THE BORUCA OF COSTA RICA

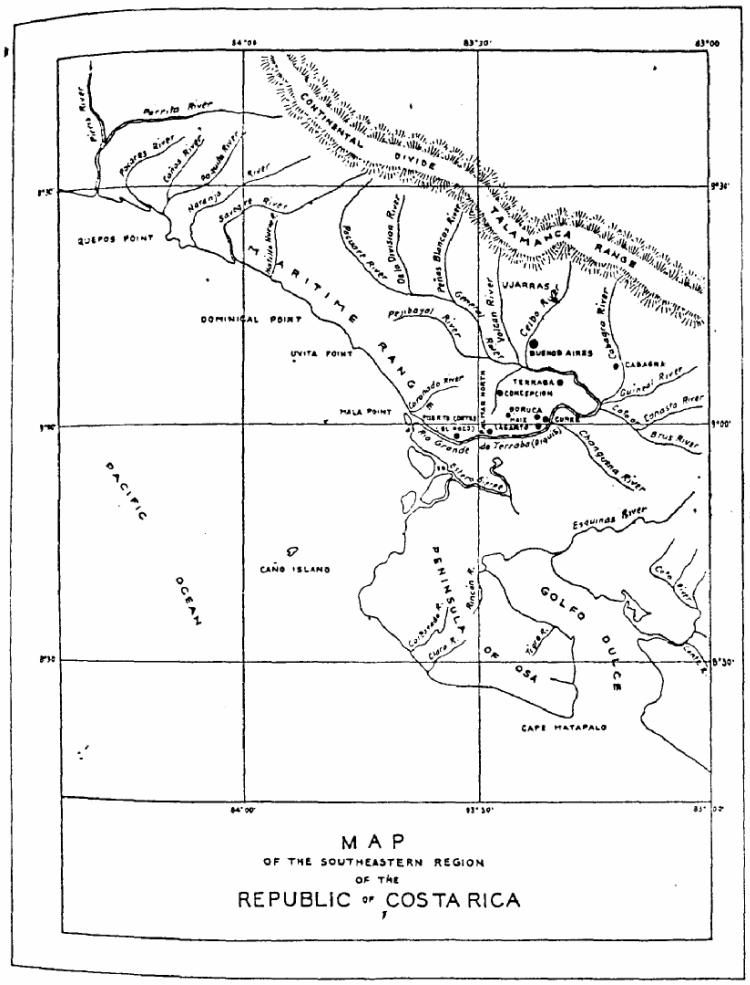

Fig. 1. Map of the southeastern region of the Republic of Costa Rica.

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THE BORUCA OF COSTA RICA

BY

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FOREWORD

THE following paper on the present-day *Boruca* Indians of southeastern Costa Rica is not a complete ethnological study. In fact, it might well be termed an "introductory paper" on these people. It is the result of four short visits into Boruca territory. The first trip was made with the idea of becoming acquainted with these people, and the remaining three visits were made to study the conditions under which the greater portion of autochthonous Costa Ricans exist today. The purpose in mind was to understand the new problems created by the first steps in constructing the Pan-American Highway. The line of the proposed highway goes between *Térraba* and *Cabécar* Indian country, and indirectly affects the *Bribri* and the *Boruca*. With its start, came the flood of opportunists to claim lands that are actually occupied by indigenous groups, many of whom do not even speak the national tongue, Spanish.

As a result of these field trips, the Costa Rican Government set up, on December 6, 1945, a *Junta* or Committee to form a long-term educational program and to demarcate various aboriginal zones to be used as reservations.

Little or nothing has been written about the *Boruca*, who are by far the most Europeanized of the southern Costa Rican tribes, and who, because of this, are fast losing their aboriginal characteristics. The report which follows is a series of facts concerning the life of the actual *Boruca* Indians; facts which, in a few years, may be obsolete or unknown. For this reason, they are offered here as part of the record of our knowledge of man's cultural changes, and, as stated before, do not pretend to represent a thorough ethnological study.

DORIS STONE

San José, Costa Rica, 1946

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GEOGRAPHY

THE country of the *Boruca* lies in the southeastern section of Costa Rica (see fig. 1, frontispiece) starting from the upper end of the flood plain of the Río Grande de Térraba, or, as we prefer to call it in the present paper, the Diquís River. *Diquís* is the older appellation, and is the name most frequently used in Costa Rican geographies, being an Hispanic form of the *Boruca* words *dik*, meaning "water" and *krit* or *krjta*, meaning "large." It is from this also that the term *Río Grande* or "Large River" has evolved. The name *Térraba* is more recent, and is due to the one-time important community of *Térraba* Indians who were moved to the upper reaches of the Diquís River from the Talamanca region around 1700 by Fray Pablo de Rebullida.[1]

The land of the *Boruca* follows the river northward on both sides to a short distance above Curré. This territory includes the section of the Changuena River on the east, and most of the Cordillera Bruqueña, which is the Maritime Range, on the west and east. Within this limited area, the *Boruca* have five settlements. The largest of these is Boruca with forty-seven houses, and three hundred and thirty-four inhabitants, the majority of whom can be classed as Indian without *ladino* or white mixture. The next largest community is Palmar Norte, on the western bank of the Diquís River, at the start of the flood plain. This has a population of one hundred and seventeen Indians, but unfortunately, many *ladinos* are seeping in due to its proximity to the farms of the United Fruit Company and the Costa Rican town of Puerto Cortés (formerly "El Pozo"). There is one other large village of Indians, Curré, on the western bank of the Río Grande. This is the northernmost settlement of the *Boruca*, and has one hundred and three inhabitants, and fourteen houses. The other sites might well be called by the Spanish term *aldeas* or hamlets. Lagarto, also on the western bank of the river, has fifteen Indians and three houses. The rest of the tribe is scattered in locations which should be classed as *ladino* towns, such as Maíz, which was once all Indian, but now has only twenty-six Indians, Puerto Cortés which has fourteen, and Buenos Aires which has seven, some of whom are not pure. According to the census taken by the school teachers in Boruca, there are about twenty-five Indians who live isolated in the forest, many on the banks of the Changuena River, making a total of six hundred and forty-one *Boruca* Indians in 1945.

EARLY HISTORY

What was included in the original territory of the *Boruca*, we cannot say. The term, which we find spelled *Burucac*, appears to have been first used by Juan Vázquez de Coronado in a letter to the king, written in 1563.[2] He unfortunately does not delimit their location. It is obvious, however, that they formed a single unit or tribe. Throughout the early literature, allusion is made to the *Borucas* as *indios infieles y de guerra*,[3] who apparently fought with many of their neighbors as well as the Spaniards. Later during the Conquest, the term was applied to a province on the Pacific coast which apparently extended from the territory of the *Quepos* Indians to the River Chiriquí Viejo in Panamá.[4] Around the year 1608, or a little earlier, Fray Alonso de la Calle went alone to the *palenques* or fortified houses of the *Boruca*, and succeeded in converting and pacifying them. Fray Alonso appears to have gathered some of these Indians and formed a town.[5] Certain it is that by 1649, there was a town known as Boruca,[6] and by 1666, the term *Boruca* had ceased to be associated only with the people of that name, but included

[1] Fernández, 1907, tom. IX, p. 502; tom. III, p. 327, footnote 8. Peralta, 1938, p. 425 gives the date 1697 for the transferal of these people.

[2] Vázquez de Coronado, 1908, p. 37.

[3] See Fernández, 1907, vol. VIII, pp. 99, 462.

[4] See Peralta, 1900, pp. 82, 218; Fernández, 1886, vol. V, p. 428.

[5] Fernández, 1907, vol. VIII, p. 99.

[6] Fernández, 1907, vol. IX, p. 364.

also various tribes from the south and the adjoining coast who formed part of the reduction of *Nuestra Señora de la Concepción de Boruca*.[7] The town of Boruca, which is not the same town we know today, was founded to the north of the present site, near the savanna known as "Mano de Tigre" today. Here, various tribes, including the *Coto* were moved into the vicinity by the Spanish priests,[8] until in 1749, even the *Quepos* Indians were brought into the area and formed part of the community.[9]

PRESENT GROUPS

As we know them, the *Boruca* are a composite group, apparently inhabiting only a small section of their former domain. The peoples who are now represented by the *Boruca* were at one time neighbors and, to some extent at least, enemies. The *Boruca* today include the *Coto*, *Turrucaca*, *Burucac*, *Quepos*, and the *Abubaes*.[10]

LANGUAGE

There are, unfortunately, no vocabularies of the original Boruca tongue. The present language is a mixture of the speech of the various peoples who form the modern *Boruca* Indians. The majority of linguists associate Boruca, even in the heterogeneous state in which it appears today, with the Chibchan dialects.[11] Lehmann divides the Chibcha into an eastern and a western branch, beginning the latter with the Cueva-Cuna with whose speech he also sees a resemblance to the *Boruca*.[12]

In connection with the name, *Boruca*, the Indians today do not use this term, but call themselves *Brunka*. *Brunka* is composed of two words, *brun*, meaning "ashes," and *ka* or *k·a*, meaning "within." Their town, however, they call *Boruca*. *Brunka* is singularly absent in the older documents of the Conquest and colonization, apparently coming into use around the nineteenth century.

NEIGHBORS

The present neighbors of the *Boruca* are largely *Talamancan* tribes, the *Térraba* in the immediate north, and the *Ujarrás* (*Cabécar*) and the *Salitre* (*Bribri*) still farther northward. A few *Changuena* are rumored to exist along the upper reaches of the Changuena River where they probably settled in the seventeenth century.[13] Some *Boruca* say that these *Changuenas* are "enchanted," and cannot be seen; others that they have seen them. All of the *Talamancan* peoples were brought into this area from the Atlantic area in the early part of the eighteenth century by Fray Pablo de Rebullida, as stated above. Here they have remained, isolated from their original territory, each group distrustful of the other. The *Boruca* distrust in particular their neighbors the *Térraba*. They get along best of all, but not very well, with the *Ujarrás*. Even within the Boruca community this isolation is evident. The women seldom visit each others' houses. As much as a year may pass without one going to the house of a neighbor, but, when they do, they are very garrulous, and enjoy gossiping and laughing, seated on their little four-footed benches.

ACCULTURATION

Since the appointment of a Spanish Magistrate, a *corregidor*, for Boruca toward the second half of the eighteenth century,[14] the *Bruncas*, *Brunkas*, or *Borucas* began to lose their own culture and personality. The slow acculturation of these people by the Costa Ricans has unfortunately gained in degree since the advent of the vanguard of road-builders for the Pan-American Highway. To date, they have, however, managed to keep relatively free from inter-mixture either by marriage or by cohabitation with non-Indian peoples (see p. 26), and are, curiously enough, practically the only group in modern Costa Rica who have retained their indigenous dress, even though many of their customs have unfortunately disappeared.

[7] Fernández, 1907, vol. VIII, pp. 421–25. For the date, 1666, see p. 425.
[8] Fernández, 1907, vol. VIII, p. 424.
[9] Lehmann, 1920, vol. I, p. 20.
[10] Lehmann, 1920, vol. I, pp. 151, 195, lists all of these people with the exception of the *Abubaes*, as forming the modern *Boruca*. The *Abubaes*, however, also should be considered as part of this group. See Fernández, 1907, vol. VIII, pp. 421, 424.
[11] See Mason, 1940, pp. 86–87, and the linguistic map of Johnson, 1940.
[12] Lehmann, 1920, vol. II, p. 71.
[13] See Fernández, 1907, vol. VIII, p. 424.
[14] Fernández, 1907, vol. IX, p. 363.

VILLAGES

The village of Boruca is situated in a low depression on undulating hills, about 6 miles inland from the River Diquís (see fig. 3, *a* and *b*) and at an altitude of approximately 466 meters. As a rule, the day-time temperature is between 75 or 78 degrees F. The nights are fairly cool, and during the dry season, fog or a very heavy mist is common in the early morning often lasting as late as eight or nine o'clock. These hillocks have been cleared of forest, and are quite bare save for a few scattered shade or fruit trees. There are no streets, but several narrow foot and animal paths extend through the town. The Indians are accustomed to pick their way over the grass to the houses which are scattered over and in between the hillocks, forming a picturesque panorama which can be best seen from the summit of the two tall hills which flank the village on the northern and southeastern sides, respectively. Eastward, a trail leads down to a mountain spur which extends in a northeastern direction toward Curré, some 6 miles distant. Formerly, Boruca had a *cabildo*, or town hall. Today, this has disappeared, and the wooden schoolhouse and church with its haphazard wire fence are the only semblances of *ladino* architecture. Although most of the houses have no fences, a very few have wooden ones, hemming in a garden with colored crotons, flowers, or some fruit trees. The school is starting a *manzana* of vegetables and fruit trees on the outskirts of the town. A small creek, with tree- or bush-lined sides, known by the Spanish name of *La Quebrada* or the Boruca name of *Tupsi*, flows through the community, supplying water for washing purposes. The drinking water is derived from springs which are located in the northern section of the town.

Curré and Lagarto are river hamlets, lying in the very narrow plain cut by the Diquís River in its upper course. They are low, unhealthy locations, the houses situated in dense forest and thickets. As a consequence, they are not open and fresh as Boruca, but closed-in, and, for many months of the year, mosquito ridden. These villages have even less the aspect of a formal town than Boruca. Narrow, almost imperceptible foot paths lead from one of the widely scattered and nearly hidden houses to the other. There are no churches or schools, and perhaps there is one fence in both communities. Water is obtained from shallow wells on the river bank, from small creeks, or from the river itself.

Palmar Norte is on a flat right on the river bank. The forest comes to the outskirts of the town, but unlike the other river villages, the community itself is open and free of the bush. Palmar Norte is obviously under *ladino* influence. Here, there is a definite attempt to lay out a "town" in the Spanish-American sense, with a *plaza* or square, a church, school, several saloons and stores, the houses all with fences, and broad, wide, grass-covered streets connecting blocks or squares. It keeps its indigenous characteristics in the still ample space or gardens around the houses, and, of course, their construction which, for the most part, is like that of Lagarto and Curré. Malaria is prevalent among the *Boruca*, who are, otherwise, an exceptionally healthy people.

SUBSISTENCE ACTIVITIES

Farming. The farms of the *Boruca* contain from three to five *manzanas*, a *manzana* usually comprising about ten thousand square *varas*.[15] The farms are away from the village, and are generally fenced in. The fence is nearly always made with living posts,

[15] A *vara* equals 33 inches.

usually from the *poro-poro* tree[16] (*Cochlospermum hibiscoides*). A vine called the *bejuco de fuego*, or *brut∫-a'* in Boruca, is used as horizontal bars, and to tie the fences, when the purse does not permit wire. The vine lasts at least a year without having to be replaced. One of the *manzanas* is always made into a *milpa*, or corn patch. The rest is planted with rice (*Oryza sativa* L.), sugar cane (*Saccharum officinarum* L.), plantains (*Musa paradisiaca* L.), yuca (*Manihot utilissima* Pohl.). The writer could not find the sweet variety which is *Esculenta* Crantz, although Pittier lists this in his vocabulary as *ünbah*,[17] ñampí (*Dioscorea trifida* L.), cacao (*Theobroma Cacao* L.), some bananas (*Musa sapientum* L.), and tobacco (*Nicotiana Tabacum* L.).

Besides these ordinary foodstuffs, there is generally one or more of the following items: coffee (*Coffea* spp.), oranges (*Citrus sinensis* [L.] Osbeck), mangoes (*Mangifera indica* L.), pejibaye (*Guilielma utilis* Oerst.), both with and without thorns, papayas (*Cariça Papaya* L.), alligator pears (*Persea americana* Mill.), pineapples (*Ananas comosus* [L.] Merr.), yucca (*Yucca elephantipes* Regel), *tiquisque* (*Xanthosoma violaceum* Schott), tree cotton (generally, *Gossypium peruvianum* Cav.), colored cotton (see p. 16), and at times, cashews (*Anacardium occidentale* L.).

The rice planted is the upland variety, and is sown after the ground has been subjected to the usual slash and burn method common to all *Boruca* cultivation. There are some twelve different varieties of corn, including a specimen with apparent jet black[18] kernels and a deep purple cob.[19] This is used as a rule, only for making chicha. Deep yellow, white, white and yellow, white-yellow-red, red, red-orange, and purple corn are also grown. The purple, like the black, is used generally for chicha. All the corn grown by the *Boruca* can be classified as *Zea Mays* L. and is divisible into types. The most common kind is known as "Tropical flint-corn," and the other as "dent corn." The various colors are secondary characteristics, and cannot be classified as distinct specimens.[20] The bean preferred is a variety (*Phaseolus vulgaris* L.) found, in Costa Rica, only among the *Boruca*.[21] It is a pole bean, and is red with large white spots.

The Indians visit their farms daily, leaving the village early each morning and returning about four or five in the afternoon. They take with them a lunch usually consisting of one or two items including either a tamale called *t∫ari-kə*, which is made of dried green plantains, or chicha made from corn. The primary clearing of the forest to make the field is done by both men and women. The felled trees are burned in the dry season, and from then on, only the women, often assisted by the children, do the work.

In the village, and often on the savannas, guavas (*guayabos*) (*Psidium Guajava* L.), *Inga* (guavas) (*Inga spectabilis* [Vahl] Willd.), Spanish plums, *jocotes* (*Spondias purpurea* L.), and nances (*Byrsonima crassifolia* [L.] DC.) are found. These trees, although apparently not cultivated today, may well have been so in ancient times.

Gathering and Cultivating Methods. The agricultural implements of the present-day *Boruca* are almost completely borrowed from the *ladino*. The common tools are broad machetes and *macanas*, which have possibly evolved from a digging stick, and are made with a wooden shaft or handle and a small iron flat-edged blade at one end. This is used for digging holes or even cutting roots in the field. Spades and an instrument called a *cuchillo*, which is a long knife or machete, are also common.

The women open holes for sowing, using a long pole with a point at one end. The seeds are carried in a gourd (see p. 19) in one hand, and sown with the other. Ordinarily the crop is gathered only by the women and children, but rice is gathered also by the men. For this purpose, an implement made of cow horn and metal with a fiber string is used. The horn portion serves as a handle, fitting into the palm of the hand while the metal part is sharpened as a knife, and protrudes between the index and the third finger. The string goes over the thumb to help steady the whole. This implement (see fig. 3, *c*) may have been borrowed from the Chiriquíans (i.e., the people from Chiriquí, Panamá, who formerly had homesteaded much of this area), and who use a similar tool, or it may be a local *Boruca* inspiration. The cutters are frequently decorated with lineal designs and initials (see fig. 3, *c*). The cutting of the rice is done with the right hand, the left being used to hold the plant. As with all other products, however, only the women and children bring the rice in from the fields, piling it in large baskets called *habas* in Spanish (see p. 15).

