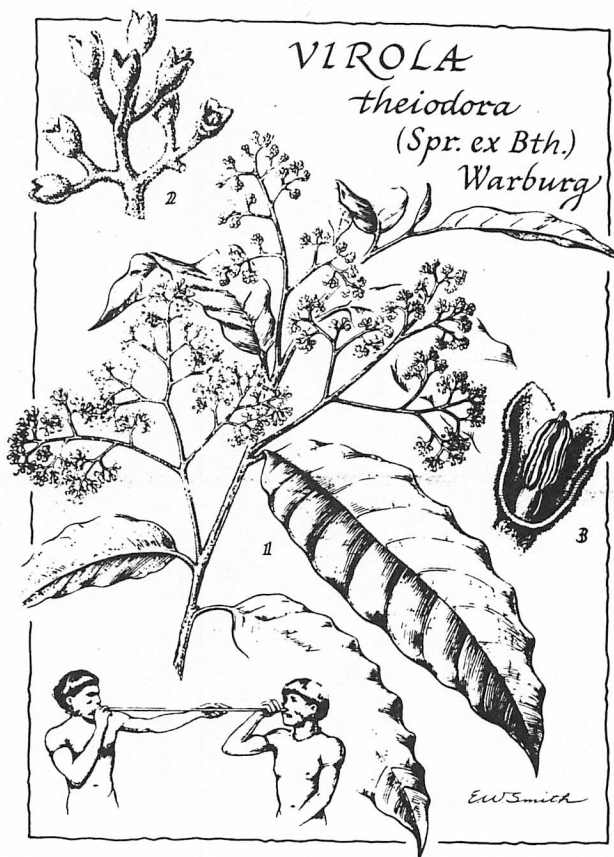


Short Communications

MEXICO AND COLOMBIA: TWO MAJOR CENTRES OF ABORIGINAL USE OF HALLUCINOGENS

It has often been wondered why the New World is so much richer in species of plants used for hallucinogenic purposes than the Old World. There have been attempts to explain this apparent discrepancy on the basis of cultural background (LaBarre 1970). There is certainly no botanical reason why the New World flora should be considered to be richer or poorer in potential hallucinogens than the Old World, so it may not be explained on the basis of greater availability of hallucinogenic plants in the Western Hemisphere (Schultes 1973).

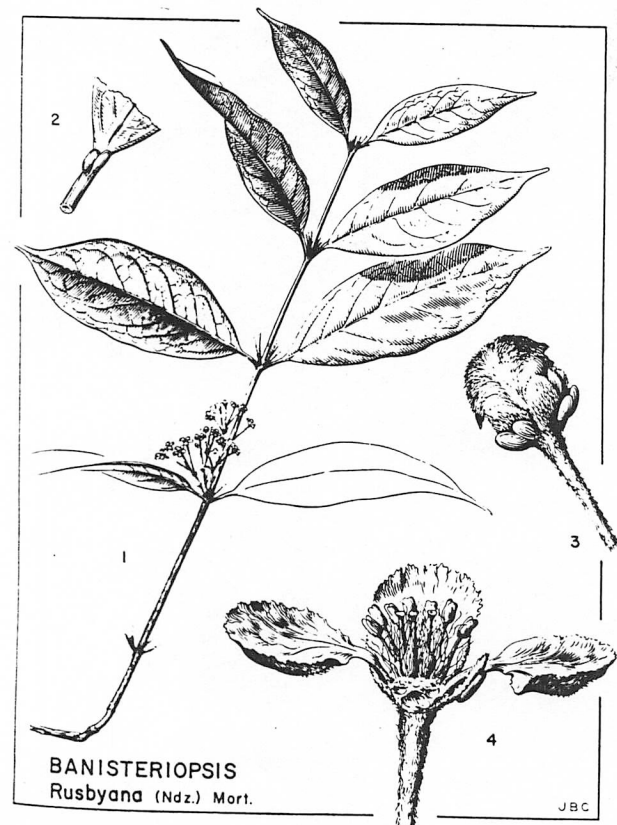
When one considers the New World, moreover, one is struck with the great disparity in use of hallucinogens in various parts of North, Central and South America. North America (north of and exclusive of Mexico) is



