

THE PRESENT DISTRIBUTION OF  
NARCOTICS AND STIMULANTS AMONGST  
THE INDIAN TRIBES OF COLOMBIA

BY  
NESTOR USCATEGUI M.<sup>1</sup>

RECENT extensive and intensive interest in narcotic and stimulant plants on the part of medical and pharmacological investigators has focused attention on the need of knowing more about these plants from the botanical and anthropological points of view. During the past twenty years or so, significant strides have been made in determining the correct botanical sources of plant narcotics and stimulants. Very little has been done, however, toward bringing into some semblance of order the vast amount of information on their distribution, preparation, use and social significance, which is scattered here and there throughout ethnological literature and the writings of travellers.

Forasmuch as Colombia represents one of the regions of the world where the native population has developed to its highest degree the use of plants which act on the central nervous system as intoxicants or stimulants, I propose here to present a preliminary and very much abbreviated survey of the distribution of the use of these plants amongst the Indians of this country.

<sup>1</sup> Instituto Colombiano de Antropología, Bogotá, Colombia.

## I.

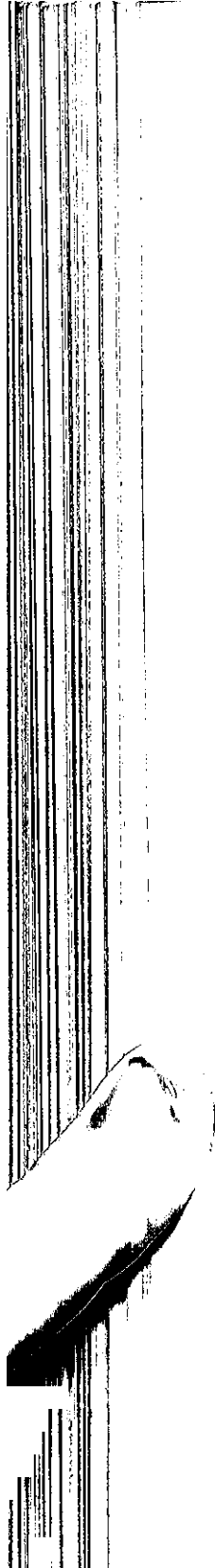
The population of Colombia is a racial mixture that is constantly increasing in complexity. It consists in great part of Europeans, especially from Spain, and of Indians from Middle America, the Antilles, the northern Andes and the Amazonian regions. There are also some negroes, mostly from Africa, who have intermingled with both whites and Indians, especially in some of the Departments. All these groups have contributed their share to the spiritual and cultural complex which man represents in Colombia.

Much of Colombia, sparsely populated and with a dearth of roads, is occupied by Indian tribes which subsist wholly on local resources. The rivers provide these natives with roads, meat and drink; the plant kingdom furnishes their clothing, shelter, food, medicines, stimulants, narcotics and poisons; the animal world supplies food, diversion and other material for magic.

These Indians employ sundry stimulants and narcotics of great potency in both magico-religious rites and in daily life as well. The accompanying map shows the wide distribution of the use of such plants. This is so great that it causes us to wonder why such a complex exists in Colombia.

Many of the naturalists, ethnographers, explorers and geographers who have lived or travelled amongst these Indians have attempted to interpret the reason for the extensive use, and even near-abuse, of stimulants and narcotics in this area. Actually the reason is simple: it is due merely to primitive mentality which is mystical. The Indian considers all nature and the visible and imagined cosmos to be endowed with spirit-forces. He does not recognize any boundary between natural and supernatural phenomena. This reason is in concord with that of Pardal (27) and Frazer (14), but is not in agreement





with Taylor's animism theory (48) or Levy Bruhl's pre-logical mentality hypothesis (23). There are other more recent theories which, because of the brevity of this article, I do not mention, and which likewise fail to accept a simple explanation for the use of narcotics. Unfortunately, some anthropologists, in studying native peoples, like to presuppose a complex type of mentality. In doing so, they accomplish nothing; on the contrary, they tend only to complicate what is obvious, logical and simple.

Insofar as the narcotics and stimulants are concerned, it has been shown that the highest cultures of America used these plants for religious or magical purposes and that, when the Spanish conquest broke down their religious, social and economic structure, these uses passed from the priestly and noble classes down to the masses who seized upon them to help solve their post-conquest problems. If the employment of narcotics sometimes developed into a commercial exploitation—as with coca in Peru and Bolivia—the immediate cause of this evil lies in intervention by white men (50). The native never looked upon his narcotics and stimulants as sources of pecuniary advantage. In pre-Columbian times, amongst American cultures of lower material and spiritual development, narcotics and stimulants were also used; and they continue to be used at the present time. Likewise, there has always existed—and there still exists—a magical or religious motive for their employment (52).

This is the field in which my own interest lies: an historical and social study of the native cultures of Colombia which are characterized at present by the widespread use of these plants. I am referring here only to present-day cultures, for to discuss the pre-Hispanic civilizations would demand too extensive a treatment.

In an earlier article (50), I have considered the chemical and therapeutic studies which have been made on coca.

These obviously have great practical importance, and the world-wide utilization of the active principle is outstandingly beneficial to man. Nevertheless, I must point out that the chemical studies of these narcotics and stimulants are far from complete. This is due primarily to the poor quality of properly identified materials on which previous investigations have been based. Furthermore, medical and therapeutic studies have usually been made on animals and in surroundings completely different from the natural environment.

The experiences realized personally by some of the naturalists and ethnographers in the use of these plants, so to speak *in situ*, have relative value, and, together with detailed descriptions by travellers or trustworthy natives, they give us some idea of the actual effect of these plants on man. Without in any way detracting from these investigators, we must say that in their accounts of the uses, kinds, collection, preparation, ceremony, symbolism and mythology of narcotic and stimulant plants most writers offer very incomplete data and usually fail to preserve material on which definite botanical determinations may be made. Furthermore, in the case of those naturalists of the past century who wrote down careful notes on the uses of plants and gathered specimens which permitted proper identification, the name of the tribe involved was often not critically determined.

My own experiences with some of the tribes of Colombia, my personal contacts with other investigators with field experience and my recent study of the literature have made it possible for me to clarify and amplify many points which hitherto have been poorly understood. My former purely ethnological approach has, during the past year, been enriched by a botanical panorama, especially in the field of narcotics and stimulants, made pos-

sible by the use of the extensive and extraordinarily well organized libraries and museums at Harvard University and by my associations with botanists at this institution.

