, explaining that he wanted to be present at the birth of his child lest "something should go wrong."

Three times I have seen a new-born infant lie shivering on the floor, while a relative went to call a cord-cutter who had not been invited beforehand. The baby and placenta were lying on a mat on the floor, the baby half wrapped in rags. The mother-in-law in one case, and the father in another, hunted up a ball of homespun cotton thread, hooked a piece over the toe, and twisted it to make a strong enough string with which to tie the cord. Old scissors were picked up off the floor, and the cord was cut. The mother-in-law soused the baby all over with warm water and then asked, "What shall I wipe him with?" Someone found her a rag. After the baby was wrapped it was put into the net shared by the mother, father, and a two-year-old brother. The birth took place in a partition of the house divided by palm bark from the space where other members of the family were sleeping. They did not come out of their nets, but the father's two sisters came from a house about thirty meters away when they heard the baby cry. The family said the baby did not breathe at first until the mother-in-law "sucked his mouth".

Labor in the cases noted lasted from about four to twenty-four hours. The mother is very quiet, at the most complaining softly under her breath.

Either a man or woman may cut the cord. The term 'cord-cutter' indicates a relationship like that of a godparent to the child. 'Co-ma' and 'co-pa' are used between the parents and the cord-cutter. The cord-cutter has a responsibility to provide gifts for the baby from time to time, and to watch out for its general welfare, and has also considerable authority, even to the extent of taking the child away from relatives who are considered to be mistreating it.

Some babies are given both Piro and Spanish names at birth, although the names are not recognized officially until the naming ceremony or festival which occurs during the first year. At that time another friend of the family acquires formal relationship with the baby by holding it during the ceremony. Often parents claim that the baby has no name until after the ceremony, although actually names may be in use. Names of objects are frequently given, as of trees, animals, birds, and fish. A name may be based on personal appearance

as Long String, Blacky, Kidney (for a little red fellow curled up), No Intestines, and Not Big. The name may be humorous as The midget monkey's pet , or Fish's Tooth. Frequently more than one nickname is given, each of several relatives using the name of his own choice.

Puberty rites and the accompanying festivities used to be one of the most colorful features of Piro life, so much so that whenever it was known that such a ceremony was to be held, local whites would try to be present. This intrusion, together with the general condemnation of the rite and festival by civilized neighbors, has resulted in its discontinuance in the villages nearest civilization. Recently in a town where whites prevented the usual puberty practices, a girl wearing European dress painted geometrical designs on the dress over her breasts to celebrate 'being ready'. No special puberty practices for boys were noted.

Weddings in the past were much more colorful festivals than now, having been reduced for the same reason as the puberty festivals were discontinued. However, marriage festivals are still important occasions in which the whole village participates in the preparation of the yuca, corn, and plantain drinks, the provision of abundant game, and a night of merry-making with drums and flutes.

After a couple has reached an understanding, the boy asks the consent of the girl's mother, who, according to a text, pretends reluctance, criticizing the girl and predicting that each will throw the other out. The fellow then makes his request of a male relative, the father or an older brother, and is referred to the mother. When told that she has been consulted, the relative remonstrates, criticizes the girl, and gives a grudging suggestion that they try it out. The boy then returns to the mother with a stronger request, to which the mother responds, "We'll make masato." There is usually matrilocal residence for an indefinite period. It seems to be a matter of protection of the bride and of mutual help, rather than of actual bride service. The son-in-law does the hunting and more active work, and the families have fields adjoining if possible. The wife seems to consider herself bound more to her parents than to her husband.

There is no mother-in-law avoidance, but there is special respect. The word 'kpashiro' which means 'holy' in religion and 'prohibited' in marriage relations is said, with an air of reverence, to apply to the mother-in-law. When a young man took back his wife of whom he was very fond but whom he had put away for repeated offenses, he explained that he was taking the girl again because his mother-in-law still loved and wanted him!

Extra-marital relations are common both before and after marriage, though jealousy is intense. Separation and remarriage have been very common. A list of ten previous husbands or wives is not a unique record.

There have been a few cases of bigamy. Wives are usually successive. In the cases noted, the wives appeared to live together as sisters, each enjoying the company of the other. Never a sharp word was heard between them. They cooperated fully in the housework, and went visiting together, laughing and joking week after week. Then, one day the husband and younger wife went hours back into the woods for vine to tie the new house they were building. Sitting on a turtle shell and stirring the big black pot of boiling bananas, the older wife suddenly dropped her laughter like a mask and recounted with great bitterness the woes of being the older, less-desired wife. From the picture of home-life which she gave, the lot of the younger woman must have been equally trying. The serenity of the household was in outward appearance only.

Marriage of parallel cousins is prohibited. When it was suggested that a boy marry his paternal uncle's daughter, his mother said to him, "Why, would you marry your little sister, your younger father's child? You are a very dog. You are not a person at all." A man cannot marry the daughter nor granddaughter of his parent's parallel cousin. The grandchildren of parallel cousins are permitted to marry if the two parents who are descended from the parallel cousins are of opposite sex. If a man's wife dies or is separated from him, he may not marry his step-daughter nor niece by marriage, but may marry his wife's sister. Similarly, if a woman's husband dies or she is separated from him, she may not marry his son nor his nephew, but may marry his brother.