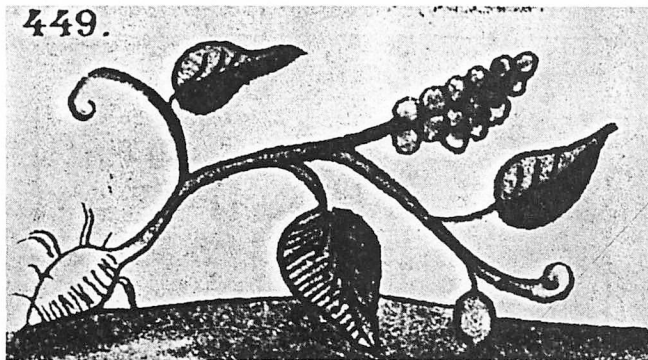
rather poor in the use of hallucinogenic plants. The great expanse of Brazil and the Argentine in South America (excluding the Amazon Valley) is very obviously poor in plants employed for the induction of visions and other hallucinations, Guianas, the West Indies and all of Central America have yielded little of interest in this respect.

Mexico and Colombia stand out, nonetheless, as the two areas where primitive societies most assiduously have employed hallucinogenic plants in magico-religious, medical or divinatory rituals. A brief review of the rich ethnopharmacologic store of the peoples who made up the advanced pre-Columbian civilizations of Mexico and the Chibcha and other cultures of Colombia and an evaluation of the tradition which both have left for modern societies may be illuminating.

The ethnopharmacopoeia of hallucinogenic drugs appears to be richest in Mexico. The number of plants



employed for their hallucinogenic properties and known to the ancients is very large: peyote (*Lophophora Williamsii*, *L. diffusa*); sinicuichi (*Heimia salicifolia*); piule, (*Rhynchosia* spp.); ololiuqui (*Rivea corymbosa*); tlitiltzin (*Ipomoea violacea*); toloache (*Datura* spp.);



Drawing of the ololiuqui of the ancient Aztecs (*Rivea corymbosa*) still used in Oaxaca. From the Florentino Codex of Sahagún's *Historia de las cosas de la Nueva España*, written during the middle of the 16th Century.

gi-i-wa (*Lycoperdon* spp.); frijolillo (*Sophora secundiflora*); zacatechichi (*Calea Zacatechichi*); hojas de la Pastora (*Salvia divinorum*). Only a few of these plants are fully investigated as to their hallucinogenic



Flowering vine of *Ipomoea violacea*, probable source of the tlitiltzin of the ancient Aztecs and still employed in Oaxaca.

properties. Evidence that other Mexican plants were used or are being used in aboriginal cultures is turning up. There are growing indications that even tobacco (*Nicotiana Tabacum* and *N. rustica*) occasionally has hallucinogenic effects as employed in certain native New World (including Mexican) ceremonies.