The present very brief paper on the overall distribution of the use of narcotics and stimulants in Colombia is offered merely as an introduction to a longer and more detailed work on the subject which I am preparing as a Guggenheim Fellow in Ethnobotany at the Botanical Museum of Harvard University.

For help and advice on numerous points, as well as for editorial assistance, my thanks are due especially to Dr. Albert F. Hill and Dr. Richard Evans Schultes of the Botanical Museum of Harvard University; and to Miss Siri von Reis and Mr. Arthur S. Barclay of the Gray Herbarium of the same University. I also wish to thank Miss Ruth Barton for her skillful execution of the map.

## II.

### PRINCIPAL NARCOTICS AND STIMULANTS USED BY NATIVE TRIBES IN COLOMBIA

<i>Common name</i>	<i>Identification</i>	<i>Distribution</i>
Coca	<i>Erythroxylon Coca</i> Lamarek	Peru, Bolivia, Ecuador, Colombia
	<i>Erythroxylon novogranatense</i> (Morris) Hieronymus	West Indies, Trinidad, Peru, British Guiana, Venezuela, Colombia (15)
Yajé	<i>Banisteriopsis Caapi</i> (Spruce ex Grisebach) Morton	Colombia, Brazil, Bolivia, Peru
	<i>Banisteriopsis inebrians</i> Morton	Colombia, Ecuador, Peru
	<i>Banisteriopsis Rusbyana</i> (Niedenzu) Morton	Colombia
	<i>Tetrapteryx methystica</i> R. E. Schultes	Brazil (and Colombia?)
Yopo	<i>Piptadenia peregrina</i> Bentham	Antilles, Guianas, Venezuela, Colombia, Brazil
Yakee, Yato, Paricá	<i>Virola calophylla</i> Warburg	Colombia, Brazil, Peru,
	<i>Virola calophylloidea</i> Markgraf	Venezuela

Mets-kwai borrachera	<i>Methysticodendron Amesianum</i> R. E. Schultes	Colombia
Tonga, Borrachera	<i>Datura suaveolens</i> & Bonpland ex Willdenow <i>Datura candida</i> (Pers.) Safford <i>Datura arborea</i> Linnaeus <i>Datura sanguinea</i> Ruiz & Pavón <i>Datura dolichocarpa</i> (Lagerheim) Safford	Humboldt Colombia, Ecuador, Peru
Tobacco	<i>Nicotiana Tabacum</i> Linnaeus	Widespread (16)
Yoco	<i>Paullinia Yoco</i> R. E. Schultes & Killip	Colombia, Ecuador, Peru

### III.

#### DISTRIBUTION ACCORDING TO LINGUISTIC GROUPS

In view of the lack of any adequate cultural classification of the Indian tribes in Colombia, I am considering the various groups in accord with a linguistic classification, realizing, at the same time, that this has really very little significance insofar as the use of narcotics and stimulants is concerned. I am also discussing the tribes in order from north to south along the Andes and Pacific coastal regions and then across the Amazon valley to the llanos or Orinoco basin.

**Guajiro:** linguistic family *Arawak*, according to Rivet (38).

The Guajiros inhabit the desert area of the Guajira Peninsula in northeastern Colombia. They employ a tobacco-paste which they chew, especially for magical purposes. The *piache* (witch-doctor) uses a piece of *manilla*, tobacco-paste brought in from Rioacha in the Departamento del Magdalena, Colombia, or from Maracaibo in Venezuela. If *manilla* be unavailable, leaves of *macuira*, a plant similar to tobacco, are chewed to bring about a state of trance for divination (28).

At the present time, the cigars and cigarettes of the

white man have become favorites and must likewise be imported, since the climate of the Guajira makes the cultivation of good tobacco impossible. In spite of the restrictions imposed by the climate, I believe that the use of tobacco is an old culture-trait, associated (in the period of the Conquest and in Colonial times) with the employment of coca or *hayo* for chewing, a habit borrowed probably from the neighboring Indians of the Sierra Nevada de Santa Marta. This is attested to by several chroniclers (10, 19). It seems also to be supported by its marked connection with magic; for the *piache* (man or woman), believes himself to be appointed by Wanurú, Spirit of Death, and begins his intoxication by chewing tobacco for several days until a state of ecstasy is attained (29). This ecstasy brings to mind that of the Kogi priests from the Sierra Nevada who induce similar semi-narcotic states through taking coca mixed with concentrated tobacco-water. Differences in concentration of this tobacco-extract account for the different names: *noai* and *mo* or *chimó* (12) referring to a thick paste or jelly-like extract, *ambire* or *ambirá* to the liquid extract or water. It seems that this culture-trait passed from the Sierra Nevada de Santa Marta to the Venezuelan Andes and thence to the east-central region of that country. The Guajiros acquired it at the same time they acquired coca-chewing. Due to difficulty in transporting coca, which cannot be grown in the Guajira, coca-chewing died out, the custom surviving only in magic rituals with the chewing of tobacco or *macuira*-leaves, instead of coca (50, 51).

**Kogi, Ika, Sanka:** linguistic family *Chibcha*, according to Rivet (38), Holmer (17).

These tribes are known under the generic name Araucos or Arhuacos, an epithet causing considerable confusion with the name of the linguistic family Arawak.

They dwell on the eastern slopes of the Sierra Nevada de Santa Marta in the northern part of the Departamento del Magdalena (36).

The ancient culture-trait of coca-chewing is conserved amongst these Indians. The coca or *hayo* is mixed with tobacco-extract, *ambirá* (53). Proof of the antiquity of the custom is given by references to it in the chronicles of the Conquest and Colonial periods. Archaeological evidence, especially such finds as stone masks depicting coca-chewing — masks analogous to wooden ones made by these people today — relates these tribes and this culture-trait to the Taironas or Tairos. Linguistically, the word *hayo* stems from Tairona. Furthermore, there are certain other vestiges which indicate that the cultures of the Sierra Nevada have continued for over five hundred years some of the older and similar Tairona culture-traits (50).

Coca and tobacco, amongst the Sierra Nevada Indians, play a wholly religious role and are used in order 1) to enable the subject to fast, 2) to attain complete sexual abstinence, 3) to keep from sleeping and 4) to refrain entirely from speaking of the "ancestors" (that is, to avoid dancing and reciting) (37).

Only the males employ tobacco and coca, because of a strong religious taboo which is widespread throughout Andean cultures.