Many of the customs concerning death have already been described under the sections on religion and the supernatural. Death seems to be dreaded less for oneself than for others who may return as ghosts. "All the dead are evil". A baby in its mother's arms becomes an object of terror the moment it is dead. However, natural sorrow outweighs even the fear of the dead. The Piro are not unduly demonstrative, but family ties are strong and the grief and longing for the dead last through the years no less than among us.

Burial is necessarily hastened in the tropics. If death occurs in the night, interment is completed during the following day. If one dies during the day, the body is usually kept overnight, surrounded with candles or open kerosene flames to keep off the insects. A rag is passed under the chin and tied above the head to keep the mouth closed, and the eyes are pressed shut by hand. The body is wrapped in a cloth.

When the body is kept overnight a wake is held. A relative by marriage usually officiates, leading in games and in the serving of the various beverages. When it is known beforehand that one is about to die, the women hurriedly make a trip to their fields for manioc, and all the big pots are put on the fires to boil manioc, plantains, and corn for the feast. The members of the immediate family withdraw from the festivities. If a wall separates them, they sit about the corpse. Otherwise they may hide their grief under their own mosquito nets.

One mother sat by the body of her little girl and for hours kept up an intermittent chant, "Cholene chun, - cholene chun, - cholene chun,.." The words are not Piro, and are in fact contrary to the pattern of Piro word formation. They may have been carried over from contact with some other tribe.

If possible a canoe is split up to make a coffin, sometimes closed only with slats as a crate. If a canoe cannot be spared the body is bound in a cane mat.

The grave is dug in the woods away from the village. A family or a couple of related families may have a common burial plot. High ground that will not be overflowed by the rising river is selected. The grave is dug about six feet deep. Usually the earth is loosened with the machete and tossed out by hand. The immediate family is often left alone to dig the grave and bury the dead, though the burial of a popular adult may be attended by most of the village. There is no ritual at the burial. The body is placed in the grave face-up. The earth is shoved into the grave by hand, and the near relatives trample it down firmly, smoothing the top of the heap as has been previously noted. At the burial of an older woman, mother of a large family, those who went to the cemetery carried fragrant stalks of sweet basil and stood them around the grave. This was not done at other funerals. Sometimes a shelter is erected over the graves, and clay pots and serving dishes are left by it.

The personal effects of a deceased adult are thrown in the river. The planted field, canoe, and house belong to the immediate family. Clothing of a baby who had died were preserved as keepsakes in a closed can.

The life span is divided by the Piro into six periods. There is a special term for a new born baby, which may be used up to five months. Another word designates a baby from five months until the time when he learns to walk. Childhood is considered to last until puberty, youth till about the twentieth year. Thereafter the term man or woman is used until signs of old age appear, and then the respectful but pitying term 'elder' is employed.

The home

Under one roof may be housed from a single individual to an extended family of more than a dozen. Usually not more than one young couple at a time shares the home of the bride's mother. However, a daughter may stay in her parents' home until she has half a dozen children of her own growing up with her little brothers and sisters. However numerous the family may become, they appear to live together in harmony, pleasant-spoken and considerate of one another. The intimacy and affection among members of the family is very great, probably due in part to the economic necessity of sharing together the few possessions of the home as well as

its labors. There is not a member of the family from the toddler to the grandfather who does not have a part in caring for the baby, and who does not watch all of its developments proudly.

Tiny babies spend a good part of each day in hammocks, either the regular family hammock, or just a meter of cloth tied at both ends. If the mother is busy at handwork, she ties a cord to the hammock so that she can keep it swinging without getting up. When not in the hammock the baby is usually carried in a painted homespun cotton sling which passes over one shoulder and under the opposite arm. Activities are carried on freely by the mother while the baby dangles in the sling. It is common to see a mother vigorously paddling a canoe while the little one clutches at her and nurses. Children are treated with affection, but sometimes with little gentleness. For example, a mother with a load often catches a baby by one arm to haul it up the notched log to the platform.

The baby is fed when it cries or soothed with spanks. After a year the weaning begins. The plantain drink is substituted for milk. However, a crying child of more than two years may still be given the breast as a pacifier, and even a grandmother sometimes offers such comfort.

Adults laugh at crying children and otherwise ignore them unless they are in real need of care. Anger and disobedience are punished. Disputes between children (as sometimes between adults) are almost always examined with the same question - "Who started it?"

The chief jumped up when two little boys, his step-grandsons, came into view, scuffling. Papisho, the slighter of the two, about seven years old, held a short thick stick with which he was beating the bare back of his slightly younger but huskier cousin, raising welts. The four-year-old brother of Papisho added a few strokes. The chief demanded, "Who began it?", and upon learning that the one receiving the punishment had started the quarrel, he sat down and watched with amusement, interfering only to order the guilty one to throw down a machete he held. The boy carefully threw it clear. His mother had been following, and she also stood watching with a smile. A grandmother and aunt of the two, hearing the rumpus, came running with the same question, "Who began it?" They stood by watching with satisfaction, once they were satisfied that justice was being meted. The one receiving the punishment, though the stronger and tougher, was evidently unnerved by a sense of guilt, and took the beating with little more than reflex defensive effort, a pattern found also in the settling of adult quarrels among the Piro.

