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SOME ASPECTS OF KARITIANA FOOD ECONOMY

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### 1. Introduction.

The Karitiana are moving rapidly from a hunting and gathering economy to a more settled agricultural way of life. One of the smaller indigenous groups in Brazil, about 65 Karitiana live in a single village<sup>1</sup>. Their new way of obtaining food means that it is not as scarce as it once was, nor as time-consuming to obtain. The food quest, however, is still a most important Karitiana activity, and more man-hours are spent on this and related activities than any other. In this paper<sup>2</sup>, we shall look at aspects of Karitiana production and distribution of food, as well as the way in which money is obtained and used to buy food. Since the economy is based upon the household unit, we shall examine the division of labour within the household. The nucleus of the household unit is a man and his wife or wives. Peripheral elements are their unmarried children and often a widowed mother and her unmarried children.

### 2. Food Sources.

Most of the food consumed by the Karitiana comes from cultivation, hunting and fishing (see Figure 1). The Karitiana are in transition from methods used when most of the food was obtained from the jungle to the present, when to an ever-increasing degree it is purchased in the city.

## 2.1 Hunting and Fishing.

The jungle and rivers are the main source of Karitiana protein. All Karitiana men have shotguns, which they use in hunting. In fact a number of men have more than one. Shotguns are the most important single tool in the search for meat. The main difficulty with the shotgun is that new cartridges have to be obtained or old ones re-charged. On occasion, cartridges are obtained from FUNAI (Fundação Nacional do Índio) as gifts, and at other times they are purchased either from the mining camp shop or else in Porto Velho. It seems that the men prefer to purchase cheaper materials for re-filling -- powder, caps and shot -- rather than the ready made cartridges.

The men go out the year round, to the jungle in search of game, individually for the most part, or accompanied by a young male member of the household. Whenever the Karitiana travel, the man carries the shotgun, while the women carry the heavier loads. The man is thus ready for action at a moment's notice. The area immediately around the village appears to have been over-hunted. The tapir, considered the best animal to kill because of its size, is rarely seen; but there are still quantities of wild pig and smaller animals, such as paca, agouti, coati, armadillo, deer, monkey and birds.

The carcass shot in the jungle is carried in by the man; or, if the quantity is too much for one man to carry, several men go out to bring it in. Animals are also cut up by the hunter who killed the game, and the entrails are placed in a large bowl. When the meat has been cut up, if there is excess, the hunter divides the carcass, giving a

piece to other men in the village. The hunter's wife and other females of the household take the entrails, squeeze out the contents of the intestines, and distribute the viscera either among the children of the household or, if there is excess, among the other women and children in the village. The household women also cook the meat.

Dogs are used in hunting to some extent, and seem especially successful with smaller game. Apart from accompanying a hunter, frequently a trained dog will also bring in meat it has killed by itself.

The rest of the jungle protein comes from fish. Fish are caught by men, women and children. Men -- but never women -- use a large wooden fish trap. Men and boys also use fishing line and hooks, and to some extent, the bow and fishing arrow. Men, women and children all use fish poison at the times of year (low water) when this method is effective. Little children also bring in small fish caught with a simple net or sieve. All fish are then cooked by the women.

Despite the fact that all people in the community, except the smallest babies, are involved in the search for protein, this is still predominantly a male occupation (see Figure 2).

## 2.2 Planting and Harvesting.

Both men and women are committed to the production of cultivated vegetable foods. In the past, the Karitiana planted small fields with a small quantity of Indian corn and a few other plants such as pumpkin and cará (dioscorea). In recent years, as their contact with the non-indigenous

population has grown, so has the range of foods which they grow and the size of their fields.

Macaxeira, the most important of the ancient food crops, is still the most important crop today. The crop is planted at the start of the rainy season in September, and is ready for harvesting four or five months later; but there is no urgency to collect the edible roots, as they do not rot when left in the ground. This means the macaxeira can be harvested when family need requires. It is thus a very good staple food for the household unit.

The banana and plantain are perhaps next in importance in Karitiana food crops. Each household has its own banana plants near the house, and the men often plant more. A banana plantation, initiated by a former FUNAI agent, is still producing a large amount of fruit, and all households draw from it occasionally.

The Karitiana plant peanuts, corn and pumpkins in specially selected areas located up to 4 km from the village, chosen for their dark and rich soil. Brazilian corn and rice as well as macaxeira have been planted in large quantities around the village. Most fields are cleared and planted adjacent to the house of the planter, reflecting the household centered work patterns of the village. In some instances, two men work together in clearing a field, but the actual planting is done in clearly demarcated areas, with a specific fallen log marking the boundary in some cases. Figure 3 indicates the present location of the fields.