Sugar, its Manufacture. Sugar is extracted from sugar cane in a very primitive fashion (see fig. 3, *d*). A tree with a knot is picked, and the knot hollowed out. About a foot or so distant, a forked portion of tree is placed erect, and one end of a hewn thick plank, slightly indented in the center, is rested in the fork with the other end against the live tree. A long pole is inserted in the knot hole, and a banana leaf is placed between the plank and the fork. Cane is put between the pole and the plank. One person holds and pushes one end of the cane and another pulls and receives it, while a third pumps the pole up and down. The cane is twisted to extract more juice as it is pulled through the presser. The juice runs down the plank, the leaf serving as a canal to guide the liquid into a vessel placed on the ground. When the pressing is over, the juice is boiled until an unrefined sugar remains.

Domestic Animals. As a rule, a family possesses a few chickens, some pigs, and an ox. The only one of these creatures which are given any semblance of shelter are the chickens, which, at night, are put in small houses (see figs. 4, *a*, *b*, *c* — see p. 23). In some households, there are dogs, which are used for hunting, and occasionally cats and birds. The birds are generally kept as pets, although at times they are raised for food. Bees are also domesticated occasionally (see fig. 4, *d*).

Wild Foods. The *Boruca* are very fond of flowers from certain bushes and trees. Among these can be listed the white blossom of the wild *majagua* (*Hampea* sp., and other spp.), the red blossom of the *poró* tree (probably *Erythrina costaricensis* Micheli), the green inflorescence of the *disciplina*, a variety of palm called *∫it* in Boruca which is probably a dwarf *Chamaedorea*; the inflorescence of the pacaya palm (*Chamaedorea* sp.) and the inflorescence of a palm called *sem-kra'* (*Carludovica palmata* R. & P.) the leaves of which are used to make hats (see p. 18). In addition to these items, the heart of the corozo palm (*Corozo oleifera* [HKB] L. H. Bailey), the royal palm *palma real* (*Scheelea rostrata* [Oerst.] Burret), and the heart or inflorescences of various palmitos including the black *chonta* or stilt palm (*Socratea durissima* Wendl.), certain small mushrooms called *∫kwa*, which grow on fallen trees, and appear between the rows of corn after the first rains, the fruit of the *ojoche* (*Brosimum terrabanum* Pittier), and various berries are frequently used for food.

Food Animals — Hunting. These Indians are very fond of meat, and wild game is always welcome. The birds most widely hunted are the crested guan (*Penelope purpurascens* Wagl.) the *paweel* or curassow (*Crax rubra* Linn.), the chestnut-headed tinamou (*Tinamus major* Gmel.), and pigeons (*Columba* sp.). Toucans (*Ramphastos swainsonii* Gould) are also favorite food birds.

Animal diet consists of game, including wild pigs (*Pecari angulatus Cope*) and another species (*Tayassu pecari* Fischer), the *guatusa* (*Dasyprocta* sp.), deer (both *Mazama sartorii* Saussure and *Odocoilus* Boddaert), *tepezcuintle*, a member of the badger family (*Coelogenys paca*), the red monkey (*Ateles geoffroyi* Kuhl), and the white-faced monkey (*Cebus capucinus* Linn.). The river is full of fish, the chief sorts being a form of perch (*Cichlasoma altifrons* Kner. & Steind.), a fresh-water mullet (*Agonostomus monticola* C. V.), croakers and snook (*Centropomus pectinatus* Poey), as well as large crayfish and a smaller specie which is caught only in the summertime, and river crabs (*Pseudothelphusa magna*). From the sea, various fish and shell

[16] *Cochlospermum vitifolium* (Willd.) Spreng. according to Standley, 1937, p. 713; and *Cochlospermum hibiscoides*, according to Pittier, 1941, p. 68. Also see Pittier, 1908, p. 120.

[17] See Pittier, 1941, p. 45.

[18] There is no true black corn. Purple always appears mixed with black.

[19] In Guatemala, especially in the west, black corn is used to eat, that is, to make tortillas, or in any other form, as well as to make chicha. It is particularly prized, along with other colored ears, as ritual offerings to the saints or to ancient gods.

[20] The writer thanks don Jorge Leon of the Institute of Inter-American Affairs, Food Production Division, San José de Costa Rica, for the above information.

[21] The Boruca bean is also known in Guatemala, particularly in the west, where it is called *pinto*.

fish are eaten when the Indians go to the Pacific coast for salt. A large and small clam which come from the coast are also favorite foods.

The *Boruca* prefer to hunt in groups of two or three and without dogs. Their favorite time for hunting is when the moon is new, and, strangely enough, on Tuesday and Thursday. Night hunting is almost never practised, as this is the time when the poisonous snakes roam, the most dreaded of which is the bushmaster (*Lachaesis muta*). Traps are used for birds, and are generally placed in the rice fields or in the corn fields. The traps are made by the men with cane (*Gynerium sagittatum* [Aubl.] Beauv.) and are box-shaped, but without a bottom. They are placed in the fields with food inside and sustained at one end by a small stick which is broken in two, but is balanced one end on top of the other. A string is fastened to one portion of the broken stick, and is left on the ground next to the food. The bird enters the trap, and walking, moves the string, which in turn pulls aside the piece of stick, and the box drops, imprisoning the bird. Sling shots are used by the boys to shoot birds. The bow and arrow for hunting have entirely disappeared, their place being taken by the shot gun and rifle.

Fishing. The *Boruca* have five ways of catching fish. One manner is with a vine (*Serjania cornigera* Turcz.). They also mash the bark of the *espavel* (*Anarcardium excelsum* [Bert. & Balb.] Skeels) and sometimes the bark of the sandbox tree, *javillo* (*Hura polyandra* Baill.). This last is less effective. To fish with vines or barks, a portion of the river is hemmed in by the men who construct a wall of stone at the upper and the lower end. They then mash the material chosen and throw it in the dammed section. The fish come to the surface stupefied, and are gathered by the men. The *Boruca* prefer to fish, however, with spears. These are of two sorts: long white canes between 57 and 58 inches long with an extended tip of pejibaye palm about 18 inches in length with several barbs at the end, and a shorter cane about 40 inches long, also with a pejibaye end, but without barbs and with a steel needle-like protrusion fastened to the pejibaye section. The short spear is used in the local creek for small fish, while the longer one is used in the river for larger fish. The pejibaye part is fitted into the cane and tied with string. The string used for fishing is always made of *pita* (*Aechmea magdalenae* André) (see p. 15). Occasionally a bow is used to shoot the fish. The only difference between the arrow and the spear, is that the arrow has a trifle shorter shaft.

Crayfish and river crabs are caught by hand, chiefly by the young boys who remove the stones in the stream and catch the shell fish from under them. It is nothing unusual that a hundred or more are caught at one time, the result being enjoyed by practically the whole tribe.

Food Preparation. The food of the *Boruca* is cooked in earthenware vessels, and, if the means of the family permit, in iron pots. These are placed on top of the three hearth stones, which are on the earthen floor, or on the *fogón*, or stove (see p. 12). For grinding grain, metates or grinding stones, called *tumbas* in Costa Rica, are used. These are natural boulders worn smooth on top. The grinding is done with a smaller flat stone with wide rounded edges. This stone is held up-right on the edges and is rolled from side to side, and not pushed backward and forward as in the greater part of Central America (see fig. 5, *a*). The small metates found in ancient graves are never used for corn, but frequently for grinding cacao, often with a pestle-like stone as the grinder.

When food is not taken by hand from the vessel in which it is cooked, it is served on cheap tin plates, or, in poorer households, in gourds (see p. 19), and eaten either with the fingers, a spoon, or a fork.

One of the most important elements of food of the *Boruca* is salt (see p. 24). The *Boruca* make a trip to the coast yearly to extract the famous *sal de piedra*, or rock salt, which lasts indefinitely, and has a fishy strong flavor. This rock salt is made by gathering the driftwood on the beach and burning it. A *haba* (a large-holed basket made of a vine or tree fiber, see p. 15) is lined with leaves and hung over a clay vessel. The ashes are put into the *haba* and sea water poured over them. The residue from this filtering process falls into the clay pot. This residue is cooked until it is dry and then recooked, about three times in all. The result is a rock-like mass with dark strata-like lines due to the ashes and sea sand. This rock salt is so hard that to procure salt for use it is necessary to scrape it with a sharp knife. A very little is sufficient as it is much stronger than ordinary salt. Rock salt, besides its general use in cooking, is much sought after by sorceresses.

Occasionally, instead of making all their salt into rock salt, the *Boruca* extract the residue after the first cooking and put it in a gourd. This they put in the hot sun until the contents are thoroughly dried. The result is a softer, not so strong-flavored, and more easily used salt which is called in the Boruca tongue *kj'-kzg*. This literally translated means "salt liver," as it is softer than the rock salt, and liver is one of the softest elements of the body.

Although the *Boruca* do not make many tortillas, they distinguish between those made of old corn and those made of sprouted corn (*maíz nacido*). They also make tortillas from green plantains, and from the fruit of the wild *ojoche tree* (see p. 7). Atol is made from rice and corn, and given to the babies when they are weaned. When rice is not dried on hides, it is hung from the ceiling over the stove and smoked dry. Then it is put into a wooden mortar and husked, to be boiled when needed.

Plaintains are roasted with and without the skin. They are also fried. Green plantains are peeled and placed on hides in the sun to dry. They are then kept in a knotted string bag (see p. 18) in the kitchen. When the plantain has hung for sufficient time to be very, very dry, it is ground to a fine powder and used as a flour for making tortillas or tamales. A wooden knife is always employed to cut the dried plantains, because if a steel knife is used, a black stain results and the flour, consequently, is colored.

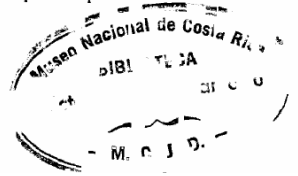
Hen eggs are generally eaten, but occasionally a man will bring crocodile eggs from the river. These are cooked with *guayabo* (guava) leaves (see p. 6) to take away the strong taste. Foodstuffs (see p. 7) such as mushrooms, hearts of palm, and flowers, including the blossoms of the papaya and the *poró* tree, are usually boiled, cut up, and mixed with hen eggs. Sometimes meat is substituted for the eggs. The cob-like inflorescence of various palms are boiled and fried. Another generally liked food is the tender leaf of the bean vine. This is prepared either with eggs or in soup.

Meat, fowl, and fish are frequently wrapped in the leaves of the *bijagua* (*Calathea insignis* Petersen). Another *Calathea* known as "black *bijagua*" is used interchangeably with the first kind. The food wrapped in the leaves is roasted on the hearth stones. There are various ways, however, of preparing different meats. Armadillo is often boiled or fried. Domestic and wild pig and venison are placed on top of three or four sticks over the hearth stones and roasted. Sometimes the flesh of these animals is sun-dried and salted, or is smoked for preservation. Beef is almost never eaten, as the cattle the *Boruca* possess are not numerous and are in the hands of a very few; besides, since they are used for traction, they are economically too important to eat (see p. 23). Posole is a common dish and is made of dried meat, usually wild pig. The meat is chopped fine and cooked with corn. The combination is then groundl. If this is boiled every night, it keeps for many days.

Shell fish is boiled, but fish, other than shell fish, is seldom eaten fresh. When it is, however, it is put into a soup, or roasted in leaves, or fried. As a rule the fish is cut into three pieces and salted to be eaten when needed. If salt is not available, the fish is smoked and saved. Smoked fish is said to be excellent for diarrhea.

Fire-making. The majority of the *Boruca* use matches, although a few of the older people occasionally use two sticks to start a fire. This is accomplished by taking a stick of pejibaye and rubbing it around and around in a small hole in a stick of *guácimo* (*Guazuma ulmifolia* Lam.), until sparks set the *guácimo* on fire. Some of the elders still talk of the stones which were formerly rubbed together to start fire, using a piece of cotton as a wick. These are not seen today.

In the bush, or in the fields, fire, which is all important among the *Boruca* for clearing purposes, is kept in an old tree trunk from day to day. This is done by throwing ashes over and around the fire to keep the embers hot and alive, much as is done in New England fireplaces at present.



Food Storage. Corn is kept in large *habas* (see p. 15), in small raised-off-the-ground houses behind the main house, or on the wooden platforms, or *tabancos*, in the main house. The corn is shucked and left on the cob. Rice, unhusked, and various foodstuffs are also kept in these houses or on the more common *tabanco*. Eggs are hung in baskets of armadillo hide in the storage houses, or on the walls of the kitchen. Smoked fish and meat are also kept on *tabancos* in the kitchen, or hanging from the walls.

Drinks. *Tivia* (see p. 20), the liquid remaining from cocoa-butter, is drunk plain, or,

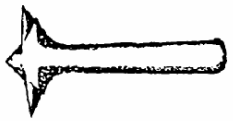


Fig. 2. Wooden masher for chicha; size, length, 22 inches.

at times, ground corn, and, very seldom, ginger is added. *Tivia*, which is also called *kuo*, is ground cacao that has been mixed with water, cooked, and beaten with water. It is taken plain without sugar, or it is mixed with roasted ripe plantains.

Chicha is made from old corn alone, or mixed with pejibaye, or with ripe or green plantains, or with ñampí, or with yuca, or with diverse starches.

Two kinds of corn chicha are made. One kind is made with a yeast, and consequently is known as *monsera*, which is the word for yeast. This chicha is used regularly at all celebrations, and in some houses almost daily. The other corn chicha is given by wives to unfaithful husbands to keep them from looking at other women. This last kind is called *punsetti* in Spanish, or *twistʃa'* in Boruca. To make the ordinary chicha, whole kernels of corn are broken or crushed on the *tumba*, then left in water overnight. They are ground again, and the *masa*, or ground corn, is wrapped in a leaf or leaves, usually from the plantain, and boiled as a tamale. When cooked, it is left in the same leaf and hung as a rule on the wall outside of the house, but sometimes inside the house, for three days (see fig. 5, *b*). It is then taken out and rewrapped in the same leaf but this time using the outer side of the leaf on the inside, and left for three more days hanging on the outside wall. If a yellow mold appears, it is still used, but not considered as good as without the mold. At the end of the three days, it is unwrapped again and left in the sun until it is thoroughly dried, when it is considered suitable to use as yeast in the chicha. When green plantains are used, the *Boruca* prefer to dry them on stones by the river instead of in the customary manner on hides by the houses. When dry, the plantains are ground and added to the corn to ferment. This also is considered *mohoso*, *monsera*, or yeast. When pejibaye, ñampí, yuca, or ripe plantains are used, they are cooked and then ground before being added to the corn.

The next step is to crack more corn, grind it, and let it soak overnight. It is then cooked until it starts to boil, when it is removed from the fire and mashed with a wooden masher (see fig. 2). Sufficient water is mixed with the corn to keep it from being either too hard or too soft. The grain is then mixed with the yeast. This concoction is left anywhere from six to fifteen days in *habas* lined with leaves. These *habas* are generally kept on the *tabancos*. At the end of the allotted time, the *haba* is taken to the river, and its contents emptied into gourds. Water is added to the paste which is pounded until it becomes soft. The chicha is usually kept in large earthenware jars, called *dʒe-bwĩ-griŋ'*, in a corner of the house, and covered with leaves or a cloth to keep for further use.

The corn for *twistʃa'* is made from corn that is left to sprout in water. When it has sprouted, it is ground on the *tumbas*, or grinding stones, and then cooked in a pot, after which it is left in wooden trays, called by the Spanish name *bateas*, to cool. When cooled, the corn is chewed by the women and the residue is spit into a clay vessel. Here it is mixed with water and brown sugar is added. It is then strained, put into a vessel, and left to ferment. The fermentation often takes place over night.

Narcotics. Tobacco is used extensively by both the men and the women. It is chewed mostly by the men, but also by the women. All people, including the children, smoke cigarettes, and both sexes use wooden pipes.

When hungry and no food is available, or when working and extra strength is needed, the Indians chew a root from a plant called *cordoncillo* in Spanish. It is a member of the *Piper* family, and has various uses among these Indians (see pp. 20, 21, 27).

HOUSES

Houses are built straight from the ground, without any attempt at a foundation, the floor being of earth. Occasionally, a shallow ditch is dug around the whole as a drain, and sometimes a low base of earth is built up and kept in place by wooden poles laid horizontally and supported by short vertical poles (see fig. 5, *c*), or by several wooden planks. Houses like this have earthen steps as an entrance. The majority of the structures, however, have a single pole at the very base serving as a finish between the house and the ground, and, in a measure, as a protection against water seepage from the outside (see fig. 5, *b*). None have porches.

In the lower, warmer areas, such as Curré and Lagarto, the houses frequently have a row of stones around their base, and even a protruding terrace of stones at the front (see fig. 5, *d*). This offers better protection in wet weather, as these sites are low and subject to backwashes from the river when rains and floods are heavy.

The shape of Boruca houses is square or rectangular. They are made of wooden poles with grass roofs. The wood used is *palo de mayo* (May tree) or the María tree, *palo María* (*Calophyllum brasiliense* Camb. var. *Rekoi* Standl.). There are two kinds of *palo de mayo*. One kind has white wood and is identified scientifically as *Vochysia hondurensis* Sprague, while the other, which is preferred and has a pinkish tinge is probably *Vochysia ferruginea* Mart.? The *palo María* also has a pinkish wood, and is used only when the tree is very small. On the coast, the wood of the *huiscoyol* palm (*Bactris minor* Jacq.) is used for roof rafters when available. It is not used in Boruca, as this palm does not grow there.

House Construction. The poles which are the thickest are placed vertically at the corners, by the doors, and at intervals along the walls to serve as supports. The intervening space is filled in by not so thick poles placed very close together, either vertically as in figures 5, *c*, *d* and 4, *c*, or horizontally as in figure 9, *c*. When they are placed horizontally, they are woven in and out of the supporting vertical poles which, of necessity, are more numerous in this type of construction. When the wall poles are vertical, thicker poles are placed horizontally in a single line on the outside at the bottom, the center, and the top, acting as a supporting band to hold the wall in shape. These bands are bound to the other poles with fiber ropes.

