

RECENT PROHIBITION OF CERTAIN PSYCHOACTIVE "ETHNOBOTANICALS" IN ROMANIA

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Abstract

This paper discusses a current problem, important for the Romanian and international society, regarding the plants, extracts and substances known as "legal drugs", "ethnobotanicals", "light drugs" – their consumption pattern, commercialization, public health consequences and the change of the legislation in force.

It clarifies the sense of two words used lately with different meanings from the etymological ones: ethnobotany, science studying the plants used in the culture of various peoples, ethnic and social groups, and the tautological phrase "ethnobotanical plants", which at best should be replaced with "ethnobotanicals" or "ethnobotanical products", designating in the current use, rather inappropriately, psychotropic, hallucinogenic, psychedelic or mind-altering herbal products.

This article takes in discussion the plant species identified as most commonly used lately in Romania (intended for commercialization and consumption). Also, the legal status of these plants in various countries from Europe, North and South America, Asia and Australia is presented.

Rezumat

Lucrarea abordează o problemă actuală, importantă a societății românești și internaționale privitoare la plante, extracte și substanțe cunoscute ca „droguri legale”, „etnobotanice”, „droguri ușoare” – consumul, comercializarea acestora, consecințele asupra sănătății publice și modificarea legislației în vigoare.

Se urmărește clarificarea a doi termeni folosiți frecvent în ultimul timp, în sensuri diferite de cele etimologice: etnobotanica, știință ce studiază plantele folosite în cultura unor popoare, etnii, grupuri sociale și expresia tautologică "plante etnobotanice" care ar trebui înlocuită cu „produse etnobotanice”, care de fapt desemnează în accepțiunea actuală, inadecvată, produse vegetale psihotrope, halucinogene, psihedelice, produse ce alterează percepția realității.

Sunt prezentate specii identificate ca fiind cele mai utilizate în România (destinate comercializării și consumului). De asemenea, este prezentat statutul legal al

acestor plante și substanțe active în diverse țări din Europa, America de Nord și de Sud, Asia și Australia.

Keywords: ethnobotanics, psychotropic plants, legal status, *Psylocibe*, *Amanita*, *Argyrea*, *Mitragyna*, *Nymphaea*, *Salvia divinorum*, *Tabernanthe*, *Turbina*

“Ethnobotany” and “ethnobotanicals” – old and new meanings

„Ethnobotany” is a term which has been used for a relatively long period with its etymological meaning of „plant lore of indigenous cultures”, in other words, how people, societies or ethnic cultures from certain world areas and times make or made use of indigenous plants. Although such preoccupations have existed for a long time in human history, the term as such (“ethnobotany”) was used for the first time in 1895 by a botanist from the University of Pennsylvania, John William Harshberger (1869-1929), while reporting his discoveries on ancient plant remains in southwestern North America. Ethnobotany has become gradually a science and currently it has several subdivisions or branches, among which ethnopharmacology seems the most important, at least for the pharmaceutical world.

“Ethnobotanical”, a noun more recently derived from “ethnobotany”, although lexically related to the former, has acquired a significantly narrower meaning: it refers to herbal products used (currently or in the past) by certain world populations in shamanic or religious rites, and more generally to induce states of alteration of consciousness and mind (i.e. herbals with narcotic, psychotropic, psychedelic, “entheogen”, hallucinogen or psychomimetic properties). This phenomenon seems to be relatively recent at the international level. In Romania it became particularly evident in the last two years, when distribution and consumption of such products increased abruptly and the word, while little understood, began to be used rather often in tautological expressions such as “ethnobotanical plants”. In this paper we will use the term “ethnobotanicals” limited to this (rather artificial) sense of herbals with mind-altering properties.

The purpose of this paper is to present an overview of the use of such herbal products for illegitimate purposes in the recent past in Romania and the public health consequences of such use, the main plant species which were identified as being sold/consumed nationally and the scientific information available about these products.