Cultivation is work which is divided between men and women of the household unit. Cutting, clearing, and burning

off the field is man's work; but both men and women cooperate in planting the main crop, macaxeira. First, the man cuts up macaxeira stalks into short lengths. Then he digs shallow holes in the ground, and the woman follows the man, dropping the pieces into the holes. Apart from one or two weedings at a later date, the man's work is finished; it is the woman who collects, cleans and cooks the macaxeira roots. The men do help, however, in bringing in poisonous manioc, a crop which has been introduced recently by the non-indigenous population.

When making manioc flour, men and women peel and soak the roots. The men operate the gas-driven manioc grater, and they also construct and operate the manioc press used for squeezing the poison from the grated roots. Then men and women work together in stirring the flour as it dries in a pan over the fire.

For the most part, women plant corn. Peanut planting, however, is a combined activity. A man clears the ground where the seeds will be planted, his wife makes the holes, and both plant the seed. The rest of the crops are planted by the men. Division of labour is not strict. In planting, as in other food obtaining activities, there is much cooperation between the sexes.

Government agents have introduced a large number of fruit trees, including mango, guava, cashew, coconut palm, lemon, and orange. The fruit is available to all, except for trees planted close to a particular house which are thought of as private household property.

Most Karitiana food comes from the above sources (ie. hunting, fishing and harvesting), but there are also

two other secondary food resources -- collected food items (from the jungle) and livestock.

### 2.3 Collecting.

The most important jungle fruit tree is the palm. Many species of palm grow in the forest, each with its own type of fruit. In some cases there is a rudimentary coconut, with a thin layer of edible meat; in other cases the palm fruit has a thin edible outer layer, surrounding a large stone. Certain deciduous forest trees also produce edible fruit, but like the palm fruit they have very little edible matter, often no more than a layer of mucous-like substance surrounding the seed. Despite the fact that jungle fruit does not have much edible matter, there is still much collecting activity. Often a family will be the collecting unit, but groups of women and children from different households are not uncommon. Sometimes it is necessary for a tree to be cut down for the fruit to be collected. If this is so, a man will go along as well.

Karitiana men also collect nuts and honey. Brazil-nut trees, unlike other jungle fruit and nut trees, are considered to be the property of an individual. These trees are few in number, and this is most likely the reason for the personal ownership. Honey, once the only source of sweetness in the jungle, is still a highly prized commodity. Honey collecting is a man's activity, because it necessitates the cutting down of a tree to obtain the honey, and because of the danger involved. In one instance a bee's nest was found at the top of a large tree. The tree being at least 1.5m in diameter, the men began cutting in the

early morning and chopped until midday before the tree fell down. Fighting their way through angry bees, they were able to obtain about 2 liters of honey.

#### 2.4 Livestock.

The Karitiana have kept chickens for many years. Recently, ducks and rabbits have been introduced, and a few pigs. The men make shelters for the animals where these are needed, and the women enjoy raising the livestock. Despite their interest and enjoyment of the animals, the Karitiana do not eat much of the livestock they produce. Eggs are few, and they prefer to hatch chicks rather than eat the eggs. Adult chickens are thin, with little meat. So although the Karitiana do spend time and energy caring for their animals and birds, they do not reap a great deal of benefit.

#### 2.5 Food sharing between households.

The household unit is the fundamental food producing group. On some occasions, however, the household has more food than it can eat, and there is a danger that food would perish before being eaten. It is at such times that food is shared with another household. This applies specifically to meat and fish, and to perishable jungle fruits when available in quantity. Even quite small animals, such as the paca and armadillo, are shared with other households at times, and large animals, like the wild pig and tapir, are always shared. No payment is received for such shared items, but the household expects to receive a reciprocal amount from other households on other occasions.



## 2.6 Trade, money and Brazilian food.

The Karitiana have begun to eat increasing quantities of Brazilian processed foods. These are readily available at the mining camp nearby, and also in Porto Velho. Most homes consistently have processed food items on hand. In order to obtain these food items (and other food-related manufactured items, such as shotguns and cartridges) the Karitiana must sell or exchange goods they produce. For this reason, they spend considerable time producing saleable items. These include farinha, rubber, sorva (used in making chewing gum), artifacts, and jaguar skins. By these means, and in a few cases by working for the government Indian Agency, the Karitiana are able to obtain money, a large proportion of which is spent on food.