There are three kinds of fiber used in house construction. The most popular, and practically the only kind found in Boruca houses, is that known as the *bejuco de fierro* or *negro*. This is a thick vine growing in the forest (perhaps *Anthurium scandens* [Aubl.] Engler).[21a] Its leaves resemble those of the bean known as *haba blanca*. From this vine, as many as eight cords are obtained, depending, of course, on the width desired. Another fiber used is called *bejuco de hombre* and is known also as *andariel*. This is really an aerial root and is found in house construction on the coast, around Palmar Norte, where the *bejuco negro* is not obtainable. The third type of fiber is made from the bark of a tree called *capulin blanco* (*Muntingia Calabura* L.). Sometimes both horizontal and vertical wall construction are found on the same house (see fig. 6, *a*). Windows are rare, but when present, the framework is always made of the thicker poles. The window shutter, however, is of planks and the hinges bought at *ladino* stores. Doors also have a framework of poles. The doors themselves are made of the small vertical poles following the vertical construction of the walls and are tied with vines, no hinges being used. Frequently, the walls have a rough coating of *bajareque* both inside and out. *Bajareque* is a mixture of cow dung and mud. Strangely enough, the

[21a] *Cydista pubescens* Blake, according to Dr. R. J. Seibert, Turrialba, Costa Rica.

bajareque is never put on the walls neatly, but is always splotchy, giving the impression of a quick hasty job. The houses of the *Boruca* who live in the lowlands, e.g., in Curré and Lagarto, by the banks of the Diquis or Térraba River as a rule do not have *bajareque* because of the heat. When it is employed, it is only to cover the side where the prevailing winds touch.

The outstanding feature of Boruca houses is the roof which, except for a few houses generally in the lowlands, is made of grass. The few exceptions have roofs of corozo palm leaves or of the *sem* palm. The roofs are made with great care, and last from forty to fifty years.

A pole is tied horizontally to the top of all the vertical supporting poles (see fig. 6, *b*). The wood used is generally *palo de mayo*, or May tree. Other poles are tied vertically to these horizontal poles. These non-supporting vertical poles are then inclined until they converge and cross at the top, where they are fastened to two horizontal thick poles, one under, and one on top of the converged poles (see fig. 6, *b*). Anywhere from two to four pole braces, depending on the size of the house, are inclined from a bottom corner toward an opposite upper corner, usually reaching the center of the roof and not the corner. At intervals, thick poles are tied as horizontal braces to the vertical and converged supports (see fig. 6, *c*).

In between these braces, smaller poles are placed horizontally following the lines of the braces (see fig. 6, *c*, *d*).

Despite the fact that the savanna is full of various grasses, the Indians take great pains to procure only three special kinds which grow in these savannas, and which are considered essential for a Boruca roof. The first of these grasses is called in the Boruca tongue, *bjak*, and in Spanish, *zacate de sabana*. It resembles *calinguero*, which in other parts of Costa Rica is planted for cattle feed. However, *bjak* does not have an odor. This grass has a little fuzz all over it which makes it in a measure impenetrable to water, and is supposed to keep all drops from entering. The second kind is called in Boruca, *jupjus*, and in Spanish, *zacate de comején*, or "termite grass," as the termite likes to make nests at its roots. This grass is used to level off the roof and to make an even finish. The third grass is thin and fine, and is called *zacate de palito*, in Spanish ("little stick grass") or *su* in Boruca. This is supposed to protect against and to stop cracks.

The Indians pull up these grasses, roots and all, and gather them in bundles which they tie with a vine or pieces of the grass itself. They put these rolls on an ox or on their own backs and take them to the building site (see fig. 7, *a*). As many as twenty-seven hundred rolls or bundles of grass are needed for an average roof. If the grass gets wet, each roll is opened and laid in the sun to dry. When ready to use, the grass is placed between one or two of the narrower horizontal poles of the roof forming a neat row. It is not tied, but is literally wedged-in. A roof usually has from six to nine horizontal rows of grass.

The interior of the houses varies. Some have two partitions made of *caña blanca* (see p. 8) or even of thin *palo de mayo* poles, following the same construction as the outer walls, at times, even with a smattering of *bajareque*. When a house is so divided, one room is used for the kitchen, one for a sleeping room, and one for a living room. Occasionally, a little hallway results in this type of house. However, the hallway is only the result of the partitions and is not an architectural feature. The average house, however, has only one partition, usually of canes, which sets off the kitchen.

Household Furniture. Many of the *Boruca* have, in addition to the three hearth stones (see p. 8), a *fogón*, or stove, built in the typical *ladino* fashion. This *fogón* is a raised wooden container, rectangular in shape, and supported by four wooden legs.

The container is filled with mud mixed with pebbles or small pieces of stone and left to dry. When thoroughly dry, three or more stones are placed on top to support the cooking vessels. Sticks of wood are placed between these stones and set on fire for cooking. At times small rounded mud ovens are also made on the *fogón*.

The *tabanco*, or wooden platform, is an important feature of a Boruca house. The *tabancos* are usually made of the stilt or black palms called in Spanish *chonta*, or *chonta negra*. There are two kinds of *chonta*. Both have aerial roots, but the one with large roots is called in Boruca *kanaşira*, and the kind with smaller roots is called *mana-kra'*. These *tabancos* either hang by vines from the roof, and serve as storage places for food or other things, or they are more stable structures made with thick horizontally placed poles resting on the uppermost horizontal pole of the wall, and forming a sort of second floor or platform to be used for sleeping as well as storing. To climb to this sort of *tabanco*, ladders made by notching a single pole so as to give place for footing are used.

Beds usually line the inside of the living room. These beds are made of four supporting sticks with a v-shaped upper end. The lower end is placed in the earth. The bed supports are either of wood or of *chonta*. Usually a rectangular framework of four poles is fitted on top of the vertical supports and tied to them with a vine. The bed itself may be made of cane or hide, although sometimes planks are used.

The only furnishings besides these beds are low wooden benches about an inch off the ground, and in certain houses, plain old-fashioned wooden coffers to keep clothes. These coffers are purely *ladino* and have been copied from the Costa Ricans who at one time or another have settled among these Indians. The low wooden benches are pure Indian, have four feet, and are either plain or have protruding heads and often tails (fig. 7, *b–6*, *c–1*). It has been suggested that this last type is copied from the stone seats or metates of the ancients.[22] The benches are kept highly polished with *chunica* (*Curatella americana* L.) leaves, and are used throughout the household, in the kitchen, by the hearth fire while cooking, as a convenient seat while weaving, and as we use chairs in our houses.

There is at least one hammock in every household, although frequently two, or even three, are found hanging from the top of the walls. They are used to sleep in as well as to sit in during the day.

Habas, empty, and with foodstuffs or clothing, are piled in corners or on *tabancos*. Wooden mortars, carved from a single piece of wood, and the wooden masher, are part of every household. These are for husking rice (see p. 9). Large pottery jars to keep chicha are generally found in the corner of the living room. String bags of diverse types hang on the walls with weaving implements, cotton, or thread; while also on the walls, and especially in the kitchen, hang pots dug from ancient graves (when the family is not superstitious), and always bottles of sundry types. These contain many different things, from herbs to oil and seeds. *Maracas*, occasionally masks for festivals, drums, clusters of parrot feathers, toucan beaks, ears of vari-colored corn, bright red shells from boiled crayfish, and even cock feathers are stuck at random in the walls or hang on strings from them, giving a gay appearance to the household. In certain houses, pet birds such as parakeets, parrots, and macaws are kept by clipping a wing. Instead of cages, a rack is made of pieces of wood, and kept in a corner of the household.

DRESS AND ORNAMENTS

Clothing. Relatively few *Boruca* wear costumes. The only ones who do are the older women who wear a *manta*, or skirt (see fig. 7, *d*), and a few men who still use the woven belt (see fig. 7, *b–7*). The majority are clothed in cheap unattractive cotton dresses, the cloth bought in the nearest *ladino* settlement. Besides the *manta*, the women wear a *huipil*, or blouse, which may be of any color, even white. (The word *huipil* is understood and used at times by these people. They have forgotten their own word for it although they admit having formerly had one.) This blouse is sometimes opened down the front, and sometimes closed. It has sleeves, and is fashioned with a guimpe effect at the neck, hanging loosely over the skirt (see fig. 7, *d*). Formerly, the women used a woven *huipil* which always had a white background, no sleeves, and a rectangular neck. The design consisted of stripes, either wide or narrow. The cloth was finer than that of the skirt, being the same

[22] Stone, 1943, p. 81.

quality as a man's belt. Occasionally, as late as a few years ago, this same *huipil* was used with a piece of cloth attached to the back as a collar. The skirt, which is relatively heavy, is worn wrapped around the body, the stripes placed horizontally (see fig. 7, *d*). It is sustained by a string tied around the waist. Under the skirt, loin cloths of *mastate* (see p. 18) are sometimes worn. No other sort of undergarment is used.

Today, most women wear two necklaces, usually of beads with seeds or coins interspersed. Earrings of seeds, a round red seed from the *poró* tree, or a similar seed that has a black spot and grows on a vine, are favorites, but cheap earrings from *ladino* stores are also seen. Before, however, in addition to seeds and fruits, sea shells and even pearls were used. Pink sea shells, such as the *Guaymi* wear today, were particularly coveted. Animal pelts and bird's egg shells served as necklaces. Rings were and are made from the seeds of the coyol palm and a palm called *palmilera*. The women love combs and flowers in their hair, seldom appearing with less than two combs and, as a rule, three or four, all of bright colors and bought from the Chinamen on the coast or in Buenos Aires. Barrettes also are frequently placed between the combs and the flowers. The hair is always arranged in two braids and parted in the center. Often ribbon is braided in these plaits. Until recently, instead of ribbons in the braids, cotton thread dyed purple was used. It is said that no other color answered the purpose. The two braids were tied with this thread on top of the hair in the front. Today, the older women generally put the braids up, tying them together with ribbons. The hair is kept sleek with cocoa-butter, and the skin is cleared of freckles or blemishes by using a mixture of cocoa-butter (see p. 20) and *tʃama*. Tʃama is sometimes called by the Spanish name *yuquilla* (*Curcuma longa* L.).

The men wear the regulation pants and shirt of the *ladino* and some still use the woven belt. In the beginning of this century, the men wore a typical costume, the cloth for which was woven by the men. Lehmann[23] notes that this was characteristic of the *Cotos*, whom, as we have seen, form part of the modern *Boruca*. Weaving was done by some, not all, of the men and women. In particular the older *Coto* men wove for all the other men.[24] The men used a *huipil* without sleeves which took one month to weave and reached below the knees. The stripes were narrower than those of a women's skirt, and they were more like the belts used at present by the men. Beneath this, they wore a loin cloth of *mastate*, and a woven belt which kept the loin-cloth in place. Formerly, the men cut off all their hair except a small portion in the front which stood up like unruly bangs. One old man in 1944 used the same sort of decorations which were used years ago, pelts of birds, squirrel tails, and bird egg shells as necklaces.

Most Indians go barefooted, although occasionally sandals are seen. These sandals are of hide, usually of wild peccary, with thongs of twisted hide which pass between the first and second toe and between the third and fourth toe, being fastened on the outer side by the ankle.

TRANSPORTATION

By Land. The *Boruca*, as is true of all the Indians of Costa Rica, are great walkers, climbing up and down the sharp spurs and steep mountains of their native habitat. Their main community, as we have seen, is situated in a series of undulating hills, which in itself is not easy country for a horse or a mule. The ox is what one might rightly call the only beast of burden common to these people. A number of families own an ox which is used to transport essentials on his back (see fig. 7, *a*), and never to pull a cart as amongst the *ladinos*. The very few horses of the *Boruca* (see p. 23) are ridden with a halter, and old, worn, second-hand saddles.

By Water. In addition to a mountainous land, the terrain of the *Boruca* and most of their communities border on water. The Diquis River still forms an important highway for these people. Until a few years ago, the sea, skirting the coast westward to Quepos and eastward to the Golfo Dulce, as well as out to Caños Island, furnished another avenue of travel. Dug-out canoes are used in the river, and a larger canoe, called a *bongo* in Spanish, was used on the sea. These *bongos* had sails of bark cloth (see p. 18) which were fastened to a framework of sticks. There are only three kinds of trees utilized for making the canoes, the *espavel*, the sandbox tree, and the *guanacaste* (*Enterolobium cyclocarpum* [Jacq.] Griseb.). The canoe is caulked with wax, from certain bees (*Apis Trigana*? or *Melipona*?), which live in the ground on Caños Island. It is said that this is one of the few places in which this species of bee is known to exist in southeastern Costa Rica. It is interesting that this wax contains a majority of resin and very little wax, as the analysis given in the appendix shows (see p. 41). Formerly, the Indians visited Caños Island especially to obtain the wax, coming away with as much as 30 or 50 pounds in their canoes. Nowadays, since the island is no longer easily accessible, caulking is done with the wax from a related species found around Boruca, or from the glue made from a palm belonging to the genus *Elaeis* and called in Boruca, *tuskra'* (see p. 19), and with the gum of the wild rubber tree (see pp. 19–20).

There remain certain families of "river Indians" who are famous for their skill with the dug-outs, particularly in the rapids, and there were formerly outstanding sailors for the sea-going *bongos*. On the river, both paddles with plain handles and poles are used.

Carrying Devices. Generally, the women carry cargo (see figs. 7, *a*; 8, *a*). The men very seldom do such labor. A tumpline is used to support the article which rests on the back of the individual or in a *haba* (see below), which is also carried in a similar manner (see fig. 8, *a*). Occasionally, string bags (see fig. 8, *b–4*, 5, 7, and p. 18) are swung from the forehead down the back. They are, however, rarely used like this, being generally left to hang on the house wall. Babies are carried in a shawl or cloth on the back.

MANUFACTURES

Cordage. The *Boruca* have two principal fibers which serve for making cord, and two which are employed but slightly. The chief fibers are *majagua* (see p. 7), and the *bejuco negro*, or, *brit* (see p. 11). These are used for making rope, string, baskets, and hammocks. In addition to this, the leaves of the *pita* plant and, at times, the leaves of the *cabuya* plant (*Furcraea* spp. and *Agave* spp.) are utilized for bags and rope.

The *majagua* is prepared by cutting a piece of the tree and stripping off the extreme outer part, using only the inner portion. To make rope from this, the fiber is tied around a tree or post and cut into strips, the quantity depending on the quality of rope desired, as the greater the number of strips, the finer the product. Figure 8, *c* shows the *majagua* fiber ready for use. The *bejuco*, or vine, is prepared by scraping off the outer bark with a knife of *caña blanca*, washed, and then cut into the desired strips. It takes a day to make this vine ready for use. The *pita* is also scraped with a cane knife until it is white all over. It is then washed in the creek or river, and cut into the desired pieces. *Pita* is not used for heavy rope, but is made into cord and a "fishing line" which is tied to the fishing spear or arrow (see p. 8). The leaf of the *cabuya* is beaten on stones until it is pulpy, after which it is washed, and then dried in the sun. When dry, it is pulled into strips.

Figure 8, *d* is a sample of the two kinds of rope the *Boruca* make. The upper portion is twisted and braided, while the lower half is only braided. This last method makes a stronger rope. When the rope is finished, it is tied at the end, and one of the strips is twisted around the whole, passed through the braid, and then pulled tightly.

Basketry. The typical basket of the *Boruca* is what is called in Spanish the *haba*, and in Boruca *ha'va*. It is woven by the men. The *haba* (see figs. 7, *b–2*; 8, *a*, *b–1*, *3*) is made only from the *bejuco negro*, the strips of which must be cut in lengths according to the size desired for the finished product, as in this type of basket one cannot add extra length or depth. The smallest *haba* is about 9 inches in depth, and is used for washing corn. For a

[23] Lehmann, 1920, vol. I, p. 198.

[24] Vázquez de Coronado, 1908, p. 50.

medium-sized *haba*, the strips are usually around 30 inches long, while the largest are around 50 inches. The base of the *haba* is triangular with the corners and two sides rounded. The third side is kept flat to fit more steadily on a person's back. In making the basket, the strips are placed on the ground and the foot put over as many ends as possible to hold the pieces in place. The opposite ends are left free, and the weaving is done with the fingers (see fig. 9, *a*). The pattern resulting from this is a hexagon (see fig. 7, *b–i*). When the base is completed the strips are doubled upward and interwoven, particularly at the corners, and horizontal strips are added as strengthening bands at the start and finish of every hexagon, the pattern remaining the same as that of the base. At the very top, a horizontal band is overlapped by the main strips and woven into the rim. A wide ribbon of the vine is fastened around the *haba* when used for carrying. This band is suspended from the forehead of a person, and the basket hangs flat on his back (see fig. 8, *a*).

Baskets are also made from the *bejuco negro*, or, preferably, from the vine called *anda-riel* (see p. 11). These baskets are circular with a decided bulge or projection a little above the base. They vary in size from short baskets with handles to very tall ones (see fig. 7, *c*). The strips used for the baskets are cut narrower than those for the *haba*, and may be added to in order to increase the depth of the article. As with the *haba*, the strips are put on the ground at the start. They are crossed, however, in the center, and another strip is then tied to this center portion or base, and is woven in and out of the projecting strips by hand. Adding of strips to make the basket larger is accomplished by weaving a strip well into the basket until an end appears on the other side of the base.

Weaving. The *Boruca* are today the only Indians of Costa Rica who do any weaving, in spite of the fact that they do very little. In 1925, there were only six women in the village of Boruca who wove skirts, *mantas*, and one woman who wove only men's belts. Almost all the women and many of the girls, however, knew how to make thread. A common practice was to make thread and give it to one of the weaving women to use, and then pay her a small sum for her work if a skirt was desired. Those who did not wear *mantas* still made the thread and sold it or exchanged it with the weavers for some other object. The primary cause for lack of enthusiasm in weaving appears to be the class of cotton available. The *Boruca* plant a tree cotton (see p. 6) that yields a very small pod, and consequently, the Indians become discouraged at the produce. The famous "colored cotton," which is so called as it is light brown, is also planted. This is the cotton which called the Spaniard's attention so markedly in El Salvador during the Conquest, and which is used today by the *Cayapa* Indians of Ecuador.[25] This colored cotton does not have to be dyed. It is, however, more delicate to make into thread than the white cotton, as it breaks oftener. The best spindles, as the best looms, and weaving instruments of the *Boruca* are made of pejibaye palm, although *chonta*, both *manà-kra'* and more seldom *kanaẓira* (see pp. 12–13), are considered good (see fig. 9, *b*). The whorl is commonly of bone, but pejibaye, *chonta*, and occasionally pottery whorls are seen. Some of the whorls are undecorated, but some have incised horizontal grooves (fig. 9, *b–3*, *4*).