Children are ordinarily spanked with nettles; rarely with vine or sticks. Mothers frequently strike them in the faces and all over their bodies with nettles, and they cry loud and long, often standing outside against a corner post or a cane wall. One case of beating was noted. Blows as of a heavy board, and the screams of a little girl of about four, were heard. The listening women were visibly distressed, and

commented that the mother was angry. Both the mother and child were hot tempered. One father was heard threatening his squalling three-year-old girl with his leather belt in her mother's absence. He strode over to her and picked her up sternly, but cuddled her instead of using the belt.

The punishment with nettles is thorough and painful, and until it accomplishes the intended improvement in the child it is repeated, though not unsympathetically, since the practice is more than a generation old. One little fellow of about five disobeyed. While his young mother went to pick the nettles, he took off over the steep river bank. For perhaps an hour he evaded her, climbing where only practised little boys could make good time. Inevitably the mother caught him at last. The nettling was proportionately long. After a while, the mother was seated with the little fellow between her knees. They must have spent a full hour in quiet conversation, ending on very good terms. The little boy's conduct was noticeably improved. The children of this family are especially well behaved, and the atmosphere of the home is pleasant.

Scolding is not common, though some parents employ a humorous sarcasm with their children. "I didn't hear you, mother." "Well, maybe you speak Spanish so that you didn't understand me." Both with children and with adults the Piro speak of 'counselling' those at fault. A good many of the views of propriety are considered to have come to them as the counsel of their ancestors, and they pass it on.

It is the custom in giving a command to a child to end with, "Gwu pchinanu" - "Say o.k.", leaving the child committed to obey. One aged man used the same technique with his somewhat younger wife.

The relationship of stepchildren is usually very affectionate, though it cannot stand quite as heavy a strain as that of sons and daughters. Fathers do not always feel as fully responsible to provide clothing for stepchildren as for their own offspring, especially if the child's own father is living in the vicinity.

The authority of the home is shared by both the father and mother. Decisions affecting the economy of the family as a whole are usually left to the father. Both parents seem to feel complete responsibility for the conduct of the children, even after the children are grown and do not recognize the authority of the home. Adult sons and daughters seem to respect the mother's opinions and desires more than those of the father.

Etiquette

Basic to courtesy among the Piro is the assumption that they are all one close-knit family. A guest received is a member of the family welcomed home. Formalities are few, but practical hospitality is generous.

Whether a traveler stops in passing or a neighbor comes from the next hut, the women offer big bowls of the plantain drink. Men are served first, beginning with the elder. Women are given the bowls next, but hold them to the children's lips before they themselves drink. Any special fruit or treat of any kind is shared with the guests.

One who arrives after a prolonged absence is greeted in plaintive intonation with the voice raised to falsetto. He replies in equally querrulous tones, and the conversation may be sustained at such a pitch for an hour before subsiding to the normal conversational level. The visitor asks for the vital statistics of the village, and is told in great detail all that has happened to his relatives since last he was among them. Whenever a death or serious illness is mentioned the question is quickly asked, "Who blew?" In his turn the visitor reports the news of his own settlement, and of any others he may have passed in travelling.

If the visitor's feet are chapped from being in the water, the women prepare genipa dye and paint his feet for him. The best food is served him, and his canoe is filled with supplies for the remainder of the trip. If he has with him fresh game or fish caught along the way, he is happy to bring it to his hosts. He is welcome to stay as long as he wishes in the home which he visits.

One time a woman was away from her house when her nephew and a canoe load of others stopped in on a trip past her village. The nephew hunted her and called, but she did not hear, and so hospitality was provided in the home of more distant relatives. The aunt, when she returned to the house and learned of the visit was humiliated to tears, and days later was still grieving and explaining why she had not heard the call.

Often when there are no guests from outside the village, the residents of two or three houses join together for meals. The men sit on a platform apart, and are served first. The women serve themselves and the children as soon as they have served the men. To eat, they sit around the serving bowls or lie propped on an elbow, and scoop the food in their cupped fingers with a motion toward themselves.

Except for a hasty snack the food is not served in the kitchen, but is carried to the platform. When a family eats alone, the man is served first but he does not sit apart. Rather the whole family forms a group about the bowls on the platform. In fact one man and his bride made a very cozy picture taking turns dipping out of the same bowl. Sometimes the smaller children of two or three years who find it hard to wait for the family meal are given their bowls of food before even the father is served.

Men do not sit on the same benches nor on the floor in the same row with women, unless they are next to their own wives. There is no show of gallantry toward the women, but there is a practical consideration

of their comfort and well-being. Piro women carry loads beyond the capacity of white women, but there is a definite limit beyond which a weight is considered a man's load. So is there a recognition that certain tasks are too difficult or too disagreeable or dangerous for women. Piro men have been pictured walking out of the planted fields carrying only their weapons while the woman struggled under a load of produce and the weight of her baby besides. The fact is that fathers frequently put the babies on their own shoulders, and carry the heavier loads; however, on a trail where there is danger of vipers, jaguars or other beasts, or where there is hope of sighting game, the man precedes carrying only his weapons. No doubt the woman would much prefer that to his stopping to unfasten and set down a load before settling with a viper in the path. Often when a woman finds some particularly good firewood which is too hard for her to cut, or too heavy to carry, she goes home without it and sends her husband back to bring it for her. The woman for her part performs countless small services for the man. Whatever they lack in formal manners is offset by practical kindness. No Piro is willing to see another distressed nor embarrassed.