The kinds of food Karitianas like to buy include vegetable starch and protein foods such as rice, macaroni, beans and bread. They also buy canned meats and fish, sugar, coffee, canned milk, cooking oil, margarine, dry crackers, and onions.

These items are very popular because of their varied flavours, and also because they can be stored for longer periods.

Since money is somewhat scarce in the village, there is a tendency for people (especially older people and women) to prefer to exchange items in order to obtain goods. Money is never used in the village between households to pay for items, but only to pay outsiders.

## 3. Agents of change in Karitiana food economy.

The Karitiana have been in contact with the sur-

rounding national society for a number of years -- probably fifteen or twenty years, though we do not have and documentation for this. From conversations with the Indians, we have gleaned the following information. There appear to have been two groups of Karitianas until fairly recent times. One of these groups lived on the banks of the Rio Candeias, where they were employed as rubber tappers. Their employer supplied the Indians with consumer goods in exchange for the jungle products, and by this means they were able to get shotguns and ammunition, as well as tools such as axes, machetes and hoes, clothes and Brazilian food items.

Because of occasional harrassment by another "wild" group of Indians and also because a chance contact in the forest reunited two Karitiana groups, the Indians moved to their present location. At this time, they still lived in a communal round house, each family within the round house having its own clearly demarcated area.

For some time following this move, the Karitianas seem to have lived as a partially nomadic group, having little or no contact with the surrounding society. They remember in detail the time when contact was re-established. A man named Lopes came paddling up the river when it was in flood. The Indians were able to make friendly contact with him, and informed him that they wanted a new employer and salt. Lopes gave them salt, sugar and cartridges. He then left for Porto Velho on foot, but later returned bringing machetes and axes. Lopes also taught them how to make large fields, and how to make farinha. After a short period the FUNAI sent in a representative.

Government agents who served there initiated important changes. Larger fields were cleared and planted. New crops were introduced, including rice and Brazilian corn, as well as a variety of fruit trees. New livestock was introduced including ducks, rabbits, and more dogs. Perhaps most important, the road was opened up from the village to the mining camp in September 1972.

Since that time, despite the poor condition of parts of the road, there has been a constant flow of traffic and goods in and out of the village. At the present time, all the people in the village (except the newest born babies) have been to Porto Velho at least once, and many of the men have made frequent trips there. From the mining camp (a 4 hour walk away), a ride can easily be obtained on vehicles which go to town regularly. Sometimes they can go right from the village if a car is going out. It is in the city, and to a lesser extent from the mining camp shop, that the Karitiana are buying Brazilian foods, and ammunition. Cutting and digging tools such as axes, machetes and hoes are obtained free of charge from the FUNAI agent, who has also supplied seed for planting.

#### 4. Summary.

The Karitiana are thus seen to be moving at a steady rate from their ancient jungle oriented way of life to a more city orientated state. It might be expected that they have experienced severe trauma in this process of change, but in fact they have not shown such tensions. They still retain their own language, but many of the other ancient customs have become submerged, or forgotten. It appears

that the retention of their language, together with the relative isolation of the village, is an important factor in their continuing social cohesion.