To make thread, the cotton is removed from the burr and carefully deseeded by hand, the seeds being saved for planting. The cotton is then put on a hide, and the women take two sticks, one in each hand, and beat the cotton making it as smooth as possible, after which, it is pulled into wide strips and rolled into balls. When the cotton is ready, the woman sits on a low bench and puts the spindle in a gourd on the ground. She holds the spindle in her right hand and the thread in her left, between the thumb and index finger, working so fast that it seems as if the spindle is rarely in her hand at all. This process the Indians call "dancing," as the spindle literally dances in the gourd (see fig. 5, *c*).

Once the thread is made, it is either left its natural color or dyed. The *Boruca* still have a few colors which they dye themselves, but red, yellow, green, and bright blue are bought, generally not as dyes, but as already colored mercerized cotton thread, at the nearest *ladino* town. Due to the relatively high price of these

[25] Barrett, 1925, pt. II, pp. 252, 258.

threads, the Indians lamented to the writer that they had forgotten how to make many of the beautiful colors their ancestors knew. In particular, they wanted to know how to obtain a bright blue. As a consequence, the seeds of the broad-leaf indigo were sent them for planting.

The colors still made by the *Boruca* are black, light yellow, pale blue, and purple. Light brown is obtained by using the natural colored cotton, as stated before. Formerly, red was made by boiling the leaves of the sangrilla tree which is called *rus kra'* in Boruca, and is abundant in the neighboring forests. At present, they do not make this dye, as they seem to think it too much trouble. A fast jet black is procured by cooking the bark of a tree called *carbonero* (*Guarea guara* (Jacq.) P. Wil.) in Spanish, and *grisin-kra'* in Boruca, and combing the liquid with a black clay found in the vicinity. Light blue is made from a narrow-leaf indigo (*Indigofera suffruticosa* Mill.) which abounds by the river. The leaves are boiled for dye. Purple is obtained on the sea coast near Punta Mala and Dominical. Here a mollusk (*Purpura patula* Gould), called *la morada*, is gathered at low tide off the rocks which jut out of the water along the shore. Formerly, the Indians swam out to the rocks with the cotton thread on top of their head to collect the animal.[26] The *Boruca* have no tradition of any of this. At the present time, they gather the mollusk when the tide is out from the shore, and from the rock they can reach by wading. Great pain is taken not to let the creature die. On obtaining the mollusk, they first turn over the shell so that the sea water runs out. Then they blow into the shell, holding the thread in front. The angry animal spits out a fluid on the thread, after which he is thrown back into the sea. This fluid is at first a greenish-yellow, but when dry, becomes deep purple.[27] They say that the ink is best when the moon is full, and no good when the moon is new. At other times, the color is not so strong, nor does it dye evenly. This dye has long been prized not only by the Indians, but also by the Spaniards who demanded purple thread, during the Conquest and the colonial period, as tribute for the church as well as for themselves.[28] For a more complete discussion of this purple dye in other parts of Central America, see MacCurdy.[29] Another, not so strong, purple dye is gathered from a small mollusk (*Purpura kiosquiformia* Duclos) which lives on the roots of the mangrove trees (*Rhizophora Mangle* L.). This creature must be killed to be of use. The soft part of the shell is removed, and the liquid it contains is put on a thin stick and *drawn* on the material in the same manner as using a colored pencil. When first applied, the liquid is black, but it turns purple on drying. This is employed very seldom today, as the little weaving that is done has generally woven designs, and is not painted.

The actual weaving is done by the women seated on the low bench that is characteristic of the *Boruca* (see p. 13). The loom used is horizontal with a warp beam and a back strap, the other end of the loom being fastened to the wall of the house or to a tree (see fig. 9, *d*). The crossing of the weft is accomplished with a straight wooden rod, after which the woof is pressed into position with a wooden sword slightly longer than the width of the cloth. A shed stick is used, but there is no heddle rod. The width of the web is kept even by the temple, which is a piece of cane, preferably the part near the inflorescence, with a bone point at each end (see p. 18).

The cloth woven by these people is usually heavy with a stripe design (see fig. 7, *d*). Some women, however, weave a conventionalized geometric pattern horizontally across the white space between the stripes (see fig. 9, *a*), not permitting the design to appear on the reverse side of the cloth. This is a single-faced weft-pattern weave, and is a technique unknown elsewhere in Central America. It has been found in ancient graves on the Ecuadorian coast, by the island of Puna.[30] Men's belts are also striped, although the thread used and the weaving is finer than that of the skirts.

[26] See Cockburn, 1779, p. 112.

[27] According to Dr. W. J. Clench, Museum of Comparative Zoölogy, Harvard University, this dye is a drug used by the snail to anesthetize its victim.

[28] See Fernández, 1907, vol. IX, pp. 353–54; Cockburn, 1779, p. 112.

[29] See MacCurdy, 1911, pp. 160–61.

[30] Information given to the writer by Professor Carlos Zeballos M., Director of the Municipal Museum, Guayaquil, Ecuador.

Bags. Bags (fig. 8, *b–3*) are woven only by the men. They are made by cutting strips of *majagua*, *pita*, or whatever material is used, very, very thin. This is then twisted into a fine cord. The bag is started from a circle of this cord. The end is passed through this, and a knot is made, leaving a loop. Once the circle has been started, the whole is put on the ground, and the maker puts his heel on top of the center. Two knots are made, one on each side of a loop, each time the cord is passed through a loop. When the work is large enough to be managed more easily, it is taken off the ground and held between the knees. Some bags are made with only one knot at each intersection. Bags are used for carrying the gourd water bottle, for keeping materials, and for carrying or keeping odds and ends.

Hammocks. The *Boruca* men make a hammock, from *majagua* (see fig. 8, *b–6*). The weave is coarser than the hammocks made by the *Bribri* from the same material. In hammock-making, the strips are twisted tightly and fastened around a stick which is placed horizontally at each end. The weaving is done with the fingers. Each time the strip is woven in and out of the spaces left by the original strips and then looped over the sticks at the end. When the hammock is finished, a turkey or chicken thigh bone is usually substituted for the sticks, and acts as a link between the hammock and the rope which ties the hammock to the wall.

Hats. One or two Indian men occasionally make straw hats from the leaf of the *sem-kra'* (see p. 7). The leaf is first dried in the sun, then cut into thin strips, and the hat is woven basket-fashion, commencing from the center of the crown. This whole technique is not common to the *Boruca* and is probably borrowed from the Chiriquianos who are found scattered through much of southeastern Costa Rica. The hats are made to sell in *ladino* towns, and are seldom used by the *Boruca*.

Bark Cloth. Today, the *Boruca* do not profess to use bark cloth or *mastate* (fig. 7, *c–4*) as part of their dress, nor do they use it any longer for sails (see p. 15). Occasionally, bark cloth is used as a blanket for sleeping. The *Boruca* claim to have worn *mastate* as late as 1933, when they had easy access to the coast and the *mastate blanco* tree which grows there. In view of the fact that it is frequently acquired from the neighboring *Cavagra* or *Cabécares* (see p. 24), it is quite probable that the *mastate* is used, not only in place of blankets, but also as loin cloth by the women. *Mastate* can be made from two trees. One tree is the *mastate blanco*, or white *mastate*, which the *Boruca* prefer, and which, as we have seen, grows on the coast. The other tree is found in the interior, and is known as *mastate colorado*, or red *mastate* (*Brosimum utila* [HBK] Pittier). It is the tree still used by the *Cavagra* for making bark cloth, but apparently was not utilized by the *Boruca* unless it was absolutely necessary. Both trees have a milk, but that of the red *mastate* is sometimes used for drinking, while that of the white is never taken. To make the cloth, a piece of bark is cut off and rolled at right angles to the grain, then beaten with a wooden stick to take off the rough outer surface, after which it is beaten with another club whose surface is grooved. It is then soaked in water and pulled to the desired size and put in the sun to dry, having pieces of wood or stone placed on the outer edges to keep the cloth from contracting.

Bone Objects. The use of bone amongst the *Boruca* is rather curious. It is the material employed almost generally for spindle whorls, and always for the needle-like pieces which are the temple, and are used to pin the woven cloth already on the loom so that it does not lose its shape while the rest is being made. Furthermore, the thigh bones of wild turkey and fowl are used to connect the hammock with the extra rope from which it hangs. Similar bones serve as handles for the *maracas* (see fig. 10, *c*, *d*). Bone is also used for certain cures, for example, if a baby has dysentery, bone and garlic bracelets are put on its wrists.

Gourds. One of the most important everyday artifacts of the *Boruca* is the gourd which grows on the tree called either *guacal*, or *jícara*, depending on the shape of the fruit. This tree scientifically is known as *Crescentia Cujete* L., and the tree, as well as its fruit, in English, are all called "gourds." The *guacal* is round, while *jícaras* are oblong.

The gourds serve many purposes. They are, of course, used as drinking cups, for holding liquids, in the kitchen, and for carrying water to the fields or on trips. Interestingly enough, a ring base to sustain the gourd erect does not seem to be known, the vessel being placed on the ground and balanced by rocks or the legs of the *fogón*. In addition to the uses mentioned above, gourds are used as bee hives (see fig. 4, *d*), as a receptacle for the spindle whorl while making thread (see fig. 5, *e*), for carrying seed when planting, and are employed extensively as sieves. The use of the gourd as a sieve is very common amongst the present close neighbors of the *Boruca*, the *Talamanca* peoples.[31] For use as a sieve, the gourd is covered with holes made by a combination cutter and puncturer. This tool has a handle of pejibaye palm in one end of which a forked piece of metal with one prong longer than the other is inserted and bound by string. The longest prong is shoved into the gourd until the shortest penetrates the outer surface deeply enough to cut a line in a circle. This operation has the double effect of making a circular hole and at the same time a line design around the aperture (see figs. 7, *b–8*; 7, *c–3*). Gourds are also made into *maracas* or rattles to accompany the drum at celebrations (see p. 29). There is no rule about the decoration of the gourds. They are either left untouched, or are carved in various designs, the most popular of which is the leaf motif, although animal figures sometimes appear. The patterns are cut with a knife, and left to turn a darker color with time.

Glues. Glues are rarely used by the *Boruca*. A glue that is used for mending vessels, or, at times for water-proofing the dug-out canoes is made from a small palm (*Elaeis melanococca Gaertn.*) called in Boruca *tuskra'*, *tus*, meaning "short," and *kra'*, meaning "plant." This palm has thorny leaves and red fruit (see p. 15). To make the glue, the trunk is cut in pieces and spread out in the open so that the dew has easy access to the sap. The following morning, the residue, which is the glue, is gathered.

Pottery. Very little pottery is now being made by the *Boruca*. The European war, however, has caused iron cooking vessels to become practically unobtainable as well as prohibitive in price, and the Indians are slowly reverting to make their clay cooking pots as before. There are several common pottery shapes. One kind is a large vessel with a pointed base which is slightly rounded, and a projection near the base, the neck indented, and a projecting rim. This type is called *kvure'* in Boruca, and resembles the Spanish *tinaja*. Other forms consist of smaller vessels with rounded base and a flat protruding rim, at times with a projecting nubbin, as if an attempt to portray a head, tail, and wings, such as is encountered on the pots found in ancient graves; and sometimes the *comal* or indented clay dish which is used for frying. Plain rounded vessels, often with a thumb-nail design on the border or rim, are common for cooking.

Women are the potters. The usual way of making a vessel is to mash the clay, if soft, with the hands, and if hard, with a stick, until it is fine. Then a coil is made of this clay, and the coil doubled over to give more strength to the whole. The base is started with these coils in the manner of a large tortilla, or corn cake. A rounded wooden mold is used only for the base. The clay tortilla is put in the mold and shaped to the sides. Then coils of clay are added, and the vessel grows above the mold. Smoothing and evening are done with the hands. Once completed, the pot is left from fifteen days to one month within the house to dry. The excess clay is then removed with a knife, and the vessel is polished by rubbing it all over with a seed which comes from a vine called in Spanish *ojo de buey* (*Mucuna urens* [L.] DC.). A bed of firewood is made outside the house, and the vessel is placed in the center. Firewood is stacked around the pot until it is covered. Fire is set, and the wood burns away leaving the vessel intact. When a particularly strong pot is desired, a *masa* is added. This *masa* is ground corn mixed with water to form a paste. It is put both inside and outside of the vessel at the moment it is removed from the fire, and while it is still red from the heat. After the pot is cold, the *masa* is removed.

Rubber. The use of rubber does not seem to be very ancient with the *Boruca*. The gum from the wild rubber tree which abounds in the vicinity (*Castilla fallax* O. F. Cook) is

[31] Skinner, 1920, pp. 66–67.

occasionally used on the dug-out canoes. This rubber has to be beaten before applied. It is put on cracks or fragile places in the boat, and the glue from the *tuskra'* palm (see p. 19) is put on top of this (see p. 15). Pieces of old rubber inner tubes collected from the coast are used by the boys for sling shots (see p. 8).

Skins. Hides are sun-dried without any preservative. buzzards and chickens being allowed to pick the skin clean. They are used for beds (see p. 13), to dry cotton (see p. 16), corn, and other grains (see p. 9), and for drums (see p. 29).

Wood and Stone. Wood is important for the houses of the *Boruca* (see p. 11), for the low benches, mortars to husk grains, shafts of agricultural implements, weaving implements, canoes, fishing gear, and, occasionally as hives for bees. The only use of stone at present is for grinding corn and cacao.

Miscellaneous. Candles are made from wax of the *jicote*, a wild bee, and from the wax of the wild wasps. Clothes are washed with *jaboncillo* (*Leguminosae* sp.). This is a vine which grows near the river Diquis. The roots only are used, and are cut into pieces and mashed. When mixed with water, suds are produced, and it is an effective cleansing agent. Brooms are made of fern leaves tied to wooden handles. Cocoa-butter is found in every Boruca household. The women rub it in their hair so their hair will shine. It also has a common use as a salve for certain remedies, such as boils or sores on the legs. To make the butter, the cacao bean is toasted and then boiled. The grease rises to the top, and then is skimmed off and put on a *bijagua* leaf (see p. 9), or in a gourd, to cool and to solidify. The liquid remaining in the pot is drunk. This is called *tivia*-in Spanish and *kao* in the Boruca tongue.

MEASUREMENTS OF TIME

The first four hours of the day are told by cock crows.[32] The Indians talk of the "first crow of the cock; the second," etc., up to the fourth. From then on the telling of the hour is dependent on the breaking of dawn and the sun. The *Boruca* also watch the moon, using its various stages during the month as a gage for planting and even for cutting a tree. They also calculate the divisions of the year by the moon as well as by the calendar of the *ladinos*. Most of the Indians have no conception of their age. The numeral count of these people runs from one to eight, Spanish being used for the remaining numbers. Foodstuffs are measured by hand-fulls or by gourds. There does not appear to be indigenous methods for weighing.

LIFE CYCLE

Birth. Before the birth of a child, as well as after the birth, the house is purified with the incense of copal (*Protium costaricense* [Rose] Engler) (see p. 24), mixed with castor oil, or, sometimes, with the oil from the copaiba or *camibar* tree (*Prioria copaifera* Griseb.) which grows in the Diquis Valley. The oil is used only as a binder, and to add to the burning quality. This mixture is put in *comales* (see p. 19) under the bed. The mother is given a purgative of *cordoncillo* (see p. 11), both before and after the birth, and is also given the liquid left from boiling the bark of the *camibar* tree. The umbilical cord is cut with a knife made of cane, *caña blanca* (see p. 8). The end of the cord is burned with *tocolote*, the colored cotton. White cotton is not used. The cut part is buried where the child is born. In cases when the cord is slow to fall off the infant, the dust from the *bajareque* of the house wall is mixed with cinnamon and applied to the babe. After birth, the child is bathed in the liquid remaining from boiling three plants. One is a grass which grows in the savanna and is called *trik-kra'*. This is a very fine grass that has a little root resembling *tiquisqui* and yellow blossoms. The other plant grows by streams and is called *tɘʃu-kra'*. Pittier does not mention *trik-kra'* but cites *tshu-krá*,[33] and gives the same use for it. Standley,[34] following Pittier,[35] spells the Boruca name as *tsú-krá*. Both writers identify the plant as *Cuphea utriculosa* Koehne. The third composite of the bath is the bark of a tree growing along the Diquis River, which tree is called *sotacaballo* in Spanish (*Pithecolobium latifolium* [L.] Benth.). It is supposed to give luck and strength, because of its hard wood, to the child. The baby is then given a bracelet, and, frequently a necklace, which are made of tiger and caiman teeth and black and red and black seeds called *neno* or *nene* in Spanish, the black come from the male tree, and the red and black from the female. Pittier reports a similar seed used, but does not give its name, merely claiming that it comes from a small tree (*palo*). In addition, he adds, that the metacarpus of the wood rat and the second joint of the leg of the beetle or a member of the *Coleoptera* family, and the skulls of guatusas, a member of the rodent family, were used on the bracelet, strung on cotton thread, and wrapped three times around the arm. He states that this was to plant virtue in the child's heart.[36] Today, none of these last-mentioned items are seen. Even the teeth, which are used at present, and are supposed to bring strength to the child, are often replaced by coins.

The mother is bathed for three successive days with a liquid made from boiling the leaves of the *guayabo* tree (see p. 6), and the leaves of the *kuet* or *sotacaballo* to strengthen her. In addition to this, she does not drink milk or coffée, nor does she eat pork, nor wet her hands, nor touch food in the kitchen for fifteen days. She does not resume relations with her husband for forty days. However, at least four times a day, she drinks a brew made from the root of *kuikʃ as* or *cordoncillo* (see p. 11) This is taken to stop the lochia. The mother is up after two days, at the most, but does not resume regular work for eight days.

When the baby is between nine and ten months old, he is weaned, and fed atol made of rice and of corn.

Puberty. There is no evidence of puberty ceremonies. When girls begin to menstruate, which occurs between twelve and fifteen years, they are given *kuikʃ as* to drink so that they will not flow for long. The women say that only "stupid *ladinas*" flow for days and days. It is said, the *kuikʃ as* stops the period usually within three days. Four days are considered too long a time. A cloth is used to catch the flow, and some women say that formerly *mastate* (see p. 18) was used. Some women also say that, at present, nothing is used, and the blood is allowed to drip down the legs. The only tabu on women during this period is that they cannot participate at a *fiesta*, nor can they serve chicha or food to the men. The menstruating women can watch the gaiety, but must stay apart.

Education. Both sexes as children help in the fields, and the girls assist in the kitchen from a very early age. They also learn to make thread, but very few show interest in weaving. The boys make string bags, rope, and hammocks, and sometimes learn to carve gourds.