Recent extent of use and negative effects in Romania

The use (at least on an extended scale) of such products on the Romanian territory seems to have begun only in the last two years. According to a report of the General Inspectorate of the Romanian Police, at

At the beginning of the year 2009 there were 18 shops selling such products. At the end of August 2009, 121 such shops were identified, which is equivalent (according to the respective report) to a 672% increase of this market in roughly 6 months. Although few of these were on-line shops (or at least selling also through internet), most of them seem to have been running only in the conventional way (i.e. as high street shops).

The use of the products sold through these commercial channels was far from safe, as based on the data gathered by the Ministry of Health from the emergency hospital units, 278 persons needed hospital care in the whole country, due to negative effects following consumption of “ethnobotanicals”, in the first six months of the year 2009. A significant proportion of these persons were children: in the Iasi county, 10 of the 66 cases reported as needing hospital care (i.e. 15.15%) were minors. In the Bucharest Clinical Emergency Hospital, 13 cases involving minor patients were reported.

New legislation focused on “ethnobotanicals”

The development of the market, as well as the increase in the number of users reaching hospitals due to intoxications of various degrees lead to requests for the forced closure of such shops, voiced in the mass media by journalists, politicians or non-governmental organisations (NGO) representatives. A bill of law was drafted by a group of Members of Parliament (MPs) and a somewhat concurrent initiative was taken up by the Ministry of Health. The latter organized a working group of experts, who focused not only on the “ethnobotanicals” use for psychoactive effects, but also for synthesis drugs which were sold and used on the black market, but not yet prohibited under the narcotic and psychotropic national legislation. Part of the membership of this expert working group was represented by the first two authors of this paper.

In the end, the working group proposed the extension of the current lists of narcotic and psychotropic plants, substances or preparations. The plants considered to be the most widely used on the Romanian territory, having the highest public health risks and therefore justifying placing under control are included in Table I. The table also gives minimal information on the parts of those plants that are generally used, the known or at least hypothesized active substance responsible for their effects and on the amount of information currently available in the scientific literature on their potential psychoactive and toxic effect. For this purpose, computerized interrogations of the Medline database were carried out, using appropriate search terms (based on the scientific and common names of the plants).

Only articles with minimal relevance, even though marginal, were counted for this purpose (for instance, studies focused on establishing chemical composition were counted, but not studies dealing with antimicrobial activity or phylogeny). It can be easily seen that for some of these species the available information in scientific publications is quite limited and that scientific investigation of these plant species and active compounds is justified.

Table I.
Plant species recently included on the Romanian national lists of narcotic and psychotropic substances

Scientific name	Common name (s)	Herbal parts used	Active substance(s) responsible for the psychoactive effects	Number of scientific papers published
<i>Amanita muscaria</i> (L:Fr.) Lam.	fly agaric; fly-poison agaric; false orange; scarlet fly cup; soma	Whole mushroom; alternatively the dried red cap	ibotenic acid and muscimol	58
<i>Amanita pantherina</i> (DC.) Krombh.	panther amanita, panther cap, false blusher	Whole mushroom	ibotenic acid and muscimol	33
All species of the genus <i>Argyrea</i>	(Hawaian) baby wood-rose; elephant-climber; elephant-creeper; elephant-vine; silver-morning-glory; wood-rose; woolly-morning-glory	Seeds	indole-type alkaloids (ergoline alkaloids), especially ergine and isoergine	11
<i>Mitragyna speciosa</i> Korth	Kratom	Leaves	mitragynine 7-hydroxymitragynine	24
<i>Nymphaea caerulea</i> Savigny	Blue lotus, Egyptian blue lotus, Blue lotus of Egypt, Blue water lily, Sacred narcotic lily of the Nile	Petals (most often), leaves and stems (sometimes)	aporphine (?), nuciferine (?)	2
All species of the genus <i>Psilocybe</i>	Magic Mushrooms, Psilocybes	Whole mushroom	psilocin and psilocybin	72
<i>Salvia divinorum</i> Epling & Jativa	Diviner's Sage Shepherdess's Herb Ska Pastora	Leaves	salvinorin A	21
<i>Tabernanthe iboga</i> Baill.	eboga, iboga, eboka	Root bark, root	ibogaine	21
<i>Turbina corymbosa</i> (L.) Raf., syn. <i>Rivea corymbosa</i> (L.) Hallier f.	trailing morning glory, Christmas vine; <i>ololiuqui</i> ; <i>badoh</i> ; Semilla de la Virgen; heavenly blue morning glory; tlilitzin	Seeds	ergot-type alkaloids (ergine, isoergine, elymoclavine, chanoclavine and lysergol)	8

For each species the legal status in various countries of the world was checked. An overview, mentioning the countries where these plants have been prohibited/strictly controlled may be found in Table II.