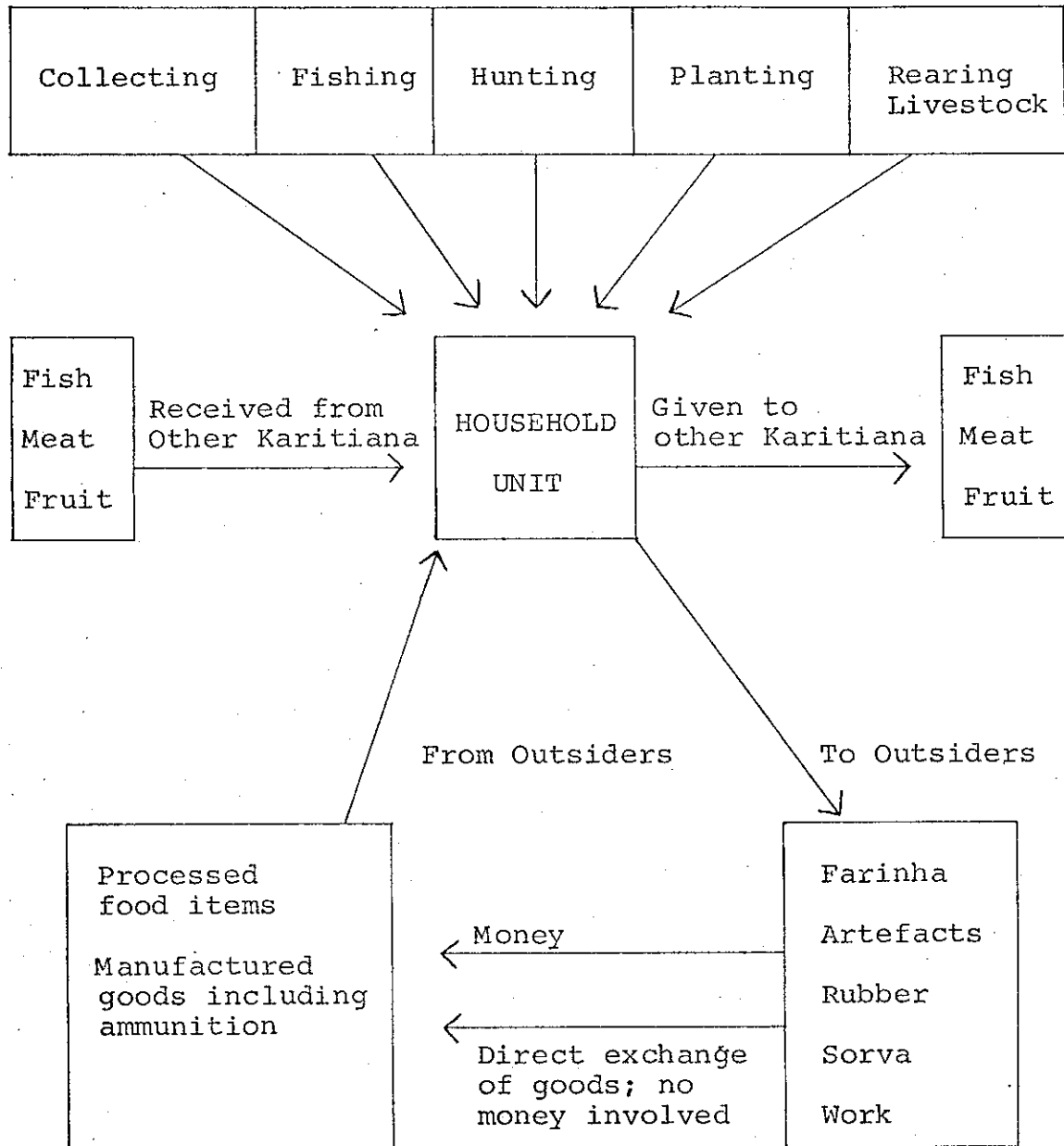
#### Notes

1. The Karitiana village is situated 20km from a mining camp, and 100km SW of the city of Porto Velho. It is possible to drive right from the village through the mining camp to Porto Velho along 50 km of partially maintained jungle road, and 50 km of territorial highway.

The village is surrounded by virgin jungle. A small river runs through the village and a number of smaller streams, some of which dry up June through August, are also found in the vicinity. Flora and fauna are typical of the Amazon basin. The soil is red, and poor for growing crops; and it has a thin layer of leaf mould which is often destroyed when fields are being burnt off.

2. The data for this paper were gathered over a two year period as part of a long range project of the Summer Institute of Linguistics, through contracts held with the Ministry of the Interior, the National Indian Foundation (FUNAI), and the National Museum, Rio de Janeiro. The present paper was written at a field workshop held by the Summer Institute of Linguistics in 1974 at Porto Velho, Brazil, under the direction of William R. Merrifield.

