



## Ethnobotanical Leaflets



# The Use of the Genus *Virola* as a Hallucinogen In South America

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*Virola theiodora* (Spr. ex Benth.) Warburg is one of many species of *Virola* used in the Amazon region as a hallucinogenic snuff. The plant differs in its pattern of usage by the indigenous people of this region. A reddish resin-like exudate is extracted from the cambial region of the bark of this slender tree and either snuffed or ingested orally. The major alkaloid constituent of this snuff appears to be 5-MeO-DMT with lesser amounts of DMT.

## Description

The Brazilian botanist Ducke was the first to make a definitive association between the hallucinogenic snuff used by the natives of the Amazon and the genus *Virola* in 1938. However, the snuff was first described in detail and identified to species with a voucher specimen in 1954 (Schultes, 1954).

*Virola theiodora* is a slender tree, 25-75 feet in height, with a cylindrical trunk up to 1.5 feet in diameter and smooth, brown-mottled bark with gray patches. Staminate inflorescences are many-flowered, paniculate, usually shorter than leaves, up to 15 cm long (usually shorter). Pistillate inflorescences are shorter. Distribution is mainly in the western Amazonia of Brazil and Columbia, possibly also in adjacent parts of Peru and Venezuela: especially abundant in the Rio Negro basin. It is a tree of well-drained forests.

## *Virola* use by natives of South America

*Virola* is used in the manufacture of hallucinogenic substances by various tribes throughout the range of the genus. Social implications for use, and the preferred form of the hallucinogen, differ according to region.

### The Colombian Vaupès

The Indian tribes of this region include the Barasana, Makuna, Puinave, Kabuyari, and Kuripko among others. *Virola theiodora*, *V. calophylla*, *V. calophylloidea*, and *V. elongata* are used in the making of a snuff as well as *Theobroma*. The use of this snuff is restricted to shamans.

### **The Orinoco in Venezuela and The Rio Negro of Brazil**

The Indian tribes here fall under the generic name of Waikà but include such subgroups as the Kirishaná, Shirianá, Karauetari, Karimé, Parahuri, Surará, Pakidái, and Yanomami. The snuff is used occasionally in daily life and individually as well as ceremonially. Not only do shamans use the snuff but also all male members of the tribe over the age of fourteen are encouraged to partake in the snuff (Schultes and Hoffman, 1980). The snuff is often administered through a blow tube by another person. The principal species used is *Virola theiodora* with *V. calophylloidea*, *V. cuspidata*, and *V. rufula* used by the indigenous people of the Rio Negro (Biocca, 1966 in Schultes and Hofman, 1980).

**Preparation:** One form of manufacture of the snuff involves the scraping of the soft inner bark of *Virola* sp., followed by the roasting of the dried shavings over a fire. Next, the roasted shavings are crushed and triturated in a mortar and pestle made from the fruit of the Brazil nut tree, *Betholletia excelsa*. The powder is then sifted to a very fine, brown dust. Next dried leaves of *Justica pectoralis* are prepared and added to the *Virola* resin dust in equal amounts. The third ingredient, *Elizabeth princeps*, is stripped of its bark. The bark is then placed in a hot fire in sectioned pieces and reduced to ash. The ash is then added to the other two ingredients in equal parts. The final product is a grayish, extremely fine snuff (Schultes and Holmstedt, 1968).

A second method used in this region involving the preparation of *virola* for ceremonial occasions works as follows: First, a site is chosen and a fresh tree is cut down. At this site a fire is made. Bark strips two feet by six inches are cut, and the red resin is extracted by placing the strips near the fire and squeezing them out. The resin is then boiled down to a thick consistency and allowed to harden. The crystalline resin is then ground into a powder. This powder is usually the finished product, although *Justicia* powder is sometimes added to give the snuff an aromatic flavor (Schultes and Hofman, 1980). *Justicia* is sometimes used alone as the basis for a hallucinogenic snuff (Schultes and Raffauf, 1990).

### **Amazonian Columbia and adjacent Peru**

Indian tribes include the Witoto, Bora, and Muinane. *Virola theiodora* is ingested in small pellets. Other *Virola* species are *V. lorentensis*, *V. surinamensis*, *V. elongata*, and *V. pavonis*. Schultes, Swain, and Plowman (1977) discovered that the Witotos of Peru occasionally used the bark of *Iryanthera macrophylla*, a myristicaceous genus, for the production of their pellets.

**Preparation:** This involves the removing the cambial layer from the inner bark of the *Virola* species. The sap is quickly boiled to separate the proteins and polysaccharides. Then the sap is simmered to bring the sap to a very sticky consistency. Many different admixtures are reduced to ash and then steeped in water until no cloudiness is seen in the filtrate. This filtrate is then boiled down to a grayish residue that

is added to the *Virola* residue. Pellets are then rolled. As given by the Witoto, common plants used as admixtures include *Gustavia poeppigiana*, *Spathyphyllum cannaefolium*, *Carludovica* sp, *Geonoma* sp., *Bactris* sp., and *Theobroma subincanum*. Pellets may also be taken without the admixture substances. Three to six pellets are taken initially and intoxication lasts up to two hours with additional pellets taken as effects wear off. Physiological effects are varied, but usually include excitability upon initial ingestion of drug. Numbness of limbs, twitching of facial muscles, inability to coordinate muscular activity, nausea, and visual hallucinations are followed by a deep, disturbed sleep (Schultes and Hofman, 1980).

The active ingredients in all of these hallucinogenic substances appear to be 5-MeO-DMT with DMT being present to a smaller extent. However, many other alkaloids have been isolated.

### **Works cited**

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