Recreation

The Piro play as enthusiastically as they work. Occasions for evenings of merry making are frequent. Birth, naming, puberty, marriage, holidays, visits of friends, the return of relatives, or any happy circumstance may be celebrated by the whole village together. Beverages of various kinds are prepared. Everyone wears his best, whether native style or European type of dress. Drums, flutes, and panpipes are played throughout the evening.

If the night is moonlit, there are outdoor games. Most of them are adapted from the Spanish. A variation from drop-the-handkerchief is a game in which the individual who is 'it' throughout the game carries a lash with which he strikes at the one who has been tapped and must run around the circle. In three-deep, likewise, anyone caught napping is given a stinging snap of a piece of cloth. There are ponderous games of tug of war in which the village is divided by choosing the side of the sun or moon, usually with enough prompting to keep the sides fairly even. Cat and mouse is played, beginning with the cat's questioning the mouse as to what he is eating, and the mouse's silly reply that he is eating rubbish or something else unappetizing. There is a very popular jaguar game in which the women are enclosed by benches arranged in a square where they huddle screaming while some of the young fellows come up roaring like jaguars and drag them off. The whole point of the game seems to be the thrill of imagining being seized by a jaguar.

If the night is dark, indoor games are played. A favorite is an adaptation of "El Gran Bonetón". Instead of numbers, names of plants are assigned to the players. When his name is called the player feigns surprise, "I?" "Yes, you're the one." "I'm not the one." "Who is?" And the player calls the name of another plant. More riotous is a

blindfold game. The master of ceremonies sits on a bench with the blindfold draped across his hands. The one who is it must stoop over so that his eyes are covered by the blindfold and the hands. Usually the master-of-ceremonies grips the temples to prevent peeking. Someone from the circle of players slips up quietly and pokes the blindfolded one, attempting to give the impression that the poke is from another direction than that from which he came. After the player has resumed his position and innocent expression, the blindfold is released, and the one who is "it" is supposed to guess who poked him and haul that one out by the ear to be "it". If his guess is wrong he himself is returned by the ear to put his face back in the blindfold. Another game is "Pigs Fly". The leader waves his arms like flapping wings and says, "It flies, it flies, the swallow," "It flies, it flies, the rabbit", etc. The players are to flap their arms when a bird or flying insect is named, but are out of the game if they continue to flap when a mammal is named.

An attractive game is sometimes played by a group seated in a very close circle on the floor with knees drawn up. Usually a young girl is "it", not being strong enough to avoid the position. All the players hold out the palms of their hands flat, toward the center of the circle. She stands as rigid as a board and falling back against the hands, is passed from one to another, pivotting on her feet. Whoever lets her down must be "it" in her place.

The twenty-eighth of July (Peruvian Independence Day) and New Year's Day, as well as special occasions are celebrated by one- or two-day holidays. The popular beverages are prepared in great quantities to be served in the various homes. All dress in their best and spend the days visiting and playing.

Soccer has been learned from the Atalayans. Perhaps the skill with which the balls are bounced from the heads of the players is carried over from a native sport. The rules of the game, however, more or less follow those observed by the whites. The game is called 'futbol' and there is a 'golkipe'. In one game a 'golkipe' had recently been appointed to serve as a policeman by the officials of Atalaya. He had made himself a polished billy-club, and he carried it with official dignity throughout the game.

Last year basket-ball reached Atalaya, and was promptly introduced in the Piro village of Belén. The general idea of the game was pretty well understood, but the players tackled as in soccer. Once when the goalkeeper saw the ball about to ring a basket he put his shoulder to the post and rocked it back with such force that the ball glanced off.

Often on a holiday a man or woman dresses up as a "devil" and chases the children for their entertainment. Sometimes the costume is just a shapeless mass of rags with a cloth mask. At other times the 'pagotko' appears wearing a clay mask with a beak-like nose extending back over the top of the head. Sometimes alligator teeth are set in like fangs, or the mask may have monkey's teeth. Either the geometrical

design is painted on the face, or red annato may be smeared around the orifices of the eyes, nostrils, mouth, and ears. Tufts of corn-silk may be used for beard, moustache, eyebrows, and tufts under the eyes. The 'pagotko' wears a shaggy barrel-shaped "dress" of dried banana leaves tied on with strips from the center of a fresh banana leaf. The 'pagotko' carries nettle and playfully threatens the children. They alternately follow shouting saucily, and flee.

Sports and games are not reserved only for holidays. Often when a group of men gather for some community work, they end the day together with a game of soccer.

Very frequently the whole village gathers informally for an evening of games or stories such as have been described, or for conversation which is an absorbing art with the Piro. The form of speech of many individuals is so distinctly stylistic that for the study of grammar it is often possible to pick out an informant whose speech will be characterized by the particular grammatical form to be studied. In conversation for conversation's sake, the men especially enjoy using stems of Spanish words with Piro inflection.

Whether several families join together, or each family group is in their own homes, there is a time of rest in the evening called "the cooling off". When the evening meal and the chores are all finished everyone sits down to relax for a while before going to bed. If they are very tired, they may just sit pensively for a while and then retire. Otherwise a lively evening of entertainment may grow out of the relaxation.