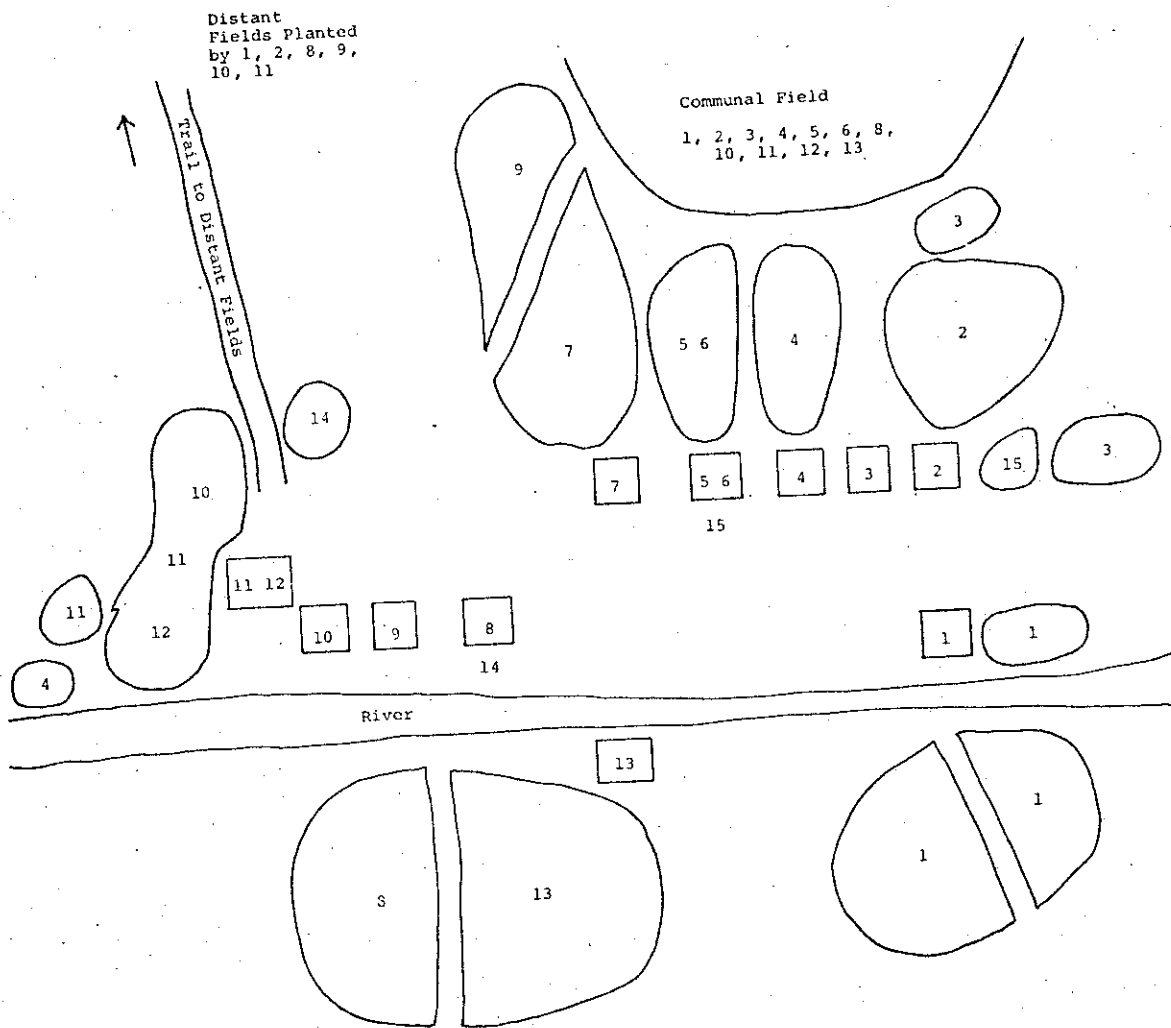
Figure 1. FOOD SOURCES AND PATTERNS OF DISTRIBUTION



	Collecting	Fishing	Hunting	Planting	Rearing Livestock	Indirect means of Obtaining Food (By Production of Saleable Items)
Q	Collecting Honey	Fish Trap Construction & Use  Fishing Bow & Arrow  Fishing Hook & Line	Shooting Game  Dogs  Cutting up Meat  Distributing Excess	Cutting & Clearing Field  Burning Field  Cutting Macaxeira Stalks  Digging Holes  Weeding  Soaking Manioc  Construction & Operation of Manioc Press	Construction of Pens & Shelters	Collecting & Processing Sorva  Collecting & Processing Rubber  Providing Teeth & Armadillo Shell (for Necklaces)  Cleaning & Drying Hides  Work for FUNAI  Making Bows & Arrows
Q & Q+	Collecting Brazil Nuts	Fishing with Poison  Sieve Fishing		Planting Peanuts  Collecting Peanuts  Collecting Manioc  Peeling & Grinding Manioc  Drying Manioc Flour		Making Farinha  Drilling, Rolling & Threading Nuts, Seeds, Teeth & Shell for Necklaces
Q+	Collecting Fruit & Coconuts  Cooking Fruit	Cooking Fish	Cleaning Viscera  Distributing Excess Viscera  Cooking Meat	Planting Manioc & Macaxeira  Planting Corn  Digging Holes for Peanuts  Collecting Macaxeira  Collecting Corn  Cooking & Preparing Vegetables	Caring & Providing Food for Hens, Ducks & Rabbits	Collecting Seeds & Nuts for Necklaces  Making Cotton Thread for Necklaces

Figure 2. DISTRIBUTION OF LABOUR WITHIN THE KARITIANA HOUSEHOLD UNIT

Figure 3. HOUSEHOLDS AND HOUSEHOLD FIELDS



KEY      □ = house      ○ = field      1 = number of household

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