Coca-plots are put in beside every house or around settlements, where they occupy as much land as is possible, as well as in distant fields. These Indians distinguish three kinds of coca, each kind belonging to different tribes. One variety with long leaves (grown by the extinct Kamkuama tribe); one with small leaves (Kogi); and one with very minute leaves (Ika). Furthermore, it is said that "the ancients" used a tree (unfortunately not determined botanically) of the high moors or *páramos*

with leaves like coca and called *guanguara* or *guanguala*.

Any person desiring to plant coca must get leaves from the *máma* (priest). Cultivating and working the land is man's work; but harvesting the leaves is woman's task. As coca is a perennial, the leaves can be gathered at any time of the year. The men prepare coca in the houses, a very painstaking chore, since coca is a sacred tree and must be duly respected when it is handled. The leaves are first cleaned of insects, petioles and damaged parts, and are then dried. Then they are put into a pot kept only for this purpose and are toasted over a slow fire in the ceremonial hut. Constant stirring is necessary, for they must not be dried too much, in order to retain a bright green color. When ready, the leaves are put into a small cotton bag (86).

As elsewhere, coca leaves must be mixed with lime before chewing. This alkaline agent is made by burning the shells of bivalves found on the Atlantic Coast. The burning is done on a small pyramidal pile of grasses, and the lime is gathered up in a bottle-shaped gourd (*Cucurbita Pepo*). The gourd, once filled, becomes for its owner a life-long companion; for in the initiation rites, young men are given the gourd and told that it symbolizes woman. The young man is married to this "woman" during the ceremony, and he perforates the gourd in imitation of defloration.

The introduction into the gourd and the rubbing motion of the stick are interpreted as coitus, and, culturally, it is understood that all true sexual activity should be repressed and should be expressed only in the use of coca. All biological needs, all frustrations, are thus concentrated in this tiny instrument which, to the Indian, represents *food, woman* and *memory* (86).

Tobacco, amongst these people, is taken according to the native, to make coca more agreeable. Tobacco plots

are located near the houses, and their cultivation is left to the men. Women gather the leaves.

As in the case of coca, tobacco has a part in the mysticism of these Indians. Tobacco-concentrate, *ambira*, which, like coca, is kept in a gourd, is prepared by a long steeping of the leaves and by mixing the resulting liquid with *yuca*-starch (*Manihot utilissima*) and *sugii* (*Sorghum* sp.). There is a certain similarity between the use of tobacco in this form and that characteristic of the Witotos of the Amazonas, and, in fact, there is some analogy in the mythology of these two groups of Indians (50).

**Motilon:** linguistic family *Karib*, according to Rivet (38).

The Yuco, as they call themselves, who live in the Sierra de Perijá, Departamento del Magdalena, belong to the Karib group, but the famous "Motilones" of the Catatumbo appear to be Arawaks (32).

This tribe grows tobacco in a rather primitive manner. In preparing tobacco, they merely hang leaves from the rafters of the houses to dry. The dried tobacco is carefully kept in baskets by the men. Smoking is done only in pipes. Both sexes and all ages smoke, children passing from their mother's breast to pipes. The pipes are of clay with a wooden stem (33).

It seems that the Yuco knew of coca and chewed it until very recently. It has now completely disappeared. Yuco coca-chewing was probably due to commercial relations with the Indians of the Sierra Nevada, for the Yuco did not grow coca, notwithstanding an appropriate climate, and, significantly, it was that fringe of the Motilones nearest Sierra Nevada which knew of the coca-chewing custom.

**Chimila:** linguistic family *Arawak*, according to Reichel-Dolmatoff (31).

A primitive Indian group, the Chimilas live in the extensive forests occupying the basins of the Magdalena, Ariguaní and Cesár Rivers.

Tobacco-chewing is practiced by the oldest inhabitants. Dried leaves are pulverized between two stones and to the powder is added a small quantity of ashes and some honey. Small cakes about two centimeters long are made of this mass. Occasionally, one may see thick cigars of Chimila-grown tobacco, but the usual way in which the male members of the tribe employ the narcotic is in chewing.

**Chami:** linguistic family *Karib*, according to Rivet (38).

The Chamí live in Corozal, Municipio de Río Frío, Departamento del Valle.

These Indians have a tobacco-pipe in the form of a small vase with four appendages on the basal edge by means of which four persons at a time smoke the narcotic. This ceramic is exceptional: a collective pipe of such singular construction represents a culture-trait hitherto unsuspected and can logically be considered a ceremonial object. The discovery of clay elbow-pipes also gives us reason to suspect that smoking amongst the Chamí was ceremonial (34, 11).

**Pijao:** linguistic family *Karib*, according to Rivet (38).

The Pijao comprise three groups representing one ethnic unit living in the southern part of the Departamento del Tolima.

Coca is found amongst these Indians and is used by them in the same way as by the neighboring Paez. Since coca is infrequent amongst *Karib* tribes and since the Pijao have been neighbors of the Paez from the time of

the Conquest, the trait was probably borrowed by the Pijao from their Chibcha neighbors, the Paez, just as the Mutilones borrowed it from the Chibchan groups of the Sierra Nevada, and Karib groups in the Amazon acquired it through contact with other tribes (35).

**Choco:** linguistic family *Karib*, according to Rivet (38a).

These Indians live in scattered groups along the Pacific coast and in the headwaters of the Río Condoto in the Departamento del Chocó.

Some groups of the Chocós use *Datura* (possibly *D. suaveolens*) in magic. According to Wassen (54), these natives probably employ a species of *Datura*, and Seemann (41) asserted as early as 1852 that the Indians of the Chocó prepare a decoction of *Datura* seeds which is sometimes given to children in maize-beer, in which drink its ill effects are said to be counteracted. The Indians believe that persons under the influence of *Datura* (*tonga* or *borrachera*) have the power of divination.

**Paez:** linguistic family *Chibcha*, according to Rivet (38), Ortíz (26).

This is the largest tribe in Colombia, numbering about 30,000. It is distributed as follows: one part in the Departamento del Tolima, between the Atá and Saldaña Rivers; another and major part in the region called Tierdentro in the northeastern section of the Departamento del Cauca.

The Paez have grown and used coca for more than four centuries. Coca cultivation is carried on in the valleys crossed by the Paez River and up to 2000 meters in altitude.

Amongst these people, coca is mainly a dietary complement, but it is also used in magic and medicine. All

members of the tribe, without regard to sex or age, chew coca, and they traffic in it, using it as a monetary medium (50).

As in all Chibchan groups, men plant coca and women harvest it. This is partly in accord with division of work between the sexes and partly in accord with tradition. I believe that, insofar as the women are concerned, there is a magico-religious taboo; but this has in part disappeared due to the influence of Catholic missions and consequent acculturation, even though coca is used in magic in all twenty Paez reservations and the usual Indian mentality is still dominant throughout the Paez population.