The *Boruca* children are sent to the local school which is run by the Costa Rican Government. The school masters, two in number, are from the central plateau, and until recently, little or no interest was taken in their job. They often were young men who were forced economically to take a post in an outlying Indian group, and who resented the fact, living only for their vacation and the day they might have sufficient friends of influence to permit their transfer to the capital. As a consequence, they frequently lived with Indian girls, and occasionally produced children whom they never bothered to support. The present inspector of the Indian schools and the actual Government, however, are doing their best to change much of this. The Boruca language is being encouraged and taught along with Spanish. A large blank notebook is being filled with the help of the older generation, and an attempt is under way to gather legends. One thing is certain, the younger generation is now obliged to study their own language. This was unheard of a few years ago.

Marriage. There is no particular ceremony in connection with marriage amongst the *Boruca*. The few customs that did exist are

[32] Pittier, 1941, p. 84, also calls attention to this fact.

[33] Pittier, 1888, p. 93.

[34] Standley, 1937, p. 761, pt. II.

[35] Pittier, 1908, p. 162.

[36] Pittier, 1888, p. 93.

slowly disappearing. In some families, the parents of the girl still arrange the match. There are, however, no exchange of presents, nor any similar ceremony, only mutual agreement. In the majority of cases, the young people decide for themselves with whom they want to live. Whether the match is prearranged or not, a system of trial-marriage is always customary. The young man moves into the house of the girl. He helps her family with work in the fields or hunting, and he lives with the girl. There is no sort of ceremony. When the couple feel contented with one another, and ready for the responsibility of their own household, they build themselves a house and leave the parental one. Nowadays, when the priest appears on his bi-yearly visit, the couple frequently marries in the church, and it is quite a sight to see long-married couples with children, and who have suddenly decided to have a formal marriage ceremony, line up before the church door to be "married." On these occasions, a "marriage shawl" is sometimes used. This is a substitute for the colonial Spanish-American custom whereby the priest in Roman Catholic marriages places a gold chain over the couple. The shawl is handwoven with a white background and a few purple and red lines. The red lines are shorter and border the ends. They are woven in a diamond-shaped pattern. The present shawl is about fifty years old, and is badly eaten by moths and bugs. It is so seldom used that it will probably be permitted to fall into decay without being replaced.

The tribe itself is not concerned with "morality" in the western meaning. Both men and women often have a lover in addition to their spouse. Unlike the neighboring *Cavagra*, who have remained more isolated from white influence and are often blindly jealous of their women, the *Boruca* pay little attention to sexual wanderings. A man gives his love food, and nowadays, occasionally money. A woman takes her illegitimate child home to her husband's house. The cases of illegitimate children are interesting in that a woman apparently has a child only when she wants one (see p. 26). The writer could find no case of divorce in Boruca, although she was told that nowadays it does exist particularly amongst the Indians who have contact with the *ladino*-populated coast. Formerly, it was unknown, but today a man leaves a woman, or a woman a man, if they feel like it.

Death. Whatever ceremonies existed amongst the *Boruca* in regard to death have almost entirely disappeared. It is interesting that the *Boruca* do not cry at funerals. At the wake, there is a feast the size of which depends upon the economic status of the deceased. Coffee and chicha are always served as drinks. The women put the body, at times with the hands folded as in prayer, on a long wooden bench or on wooden tablets, and cover it with any piece of cloth available. Three candles are placed alongside the body, one at each side of the face and one at the end. Sometimes, a candle is put by the feet. Prayers are recited all night during the wake. In the morning, men tie the body with fiber rope to the bench or planks, fastening to them two poles horizontally to serve as handles, and generally carry the whole to the church. Here an Indian, the warden, officiates in the absence of the priest. After the Mass, or the few prayers if there is no priest, the body still on the bench (see fig. 10, *a*), and still covered with cloth, is carried by the men to the cemetery, friends of the dead following. Here, bench and all, it is deposited in a shallow grave (about 4 feet), and very infrequently, leaves or flowers are scattered over or placed on it. When the deceased leaves no relative, his extra clothes are placed under his body and used as a bed in the grave. If the dead has enjoyed a good position within the community during life, then a small tunnel is made in a side of the grave, and the body is placed there. This is called a "tomb." When a child dies, the body is tied in a white cloth and the one accordion in the village is played all the way to the graveyard. The whole town accompanies the body.

One year after the death of an individual, the *Boruca* celebrate what is known as the "birthday" of the death. Another feast is given at the house of the deceased. This feast must have a lot of chicha, and often lasts until the following morning or until the chicha disappears.

SOCIAL, POLITICAL, AND ECONOMIC ORGANIZATION

Land Tenure. The *Boruca* consider the territory in which they live as the property of the tribe at large. Legally, the Costa Rican Government has not yet made a reservation of this section. This is due, perhaps, to the relative remoteness of the area from the towns of the central plateau, and to the very broken nature of the terrain. It may also be partly the result of the hostile attitude of the *Boruca* to any stranger desiring to settle amongst them. No non-Indian has property in this region.

Each family has from three to five *manzanas* for their own use, often as far as a league (3 miles) from the village. This is their "farm," and is worked continuously until the soil runs out, then a new spot is selected, and the forest cleared to start again. The village, as a whole, has a *manzana* for cultivation for the church. Each individual is required to do his share of work on this land. The Indians go in groups to clear the field and to plant it with corn, rice, beans, and sugar cane. Formerly the church had cattle, but this situation no longer exists in Boruca. When the crops are gathered, they are stored in a special room in the parish house to be kept for the use of the priest on his bi-yearly visits, or for the poor when the farming year is bad. Unfortunately, nowadays, this custom is slowly disappearing.

It is said that up to only a few years ago, the town also had its field, and that there were no individual small farms as there are today. The great number of barren hills which are commonly called "savannas," and which clearly retain the vestiges of former tilled rows (see fig. 10, *e*), serve as silent proof of the authenticity of this tradition, as well as to the Spanish reports of the great number of Indians who inhabited this region at the time of the Conquest. The savannas today are of particular importance to the *Boruca*. Economically, these savannas furnish the roof of the house (see p. 12), and the food for the few animals which these Indians possess. Besides this, they yield a grass that is considered necessary to use in the bath of the new-born child (see p. 20), and a grass which is often used to make *maracas* (see p. 29). Consequently, no one is allowed to fence off the savannas, and the Indians complain bitterly because many of these fields are being lost to nature, who is reclaiming her own.

Property and Inheritance. The oldest male member of the family distributes the property at the death of an individual. If the male members are too young, then the oldest female member does the dividing. Concerning the property, we may judge the economy of the tribe as a whole, more or less clearly from the situation in Boruca, the largest single community of these people.

Cattle is a rich man's privilege in Boruca. Amongst the three hundred and twenty-four inhabitants, there are only one hundred cows. These are owned by sixteen individuals, no man having more than six. There are forty-seven houses in the town, however, and there is an ox for the majority of the households, at least one or more pigs, and numerous chickens. In addition to this, there are four bulls, each one with a separate owner, and twenty horses divided amongst six people. The pigs are raised to sell to the *ladinos* and to eat. The cows are seldom killed, but are used as a medium of wealth, to sell, or to pass on as an inheritance. The cows are seldom milked.

Social Organization. A few vestiges of an older communal relationship are seen in the former lack of individual farms, and today, in the *juntas* or "get-togethers" of the Indians. When a new house is to be built, the man who wants to erect it calls upon his friends for help, after he has collected the necessary material. They all join together, and the construction is ready in a short space of time, the owner giving chicha, and often food to the helpers. It is interesting to note also that on one day a year, designated now by the police chief, but formerly by the council, the men gather to cut the grass and to "clean" the village of Boruca. They go systematically from house to house, and cut all the weeds in sight. This helps to maintain Boruca as a cleared, sanitary spot.

Political Organization. Most traces of political organization have disappeared. The outstanding authority is the police agent, who is an Indian, but is appointed by the Government of Costa Rica. He is, however, de-

pendent to a certain extent upon what remains of the former all-powerful council. The council is composed of the four or six oldest men, and they approve or disapprove of the police appointment. If they disapprove, a new agent has to be named. Formerly this group selected the *cabildo*, but this has disappeared today. The chief duty of the council is to select the first and second mayordomos of the church, and the two women who are to cook for the church. These personages function during *fiestas* or the visits of the priest, and are appointed yearly. If there is a change in the personnel, the former mayordomo has to hand over all the religious symbols and whatever money there may be to the new one.

Exchange and Distribution of Goods. The *Boruca* amongst themselves are in the habit of exchanging foodstuffs. If a family lacks a certain commodity, for example corn, a transaction can be made with another party on the strength of a promise to return the item at the next harvest. The personal word of one Indian to another is very respected.

Salt (see pp. 8–9) was formerly an item of trade with the neighboring *Térraba*, *Cabécares*, and *Bribri*, who inhabit the areas farther inland, as well as with more distant *Talamancan* peoples. Reports of Boruca trade with salt as the chief article of commerce exist from as early as 1697. In that year, two priests, Francisco de San Joseph and Pablo de Rebullida, from the *Talamancan* missions, wrote:

> . . . . these (Indians) bargain with the Borucan and Texabas (Térrabas), they give them cotton "mantas" (skirts) painted which serve as covers on tables and curtains, and the Borucas give them salt, axes, machetes, dogs, and other things."[37]

Pittier[38] noticed that in the latter part of the nineteenth century, the *Borucas* frequently went to Puntarenas "carrying hides, cocoa-butter, blackberries, pineapples," etc., and that on the return trip, they brought "articles of prime necessity." He notes also that the *Viceitas*, a *Talamancan* people, came in August to trade with the *Térraba* and the *Boruca*. The *Viceitas* brought "cacao, hammocks, bags, iron pots, knives, and various objects of English and North American manufacture. They exchanged these goods for *mantas*, salt, calves, turkeys, dogs, etc." And that they also sold a certain kind of white *manta* which was larger than that of the *Borucas*.

The *Viceitas*, who are the *Bribri*, still come around August, and are famous for their bags and hammocks. Practically all of the string bags and the best hammocks found in Boruca are of *Viceita* manufacture (see fig. 8, *b–2*, *4*, 7). As late as 1942, the *Boruca* would exchange a kilo of salt (rock salt) for a cow or several calves, or a smaller amount for copal, which does not grow around Boruca, but is common in the Talamanca mountains, or for *mastate* (see p. 18). Since 1942, however, the Government monopoly on salt has tended to stop this ancient custom. The *Boruca* have had to make their salt more or less in contraband, and to reserve most of the little salt they are able to make for their own use. This, and the high price of Government salt has left the other tribes, and in particular the poorer *Bribri* in such straits that they are forced to frequent the *salitres* or salt deposits which are found in their area and chew the earth as cattle do in order to extract the mineral.

RELIGION, MAGIC, ETC.

The *Boruca* are professed Roman Catholics. The priest visits the community about twice yearly, and baptizes, marries, and confirms all at once. Very little vestige of old beliefs remains, and those that do, are generally well disguised with a covering of Catholicism. On the day of St. John the Baptist, the *Boruca* go at midnight to the creek which runs through the town and bathe. December eighth, the Roman Catholic feast of the Immaculate Conception, is the religious holiday of the town of Boruca, which we must remember is called in Spanish "Nuestra Señora de la Concepción de Boruca." This is the time the priest makes one of his bi-yearly visits. Mass is held, after which the people hold a solemn procession throughout the village, up and down the rolling hillocks. The Virgin of the Immaculate Conception is carried, in the procession, by four women picked by the priest. A food bazaar is held in the church yard, and the only ancient vestige that can be seen is the dance of the *negritos* (see p. 29), who generally precede the procession, but sometimes appear later in the day. This variation depends upon the priest. Frequently, the priest feels that the dance is too pagan and should not be performed in the solemn march.

[37] See Informe, 1697.

[38] Pittier, 1891, p. 105.

Superstitions and Beliefs. There are certain superstitions and beliefs peculiar to the *Boruca* which may be associated with their former credence. When planting, the Indians water the newly sown seeds with water mixed with soil from the cemetery. This is supposed to keep the rats and other rodents from eating the seeds. All the Indians are afraid of thunder, believing that it is closely allied with bad luck. When it thunders in the hills on the east side of the Diquis or Térraba River, the *Boruca* say that a large snake is moving his tail. This snake used to live near El Sapo, in these hills, but when Monseñor Thiel, the former Archbishop of Costa Rica, passed through this region on one of his missionary trips, the snake moved, from fear of the Archbishop, to the headwaters of the Balsar River, west of the Diquis River. Here he is today, in a very steep and isolated spot where no one can find him.

When it thunders toward the south, they claim that the two pejibaye palms which grow on the summit of the Hill of the Sorcerer are angry. The wind that blows at night is a soul in pain. It is interesting that the Indians still tell, and actually believe, that without the help of the *sukia*[38a] there would not now be game around Boruca, and so, of course, all the people would have died. They say that eighteen years ago there was no game in the vicinity. A *sukia* from Talamanca was summoned. He went to a high mountain which lies south of the present village of Boruca. This mountain is called "El Cerro del Encanto," or "Hill of the Sorcerer." A great noise was heard. When he returned, there were many wild peccary in the neighborhood. They still recount and believe that "Tatica Cuazarn," the mythical sorcerer who lives on the Hill of the Sorcerer, used to visit Boruca and drink and eat with the people. He was always dressed as an old man, and none knew him on these visits. He came incognito so that he could find out what in truth was passing amongst his people. Although the Indians say that formerly the Hill was a gathering place for their secret tribal meetings, no Indians will go there today, even though there are supposedly wild cattle there, and cattle are economicaly very important to the *Boruca*. This cattle is held to be the property of "Tatica Cuazarn," and cannot be touched. The *Boruca* recount that one of them went to the Hill hunting, and saw a man bathing. He started to shoot the man, but his gun wouldn't go off. This man was, of course, "Tatica Cuazarn." Cuazarn has a son who is called Sankrao, and who lives in the mountains of Golfo Dulce.

North and west of Boruca, there are certain lagoons which the Indians do not like to pass, and never will go by them if they are accompanied by dogs. One of these lagoons is the "Laguna de Danta." Here, "Mamram" is supposed to dwell. "Mamram" in Boruca signifies witchery.

If one goes hunting, it is not good to say to him, "God be with you," because one will have bad luck.

Sickness, Curing, and Shamanism. Shamanism as such is not practised any longer amongst the *Boruca*. Formerly the *Boruca* had real shamans, whom they called *bruk-bri*, but they have long since disappeared. The power of the shaman, however, is still respected, and when a grave sickness appears, or a great misfortune affects the tribe or village, the *bruk-bri* is sent for from some of the *Talamanca* peoples, chiefly the *Cabécares*. These peoples call the shaman, *sukia*, and the one who travels to Boruca is known as the *cacique sukia*, the title being derived from the word for shaman and the widespread Costa Rican word for chieftain. The *cacique sukia* is held in deadly respect by the Indians. Chicha, as well as the most attractive girl in town are offered to him on his visits. When curing, the *sukia* stays outside behind the house, all night, and smokes incessantly. He then enters and blows smoke on the patient. The *sukia* does not accept money, and only at times will take presents of a pig or food.

[38a] See below.

Curanderas or female witch doctors, for whom no word exists in the Boruca language, are part of the community. However, the lore is handed down from mother to daughter, with the result that the women of certain families are famous for curing powers, whereas other women of the community have none of this learning. Along with a more than general knowledge of herbs, roots, and plant life, the witch doctor must have a therapeutic sense combined with an instinctive knowledge of psychology. For this reason, in spite of the fact that the witch doctor passes her secrets on to all of her daughters, only the one or ones who are lucky enough to have such qualities practise. At times, when there is no female offspring, or when none is suited to practise, the *curandera* has been known to adopt a girl and train her to follow in her trade.

The witch doctors do not receive the same reverence that the *sukias* receive, even though the witch doctors are *Boruca* Indians and have more opportunity to practise on the people. This, and the fact that the witch doctors are women, while the *sukias* are male, may, of course, be the very reason why they are not feared. At times, however, the *sukia* has been known to teach the witch doctor some of his secrets, and it is certain that the *curandera* is highly respected by both sexes. Although the *curandera* is principally interested in female sicknesses, both men and women consult her.

Strangely enough, the most intimate details of the life of a patient are discussed openly with the witch doctor, even in the presence of a member of the opposite sex. Unlike the *sukia*, the *curandera* will accept pay for her services.

In addition to her use of plants, the witch doctor sometimes employs some form of sorcery to impress her patients. A favorite method is to tie a thread, preferably a silk one, around the little stones called *sukia stones*, which are found in the ancient graves, and to hang them from the hand or from the ceiling of the house. The *curandera* reads the answers to the questions asked her by the patient from the manner in which the stones swing.

One of the most important functions of the witch doctor appears to be the control of birth. The *Boruca* have long been famous for having children only when they feel like it, not using an abortive, but a preventive or a provocative, as the case might be. They are very reticent to admit even the existence of such a practice, however, through fear of the priest and of the Costa Rican Government, which in the past has persecuted the Talamancan peoples for this, as we shall see further on.

Both processes are brought about by taking certain liquid preparations given by the witch doctor. The sterilization process is called a *curada*, and when a woman has one or two children, the Indians say quite frankly that she is *curada*. It appears possible to be *curada* and then go to the *curandera* and become pregnant when one wants. Both remedies are drinks made from certain leaves, fungi, roots, and ferns. The sterilizing brew must be taken for fifteen days, stopped for fifteen days, and taken again for fifteen days. If badly prepared or taken too consistently without the interval in between, the drink is said to kill by causing hemorrhages. The neighbors of the *Boruca* all have, at least, the remedy to stop conception. The *Térraba*[39] do not practise it so often today, as the Roman Catholic Church has apparently had more influence on them. The *Térraba* claim that their population has decreased violently since the past century because their women made themselves too sterile, and both sexes began to live together in any manner. They add that because of this, a curse has been put on them and they are dying out. It is a pity there is no census record to serve as comparative material. All of the remaining Talamanca peoples, such as the *Bribri*, the *Chirripó*, and the *Cabécares*, seem also to know this custom. In an unpublished report of Fathers Vincente Krautwog and Augustín Blessing of several trips made by them to the missions of Talamanca in the years 1894 to 1902, the originals of which are in the parochial archives in Limón, Costa Rica, the following statements are significant:

> The women of the Estrella (valley) have very few children, because of certain remedies which they take without misgiving, publically, in order not to have off-spring. (These Indians were living in Caña Coén.)
>
> I hardly baptized a baby, because a large portion of the women are sterile through a remedy which they take, be it from being deceived, be it from being lost, be it from their own evilness, taking and masticating in the woods the bark and the juice (sap) of dangerous trees. There are about four old women who are most guilty: María Caferina and Margarita in the house of Simeón, Rosalía, mother of Luis Quirós, and María, called "camisa," mother of the woman who lives with Miguel Medina, some four hours distant from Simeón. The evil of this "cure" ("curar"), being so alarming, I wrote a letter to the Mayor (Alcalde) don Lucas Alvarado, in which I authorized the authorities of Estrella to at least threaten these criminal women, in case they could not be intimidated, to take them prisoners to Limón. I attacked strongly on a thousand occasions this evil. . . .