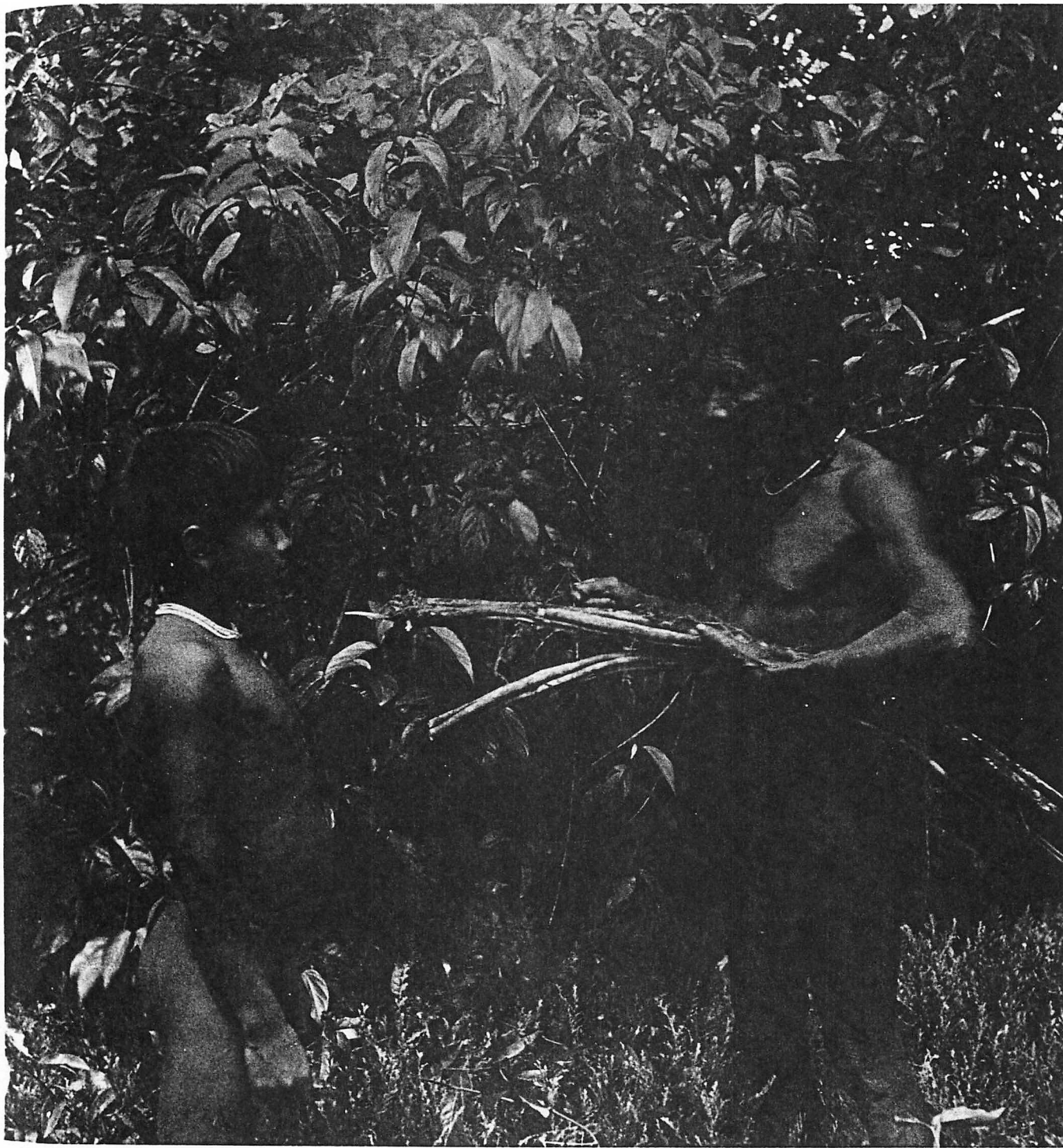
Colombia — with its Andean, Amazonian and coastal areas, not to mention its Orinoco basin and the northwest sectors of the Chocó — represents undoubtedly the richest phytogeographic part of the New World and the region where, it appears, primitive societies most valued hallucinogenic drugs. This Republic can count on a large number of psychoactively employed plants: *Datura arborea*, *D. aurea*, *D. dolichocarpa*, *D. sanguinea*, *D. suaveolens* and *D. vulcanicola*; *Methysticodendron Amesianum*; *Ipobroma fuchsoides*; *Banisteriopsis Caapi*, *B. inebrians*, *B. Rusbyana*; *Psychotria viridis*; *Coriaria thymifolia*; *Anadenanthera (Piptadenia) peregrina*.

Photo: R.G. Wasson

Virola calophylla, *V. calophylloidea*, *V. theiodora*; possibly *Tetrapteris methystica* and others.

Why these two parts of the New World — Mexico and Colombia — should be so rich in plant hallucinogens

can only be guessed at the present time, but a partial reason may be the wealth of the floras of these two areas: especially Colombia, with an estimated flora of 50,000 species of higher plants (Schultes 1951). Mexico



Makuna medicine-man gathering stems of *Banisteriopsis Caapi* for preparation of narcotic caapi drink. Río Popeyá, Amazonas, Colombia.

Photo: R.E. Schultes

De PYCIELT, seu Tabaco. Cap. LI.