Coca leaves are toasted over a slow fire in great earthen pots. When the leaves are dark green with a golden or straw-colored sheen, they are ready for use. They are carried in woven woollen bags, which every Paez Indian wears hanging from the neck. The lime is provided from limestone, abundant in the region, which is broken up by fire. It is kept in a small gourd carried in the coca-bag.

The "chewer" takes a few dried leaves from the bag and places them in the mouth where they are moistened and rolled into a pellet with the tongue. Then a small amount of lime is extracted from the gourd with the fingers, placed in the mouth and mixed with the chewed leaves. This produces the desired effects.

The Paez likewise chew tobacco, principally in magic and medicine (1). Generally, they do not cultivate the plant, buying manufactured cigarettes for the purpose. The shaman employs tobacco mixed with coca during magic-sessions. It seems that the intrusion of tobacco into Paez medicine is not very old. *Borrachero* (a species of *Datura*) is used by the witch-doctor as a venomous narcotic to cause enemies to become insane (1).

**Guambiano:** linguistic family *Chibcha*, according to Rivet (38).

The seven thousand Guambianos, who dwell in the western part of the Departamento del Cauca, use coca magically in those reservations economically most advanced (Quizgó and Guambía) and in Ambaló as a dietary supplement, but naturally with magical connotations. Coca cultivation has decreased appreciably. The preparation of the leaves is the same as amongst the Paez (50).

**Sibundoy:** linguistic group *Koche*, according to Ortíz (26b).

The Sibundoy Indians, speaking Kamsá, live in the eastern half of the Valley of Sibundoy.

In their magico-therapeutic rites, they make use of a number of solanaceous plants: *Datura candida*, *D. sanguinea* and *D. dolichocarpa*. Each of these species of *Datura* has its special native name. There are further, according to Barclay and to Schultes, bizarre forms of these species with deformities due probably to virus-infection, each of which the Indians recognize as a different "kind" of *borrachero* and each destined for a specific magico-therapeutic use. The Sibundoy also possess another curious solanaceous drug, an endemic of their high, mountain-girt valley: *Methysticodendron Amesianum*.

The use of these highly dangerous solanaceous narcotics is restricted to the medicine-men who employ them for divination, prophecy and therapy. The intoxicating effects, which may reach the point of delirium, sometimes last up to several days, with periods of utter unconsciousness.

Only the leaves are used in preparing the intoxicating drink, the infusion taking from thirty minutes to one hour to prepare. The medicine-men never imbibe the liquid all at once, delaying the drinking ceremonially over a two or three hour period. In the case of *Methy-*

*sticodendron*, tradition dictates that the drug must be taken during the wane of the moon. *Yajé*, coca and tobacco are doubtlessly present as imported curiosities in the bundles of magic-elements of Sibundoy medicine-men, but none of these narcotics is used widely by the Kamsá people (46).

**Siona:** linguistic family *Tukano*, according to Rivet (38), Loukotka (24), Castellví (3), Ortíz (26).

Inhabitants of the Comisaría del Putumayo, between the Sucumbíos and Guamüés Rivers, these Indians are allied linguistically and culturally to the Tukanoan tribes of the Vaupés, from which region they probably came, perhaps at an earlier date than the only other western Tukanoan group, the Koregwahes. They have lived in their present locality, however, at least since Colonial times and have probably adopted some of the narcotics and stimulants from their non-Tukanoan neighbors.

The Sionas use tobacco in the form of cigars and concentrated extract (2). They prepare tobacco in a most curious way which is, in reality, a combination of the cigar-making of the Vaupés Tukanos and the *ambíl*-making of the Witotos: they add peels of unripened bananas and cacao husks, burned and sifted, to the extract. Furthermore, they smoke cigars and use the long, communal ceremonial cigar of the Tukanos of the Vaupés. But they do not, as do the Tukanos and Witotos, use coca, the place of which is filled by *yoco*.

*Yoco*, a stimulant rich in caffeine, is one of the principal economic plants of the Sionas. Schultes believes that the origin of the use of *yoco* may be Kechwa, since its name, used by all the Indians of the Putumayo regardless of their linguistic affinities, is apparently derived from Inga, a splinter tribe, once numerous, located in the region of Mocoa, speaking a dialect of Ecuadorean

highland Kechwa. There is, however, as Schultes points out, no real proof on which to base such a theory (45).

They also take *yajé*, making use of *Banisteriopsis quitense*, *B. inebrians* and *B. Rusbyana*. From these narcotic lianas, they prepare a drink employed preferentially by the witch-doctors for magic purposes. Occasionally, other plants are added to the *Banisteriopsis*, some of which are not malpighiaceae: a species of tree-*Datura*, the amaranthaceous *Alternanthera Lehmannii* and, sometimes, tobacco-leaves (47).

**Kofan:** linguistic family *Chibcha*, according to Rivet (38) and to Jijón y Caamaño (18a); family uncertain or unknown according to Ortíz' (26) and to Mason (24a). Cf. Castellví classification (4).

The Kofáns are located near Puerto Ospina on the Putumayo River and on the Sucumbíos and Guamüés Rivers in the Colombian Comisaría del Putumayo and along the Aguarico River in adjacent Ecuador.

Tobacco is important to the Kofáns. It is used in long rolls or pressed cakes, similar to those found amongst the Tukanoan groups of the Vaupés. Both tribes now import the rolls from Brazil. The Kofáns use also the concentrated extract, which they call *ambíl*, as do the Witos of the Amazonas (51).

*Yajé*, made especially of *Banisteriopsis inebrians* and probably also of *B. quitense*, is one of their more important narcotics, and its use is not confined to the priestly or doctoring class.

The Kofáns are the most excessive users of *yoco*, which is consumed daily by all individuals. When the wild supply of this forest vine is exhausted in a region, an entire settlement may move in order to locate itself near a new and adequate supply. It is never cultivated, since it is such a slow-growing liana (47).

**Inga:** linguistic family *Kechwa*, according to Ortíz (26b).

This reduced group of Indians, now living near Mocoa in the Comisaría del Putumayo, is probably a remnant of a former Kechwa expansion from the highlands eastward over the slopes of the Andes in southern Colombia.