The above was written in the year 1894. In 1897, we find the following:

> The great evil of taking means not to bring forth young, is disappearing, and once again children are being born.

In Buenos Aires which is situated between Boruca and Talamanca, the Chirícano women are said to drink a preparation made by boiling the leaves and stem of *Justicia tinctoria* ([Oerst.] Hemsl.) and drinking a gourd of this three times daily the first day of menstruation. As yet, we have not been able to verify this usage, but it is a curious fact that in the majority of the yards of these people this plant is found. The excuse given for this plant is that it is used to wash clothes, serving as bluing.

The medicine to induce pregnancy is apparently more complicated than that to stop conception. The following is an analysis made by Dr. Reif in the United Fruit Company laboratory in La Lima, Honduras, of this medicine from the *Boruca* Indians:

> A brown liquid with some flocculent precipitate and a strong odor of hydrogen sulfide indicating purition of organic matter. It is an aqueous solution containing some tannins but no alcohols, alkaloide or saponines. After evaporation of the liquid and removal of hydrogen sulfide smell, a strong odor resembling that of Castoreum remained. This odor is possibly derived from glands of some tropical animal since beavers do not occur there.
>
> The tannins would indicate that some bark or barks were used in the preparation. Microscopical examination of the residue did not give any clues.

A few places where such practices as these are known are Africa, the Fiji Islands, and Ecuador.

The following is a list of the more generally known cures used by the *Boruca* and usually prescribed by the *curandera*.

Malaria is treated by drinking the liquid left from cooking the bark of a tree called *hombre grande* (*Quassia amara* L.), and sometimes, from boiling the fruits of the *cedrón* (*Simaba Cedron* Planch.)

For stomach-aches, a vine called in Boruca *so-kra'* (*Philodendron* sp.) is boiled with the ever useful *Kuikʃ·as* (*Piper* spp.), and drunk.

Dysentery in adults is treated by boiling the bark of the María tree, the guava tree, the leaves and the yuca-like root of the *contrayerva* (*Dorstenia Contrajerva* L.), and the ripe vanilla pod (*Vanilla fragrans* [Salisb] Aries).

Rheumatism is treated by rubbing the afflicted parts with the oil of the copaiba tree.

To stop boils, the leaves of the *kana kra'* (*Conostegia extinctoria* [Bonpl.] D. Don.) are used in combination with a lard made from the marrow of the leg bones of a cow and lemon juice. The lard helps to keep the leaves in place, and is supposed to aid in drawing out the poison.

For snake bites, some Indians, but not all, as the majority go to a *sukia* for this, use the leaf of the *guaco* (*Mikania Guaco* Humb. & Bonpl.). They mash the leaf, soak it in water, and then put it on the afflicted parts. Another remedy for snake bites is to use the bulb or root of the *Strychnos* or *curarina* vine (*Strychnos toxifera* Schonb. ex Benth.). This is cut into pieces and mixed with the *guaco* leaf and boiled very well. The resulting liquid is drunk. The most effective remedy for snake bites, however, seems to be the resin from the *caraña* tree (*Protium* spp.). This tree grows on the coast, particularly near Dominical. The resin is mixed with honey and is both drunk and applied to the bite.

[39] See Pittier, 1891, p. 93.

FOLKLORE

Very little remains in the field of legends or myths. Certain ones, told as recently as the time of Pittier, for example, "El Encanto," [40] are now forgotten. The tales which are still told appear for the most part to be unfinished, half-remembered stories, and are, to a great extent, crude and unsatisfactory. The writer found that the telling of legends was similar, in a measure, to the gathering of language data. Few people remembered details, and no two people agreed on all details. The fundamental note in the tales collected is the importance placed on witchcraft, in spite of the fact that the *Borucas* like to give the impression that they no longer believe nor remember anything about witchery. The following are four myths which are still told by the *Boruca* Indians.

The "Mamram." These are two bewitched women. They were orphaned girls who were from Boruca, and who used to fish the crabs and the crayfish in the creek which runs through the town. Each day, as they exhausted one spot, they moved a bit further along the water course, until one day they disappeared completely and did not return.

The shamans, however, found the girls, and tied them up, then moved them to Barranco. You know they are there today, because you can see the stones of their hearth. Their bodies are covered with hair, and they are ugly, not only in appearance, but also in character. They are very mean, and have bothered people so much in the vicinity, that more than one community has had to move. The last place they destroyed was Camakrán by Paso Caracol.

The Grandfather of the Volcano. A long time ago, the grandfather of the volcano fell in love with a girl and took care of her. She became pregnant. He brought her partridges, wild turkeys, *paweeles*, wild hogs, wild pigs, and deer. The girl had a son, and she took care of him and raised him until he was six. Then the father came with a great wind and took the boy from his mother, and carried him to his house.

The father continued to visit the mother nightly, however, bringing her dried meat. But the mother would say, "My child is what I want. Where is he?"

The father did not like this, and moved the boy to a different place, and gave him the name of San-kra'-ua so that the mother would not know where he lived.

The Serpent. This is a legend which is concerned with the creek and site of Boruca itself. The hole mentioned in the story is still pointed out between two of the undulating hills in the town. The serpent has a mystical connection with the serpent who thunders by rattling his tail, and with the Laguna de Sierpe which forms one of the seven mouths of the Diquis River.

The serpent lived in the hole. He came out, and the woman was behind him at the edge of the entrance. The snake waited for her to give him chicha so he would become drunk, and they would embrace. Then she laughed with the snake. Then they bathed together in the Diquis River. Then the snake went to sleep in his hole, and the woman went to her house to make more chicha, so that day-after-tomorrow again the snake would become drunk. Thus they behaved.

Then the woman became pregnant by the snake. Then the people and the sun knew. Then the mother of the girl bewitched him, so that he was burned hanging.

Then the girl gave birth, and the people stood by ready with machetes to kill the little snakes. They were ready with machetes and with sticks. One little snake did not have a tail. The mother of the girl burned them all. Nothing remained but ashes. The mother felt sorry, and cried for her daughter.

It ends here. All of it.

The Legend of the Kagõera. The Kagõera were a branch of the *Boruca* who lived at a site called Vanilla between Curré and Lagarto. They were in the habit of making frequent visits to Drake's Bay, on the coast near the Osa Peninsula. The Kagõera could be distinguished from the rest of the tribe by a golden plaque which they wore on their forehead.

Among the Kagõera was a brother and a sister who lived together as a married couple. When the sister became pregnant, the *sukia* or medicine man was very angry and ordered that she be eaten by three tigers. To carry this out, the *sukia* waited until the woman was in a certain spot, and then made her unable to move. He ordered a man to climb a tree to watch and to report what occurred.

At four o'clock in the afternoon, the three tigers came out of the woodland roaring and went right to the woman. Two were spotted with black and one was a yellow lion. The watcher saw them play together and pet her. The woman remained frozen. When they tired of playing, one of the spotted tigers killed her, and they all ate her, all of her, until not even a drop of blood was left to tell the tale.

The watcher was so frightened that he could not get down from the tree until the following day. The rest of the tribe also came at daybreak to find and to talk to him who had witnessed the death of the woman who became pregnant by her brother furnished the example for the law that whoever should copy this act would be severely punished.

[40] Pittier, 1941, pp. 93–94.

THE ARTS

Music. There are very few genuinely aboriginal instruments left amongst the *Boruca*, and in public, they play no music that can definitely be called their own. The *maraca*, or rattle, is undoubtedly pre-Spanish, as frequently clay *maracas* are found in the early graves. The modern *maraca* is generally made of a gourd and often has little holes at the base to give more sound. The gourd is filled with little round black seeds called *takra'*, and attached to a bone handle (see p. 18). Rattles or *maracas* are also made by men and women of a grass (*Arundinella Deppeana* Nees.) which grows in the savanna. This grass is called *suge-ra'* in Boruca, and *cola de venado* or *cola de chivo* in Spanish. The upper portion when young is purplish, while the lower part and the old grass is the color of straw. The Indians use both the old and young grass, thereby giving the rattle two distinct colors. It is woven with the fingers, the weave used being called *ra-ta'* (see fig. 10, *c*), and the finished product is filled with corn to make it sound. Drums are round (see fig. 7, *c–5*), and made from a piece of the trunk of cedar or of balsa, and, very occasionally, of the coyol palm (*Acrocomia vinifera* Oerst.). Both ends are covered with wild peccary hide and fastened with thongs of the same hide. They are played by hand without sticks. A *chirimía* or flute-like instrument is made of cane and wood, and is used in a burlesque dance of bullfighting on the first of January, as well as on the eighth of December with the *negritos*. The *zambombia* is an instrument of the *Boruca* which has probably come to them through contact with the Chiriquíans. The *zambombia* is a hollowed stick divided inside into separate compartments. The divisions are made with pieces of the pejibaye palm. The same black seeds used in the *maracas* are put in these compartments, and the *zambombia* is moved backward and forward to produce noise. In the village there is one accordion which also is played at celebrations.

The music on these occasions is almost entirely copied from the Chiriquíans who in turn have received a considerable negro influence. Waltzes are also popular, and some foxtrots are heard.

Dancing. The *Boruca* are said to have secret dances. Their two public dances, if so they may be called, that are not copied from the Chiriquíans, are the "bullfight" and the *negritos*. The "bullfight" takes place on New Year's Day. A balsa (*Ochroma Lagopus* Sw.) mask of a huge bull's head painted in black with white lines, and with the horns and the upper part of the skull from a real bull, is put over a framework of a curved piece of wood that has a supporting wooden cross piece. This helps the whole to project from the head of the wearer in the manner of a real bull's head. The mask is usually worn by one of the young bloods of the village. Another man wears a balsa mask of one face with a little face on the chin, suggesting a dual personification (see fig. 10, *b*). These are the only two "characters." Almost all the men in the village, however, put on balsa masks of various types, some with gaily colored paper pasted on the surface, some painted, and some perfectly plain. The

object of the "dance" is that all the participants "fight" the bull, the wearer of the two-faced mask being the real "matador." At the end of the "dance" the "bull" is tied and supposedly strangled. This "fighting" is done to the accompaniment of the *chirimía*, *maraca*, and drum (see p. 29) to say nothing of the shouts of the various dancers. On New Year's Eve, the Indians dress in banana leaves and masks, and go to one another's houses, and, according to some, to a secret place to celebrate. On the eighth of December, the council chooses three or four men who represent the *negritos* or black men. They paint their faces with mud and soot, and adorn themselves with the skin of the jaguar or other animal of the forest. One man dresses as a black horse, using for this a hoop-shaped piece of cane from which hangs black cloth cut to represent a horse. The man steps into the center of the hoop and wears it hanging from his shoulders by fiber ropes. The drum, *chirimía*, and *maraca* accompany these merrymakers who dance around, bow to people, play tricks on people, and beg drinks from anyone they chance to see. In fact, they dance from house to house and at each stop are usually given a drink of chicha. The dance itself dates from Spanish-colonial times, and is performed today during religious feasts in many communities from Mexico through Guatemala southward, including the town of Nicoya in the peninsula of that name in Costa Rica.

The other dances which are performed in public are danced only by the younger generation. The steps are entirely borrowed from the Chiriquians, who formerly and even still inhabit much of southern Costa Rica. The favorite dances are the *cumbia*, the *punto Chiricano*, and the waltz. All of these, with the single exception of the waltz, are danced individually and not by a couple holding one another close.

Games and Gambling. The *Boruca* are not a gambling people. They appear to have no interest in any sort of gambling. Dice are almost unheard of, and perhaps one pack of cards can be found in the whole village.

The boys have a game called *cuepas*. This is played with round pieces of bee's wax shaped almost like the cap of a pop bottle. One of these are placed face down, and a boy throws a similar piece on top of it. If the result of the impact causes both pieces to be face up, the boy who threw the *cuepa* wins, and takes the other *cuepa* as well as his own. If the result is otherwise, he loses his *cuepa*. Boys carry a ball of wax in their pockets for the express purpose of making *cuepas*.

Tops, made of wood with a nail serving as the pointed end, are also seen. They are not very popular, however.

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APPENDICES A-C

Acknowledgment is gratefully extended to the Botanical Museum and the Museum of Comparative Zoölogy for help in the verification of the botanical and zoölogical terms, appearing in Appendices A and B.

APPENDIX A: PLANT NAMES

ENGLISH	IN COSTA RICA	SCIENTIFIC
	A	
alligator pear	*aguacate*	*Persea americana* Mill.
anda-riel (see *bejuco de hombre*)		
Arundinella	*cola de venado* or *cola de chivo*	*Arundinella Deppeana* Nees.
	B	
balsa	*balsa*	*Ochroma Lagopus* Sw.
banana	*banano*	*Musa sapientum* "
banana	*guineo morado*	" " "
bean	*frijol*	*Phaseolus* sp.
bejuco de fierro (iron vine or *bejuco negro*)	*bejuco de fierro* or *bejuco negro*	perhaps *Anthurium scandens* (Aubl.) Engler; *Cydista pubescens* Blake
bejuco de fuego (fire vine)	*bejuco de fuego*	?
bejuco de hombre (man vine) or *anda-riel* (rail vine)	*bejuco de hombre* or *anda-riel*	?
bijagua	*bijagua*	*Calathea insignis* Petersen
bijagua, black	*bijagua negra*	*Calathea* spp.
bluing	*azul de mata*	*Justicia tinctoria* (Oerst.) Hemsl.
Boruca bean	*frijol de Boruca*	variation of *Phaseolus vulgaris* L.
	C	
cabuya	*cabuya*	*Furcraea* spp.; also *Agave* spp.
cacao or chocolate	*cacao*	*Theobroma Cacao* L.
cane, white or wild	*caña blanca*	*Gynerium sagittatum* (Aubl.) Beauv. (*saccharoides* Humb. & Bonpl.)
capulin, white	*capulin blanco*	*Muntingia Calabura* L.
caraña	*caraña*	*Protium* spp.
carbonero	*carbonero*	*Guarea guara* (Jacq.) P. Wil.
cashew	*marañón*	*Anacardium occidentale* L.
cassava (see yuca)		
castor bean	*castor*	*Ricinus communis* L.
cedar	*cedro*	*Cedrela* spp.
cedrón	*cedrón*	*Simaba Cedron* Planch.
chocolate (see cacao)		
chumico	*chumico*	*Curatella americana* L.
coffee	*café*	*Coffea* spp.
Conostegia	*kana kra'*	*Conostegia extinctoria* (Bonpl.) D. Don.
contrayerva	*contrayerba*	*Dorstenia Contrajerva* L.
copaiba	*camibar*	*Prioria copaifera* Griseb.
copal	*copal*	*Protium costaricense* (Rose) Engler

ENGLISH	IN COSTA RICA	SCIENTIFIC
cordoncillo	*cordoncillo*	*Piper* spp.
corn	*maíz*	*Zea Mays* L.
corozo palm	*corozo*	*Corozo oleifera* (HBK) L. H. Bailey
cotton	*algodón*	*Gossypium peruvianum* Cav.
cotton, colored	*tocolote*	*Gossypium peruvianum* Cav.
coyol palm	*coyol*	*Acrocomia vinifera* Oerst.
Cuphea	*tshu-krá*	*Cuphea utriculosa* Koehne
	D	
disciplina palm (dwarf)	*disciplina*	*Chamaedorea* sp.
	E	
espavel	*espavel*	*Anacardium excelsum* (Bert. & Balb.) Skeels
Elaeis	*tuskra'*	*Elaeis melanocca* Gaertn
	F	
fire vine (see *bejuco de fuego*)		
	G	
gourd	*jícara; guacal*	*Crescentia Cujete* L.
guácimo	*guácimo*	*Guazuma ulmifolia* Lam.
guaco	*guaco*	*Mikania Guaco* Humb. & Bonpl.
guanacaste	*guanacaste*	*Enterolobium* (Pittier, 1941, p. 59 classifies this as *Enterolobium cyclocarpum* [Jacq.] Griseb.)
guava	*guayabo*	*Psidium Guajava* L.
	H	
hoja de duende	*hoja de duende*	*Bactris minor* Jacq.
huiscoyol palm	*huiscoyol*	
	I	
indigo	*añil*	*Indigofera suffruticosa* Mill.
Inga	*guava*	*Inga spectabilis* (Vahl) Willd.
	J	
jaboncillo	*jaboncillo*	*Leguminosae* sp.
	L	
little stick grass	*zacate de palito*	?
	M	
majagua	*majagua*	*Hampea* sp., and other spp.
mango	*mango*	*Mangifera indica* L.
mangfove	*mangle*	*Rhizophora Mangle* L.
man vine (see *bejuco de hombre*)		
Maria tree	*palo Maria*	*Calophyllum brasiliense* Camb. var. *Rekoi* Standl.
mastate, red	*mastate colorado*	*Brosimum utile* (HBK) Pittier
mastate, white	*mastate blanco*	*Brosimum* sp.? (Pittier, 1941, p. 63, wrongly classified this tree as *Brosimum utile*)
May tree, pink	*palo de mayo (rosado)*	*Vochysia ferruginea* Mart.?
May tree, white	*palo de mayo (blanco)*	*Vochysia hondurensis* Sprague

ENGLISH	IN COSTA RICA	SCIENTIFIC
	N	
nance	*nance*	*Byrsonima crassifolia* (L.) DC.
nene or *neno*	*nene* or *neno*	*Abrus precatorius* L. ?
ñampí	*ñampí*	*Dioscorea trifida* L.
	O	
ojoche	*ojoche*	*Brosimum terrabanum* Pittier
ojo de buey	*ojo de buey*	*Mucuna urens* (L.) DC.
orange	*naranjos*	*Citrus sinensis* (L.) Osbeck
	P	
pacaya palm	*pacaya*	*Chamaedorea* sp.
palmilera	*palmilera*	*Socratea* sp.
papaya	*papaya*	*Carica Papaya* L.
pejibaye palm	*pejibaye*	*Guilielma utilis* Oerst.
Philodendron	*so-kra'*	*Philodendron* spp.
pineapple	*piña*	*Ananas comosus* (L.) Merr.
pita	*pita*	*Aechmea magdalenae* André
plantain	*plátano*	*Musa paradisiaca* L.
poró	*poró*	(Probably, *Erythrina costaricensis* Micheli; Pittier, 1908, p. 163, identifies this tree as *Erythrina corallodendron* L.)
poro-poro	*poro-poro*	*Cochlospermum vitifolium* Willd. (Spreng, according to Standley, 1937, p. 713; *Cochlospermum hibiscoides*, according to Pittier, 1908, p. 129; 1941, p. 68.)
	Q	
Quassia	*hombre grande*	*Quassia amara* L.
	R	
rail vine (see *bejuco de hombre*)		
rice	*arroz*	*Oryza sativa* L.
royal palm	*palma real*	*Scheelea rostrata* (Oerst.) Burret
rubber, wild	*hule macho*	*Castilla fallax* O. F. Cook
	S	
sandbox tree	*javillo*	*Hura polyandra* Baill. Pittier, 1941, p. 59, classifies this tree as *Hura crepitans* L.
savanna grass	*zacate de sabana*	?
sem palm	*sem-kra'*	*Carludovica palmata* R. & P.
Serjania	*sierrilla*	*Serjania cornigera* Turcz.
totacaballo	*totacaballo*	*Pithecolobium latifolium* (L.) Benth.
Spanish plum	*jocote*	*Spondias purpurea* L.
squash	*calabazo*	*Cucurbita maxima* Duchesne
stilt palm	*chonta*	*Socratea durissima* Wendl.
stilt palm, black	*chonta negra*	*Socratea* sp. or species of similar growth habit
Strychnos	*curarina*	*Strychnos toxifera* Schomb. ex Benth.
sugar cane	*caña dulce*	*Saccharum officinarum* L.