Many items of adult recreation have been copied from the whites. Children's play, on the contrary, is distinctively Piro, partly because a large proportion of it is imitation of the adult's routine activities. Little boys spend hours with their tiny bows and arrows. As soon as they can toddle about with the bow in their hands they begin to shoot at lizards, birds, and minnows. They are accustomed from the second year to have knives and machetes in their hands. Often they cut down banana or palm leaves and set up tiny play houses, where the little girls keep house. The jungle is so damp that no one seems aware of any danger from fire. Little girls who can hardly walk steadily pull brands from the fire to kindle their own play hearths. When the mother makes clay pots, the little ones have modeling clay to play with. While the mother does the family wash in the stream, the children splash around her.

Older children spend a good part of a hot day in the streams or in the river. Most of them swim well. The boys often have small canoes of balsa or cedar. Besides the canoes intended for the water, children often have toy canoes a meter to a meter and a half in length with which they play about the house. Older brothers and sisters pull them along the ground, giving rides to the babies. The little ones sit in their toy canoes by the hour playing that they are paddling or poling, or rocking the canoes.

Children old enough to care for themselves play in the forest, climbing for fruit and flowers, and chasing butterflies, squirrels, monkeys, and birds. They make whistles of the tubes encasing the pistils of finfín vine blossoms. Play bean crops are harvested from the bolsa quihua. The fruit of the avilla is brought home, its pithy sections dried and strung on twigs, which are stood upright in the earth. The pith is lighted at night and each twig burns like a bright candle for about five minutes. One vine furnishes tendrils that loop to form bubble pipes, and lathery sap which serves as soap so that the children blow bubbles.

The boys make ingenious little pop guns from papaya leaf stalks. A tapering, hollow stalk is cut in about a 25 centimeter length. A wad of fiber or pith is inserted in the tube and pushed from the larger to the narrower end with a little rod. Then a second wad is inserted in the larger end and pushed through with the rod until enough air pressure has accumulated to cause the first wad to pop out with some force.

Shuttle-cocks made by impaling nuts on the quills of bright-colored feathers are tossed into the air. Tops are made by driving pegs through large, heavy nuts. The tops are spun by winding and throwing. Boys play lassoing and snaring with bark rope.

The cat's-cradle is made by passing the loop across the palm of the hands, with the thumbs and little fingers outside the loop. With each middle finger the string across the opposite palm is picked up. Then with the mouth the lowest outside strand is pulled across the top of the cradle until it swings down below the cradle. It is brought on around so that it makes a complete loop and is hooked over the right thumb. In the end there is a single loop over every other finger except the right thumb which has two loops.

Kinship recognition and teknonymy

Relationship among all Piro is designated by kinship terms. In the few cases in which actual kinship is not traced, as when members of a distant community immigrate, relationship is arbitrarily assumed until the families have been sufficiently fused by marriage to provide real kinship terms.

For each general term designating a relative, there is a corresponding shortened form used as a vocative, and used also in familiar reference, as in talking to a child about his brother or his uncle. The following chart gives the general forms in the first person possessive, followed by the vocative forms in parentheses. In each horizontal line, the larger figures represent the older relatives.

Brothers-in-law and sisters-in-law are shown on the chart as addressed by the vocatives 'shte' or 'wiwi', used of younger relatives, or those of descending generation. If those of the same generation

are actually older, the form yeye (older brother or sister, etc.) may be used. The Piro desire to appear young, and sometimes complain that relatives incorrectly use the form of address appropriate to elders. Women use the same kinship terms as men, except for 'my sister-in-law', which is nyejewlo (magi), and 'my brother-in-law', which is nomeknatjiru (meknatjiru).

The use of names is generally avoided. Parents are called 'shte's mother' or 'shte's father'. In case of ambiguity the child's name may be substituted for 'shte'. Husband and wife may address each other in this way, or may use an affectionate abbreviation of either the Spanish or Indian name. In referring to a family or group of people it is common practice to say 'they - Pipipi', using the name of the youngest of the group.

Social organization

Each village or settlement has a chief called 'our big one'. He has no material advantage over the other men of the village. He directs activities involving the whole group, or any subgroup of which he is a party, as the father does his household, but he does not use his position for personal advantage. For example, he may assign a group of men to their positions in a canoe, but in no case has a chief been observed seated with the paddle in the poop, nor taking it easy if there are extra men along. Rather he poles and works very hard. However, a chief has been known to assign a favorite younger brother to the easy place in the poop.

Chieftainship is not hereditary. Any man who, because of leadership ability, personality, superior education, prominence in treating whites, etc., can gain a following, may tell his friends that he is starting a village in such and such a place, and invite them to live with him. The amount of authority exercized by the different village chiefs varies considerably. In some villages, it would be difficult to discover by observation which man of the village was chief. They are ordinarily not addressed by title, but by kinship terms. However, some chiefs are treated with noticeable deference, and are frequently consulted. Even these chiefs generally issue orders in the same manner that equal members of a family tell each other what they want done. However, one chief was definitely commanding, though not unpleasantly so. One of the milder, persuasive chiefs explained that if a man were guilty of a misdemeanor, he would order him beaten. No instance of beating by order of a chief was noted.