These Inga Indians are much given to the use of *yajé*, made normally of *Banisteriopsis inebrians* or *B. Rusbyana*, sometimes with non-malpighiaceous admixtures. They refer to the narcotic also as *ayahuasca*, a generalized Kechwa name meaning "vine of the dead." *Yajé* also finds use amongst the Ingas as a violent purgative. For magical purposes, *yajé* is taken sometimes only by the shaman and sometimes by any male member of the tribe under the supervision of the shaman (47).

The Ingas likewise use *yoco* daily as a stimulant. Coca is never chewed by members of this tribe (45).

**Koregwahes:** linguistic family *Tukano*, according to Rivet (38), Mason (24a).

The Koregwahes, like the Sionas, probably came westward from the Vaupés in pre-Colonial times, but apparently at a later date. Quite possibly they brought the coca habit with them.

Unlike the Sionas, however, they do not use tobacco, but have adopted *yoco* and *yajé*. I cannot dare to guess from whom they borrowed the use of *yajé* (8), because almost all of the tribes of the Putumayo, Amazonas and Vaupés use it.

**Witoto:** linguistic family *Witoto*, according to Koch-Grünberg (20), Rivet (38), Castellví (7), Ortíz (26).

The Witotos are dispersed in several localities of the Colombian Comisaría del Amazonas, especially along the Karaparaná and Igaparaná Rivers, and in adjacent parts

of Peru. The tribe suffered dismemberment through the exodus of many groups around the first of this century, as a result of persecution during the rubber boom. Due to years of harsh treatment as virtual slaves in rubber work, they suffered also much cultural disintegration in this period.

They use a tobacco-concentrate, a syrup-like or semi-solid extract of a deep brown color, called *yera*, *yeras* or *djerabe* (49, 21, 6).

The largest and greenest leaves from the lower part of the plant are boiled slowly in a large earthen pot for several hours. Before the extract becomes thick, it is taken from the pot, and alkaline salts are added to it. These salts are prepared from the petioles and leaves of a species of *Chamaedorea* and from the young shoots of a species of *Bactris*. They are called *cha-pe-nas* in Witoto and are obtained by the evaporation of the water which has been passed through the ashes of the aforementioned plant materials (42).

The preparation of *ambíl* differs little amongst the sundry groups of Witotos, and this culture-trait has its roots deep in Witoto history and mythology (28). There is a surprising similarity between this use of tobacco, and that of the tribes of the Sierra Nevada de Santa Marta. To explain this through cultural parallelism would be too premature, and it is necessary to delve a bit deeper into the history and mythology of the two tribes to arrive at a satisfactory solution.

Usually the Indians employ *ambíl* together with coca, but they occasionally use it alone. Witoto women do not chew coca, though some take tobacco. It would seem that the vestiges of an ancient taboo against the use of these narcotics by women still exists (50).

Coca preparation likewise presents reminders of ancient ceremonials. The fresh green leaves, toasted brown in an

earthen pot, are pulverized, and the powder is mixed with ashes of the *yarumo* trees (*Cecropia* spp., especially *C. peltata* L.). This mixture is sifted through pounded bark-cloth and is thus made ready for chewing (42).

Even though the use of these two plants has lost much of its ancient ritualistic savor, they are still taken at important or special meetings or councils, where critical tribal business is discussed or tribal history and tradition are recited (25).

One naturally finds certain slight variations in the preparation of tobacco and coca within the Witoto groups, especially between the Witotos themselves and the Boras. The Boras live more apart from missionary influence than do the Witotos to-day and, consequently, have preserved more of their old traditions and indigenous culture. Some students, such as Rivet (38), believe that the Boras belong to the Tupí-Guaraní linguistic family, whereas others, like Castellví, hold them to represent a distinct family. Jijón y Caamaño (18a) maintains that the Boras are related to the Witotos. My personal belief is that only a closer study of the Bora language can solve this riddle, even though it is clear from the reports of reliable travellers that Witotos and Boras converse together in their respective languages and understand one another with difficulty. Culturally, however, the Witotos and Boras, neighbors for centuries, are extremely close, and we have discussed them here with the Witotos for this reason.

Cigars are smoked amongst some of the Witoto groups to the north. The cigar is made with a banana-leaf wrapping and the tobacco is that commonly cultivated by the Witotos (51, 18).

Finally, we can point to the use by the Witotos of the hallucinogenic narcotic *ayahuasca* or *yajé* (*Banisteriopsis* spp.), though apparently on a rather reduced scale. Here

the use of *ayahuasca* is commonly restricted to the shaman and has not extended itself to the whole population.

The Miraña (Miranya) Indians, now much reduced in numbers but once widely feared for their war-like characteristics, are usually classified linguistically as Witotoan. According to information which I have received from travellers and others who know the Mirañas, I believe that there may be very good reason for suspecting that they are not Witotoan and that they may perhaps constitute even a distinct family. They now dwell near La Pedrera on the Caquetá River and along the lower reaches of the Kawinarí River, a southern tributary of the Caquetá. There are also groups of Mirañas in adjacent Brazil.

Because of long proximity, the Mirañas are culturally, in many respects, similar to the Witotos and Boras. They use coca in large quantities in daily life and are said to employ tobacco in the form of snuff and *ambíl*. There seems to be no report that they take *caapi*.

**Tukano:** linguistic family *Tukano*, according to Rivet (38), Castellví (5), Mason (24a) and others. Cf. the classification of Koch-Grünberg (21).

Tukano represents one of the most important linguistic families of South America. The sundry Tukanoan tribes dwell for the most part in the Comisaría del Vaupés and in adjacent Brazil. The more important tribes in the Colombian Vaupés are the Gwananos, Piratapuyos, Taiwanos, Makunas, Barasanas and Djis. The Kubeos are usually classified as Tukanoan, but there may be reason for questioning their belonging to this linguistic family. They represent the culture of the tropical forest, are agriculturists, fishers, river-travellers, use the hammock and know the art of ceramics. Socially, they are fratri-cidally organized (14a).

Tobacco, coca, *paricá* and *caapi* are the narcotic plants that figure in their daily life as well as in therapeutic and magic rites (43, 47, 50, 51).

The great cigar, made from rolled tobacco leaves covered with leaves of maize, banana or other plants or with the soft inner bark of an unidentified annonaceous tree, is characteristic of the Tukanos. Held in an artistically turned forked wooden support, this three-foot cigar is smoked in certain festival ceremonies. Its use is, however, on the wane (51).

Tobacco is also the basis of a snuff amongst these Indians. The leaves are dried and pulverized, and the resulting brown powder is mixed with an equal amount of ashes from any of a number of plants. The final snuff is greyish. Both sexes may partake of tobacco-snuff which is rather commonly used. It is kept in a case made from large land-snails with a tube or mouth fashioned from a bird bone.