Table II.
Countries where the plants and substances in Table I are prohibited under the narcotic/psychotropic legislation (as of beginning of March, 2010)

No	Plant/substance	Countries where prohibition/strict control is in force [1]
1	<i>Amanita muscaria</i> (L:Fr.) Lam.	From the end of 2008, <i>A. muscaria</i> and <i>A. pantherina</i> are illegal to buy, sell, or possess in Netherlands. A law adopted in 2005 in Louisiana (Act No 159) makes 40 plants illegal, including <i>Amanita muscaria</i> , when intended for human consumption. The law specifically excludes the "possession, planting, cultivation, growing, or harvesting" of these plants if used "strictly for aesthetic, landscaping, or decorative purposes."
2	<i>Amanita pantherina</i> (DC.) Krombh.	See above.
3	All species of the genus <i>Argyreia</i>	While seeds of <i>A. nervosa</i> are still legal in most countries, they have been listed as controlled narcotic drugs in Italy (since 2007) and have been banned in Russia, together with Spice products (since 2009). Consumption of lysergic acid amide (LSA) containing materials such as <i>A. nervosa</i> seeds is prohibited under state legislation in most Australian states.
4	<i>Mitragyna speciosa</i> Korth	Australia, Burma, Malaysia, South Korea, Thailand and Vietnam.
5	<i>Nymphaea caerulea</i> Savigny	It seems this plant has only been recently (April 2009) banned in Russia, along with "Spice" and related products. Otherwise, no country seems to have controlled it (yet).
6	All species of the genus <i>Psilocybe</i>	Prohibited (cultivation, possession, sale): Belgium (cultivation since 1921, possession and sale from 1998), Denmark (1993), Germany (illegal if used for the purpose of intoxication), Estonia, Ireland, Italy (2006), Latvia, Poland, Finland, Sweden (1968, <i>P. semilanceata</i> , <i>P. cubensis</i> , psilocybin, psilocin), UK (2005), Norway, USA. Treated as psilocin and psilocybin: Czech Republic, Greece, Lithuania, Cyprus, Luxembourg, Hungary (psilocin), Slovenia (psilocin), Slovakia (psilocin), Portugal (psilocin), Australia (1995), Brazil, Canada, Japan (2002), Switzerland (2006), Thailand (1988). In Austria is not legally controlled, but the judge may choose to convict for "attempt to commit a drug offence" depending on the motive.
7	<i>Salvia divinorum</i> Epling & Jativa	Delaware, Florida, Hawaii, Illinois, Kansas, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Virginia in the United States; Australia, Belgium, Croatia, Denmark, Germany, Italy, Japan, Latvia, Lithuania, Poland, Sweden, South Korea
8	<i>Tabernanthe iboga</i> Baill.	France, Belgium, Denmark, Sweden, Switzerland, Poland, Great Britain, USA
9	<i>Turbina corymbosa</i> (L.) Raf., syn. <i>Rivea corymbosa</i> (L.) Hallier f.	While seeds of <i>T. corymbosa</i> are still legal in most countries, they have been listed as controlled narcotic drugs in Italy (since 2007). A Louisiana (USA) law from 2005 has classified 40 plants as illegal, including <i>Turbina corymbosa</i> , when intended for human consumption. The law specifically excludes the "possession, planting, cultivation, growing, or harvesting" of these plants if used "strictly for aesthetic, landscaping, or decorative purposes." [4]

It should be noted that the new law text (currently already in force) makes no reference to “ethnobotanicals” at all, although uninformed phytotherapists and self-proclaimed specialists expressed fears before the publication of the law that it would endanger the practice of phytotherapy. As a matter of fact, the new Government Ordinance (no. 6/2010) only regulates certain species and substances, in the same manner as for the other plants, substances and preparations already under national (and international) control, by including them in the corresponding tables annexed to law no. 143/2000 (which is focused on the „black market”) and law no. 339/2005 (which is focused on the legal use of various narcotic and psychotropic products, in certain circumstances – such as medical use, industrial use, scientific research etc).