Punishment inflicted by the offended party or his family seems to be the accepted way. A husband beat his wife with a heavy five-foot pole for suspected adultery. He grabbed her by the hair and beat her on the back so that she was helpless for weeks, and unable to turn her head freely for months. The children screamed hysterically, and neighboring women scolded among themselves, insisting that their friend was

PLATE V

Piro Kinship System

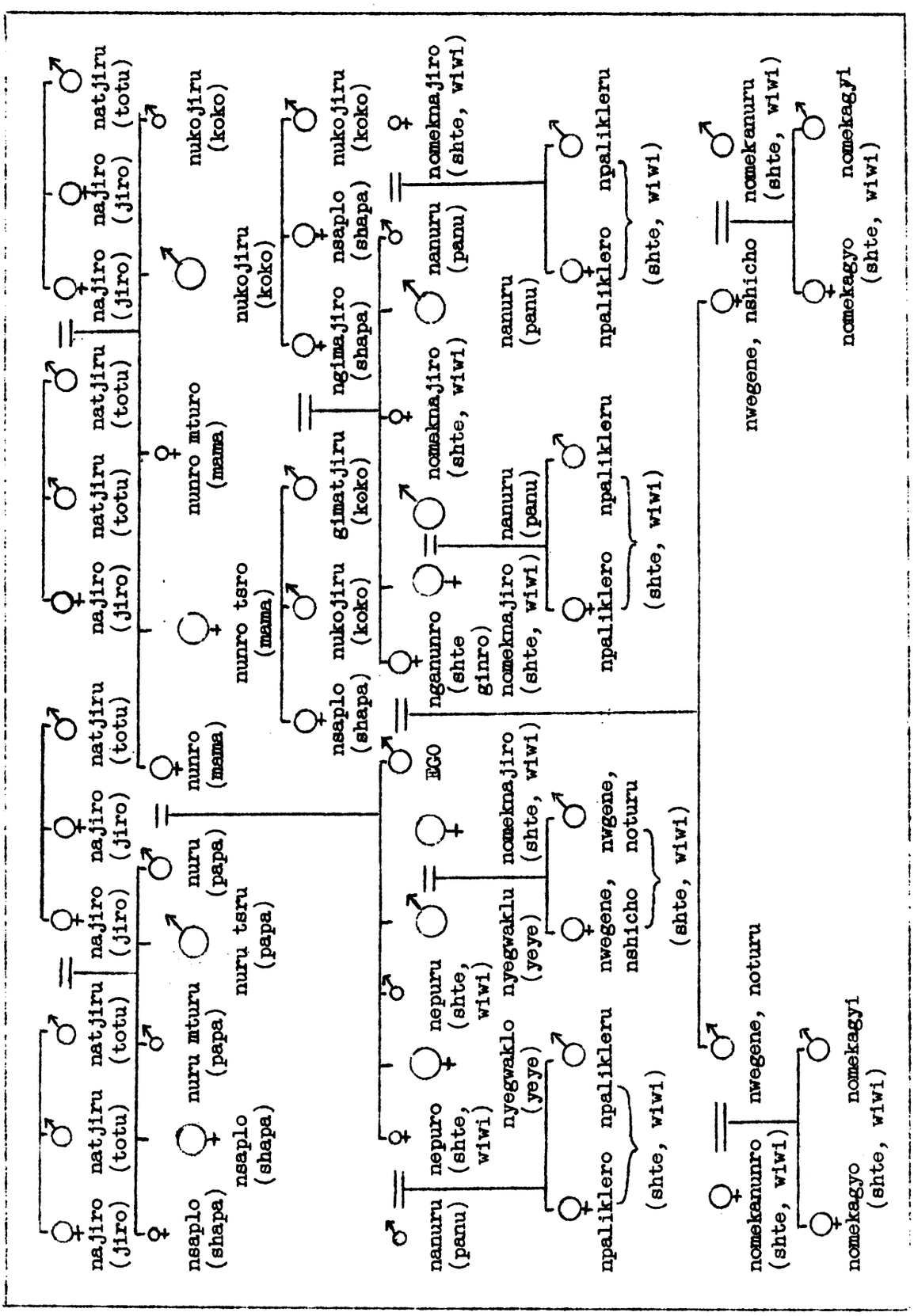
(Terms Used by Ego)

Key:

♂ ♀ : younger

♂ ♀ : no age distinction

♂ ♀ : older



innocent, but no one interfered. A male relative some months later remarked that if it were not for certain awkward circumstances, he would beat the wife-beater. After he cooled off, the husband claimed to have beaten his wife because she threatened to take poison because of his accusations. The man was himself severely beaten by a couple of brothers who had a grievance against him. Their pretext for the beating was that he had moved a post they set up; however, it was generally assumed that they had some further, unstated reason.

About a year later, the same woman demonstrated another form of individual law-enforcement. She heard that her husband had visited a certain woman across the river, and she said with righteous indignation, "I went to her, and I pulled her hair." It seems to have been a formal administration of justice. The wife took witnesses. And it seems to have been effective. The woman who had offended was still tearful and half-sick some days later.

However serious offenses may be, and however severely they may be punished, good relationships are soon restored. Life within the tribal group is too intimate for grudges to be tolerated. "We forget with regard to each other," they say. Incest, adultery, stealing, and anger, in the order named, are regarded as the most serious crimes. Of these, only the second and last are common.

For the one case of incest noted, no punishment except expressions of horror was inflicted. The guilty chief voluntarily withdrew from his village and his shame and evident anguish of spirit are a warning to all the tribe to adhere to the stated restrictions. The girl, his stepdaughter, died, apparently from grief.

Except among very small children, who were punished, no case of theft has been noted among the Piro who have remained in their own communities. A few who have passed considerable time with outsiders have been accused of theft. Property rights are rigidly respected. A child who finds a pin or a dim scrap of mirror will carry it to the chief in order that he may find its owner.