*Banisteriopsis* is taken by any male member, even though its use is essentially in magic. It is customarily employed during various dances which take place more frequently during the rainy season. Occasionally, treatment of disease or exorcism are practiced during *caapi*-dances. *Caapi* is perhaps best known as the strong narcotic given to enhance the bravery of Tukano boys about to undergo the violent physical ordeal connected with their initiation ceremony—the Yuruparí Dance (47).

The Tukanos likewise use a snuff prepared from the blood-red resin of certain species of the myristicaceous tree, *Virola*, especially *V. calophylla* and *V. calophyll-idea*. It is commonly known as *pa-ree-lá* amongst the Tukanos, though this is a Tupí-Guaraní loan-word. The Puinaves call this intoxicating snuff *ya-kee*, the Kuripakos *ya-to*. It is prepared by boiling the resin for many hours and allowing it to sun-dry to a hard mass which is

then pulverized. An alkaline admixture of ashes of bark from a species of wild cacao-tree (*Theobroma subincanum*) is added to the powder, and the resulting preparation is sifted to form the final snuff. Unfortunately, this has been widely confused in anthropological literature with an intoxicating snuff made from the leguminous seeds of *Piptadenia peregrina*, a narcotic used in Colombia by non-Tukanoan tribes inhabiting principally certain western tributaries of the Orinoco River (43, 43a).

**Desano and Tariano:** linguistic family *Arawak*, according to Rondon (39a), and Schultes (personal communication). Cf. the classification of Koch-Grünberg (22).

These two Arawak tribes live along the lower part of the Colombian course of the Vaupés River and on affluents of it, in a long and close geographic and cultural proximity to the Tukanoan groups of the region.

Their use of coca, *caapi* and tobacco are similar in all respects to those of the Tukanos. They also know and employ *paricá* or *Virola*-snuff as do their Tukanoan neighbors (43).

**Tikuna:** linguistic family *Arawak*, according to Castellvi (3).

The Tikunas live in the Trapecio Amazónico of Colombia and adjacent parts of Brazil and Peru. They employ tobacco in the form of a cigar (9, 25a), and there are reports that they conserve the use of the pipe for smoking (51, 25a). They likewise use *paricá* or *Virola*-snuff. I once believed, on the basis of a reference by Tessmann and Nimuendajú (25a), that the Tikunas employed *yopo*, but since *Piptadenia peregrina* is not known in their area and bearing in mind Schultes' notes on the distribution of *Virola calophylla* and *V. calophylloidea*, I now believe,

even in the absence of botanical specimens, that we may be justified in assuming that they make their narcotic *paricá* from *Virola*. Furthermore, Nimuendajú states that Tikuna snuff is made from the bark of a tree.

**Yukuna:** linguistic family *Arawak*, according to Koch-Grünberg (22), and Schultes (personal communication).

The Yukunas, who inhabit the uppermost reaches of the Miritiparaná River in the Comisaría del Amazonas, have now almost fully absorbed a once-large tribe of unknown linguistic grouping, the Matapies. The Yukunas are great chewers of coca and employ tobacco-snuff to excess. They use tobacco also in the form of a thick extract and in long cigars, as do their Tukanoan neighbors. *Banisteriopsis* spp. are likewise employed to make a narcotic drink in ways similar to those of adjacent tribes, even though the extent of the employment of this drug is much smaller than that of the Tukanoans to the north (47).

**Tanimuka:** linguistic family *Arawak*, according to Schultes (personal communication).

The Popeyacá River, affluent of the Apaporis and located near Yukuna country in the Comisaría del Amazonas, is the present center of a Tanimuka population which is small. A split group of Tanimukas early in the present century fled to the distant headwaters of the Igarapé Peritomé, a small tributary of the Apaporis upstream from the Popeyacá, to escape persecution by rubber workers.

The Tanimukas use coca, tobacco and *yajé* in exactly the same way as do their neighbors, the Yukunas. The Peritomé-Tanimukas prepare their coca in a very exclusive and wholly distinct form from any other Indians of the Andes or Amazon.

In 1957, Schultes (46) published a note on their novel formula. Powdered coca and its accompanying ashes are treated with smoke from the burning resin of *Protium heptaphyllum* by means of long tubes through which the smoke is blown into the center of a pile of coca-powder. A resinous, aromatic savour is thus given to the coca which greatly improves its taste. This method is an astonishing refinement in coca-preparation and gives cause to wonder whether the Amazon Indians acquired coca in pre-Hispanic days, since this refinement was not mentioned in the Spanish chronicles nor by the Colonial writers nor by subsequent travellers and naturalists. It is also true that these peoples are next to unknown and that few modern naturalists and no earlier chroniclers ever got into their area. Here is most certainly a good case for independent invention, and probably a recent one, since the main group of Tanimukas in the Popeyacá still prepare coca following the general Amazonian method. They sometimes, however, journey for several days to the Peritomé to buy the incensed coca for special occasions from their separated brethren.

**Maku:** linguistic family or families undetermined, according to Schultes (personal communication). Cf. the classification of Koch-Grünberg (22).

In the little-known forests between the lower Apaporis and Vaupés Rivers of Colombia and in adjacent Brazil, there live groups of nomadic Indians collectively called *Makus*. There appear to be a number of distinct languages involved, at least one of which has been thought, perhaps on superficial evidence, to be remotely related to Puinave. The Makus, who practice no agriculture, have no canoes, build no houses and use no clothing, are extremely primitive in all respects. Some individuals have been enslaved for manual labor by the strong Tukanoan tribes.

Little is known of the Makus. We do know that, as nomadic forest-dwellers, they have a keen knowledge of plants: they acquire machetes from Indian groups of higher culture by preparing for barter a type of curare or arrow-poison which has the reputation of being the best of the entire region. Schultes, who has contacted several groups of Makus, states that, since they cultivate no plants, they chew coca and use tobacco only when visiting settled Indians of other tribes but that they apparently do use *caapi* from wild sources. On the Colombo-Brazilian boundary, Schultes (47) discovered amongst a group of Makus, and experimented with, a new kind of *caapi*, made from *Tetrapterys methystica*, a genus related to *Banisteriopsis*. It is a narcotic prepared from wild lianas and is apparently not cultivated. We have no knowledge as to whether this *caapi* is used only by the Makus or not, but it has not yet been detected amongst the Tukanos.