IN COSTA RICA	SCIENTIFIC
T	
zacate de comején	?
tiquisque	*Xanthosoma violaceum* Schott
tabaco	*Nicotiana Tabacum* L.
V	
vainilla	*Vanilla fragrans* (Salisb) Ames
Y	
yuca	*Manihot utilissima* Pohl.
itavo	*Yucca elephantipes* Regel
yuquilla	*Curcuma longa* L.

APPENDIX B: NAMES OF BIRDS, ANIMALS, FISH, AND REPTILES

ENGLISH	IN COSTA RICA	SCIENTIFIC
	A	
armadillo	*cosuco; armadillo*	*Dasypus novemcinctus* Linn.
	B	
bee (wild) from Caños Island [1]		*Apis Trigana* or *Apis Melipona*?
bee (wild)	*jicote*	*Melipona bechii* supsp. *bechii*
bushmaster	*cascabela muda*	*Lachaesis muta*
	C	
clam	*almeja*	?
crab (river)	*cangrejo del río*	*Pseudotelphusa magna*
crayfish	*camarón*	?
croaker	*roncador*	?
curassow	*paweel*	*Crax rubra* Linn.
	D	
deer	1) *cabra* 2) *venado*	1) *Mazama sartorii* Saussure 2) *Odocoilus* Boddaert
	G	
guan (crested)	*pava*	*Penelope purpurascens* Wagl.
guatusa	*guatusa*	*Dasyprocta* sp.
	M	
macaw (scarlet)	*lapa; guacamaya*	*Ara macao* Linn.
mollusk (large for purple dye)	*caracol; morada*	*Purpura patula* Gould
mollusk (small, for purple dye)	*caracol; molusco*	*Purpura kiosquiformia* Duclos
monkey (red)	*mono colorado*	*Ateles geoffroyi* Kuhl
monkey (white-faced)	*carablanca*	*Cebus capucinus* Linn.
mullet (fresh water)	*tepemachin*	*Agonostomus monticola* C. V.
	P	
parakeet	*perico*	*Aratinga canicularis* Linn.
parrot	*loro*	*Amazona auropalliata* Less.
perch	*mojarra*	*Cichlasoma altifrons* Kner. & Steind.
pig (peccary)	*chancho del monte*	*Pecari angulatus* Cope
pig (wild boar?)	*cariblanco*	*Tayassu pecari* Fischer
pigeon	*paloma*	*Columba* sp.
pigeon (white wing)		
	S	
snook	*robalo*	*Centropomus pectinatus* Poey
	T	
tepezcuintle	*tepezcuintle*	*Coelogenys paca*
tinamou (chestnut-headed)	*gallina del monte*	*Tinamus major* Gmel.
toucan	*curré*	*Ramphastos swainsonii* Gould

[1] The result of the analysis of the sample of Caños Island Wild Bees Wax by the Laboratorio Químico Oficial, República de Costa Rica, was the following:

Resin	78.17%
Wax	8.65%
Substances insoluble in ether	13.18%
	100.00%
Humidity	3.12%
Ashes	3.10%
Sugars	0.00%
Glues	0.00%

September 21, 1945

APPENDIX C: COMPARATIVE VOCABULARIES

THE following is a comparative vocabulary of the Boruca language of words used in this paper. The earliest vocabulary is that of Valentini, dating from 1862. This has been taken from Lehmann, 1920, vol. I, pp. 346–48. In the chart, it is listed as Valentini, 1920. The next oldest are those of Gabb and Monseñor Thiel, and are placed according to their publication dates, the first being Gabb, 1881, and the second Thiel, 1882. The second Thiel vocabulary is taken from Lehmann, 1920, vol. I, pp. 346–56, and was collected in the year 1892. It is listed as Thiel, 1920, in the chart. The following three lists are from Pittier dating from the years 1891, 1892–96, and published by the National Museum of Costa Rica in 1941. Because of this, it is listed as 1941. The last Pittier vocabulary appeared in 1908. The final column was gathered by the writer in 1945, and contains the Boruca name for the principal items mentioned in this paper. The orthography used in the 1945 column is based on the international phonetic alphabet of G. H. Camerlynck. This alphabet was accepted at the International Congress of Phonetics in 1926. The key to this spelling is given below. (Due to the difficulties involved in obtaining special phonetic characters and setting these in the typeface as used herein, certain substitutes in the phonetic alphabet have been made. It has been necessary to make two alterations from the original — the *a*'s are different from those in the Camerlynck alphabet; *ŋ* represents an alternative form of the character used by Camerlynck.)

It should be noticed that apart from the differences caused by lack of standard phonetic alphabet, the language has been slowly changing during the period of years represented by these lists, and that certain indigenous words are being replaced by hispanic forms.

KEY TO PHONETIC SPELLING

- *a*: Like cat, hat
- *ɑ*: *ah*, like *a* in Latin.
- *e*: like *May*
- *ɛ*: like wet, but with long vocalic sound
- *ə*: like mute *e* in English
- *i*: like *ee* in English: sl*ee*p
- *o*: like *oh* in English
- *ɔ*; *œ*: like *cut* in English
- *ø*: like *cu*stom, or better, like *eu* in French, or *ö(oe)* in German: G*oe*the
- *b, d, f, g, k, l, m, n, p, r, s, t, v, z*, like in English
- *ŋ*: almost like *ng* in English, or like *gn* in French
- *ʃ*: like *sh* in English
- *ō̆*: like Genevieve
- *w*: like *what*, but without expiration
- *j*: like *yet*
- *y*: like *ü* in German: Gl*ü*ck
- *ɥ*: like *ü* in German: Gl*ü*ck

ENGLISH	VALEN-TINI (1862) 1920	GABB 1881	THIEL 1882	THIEL 1920	PITTIER 1891	PITTIER 1941	PITTIER 1908	STONE 1945
				A				
alligator pear				*bu-cra*		*bub'-kra*		*bu'kra*
anda-riel (rail vine) or *bejuco de hombre* (man vine)								*dra'*
armadillo				*tzóna*		*tsón; tsu*		*tsɔn*
Arundinella (see savannah grass – for rattles)								
				B				
bags (string)								*kre-ʃi*
banana		*bridwa*		*bri-duáh*		*brid-uá*		*brid'wa*
banana (guineo)					[1]	[2]		*bu-dwa'*
bark cloth				*cavac*	*cavác*			*kavak'*
basket				*cooh-cráng*	*ko-kra*	*kokrán*		*kɔ*
basket (large)								*ba'va*
bean				*suép; súehp*		*soeép; sueép*		*swɛp*
bee				*but*				*but-wawa*
bejuco de fierro (iron vine) or *bejuco negro* (black vine)								*brit*
bejuco de fuego (fire vine)								*brutʃ·a'*
bejuco de hombre (see *anda-riel*								
belt, woven (for men)		*suampka*	*sovémca*	[3] *cactub-tzit*		*suam-ká*		*suam-k·a'*
bijagua						*krán-kab'*		*swa-kra*
bijagua (black)								*bwa-k·a'*
birds	*du-tsit*	*du-tsút*		*du*		*du; du tsët; pxé*		*dɥ*
bushmaster						*súg-dëban*		*sug'-dɛban*
				C				
cabuya				*chijt-ca*				*ʃjt-ka*
cane (wild)		[4] *bah-krá*		*bajira suvát*		*baq-krá*		*bak-kra'*

[1] Pittier, 1891, p. 103, uses *bri duáh* for *platano guineo* and not for "banana."
[2] Pittier, 1941, p. 16, uses *bu-dua* for *platáno guineo*, and not for "banana."
[3] Thiel, in Lehmann, 1920, vol. I, p. 352, does not give the Spanish word *faja* but gives *cinturón* for the Boruca word cited above.
[4] Gabb, 1881, p. 465, does not list *caña blanca*, or "white cane." He lists *caña silvestre*, or "wild cane."

ENGLISH	VALENTINI (1862) 1920	GABB 1881	THIEL 1881	THIEL 1910	PITTIER 1891	PITTIER 1941	PITTIER 1908	STONE 1945
capulin (white)						*tcbi-kra*		*tcb:'kra, tri'kwa, kr:'kra*
caraña							*dibit-krá*	*dibit-kra'; rs∫va'*
carbonero								*gri∫in-kra'*
cassava (see yuca)								
cat						*bis*		*bis*
chicha (from corn alone)		*yi-wó; djiwó* (in Pittier, 1941, p. 55)		*cuc-cha*		*djé-buí; kup-tza-bui*		*dɟɛ-buí'*
chicha (mixed with ñampi)								*dɟkat∫a'*
chicha (mixed with pejibaye)				*suba-chá*				*suba-t∫a'*
chicha (mixed with ripe or green plantain)						*mua djé-bui*		*mwadgebui'*
chicha (mixed with yuca)				*ung-ca-chá*				*uŋ-ka-t∫a'*
chicha *pumetii*								*twist∫a'*
chicken				*coró*		*krob'*		*kro*
chocolate		*kaó*		*cáu-cá*		*kaó; kaú*		*kao*
chonta (large roots)								*kanagira*
chonta (small roots)								*mana-kra'*
clam								*krü*
clam (large)								*nrü'*
clay vessel (large)				*cvureh*				*kvure'*
clay vessel (*comal*)								*gwam*
cocoa-butter						*zik*		*∫ik*
coffee								*krangwa*
Conostegia						*		*kana kra'*
copal								*ɥit-kra*
cordoncillo							*kuí-krá*	*kɥikl as*
corn	*ka-ep*	*kup*		*cup*	*cuip*	*kup*	*ru-krá*	*kwp*
corn (black)					*cuip turinat*	*kup-turinát*		*kwp-turjnat; kwp-brjnat*
corn-patch			*crib*	*cri; cug-cac*		*ri*		*gre*

ENGLISH	VALENTINI (1862) 1920	GABB 1881	THIEL 1881	THIEL 1910	PITTIER 1891	PITTIER 1941	PITTIER 1908	STONE 1945
corn (sprouted)								*kus-p:*
corozo palm				*tza-aguá*		*tza-kra*		*tza-kra'*
cotton				*chebó*	*tshebá*	*tzébu-krá*		*t∫eb:'*
cotton, colored					*teri tshebú*	*terik tzébú*		*trik∫u, trik∫ubuk*
coyol palm						*gua-krá; ua-krá; u-krá*		*kwua-kra*
crab (river)				*eroc*		*korók; gró*		*k:rok'*
crayfish				*tsüh*		*tëuá; seua*		*su a'*
crayfish (small)								*∫u*
croaker	Apparently, only the Spanish name "roncador" is in use							
Cuphea							*tsú-krá*	*ts∫u-kra'*
curassow				*dibi-ram-at*		*kuúng; kug*		*kuŋ'*
				D				
deer	*suturik*			*tuturic*		*su-turik*		*suturik*
disciplina palm								*∫it*
dog	*ãuj*	*auih*		*aüf*		*aúq, aúx* *		*oef*
drum				*quebé*		*kebé*		*kcbe'*
dug-out canoe for river						*ru-tiét*		*rü*
dug-out canoe for sea (*bongo*)								*rü*
				E				
egg (crocodile)						*		*kubup*
egg (hen)		*		*		*krob'-kup*		*krokup*
Elaeis								*tuskra'*
espavel								*jcmkra'*
				F				
fire stones						*dji-bra-kang-i*		*dɟibrakaŋ-i*
fire vine (see *bejuco de fuego*)								
fish	*un*	*ung*		*ung*		*ung*		*uŋ*

* Pittier, 1941, p. 67, calls attention that the word for "dog" is *onomatopoeic.*

† Although "crocodile egg" is not given in any vocabulary except that of the writer, Pittier, 1941, p. 61, lists *kub* as a crocodile; while Thiel, in Lehmann, 1920, vol. I, p. 353, gives *cuh*; or *cu.*

‡ Gabb, 1881, p. 471, gives *kup* for "egg." Neither Gabb nor Thiel make a distinction between the "egg" and a "hen's egg," as does Pittier and the writer.

§ Thiel, in Lehmann, 1920, vol. I, p. 353, gives *i-cáp* for "egg."

ENGLISH	VALENTINI (1861) 1920	GABB 1881	THIEL 1882	THIEL 1920	PITTIER 1891	PITTIER 1941	PITTIER 1908	STONE 1945
				G				
gourd (oblong)								*tam*
gourd tree (oblong)						*tam-krá*		*tam-kra*
gourd (round)								*kwa'*
gourd tree (round)		*yám-kra*		*táng-crab*		*kuá-krá*		*kwa-kra*
grinding stone (for grain)		[16]		*cang*		*dji-ab-rá*		*kaŋ-kri'*
grinding stone (from graves)								*kaŋ-brus*
gruel								*ok-tʃa*
guácimo				*diám-crâb*		*dian-krá*		*diam-kra*
guan, crested				*dibih*		*dibi*		*divj*
guanacaste						*kriá-krá*		*kra'-kra*
guatusa		*chesbt*; *txext* (in Pittier, 1941, p. 59)		*cbéb*		*txeb'*		*txtʃe'*
guava			*thuib-uáb* [15]	[15]		*xuib-krá*		*tuj-kra*
				H				
hamnock		*kung*		*cung*		*kun*		*kuŋ*
hearth stone (see stone)								
huiscoyol palm						*tsu-krá*		*tsu-kra*
				I				
indigo							*tibi-kâb*	*tibi-kra*
Inga				*guróoba*		*guarok-krá*		*gwarɔk-kra*
				J				
jaboncillo								*tʃis*
jar (for chicha)								*dʒe-bwĩ-griŋ*
				L				
little stick grass								*tu*
loom					*cutb ibing*			*tramɔbo* (hispanic root?)

[15] Gabb, 1881, p. 479, does not list "grinding stone," but lists the word for "stone" as *kang*.

[15] Thiel, 1882, p. 93, gives the tree as *'thuib-uáb*, and the fruit as *uáb*.

[15] Thiel, in Lehmann, 1920, vol. I, p. 353, lists the fruit as *thuib-uáb*, but does not list the plant.

ENGLISH	VALENTINI (1861) 1920	GABB 1881	THIEL 1882	THIEL 1920	PITTIER 1891	PITTIER 1941	PITTIER 1908	STONE 1945
				M				
macaw			*thóoh*			*xoh'*		*ʃo*
majagua				*sang-cca*		*kro-kuá*	*krók-ua*	*kro-kwa'*
mango	There appears to be no indigenous name							
maraca								*ta kup*
Maria tree						*dúti-krá*	*dét-kri-kra*	*du'ti-kra'*
mastate (red)								*drok-kɔwak-kra'*
mastate (white)							*kavák-kra*	*kavak-'kra'*
May tree (pink)						*be-kra*; *bi-kra*	*be-kra*; *bi-krá*	*be-kra*
May tree (white)								*ʃubekra'*
mollusk (small)						*zurém-is*		*zuremis'*
monkey (red)		*nông*		*nong*		*nón*		*nɔŋ*
monkey (white-faced)		*ok*		*oc*		*ok*		*ok*
mullet (fresh water)	Apparently there is no name in the Boruca tongue							
mushroom								*szkwa*
				N				
nance				*thiqu-cra*		*xi-kra*		*ʃi-kra*
nene (male) *nene* (female)								*tubuk*; *bru-ra-mat*
				Ñ				
ñampí						[15]		*dɥ*
				O				
ojoche (fruit)								*kaba-wa*
ojoche (tree)						*kaba-krá*		*kaba-krá*
ojo de buey							*koók-tsa-kúp*	*ʃit-kup*
orange			*draj thina*			*drab'-tsi-na*		*dra'-tʃin*
				P				
pacaya palm				*cub*		*ku-krá*		*kɥ-kra'*
palmilera						*gxu-krá*		*guʃ-kra*
papaya				*cúb*		*kub'*, *u-krá*		*kɥ*

[15] Pittier, 1941, p. 65, lists this as *ñame*.