In the law no. 143/2000 preventing and fighting drug traffic and consumption, most of these herbal products have been included in Table III (the lowest risk group, formally named in the law as „risk drugs”, as compared with table I and II, formally named as „high risk drugs”); only *Psilocybe* mushrooms have been placed in table I. In the law no. 339/2005, the two *Amanita* species, all *Psilocybe* species, all *Argyreia* species, *Nymphaea caerulea* Sav. and *Turbina corymbosa* (L.) Raf. sin. *Rivea corymbosa* (L.) Hallier f. have been included in table I (plants with unknown interest for medicine). *Mitragyna speciosa* Korth (Kratom), *Salvia divinorum* Epling & Jativa and *Tabernanthe iboga* (L.) Nutt. have been placed in table II (plants which are of interest for medicine, placed under a strict control), for in their case potential medical uses (especially for addiction treatment) have been proposed. The main active substances from all these plants (e.g. ibogaine, mytraginine, 7-hydroxy-mytraginine, salvinorin A-F, muscimol, ibotenic acid etc), where known and have also been placed under control, on the same lists as the plant species themselves.

Because the parliamentary bill proposed to include among the prohibited plants two additional species, *Ipomoea violacea* and *Nymphaea alba* (no systematic details were supplied in the bill), the working group has also considered the status of these two species, but in the end decided not to recommend their inclusion on the narcotic and psychotropic lists. In taking this decision for *Ipomoea violacea*, it was taken into account the taxonomic complexities (*I. violacea* L. sin. *I. tuba* (Schltdl.) G. Don, as a matter of fact is – based on the currently available phytochemical data – devoid of ergoline alkaloids, only *I. violacea* auct., not L. sin. *I. tricolor* Cav. sin. *I. rubro-caerulea* Hook contains such alkaloids) (2), the negative impact on the innocent people cultivating it in their gardens (as the inclusion on lists triggers the obligation of destroying any plants, even those spontaneously grown), the fact that in most countries the species has not been placed under control and that a more suitable solution would be the treatment of seeds so as to make them inappropriate for

human consumption. Ecological reasons were against the inclusion of *Nymphaea alba* L., considering that the consumption of this species seems limited in Romania and the supposed effects (as the scientific literature is silent in this respect) are quite mild.

Other *Argyreia* species, such as *A. acuta*, *A. bernesi*, *A. capitata*, *A. cuneata*, *A. hainanensis*, *A. luzonensis*, *A. mollis*, *A. obtusifolia*, *A. osyrensis*, *A. pseudorubicunda*, *A. ridley*, *A. splendens*, *A. wallichii*, also contain lysergic alkaloids (3). To avoid a shift towards other *Argyreia* species, all species of this genus have been included in the extend national list of narcotic and psychotropic plants, substances and preparations.

A few reflections on the efficacy of the new legislation

The new Government Ordinance which was presented above has targeted the trade with certain herbal products used to induce psychoactive effects, in order to prevent the negative public health risks associated with the use of these products. Several weeks after its implementation it seems that at least partially this purpose has been achieved. A number of high street “dreams shops” have closed or at least temporarily have put an end to their activity. The products included in the narcotic and psychotropic lists are no longer marketed. Is this a real and long-term success in protecting public health at national level? We are rather reserved.

First, a number of shops have continued their commercial activity with different other products and it is likely that what will happen on short- and medium-term is a shift from the prohibited products to others not prohibited yet. Some of the latter may be associated with even higher risks than those already covered by the recent legislation. Second, even a more important and dangerous shift may take place for some of the users, from the prohibited herbals, with rather mild effects in most cases, towards other drugs, with stronger effects, commonly found on the black market. Whether the general outcome would be positive or negative will remain to be seen, although unequivocal assessment for such macro-policies is rather difficult to perform.

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