**Karihona:** linguistic family *Karib*, according to Mason (24a).

At the present time, there are two isolated groups of Karihonas; one at the headwaters of the Vaupés River, the other in and near La Pedrera on the Brazilian frontier of the Caquetá River. These two groups migrated to their present sites about 1914 from the distant headwaters of the Apaporis River, where they had an internecine war and were decimated by small-pox brought in by white balata-explorers.

They use *yajé* and tobacco, the former as a concentrated drink, the latter as a snuff.

**Tunebo:** linguistic family *Chibcha*, according to Rivet (38b).

Inhabitants of the humid jungle regions in the south-

western part of the Comisaría de Arauca, still a very poorly known area, the Tunebos are best understood through the works, partly unpublished, of Padre Henri J. Rocheraux (39). The tribe, which to-day is very reduced in size, preserves many primitive customs. They use coca as well as *yopo*. Fresh coca-leaves are toasted but not pulverized. Upon chewing, the leaves are mixed with lime. This is a purely Andean culture-trait. The custom of snuffing *yopo* was acquired probably from their Arawak neighbors in Venezuela and Colombia, for we have information about Tunebo movements to and from various points in southern Venezuela and northwestern Colombia. The Tunebos, according to Rocheraux (39), employ tobacco in the form of a masticatory, using air-dried leaves. A quid is made of these and is chewed. Formerly they did not smoke but recently they have learned this habit from contact with the white man.

**Various tribes.** Finally, we must consider some tribes located between the Meta and Inirida Rivers, most of which belong to the Arawak and Guahibo linguistic families. The tribes in question are the Puinaves (24), Piapocos (24a), Guayaberos (according to Meden, personal communication) and Guahibos, Kuivas, Amoruas, Sikuanis, Salivas (30) and Kuripakos, according to Schultes (personal communication).

All of these use or were formerly acquainted with *yopo*, especially for purposes of magic. *Yopo*, prepared from the toasted and pulverized seeds of *Piptadenia peregrina*, is normally taken only by the men, for there exists a certain taboo which, however, does not now seem to be so strict as it once was. In the most acculturated of these people, both sexes take it. Snuffing of this violent intoxicant, which looks rather like ground coffee, is carried out with very different kinds of instruments, the most

generally used of which is a double Y-shaped tube of bird bones (the arms of the Y being soldered into place with pitch) ending in two hollowed palm-nuts. These nuts are placed at the opening of the nostrils, and the powder is inhaled from the palm of the hand. Another kind is the long V-shaped snuffing tube, one leg of which is inserted into a nostril, the other into the mouth, thus making self-administration possible. There are additional types of snuffing-tubes as well, both of bone and of small bamboo-like grasses. One other primitive type is made of a palm-leaf: the apex of the leaf is cut off truncated, and this funnel-shaped end is placed over the snuff, while the snuffer draws in strongly through the petiole which is bound into a tube (30, 55).

Generally, some kind of wooden mortar and pestle is used to grind the *Piptadenia*-seeds which have previously been roasted in the fire. The powder is kept in a case made of the leg-bone of the jaguar, partly closed with wax and adorned with feathers. The addition of an alkaline admixture may or may not be the practice.

This narcotic is employed, especially by shamans, for the hallucinogenic effects produced by bufotenine, an active principle believed to be responsible for the startling activity of the intoxication (13).

These tribes of the llanos areas of Colombia likewise take tobacco, usually in the form of large cigars wrapped in very fine maize husks (30).

The Piapoko, Puinave and Guahibo Indians make use of *yajé* but not as a drink. The bark of the root of the vine is simply chewed, and narcotic effects are said thus to be induced.

#### IV.

In summary, I may say that all that has been attempted in this article is an overall picture of the very extensive use of narcotics and stimulants by the indige-

nous population of Colombia. This is a country highly developed spiritually, intellectually and materially. The use of these plants in the native cultures of a country with such a modern civilization represents, paradoxically, a condition far in advance of that usually found where native cultures frequently weaken or disappear. It demonstrates for the indigenous civilizations of Colombia a spiritual power and a cultural balance as well as the existence in the mind of the native of a fixed purpose in his use of narcotics. It is likewise significant and of a value beyond measure for science that we can look in this present age to such a rich knowledge of economic plants by primitive peoples. Here we have at hand the possibility of studying materials *in situ*. For botany, for anthropology and for medicine, Colombia is a seemingly inexhaustible treasure-house.

## LITERATURE CITED

1. Bernal V., Segundo, 1954. *Magia y Medicina entre los Paéces*. *Rev. Col. Anthropol.* 2: 221-264.
2. Caella P., Plácido de, 1945. *Tabaco entre las tribus Siona*. *Amazon. Col. American.* 8: 39.
3. Castellví, Marcelino de, 1934. *Las investigaciones lingüísticas, para uso de los investigadores del Departamento de Nariño y de las regiones del Caquetá, Putumayo y Amazonas*.
4. —, 1938. *La lengua Kofán*. *Journ. Soc. Amer. Paris*, n.s. 30: 219-233.
5. —, 1939. *Bibliografía sobre la familia lingüística Tukano*. *Proc. Second Conv. Inter-Amer. Libr. Assoc. Amer.* ser. 2, 2.
6. —, 1941-44. *Materiales etnobotánicos sobre el tabaco y la coca*. *Rev. Amazon. Col. American.* 2, nos. 4-6.
7. —, 1958. *La Macrofamilia lingüística Witoto*. *Rev. Amazon. Col. American.* 5: nos. 17-19.
8. Claes, Florent, 1932-34. *Chez les indies Correguajes*. *Bull. Soc. Roy. Belgue de Geogr.* nos. 56-58, 27-51.
9. De Alviano F., Fidelis, 1958. *Noticia Etnográfica dos Indios Ticonunas*. *Miscelánea Padre Castellví*, 129.
10. De la Rosa, Alférez, José Nicolas, 1949. *Floresta de la Santa Iglesia Catedral de Santa Marta* [copy], 279.
11. Duque Gómez, Luis, 1945. *Misiones de estudio*. *Bol. Arqu.* 1: 215.
12. Dupuoy, Walter, 1952. *Aspectos folklóricos del uso del Chimo*. *Arch. Venez. Folkl.* 2: 3-12.
13. Fabing, Howard D., 1956. *Bufotenina (E) Yopo — On Going Beserk: A Neurochemical Inquiry*. *Sci. Month.* 83, no. 5.
14. Frazer, Sir James George, 1923. *The Golden Bough*, 11-12.
- 14a. Fúlop, Marcos, 1954. *Aspectos de la cultura Tucano*. *Cosmog. Rev. Col. Antropol.* 3: 99-137.
15. Gentner, Walter A., 1954. *The Genus Erythroxylum in Colombia*. [Ms. inéd.] Bogotá.
16. Goodspeed, Thomas H., 1954. *The Genus Nicotiana*, 19-36.
17. Holmer, Nils M., 1952. *Contribución a la lingüística de la Sierra Nevada*. *Rev. Col. Antropol.* 1: 313.
18. Igualada, Bartolomé de, 1938. *Tres emocionantes exploraciones misionales por el río Cahuinari*. *Bol. Estud. Hist.* 7, no. 83.