ENGLISH	VALENTINI (1862) 1910	GARR 1881	THIEL 1882	THIEL 1910	PUTTIER 1891	PUTTIER 1941	PUTTIER 1908	STONE 1945
parrot			*curij*			*kuriç*		*ʃriç*
pejibaye			*subi-dera*	*subia-cra*		*suba-krá*		*suba-kra'*
pejibaye (without thorns)								*uj-krá*
pejibaye (without seeds)								*ubp*
pejibaye (with seeds)								*uk*
perch						*soût*		*sort*
pestle or *mano*		*yu-ré*		*cang-e-qui-thurich*		*kang-i-uah'*		*kaŋ-i-wa'*
Philodendron								*so-kra'*
pig						*cuchi*		*kuʃi*
pig (peccary)		*sini*		"				*sini'*
pig (wild boar?)		*kra-mi-thuk*				*kram-xuk; kram-i-xuk*		*kram-ʃuk*
pigeon (large)	*oog*			*óoc*		*ook; ôbok*		*ork*
pigeon (white-wing)						*kibi-tut*		*kibi-tut*
pineapple		*bwat*		*boat*		*boaát*		*kwate*
pita				*ba*				*ba*
plantain		*mwa*	*ma (?)*[18]			*mwá*		*mawa*
poró				[19]			*bru-krá*	*bru-kra'*
poro-poro						*min-kra*		*main-kra'*
posole (pemican?)								*kubri'*
				R				
rattle (*maraca*)								*ta*
rice						*tu-trut*		*tutrût*
royal palm							*o-krá*	*o-kra'*
rubber (wild)							*gli-krá*	*gui-kra'*
				S				
salt				*quih*		*ki*		*kj*
salt (rock)								*kj'-ij-ka*
salt (soft)								*kj'-kog*
sandbox tree						*tuu-krá*		*tuu-kra'*

[18] Thiel, in Lehmann, 1910, vol. I, p. 351, gives *zini* for *caribianco*, which is a species of wild pig.

[18] It appears from the Bishop's vocabulary that *ma* may be considered as the word he uses for plantain; see Thiel, 1882, p. 103.

[19] Thiel, in Lehmann, 1910, vol. I, p. 355, gives *ming-crab*. This is, however, the *poro-poro*, and not the *poró*. See p. 6.

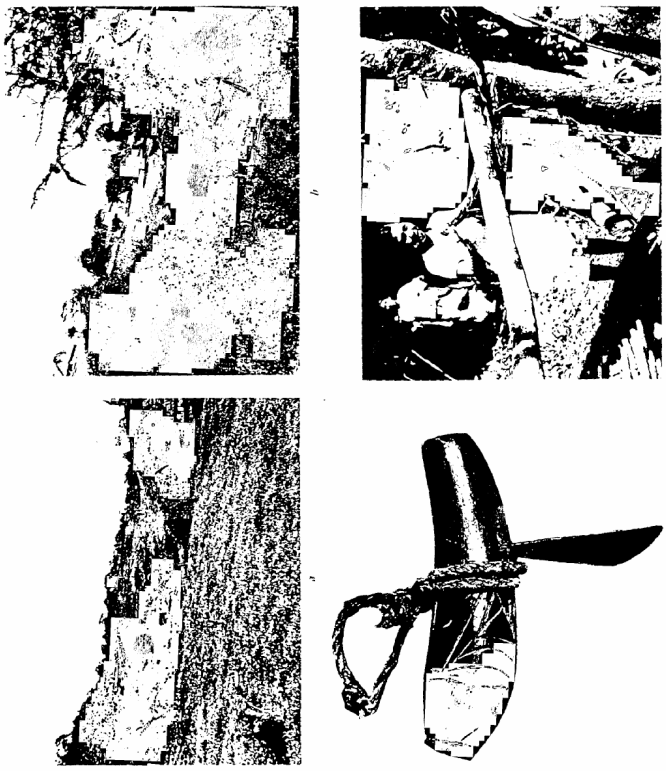
ENGLISH	VALENTINI (1862) 1910	GARR 1881	THIEL 1882	THIEL 1910	PUTTIER 1891	PUTTIER 1941	PUTTIER 1908	STONE 1945
sangritla tree								*rus kra'*
savanna grass								*bjak*
savanna grass (for new-born child)								*trik-kra'*
savanna grass (for rattles)								*suge-r a'*
seeds (black used in rattles)								*t-akra'*
sem palm							*sem*	*sem-kra'*
Serjania								*abiv*
shaman								*bruk-bri*
sieve								*ʃi-bra-wa*
skirt (*manta*)		*cuush-é*		*ciúuthi*	*cuuthé*	*kuux-é*		*kûʃ*
snook						*tiógk*		*tiok*
totacaballo							*kuéb-krá cueb-cra'* (in Pittier, 1888, p. 93 see References)	*kuet-kra'*
Spanish plum	There appears to be no name in Boruca							
spindle								*tun*
spindle whorl								*tun-kup*
squash								*dôij*
stilt palm (black, small roots)								*mana-kra'*
stilt palm (black, large roots)								*kanagira*
stone; hearth stone				*cbi-crâb*		*djii-tan*		*dji-tan*
Strychnos								*tebstengwa'*
sugar cane		*bab-ye-rá*		*budi*		*baq-dji-ra*	*bax dtirâb*	*bak-dji'-ra*
				T				
tamale of dried green plantains								*tʃari-k*
temple					*psbú-dji*			*pʃu-dji*
tepezcuintle				*dijt*		*biçt*		*bikt*
termite grass								*ʃupʃus*
tinamou (chestnut-headed)				*ong-coró*		*ond-krob; ung-buk*		*ond-kro*
tiquisque				*san*		*sán*	*san*	*san*
tobacco		*duva*	*du-á*	*duab*		*déuah'; duah'*	*dé-uá*	*dwa*

ENGLISH	VALENTINI (1861) 1910	GABB 1881	THIEL 1882	THIEL 1910	PITTIER 1891	PITTIER 1941	PITTIER 1908	1945
tortilla (of sprouted corn)								*ɔ-ʃi'*
tortilla (of old corn)						*o bó-ri; ó-txo-ri*		*obɔ̀ -ri*
toucan				*serit*		*srit; tsi-rit-srit*		*sirjt*
traps for birds								*turεka*
				V				
vessel (earthen)		*kwa-lé*		*furé*		*surab' krueib'*		*súa'grib*
vessel (iron)						*drik kručib'*		*drik-tsin*
				W				
wasp (wild)		*srung-wá*		*surúng-va*		*srun-uá*		*srun-wa*
water left from cocoa-butter								*kao*
wax		*but*		*but*		*but*		*bœt*
weave used in straw *maraca*								*ra-t a'*
weaving instruments								*ra-kra*
witchery								*mamram*
				Y				
yeast; also chicha with yeast								*monsera; moboso* (hispanic roots?)
yuca				*úng-cab*		[17]		*uŋ'-ka*
yucca	*Itavo* is the only name used. It is probably not Boruca							
yuquilla								*tʃama* (probably Spanish)

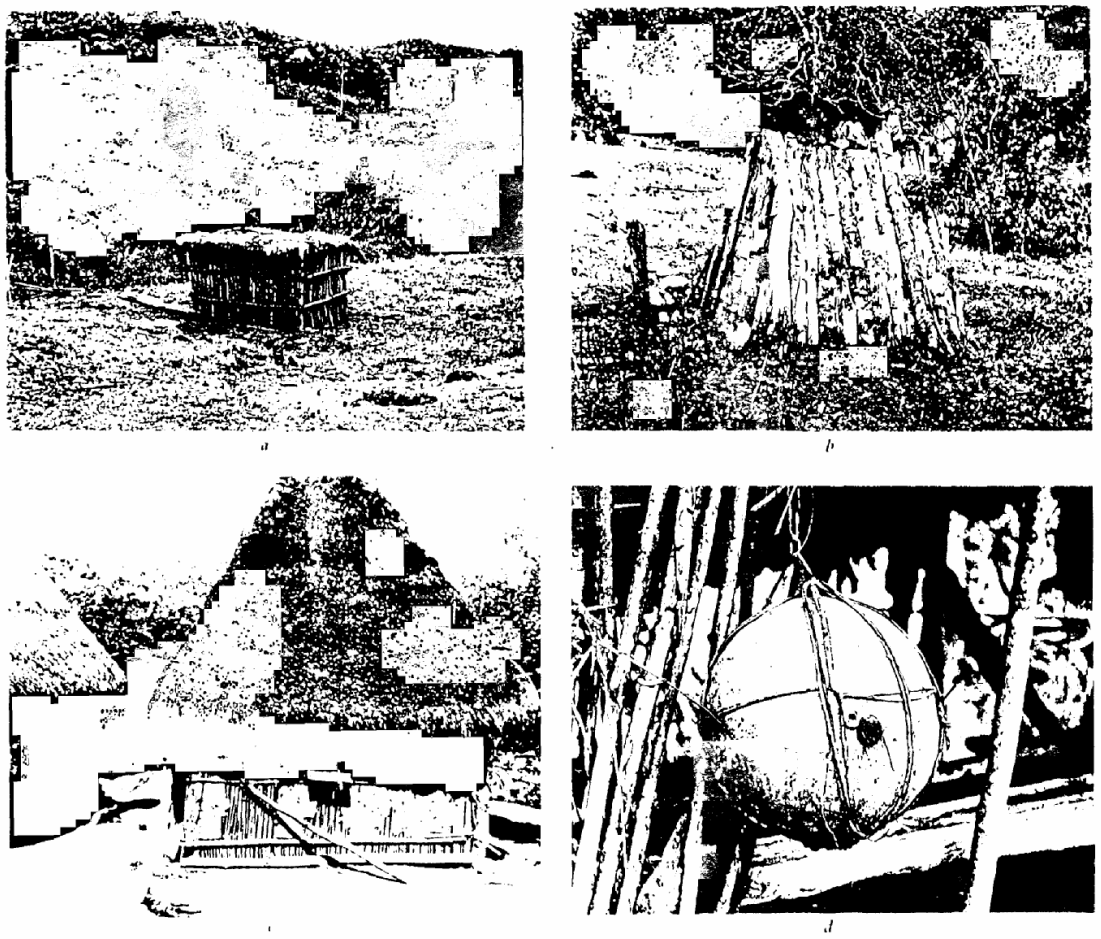
[17] Pittier, 1941, p. 45, lists the sweet variety (*Esculenta* Crantz) as *únkab'*. The writer could not find this variety amongst the *Borucas*. Pittier does not list the non-sweet type.

COLLOTYPE FIGURES 3–10

Errata:
Throughout legends, read "pejibaye" for "pejiballe."

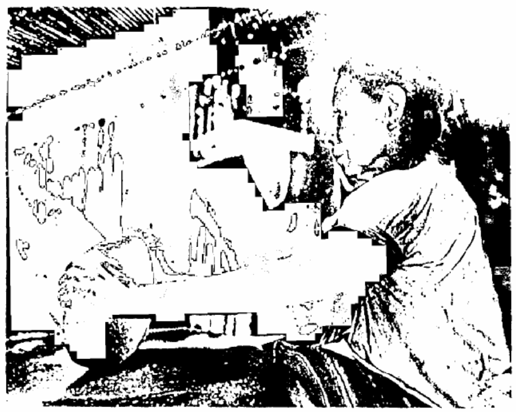


a, b, Distant views of Bunea village. *c*, Rice-cutter (actual size). *d*, Extraction of sugar cane juice.



a, *b*, Two types of chicken coops. *c*, Vertical pole construction with spots of *bajareque* and hanging "nest" for setting hen. *d*, Domestication of bees (hive made from a gourd).

... from a gourd). ... of *cajueque* and hanging "nest" for setting hen. *d*, Domestication of bees



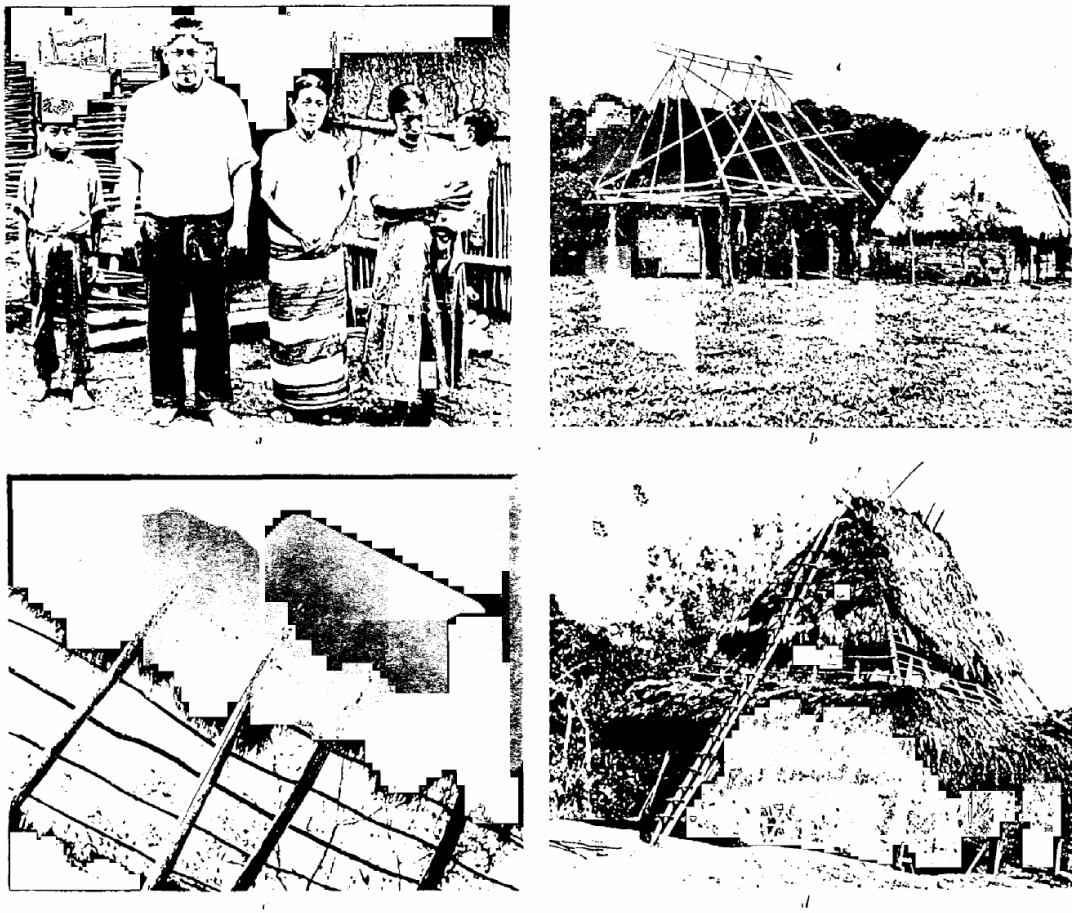
a

b

c

d

a, Method of grinding corn. *b*, Single pole as base of house (note window on left, and yeast for chicha hanging on front wall). *c*, House base of earth with wooden pole support (woman seated on low stool making thread). *d*, Front stone terrace, Curré.



a, Two types of house construction in same house. *b*, Bare framework of roof, Palmar Norte. *c*, Roof framework in more advanced stage, Borneca. *d*, Partly finished roof showing framework, grass, and ladder.

a

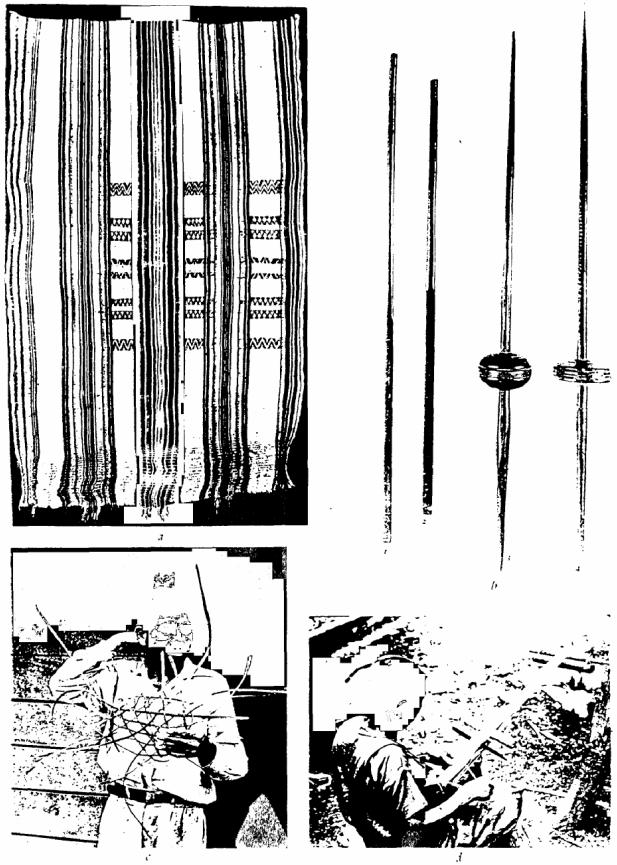
b

c

d

a, Ox and Indian woman laden with grasses for a roof. *b*, Artifacts of the *Boruca*: 1, *manta* or skirt; 2, *haba*; 3, doll; 4, *maracas* or rattles; 5, mask; 6, four-legged stool; 7, man's belt; 8, sieve. *c*, Artifacts of the *Boruca*: 1, four-legged stool with head and tail; 2, basket; 3, sieve; 4, bark cloth; 5, drum. *d* Women wearing the *manta*, or skirt, and blouse.

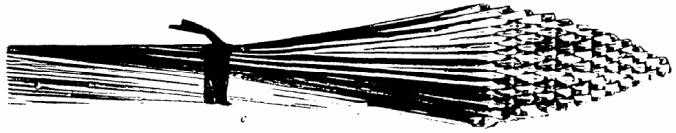
a, Girls laden with oranges in *habas* in front of school house. *b*, Cordage artifacts used by the *Boruca*: 1, *haba*; 2, 4, 7, string bags made by the *Talamanca* peoples; 3, *haba*, 5, string bag made by the *Boruca*; 6, hammock made by the *Boruca*. *c*, *Majagua* ready for use. *d*, Sample of rope techniques.



a. Manta or skirt with single-faced weft-pattern weave (courtesy of Peabody Museum, Harvard University). *b*, Peiballe artifacts: 1, 2, pejibaille rods used in weaving; 3, 4, spindles and whorls of pejibaille (courtesy of Peabody Museum, Harvard University). *c*, Start of a *hatu*. *d*, Woman weaving man's belt.

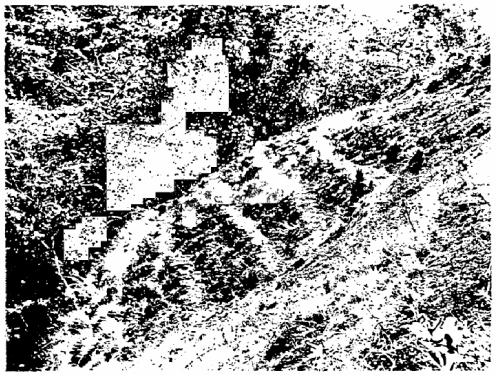
a

b



c

d



e

a, Funeral of a woman. *b*, Mask used in New Year's celebration. *c*, Straw *maraca* (⅔ actual size). *d*, Rattles or *maracas* with bone handles. *e*, Remains of contour agriculture on the savanna.

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