Most of the family possessions are assumed to be the common property of the whole family, but for pleasure the parents sometimes make gifts of livestock, pottery, or other objects to the children. If the egg of shte's chicken is sold, shte goes along and himself receives the price.

Only that which has been purchased is paid for in trade among the members of the tribe. A Piro can take anything from another's planted field, though he must first ask the owner. Fish and game are freely distributed, unless salted, in which case the price of the salt is necessarily replaced.

Toward the close of the second term of adult education in Huau, we saw the first instance of commercial advertising among the Piro.

Alexander went from house to house throughout the village posting a hand-written sign by the doorways. It read:

> Tomorrow it will die, a pig.
> There will be a price for its flesh.
> The price will be S/ 2.00 only each weight (kilo) of its flesh.
>
> (Signed) Alexander's animal

Relationship with other tribes

The dealings actually observed between the Piro and members of other tribes have been kindly. The Machiguenga, Shipibo, Campa, and Amahuaca passing the Piro villages sometimes stop in to ask for food. Whites would be charged, but the other Indians are given generous supplies without a price because "they also are poor". Canoes of Piro and other Indians meeting on the river exchange gifts of supplies. Certain individuals of the other tribes are well known in the Piro villages, and make extended visits, enjoying the free hospitality of their hosts. As has been noted, there is a great deal of intermarriage.

Apart, however, from actual contacts with individuals, the attitude of the Piro toward surrounding tribes has not been friendly until within the last three or four years. There are Campa, Machiguenga, and Amahuaca slaves who were stolen in raids. Some are still little children, indicating that the practice has not been long discontinued. These slaves are actually treated as members of the family. They apparently are taken by men who lack children of their own. When they grow up they marry members of the tribe and are entirely free.

One old Piro man told how he stole Amahuaca women:

> ...There I finished my rubber work. Down on the Shimbillo River I stole Peccary People. Three women I grabbed. The men fled. We took them up river. By night we traveled. Then their people followed us. All night we kept watch. Their husbands wanted to attack us and kill us, but we watched for them. Four days we travelled up river. There one of the women fled from us. She fled at night, leaving right while we were watching. We followed her in the night. She hid in a bamboo patch. It was a dark night. There we deceived her. I whistled, and she answered, thinking it was her people. There I seized her and took her back again. In the morning we flogged her. Then we went up river again. Two days we travelled. On the third day her husband caught up with us and took her away. She was happy when she saw her husband. Then we said to her husband, 'Why didn't you come out? That's why we took your wife. Why did you flee?" Her husband said, "I was afraid. That's why I didn't come out. Now I'm going to take my wife. Now don't be angry."

The Piro are not always the aggressors. They have in the past lived in fear of attacks from neighboring tribes. One evening in 1949 the imaginative chief of our village informed us that he was expecting an attack that night. He had a list of reasons. Some months before a Campa chief had said that he was fleeing to the Purús because he had seen a great number of Amahuaca up the Sepahua River preparing for war. The chief said that he knew personally that there was unrest among the Amahuaca, and that Amahuaca 'spies' had been seen in the woods near another Piro village upriver. Two canoes of Amahuaca had just passed us that afternoon, and at the same time seven carbine shots had been fired in the woods. No Piro in the nearby villages had a carbine, and no Piro would shoot more than once or twice. The chief drew a sketch of a large footprint with broad toes which he said was an Amahuaca print, and a much smaller, more slender print which he said was typically Piro. He assured me that they would be able to identify the Amahuaca's prints in the woods the next day. In the meantime, he said, they would lie awake all night listening for the snapping of a twig, and all the men would be instructed to have their bows and arrows near at hand. The other men did not appear to be particularly worried. I was not quite at ease, and lay awake in my hammock until I heard a deep snore from under the chief's net, a much bigger snore than his little wife would be capable of producing. Later we learned that a white hunter had fired the shots in the wood. The chief made no further comment about the incident.

Tribes less known are regarded with amused contempt, or are the subject of tall stories. A girl wrote home, "I'm here laughing at the Shipibos." The Mascho, according to the Piro informant, have no language at all. They are extremely cruel. In fact, they pour kerosene on their children and burn them. Other tribes are described as plundering and stealing. However, since the outlook of the Piro has broadened in the last few years, they take a much friendlier attitude toward other tribes, calling them 'our brothers'.

Relationship with the whites

The attitude of the Piro toward the white in the past has been a mixture of dread and envy. Their experience had been mostly with those who traveled up their rivers to exploit them. When explaining a word for 'affliction' one chief said, "Yes, it is an affliction that my little boy was born blind. And then again, when a white comes to live in one of our villages and we can't get rid of him, that's affliction."

Whites are mentioned as ogres to frighten children into obedience. Martín was wearing soldier's trousers, a little too small, and comical without leggings or shoes, but he was proud of them. When a little girl refused to be coaxed into his arms, he said with twinkling eyes, "You're afraid of me? You think I'm a white in these trousers?"

There are several words which mean slave and were used of the relationship of the Piro to the white even up to most recent times. Representative of the words is "a sufferer", "a poverty stricken one",

"a bitter one". Civil guards are referred to as "nettles". These words are little used now since debts are being cancelled and the government is making the Piro aware of their rights as citizens.