- 18a. Jijón y Caamaño, Jacinto, 1939. Materiales para el mapa lingüístico del Occidente de Colombia. Bol. Estud. Hist. Pasto 12: 167-175.
19. Julián, Antonio, 1949. La Perla de América y Provincia de Santa Marta [copy]. Discurso VI.
20. Koch-Grünberg, Theodor, 1906. Les Indiens Ouitotos. Journ. Soc. American 3: 157-189.
21. —, 1928. Zwei Jahre bei den Indianern Nordwest-Brasilien, 34, 85.
22. —, 1917. Von Roroima zum Orinoco 1: map. 407.
23. Levy-Bruhl, Lucien, 1922. La Mentalité Primitive, 47-50.
24. Loukotka, Cestmir, 1935. Clasificación de las lenguas sudamericanas. Edición "Linguística sudamericana," no. 1.
- 24a. Mason, John Alden, 1950. The Language of South American Indians 6: 157-317.
25. Monconil, Gaspar M., 1945. Preparación del tabaco entre los Witoto. Rev. Amazon. 3: nos. 9-10.
- 25a. Nimuendaju, Curt, 1952. Am. Arch. Ethnol. 45: 23, 79, 101, 104.
26. Ortíz, Sergio Elías, 1937. Clasificación de las lenguas indígenas de Colombia. Idearium 1.
- 26a. —, 1948. Familia Witoto. Rev. Hist. Pasto 9.
- 26b. —, 1954. Linguística Aborigen de Colombia, 161-187, 209-247, 247-271, 271-349, 349-378, 413.
27. Pardal, Ramón, 1937. Medicina Aborigen Americana 32.
28. Pineda, Roberto, 1947. Aspectos de la Magia en la Guajira. Rev. Inst. Etnol. Nal. 3: 11.
29. Preuss, Konrad T., 1921. Religion und Mythologie der Uitoto, 219, 234, 254.
30. Reichel-Dolmatoff, Gerard, 1944. La cultura de los Indios Guahibo. Rev. Inst. Etnol. Nal., 435-454.
31. —, 1946. Etnografía Chimila. Bol. Arqu. no. 2, 98-146.
32. —, 1946. Informe sobre las investigaciones preliminares de la Comisión Etnológica al Catatumbo. Bol. Arqu., no. 4, 392.
33. —, 1945. Los Indios Mutilones. Rev. Inst. Etnol. Nal. 7: 18, 26, 33, 54.
34. —, 1945. Cilomanufactura de la cerámica entre los Chamí. Bol. Arqu. 1: 429.
35. —, Gerard y Alicia, 1944. Grupos sanguíneos entre los indios Pijao del Tolima. Rev. Inst. Etnol. Nal., 507.
36. Reichel-Dolmatoff, Gerard, 1949. Los Kogi. Rev. Inst. Etnol. Nal., T.I.V. IV, 1.
37. —, 1951. Los Kogi. Una tribu de la Sierra Nevada de Santa Marta. T II. Bogota.

38. Rivet, Paul, 1924. Langues Americaines III. Langues de l'Amerique du Sud et des Antilles. In Meillet, A. and Cohen, Marcel, "Les Langues du Monde," Coll. Ling. Paris 16: 629-715.
- 38a. —, 1943. La lengua Chocó. Rev. Inst. Etnol. Nac., 131-196; 1944, 297-349.
- 38b. —, 1943. La lengua Tunebo. Rev. Inst. Etnol. Nac., 47-53.
39. Rocheraux, Henri J. Les Unkasias. [Ms. ined.]
- 39a. Rondon, Frederico, 1945. Uaupés.
40. Safford, William E., 1920. Daturas of the Old World and New: an account of their narcotic properties and their use in oracular and initiatory ceremonies. Ann. Rept. Smithson. Inst. 561-567.
41. Seemann, Berthold, 1852-1857. The Botany of the voyage of the H.M.S. Herald. London, 68-69.
42. Schultes, Richard Evans, 1945. El uso del Tabaco entre los Huitotos. Agricult. Trop. no. 9, 19-22.
43. —, 1954. Un nouveau tabac à priser de L'Amazone du Nord-Ouest, 1954. Journ. Agric. Trop. Bot. Appl., 298-311.
- 43a. —, 1954. A new narcotic snuff from the northwest Amazon. Bot. Mus. Leaflet. Harvard Univ. 16: 241-260.
44. —, 1955. A new narcotic genus from the Amazon slope of the Colombian Andes. Bot. Mus. Leaflet. Harvard Univ. 17: 1-11.
45. —, 1942. Plantae Colombianae II: Yoco: a stimulant of southern Colombia. Bot. Mus. Leaflet. Harvard Univ. 10: 301-322.
46. —, 1957. A new method of coca preparation in the Colombian Amazon. Bot. Mus. Leaflet. Harvard Univ. 17: 241-264.
47. —, 1957. The identity of the malpighiaceae narcotics of South America. Bot. Mus. Leaflet. Harvard Univ. 18: 1-56.
48. Taylor, E. B., 1903. Primitive culture researches into the development of mythology, philosophy, religion, art and custom.
49. Tessmann, Günter, 1930. Die Indianer Nordost-Perus, 319.
50. Uscátegui M., Nestor, 1954. Contribución al estudio de la masticación de las hojas de coca. Rev. Col. Antrop. 3: 209-289.
51. —, 1956. El tabaco entre las tribus indígenas de Colombia. Rev. Col. Antrop. 5: 12, 52.
52. —. Función social de los narcóticos y estimulantes en las tribus indígenas de Colombia. [Ms. inéd.]
53. Vinales, José de, 1952. Indios Arhuacos. Rev. Inst. Etnol. 5.
54. Wassen, Henry, 1935. Notes on southern groups of Chocó Indians in Colombia. Ethnol. Stud. 1-3, 101-102.
55. Wurdack, J. J., 1958. Indian narcotics in southern Venezuela. Gard. Journ., 116-118.