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[2]) grec: *campus* = champ: croissant dans les champs et les prés.
[3]) L. E. Greene, botaniste américain, 1842—1915.
[4]) latin: *robur* = robuste.
[5]) Th. Nuttall, botaniste américain, 1786—1859.
[6]) grec: *eschara* = rude, couvert de croûtes.
[7]) Fr. Th. Pursh, botaniste allemand au Canada, 1774—1820.

BANISTERIAE LIGNUM

by George M. Hocking, Ph.D.

This drug is derived from *BANISTERIOPSIS* (*Banisteria* [1])) species, plants belonging to the family *Malpighiaceæ* (Locust berry family), which include the following:

a) *Banisteriopsis caapi* [2]) (Spruce) Morton, also called *Banisteria caapi* Spruce, a native of tropical South America (especially the State of Amazonas in Brazil);
b) *Banisteriopsis inebrians* [3]) Morton, indigenous to south-eastern Colombia and Brazilian Amazonas;
c) *Banisteriopsis quitensis* [4]) Morton, growing wild and cultivated in northern South America (especially Colombia);
d) *Banisteriopsis Rusbyana* [5]) (Niedenzu) Morton (*Banisteria Rusbyana* Niedenzu), a native of northern South America;
e) several other *Banisteriopsis* and *Banisteria* spp., indigenous to Mexico.

These plants are lianas [6]) (lianes). The drug *Banisteriæ Lignum* consists of the segments of the lower part of the stem, and is mainly used — or rather misused — by the natives to prepare a narcotic beverage (delirifacient), known variously as "ayahuasca", "caapi", "yagé" (yaje), "yagé del monte", "ocó-yagé", or "caqueta".

The drug contains an alkaloid, banisterine [7]) (banisterinium) (yageine), $C_{13}H_{12}ON_2$, and is used medicinally in Parkinson's disease (paralysis agitans), on account of its subcortical effect in cases of motor brain-stem symptoms [8]).

The above-mentioned narcotic beverage, although it is drunk by many inhabitants of South American countries, is dangerous and can cause paralysis, even death. The stem wood is also used as a fumitory and as a masticatory. According to *Beringer* (Heidelberg, Germany), the effect of banisterine on some of the symptoms of Parkinson's disease is not a lessening of the trembling, but a partial relief of the stiffness and the restricted motility; he prescribed 0.02 gram of the alkaloid.

V. A. Reko ("Magische Gifte" 2nd ed., 1938) is of the opinion that the South American medicinal plants have been handed down to the so-called "Indios" from ancestor to ancestor originating with the Aztecs, who seem to have been conversant with many of the medicinal properties of plants.

There is a form of paralysis agitans, namely "sine agitationem" (without tremor), which is said to respond favourably to banisterine therapy. In the case of this disease, which can last 10 to 15 years before death ensues, of which the etiology is completely unknown, and for which physicians prescribe whatever the pharmaceutical industry may offer, trials made with a cold infusion might well be allowed. Its alkaloids might prove of considerable interest in further experimental pharmacological and clinical testing.

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[1]) named after J. Banister (1650—1692), a missionary who studied plants in Virginia.
[2]) the native name; do not confuse with "Caapi", a proprietary headache remedy of Great Britain.
[3]) Latin for intoxicating.
[4]) from Quito (in Ecuador), since first found there.
[5]) named after Henry H. Rusby (1855—1940).
[6]) "liana" is a term applied to the larger climbing and twining, woody plants in tropical forests.
[7]) banisterine (or telepathine) is identical with harmine, which is an alkaloid present in the seeds of *Peganum harmala*. The hydrochloride of the alkaloid isolated from *Banisteria caapi* is a white, crystalline powder (colourless prisms), soluble about 1 : 40 in water at 20° C., readily soluble in hot water, alcohol, ether, and chloroform. It is administered — once or twice daily — orally (capsules 0.02 gram), subcutaneously (injection 0.02—0.04 ml.), or rectally (suppositories with 0.04 gram) in palliating the morbid conditions following encephalitis epidemica (lethargica), also in cases of hypokinesis (partial paralysis) and in contraction (rigor) of the smooth musculature.
[8]) the drug is used for similar purposes as bulbocapnine, $C_{19}H_{19}O_4N$, which is the alkaloid derived from *Corydalis cava*, for oral and subcutaneous administration in cases of chronic tremor, especially paralysis agitans, chorea, and ataxia.

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Übersetzung

BANISTERIAE LIGNUM

Diese Droge wird erhalten von *BANISTERIOPSIS* (*Banisteria* [1])) Spezies, Pflanzen der Familie *Malpighiaceæ,* wozu gehören:

a) *Banisteriopsis caapi* [2]) (Spruce) Morton, auch *Banisteria caapi* Spruce genannt, heimisch im tropischen Südamerika (hauptsächlich in den Amazona Staaten Brasiliens);
b) *Banisteriopsis inebrians* [3]) Morton, heimisch in Südost-Colombia und in den brasilianischen Amazonas;
c) *Banisteriopsis quitensis* [4]) Morton, wildwachsend und kultiviert in den nördlichen Teilen Südamerikas (hauptsächlich Colombia);
d) *Banisteriopsis Rusbyana* [5]) (Niedenzu) Morton (*Banisteria Rusbyana* Niedenzu), heimisch in den nördlichen Teilen Südamerikas;
e) verschiedene andere *Banisteriopsis* und *Banisteria* Spezies, heimisch in Mexiko.

Diese Pflanzen sind Lianen.[6]) Die Droge *Banisteriæ Lignum* besteht aus den Abschnitten des unteren Teiles des Stammes und wird von den Einheimischen