The whole attitude of the Piro toward the white has been undergoing a change. One of the first reactions to the beginnings of education was the loss of the painful feeling of shame with regard to the use of the tribal language. Perhaps the sight of their own language written, as well as the discovery that languages are numerous and varied, has helped them. Contact with government officials has proved to them that all whites are not their enemies. Also, since they are now able to handle their own accounts, they feel at ease in bringing their produce to Atalaya and Pucallpa for sale. Oranges, watermelons, rice, beans, chickens, and pigs have become a source of income.

The effect of their happier relationship with the whites, and the awareness of their own part in their republic, has not inclined the Piro to abandon his picturesque tribal customs, folklore and art, but rather to awaken an intense pride in all that is Piro. He has determined to master Spanish, to know his country, and take part as a citizen, but at the same time there has been a renewal of interest in the tribal arts. Drama is being revived. Children are being taught the pottery, weaving, beadwork, and designs of the tribe with much greater pride and confidence than they were a few years back. The aged and young alike are begging to have their folktales, myths and recent history recorded, and are reading with great delight all that is written in their language.

ENDNOTES

(1) The data on which this paper is based were gathered in eastern Peru during the periods of January to March, 1947; September, 1947 to April, 1950; and October, 1951 to May, 1953. Various informants of the settlements on the Urubamba river contributed to the data. Grateful acknowledgment is made to my colleagues of the Summer Institute of Linguistics for their many valuable suggestions, and especially to Miss Joyce Nies who gave editorial assistance and typed the manuscripts.

(2) Words underlined are in regional Spanish, or in words given as Spanish by the Piro informant.

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Vocabulary made in 1846. Gives about 170 Piro words. No key to phonetics.

Coriat, G., Juan E.

1943 El hombre del Amazonas y ensayo monográfico de Loreto. 2nd. ed., Librería Coriat, imprenta, Lima.

Gives extensive material on the various tribes of Loreto, including some interesting pages on the Piro. It is a bit misleading because the material may be assumed to be up-to-date, appearing in a book recently issued, whereas the greater part of it is copied from the writings of Franciscans, 1883 or earlier; Fry, 1890; Samanez y Ocampo, 1885; and other early writers.

Comisión General del Censo

1940 "Cuadro estadístico de las tribus de la montaña del Perú, según los informes enviados a la Comisión General del Censo, por los maestros de escuela y jefes de las guarniciones militares," Baluarte, Junio, pp. 8-9.

Mentions two locations where Piro have settled. Of doubtful value, since there is no adequate means of taking census.

Farabee, William Curtis

1922 Indian tribes of Eastern Peru. Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University, Vol. 10, Harvard University Press, Cambridge, Mass.

Errors in vocabulary and ethnological detail. Not a picture of the Piro of today.

Fry, Carlos

1889 La gran región de los bosques; o, ríos peruanos navegables: Urubamba, Ucayali, Amazonas, Pachitoa y Palcazu. Diario de viages y exploraciones...en 1886, 1887 y 1888. 2 vols., Imprenta de B. Gil, Lima.

Perhaps the most extensive original material found on the anthropology of the tribe. Fry's home was in the region, and he travelled quite extensively through Piro territory, visiting secluded Piro dwellings, and chatting with Piro guides and canoemen whose confidence he seems to have held. For about two weeks he stayed in a Piro village. However, the observations made there do not represent too well contemporary Piro culture traits. Fry does not discuss the tribe consistently; often the reader finds that without notice he has shifted to a discussion of the "infidels" in general.

Fuentes, Hildebrando

1908 "Apuntes geográficos, históricos, estadísticos, políticos y sociales de Loreto...," Colección de leyes, decretos, resoluciones y otros documentos oficiales, referentes al departmento de Loreto..., edited by Carlos Larrabure y Correa, Vol. XVI pp. 139-536, Vol. XVII pp. 3-278, Lima.

Fuentes' viewpoint was that of an official and commercial agent, located somewhat down-river from Piro territory, but interested in all the tribes, both for business and for humanitarian reasons. He apparently made few first-hand observations of the customs, but knew the history of the region thoroughly. His comments are brief but interesting.

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1922-1929 Historia de las misiones Franciscanas y narración de los progresos de la geografía en el oriente del Perú. 14 vols., Lima. (title and publisher vary)

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difficulties with the grammar, which he was not able to work out. Little anthropological data is given in this series, the contacts having been made, with few exceptions, by the Indians coming in to the mission. Material on the Piro is of 1883 or earlier.

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Material superficial.

Raimondi, Antonio

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Raimondi was a highly honored scholar, much quoted in writings pertaining to eastern Peru. He did not tell much about the Piro.

Samanez y Ocampo, José B.

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Samanez made a voyage through Piro territory, and had some experience with the Piro. Part of his information was given him by residents of the district. His material is extremely interesting, and is much quoted by other writers.

Schwab, Federico

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Tizón y Bueno, Ricardo

1911 La hoya Peruana del Madre de Dios... Tipografía de "La Opinion Nacional", Lima.

Brief mention of the Piro in a list of tribes.

Uriarte, Buenaventura de: Dominguez, Fernando; and Gridilla, Alberto

1942 En el IV centenario Amazónico y la Orden Franciscana.

Only passing mention of the Piro, as in a list of tribes.

(Editor's note: We apologize for the fact that some of the above references do not comply with the usual bibliographic standards for the Papers. In these cases, it proved impossible to amplify the information given by Miss Matteson. Authors are urged to follow the bibliographic method exemplified in previous issues of this publication.)