PLANTAM, quam Mexicenses Pycielt, seu Yelt vocant, ab Hittinis appellatur Tabacus, à quibus non ad Indos solos, sed & ad Hispanos id deluxit nomē, eò quod suffumigijs admisceretur, quæ Tabacos etiam nuncupare consueverunt. à Brasiliensis Petum, ab alijs Herba sacra, à nonnullis Nicotiana dicitur. Non est autem vna huius plantæ species. alij namque tres in hoc antiquo Orbe reperiri affirmant, ac plantam hanc in Tabacum maiorem, minorem, & minimum partiuntur. At quia maioris, minorisq; Tabaci differentia pusilla est (constitit enim in magnitudine, & longitudine, ac adhærentia foliorum sine pediculis cauli, vt in maiori obseruatur, in minori verò folium est paulò minus, longo pediculo ramis inhærens, ac florum positura, cumq; id ob causas mutationes in plantis efficientes, latius in proæmio explicatas contingere poterit) non immeritò duæ

sunt tantum species, quæ obseruantur in hac noua Hispania. quarum alteram Pycielt, alteram verò Quauhylet appellant. Pycielt ergo herba est, folia ferens lata, oblonga, ac Personatæ quadratenus similia. caules, quinque pluresvè dorsantes longos, atque hirsutos, inconditos, striatos, & læues. flores Hyoscyami lutei similes, eisq; decidentibus vascula prædicti Hyoscyami æmula, referta semine pusillo, Papaueris minore, ac ex rufo nigricante. radicem breuem, non admodum tenuem, sed fibratam. Quauhylet verò in magnam assurgens altitudinem, Assyriam Malum, Limonè vocatæ, æquat. Caule recto multos emittente ramos, & in eis folia mali Assyrij longiora, hirsuta, colore viridi diluore, vti tota planta diffusa. interdumque folia, foli, & cæli ratione variantur, quandoque enim cubitalem longitudinem, ac pedalem latitudinem assecuta sine pediculo caulem amplectuntur. nonnumquam verò folia minora, pediculis inhærentia ramis conspiciuntur. Flores Campanulæ instar fert, concauos, ac per extremum sex, septemvè angulis distinctos, candicantes, medio verò purpurecentes, ordine per ramulorum longitudinem dispositos, quibus succedunt capitula Ocymoidi similia, maiora ramè, plena semine pusillo ex cinea

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Reproduction of the illustration of *Nicotiana rustica* and a portion of the discussion of tobacco from Hernandez' *Rerum medicarum Novae Hispaniae thesaurus, seu plantarum, animalium, mineralium mexicanorum historia*, published in 1651.

had a very highly developed and narcotic-oriented culture at the time of the Conquest. Colombia apparently did not. The Chibcha culture, which overshadowed most of Colombia, was not so highly advanced as the Mexican cultures, nor was it as sophisticated as that of the neighbouring Inca Empire to the south.

We know as yet relatively little about the use of hallucinogens by the Chibchas and members of their empire. More and more information is becoming available as archaeological progress is being made. The use of so many hallucinogens in present cultures in Colombia and their importance, however, assure us of the antiquity of the custom (Uscátegui 1959). The well established utilization of hallucinogenic drugs in

ceremonies in both the Andean and Amazonian parts of Colombia is, however, well recognized and most certainly must be significant of antiquity of use.

An important aspect concerning these two geographic parts of New World use of hallucinogens pertains to the fact that there are no two species used commonly in both areas. And, except for the genus *Datura*, even the genera and plant families are usually not the same. With *Datura*, the species employed — although possessing the same active chemical constituents — are wholly distinct, and the South American species are often considered to represent a different genus, *Brugmansia*.

Mexico and Colombia stand out as the two areas where native cultures in pre-Columbian times used — and still use — the greatest number of plant species for their hallucinogenic purposes. The reasons may not yet be clear, but modern research does indicate that even more hallucinogens are employed in Mexico and Colombia than those now known. And, furthermore, there is evidence that we still do not botanically know all of the hallucinogenic plants used in either of these countries. The years to come are certain to amplify the list.

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