

Among the pioneers of Indiana this tree was the choice stick for the rail fence, owing to its durability and its being easily split. A boy could make rails of the blue ash and a woman could split blue ash stove wood. Hence the blue ash soon disappeared as a large or even medium-sized forest tree. As members of the original forest, they are all gone but the scrubs. Unlike many other forest trees, the blue ash is making fair headway towards reëstablishing itself. It is an abundant fruiter, and we frequently find a young tree that has escaped the kind of civilization enforced by cattle and clean farmers.

BOTANICAL PRODUCTS OF THE UNITED STATES PHARMACOPEIA, 1890. BY JOHN S. WRIGHT.

[ABSTRACT.]

A large number of the official organic drugs are plant products. The revisers of the United States Pharmacopœia, 1890 (published in 1894 and in effect until 1904), admit plant products, such as fruits, leaves, stems, underground portions, inspissated juices, resins, gummy exudations, products of distillation, and other materials of vegetable origin, representing 232 species, 186 genera, and 73 natural orders.

Since the pharmacopœia list of drugs is official, much care is exercised in making admissions to it. Long and general use is usually necessary to demonstrate the claim of a plant or any of its products to recognition in this work, which is the guide to druggists of the United States.

Only occasionally does an entire plant become an official drug, strictly speaking, that part only is official which is mentioned by the pharmacopœia; thus we have, under the title CAPSICUM: "The fruit of *Capsicum fastigiatum* Blume;" or as under ALOES, SOCOTRINE: "The inspissated juice of the leaves of *Aloe Perryi* Baker." In the former case it is the fruit, and in the latter the inspissated juice, only, of the plant mentioned, which is official. In some cases several parts or products of a plant are extensively employed in medicine, and may even be generally recognized in dispensatories and kindred works, though only one of these may be official; for instance, the tubers and leaves of Aconite (*Aconitum Napellus* L.) are each recognized as medical agents, yet the tuber is alone official.

With this conservatism on the part of the revisers of the pharmacopœia, it is found that nearly every official drug is of positive value in medicine, and further, that the official list is very much smaller than any other general organic drug list. As before stated, the official list includes products representing 232

species of plants, while most others will approach 700 to 1,000, and one, especially, includes the products of 2,465 species.

The 232 species yielding official drugs, with seven exceptions, belong to orders of flowering plants, and most are plants which have been long known; in proof of this, we find that many have been named by the earlier botanists, Linné being the original author of the names of 132, over half of the entire number.

The seven species which do not belong to the flowering plants represent six genera and five families, as follows:

NATURAL ORDER.	GENUS AND SPECIES.	COMMON NAME.
FILICES	<i>Dryopteris Filix-mas</i> (L.) Schott, } <i>Dryopteris marginalis</i> (L.) A. Gray, }	Aspidium.
	<i>Chondrus crispus</i> , Stackhouse, } <i>Gigartina mamillata</i> , J. Agardh, }		Chondrus, Irish Moss.
LICHENES	<i>Cetraria islandica</i> (L.) Acharius,	Cetraria, Iceland Moss.
LYCOPODIACEÆ	<i>Lycopodium claratum</i> , L.,	Lycopodium.
PYRENOAMYCETES	<i>Claviceps purpurea</i> (Fries.) Tulasne,	Ergot.

Of the orders of plants represented by the official drugs, only the following five furnish ten or more species:

1. Leguminosæ	17 species	12 genera.
2. Composite	16 species	14 genera.
3. Labiate	13 species	9 genera.
4. Liliacæ	11 species	8 genera.
5. Rosacæ	10 species	5 genera.

The other 165 species are very evenly distributed among the remaining 68 natural orders.

Of the 232 species of plants which yield official drugs, there are found in North America, either as indigenous, adventive, commonly cultivated or escaped from cultivation, 134 species belonging to 110 genera and 59 natural orders. Of this number there are in Indiana 75 species representing 68 genera and 47 natural orders.

The table and statistics below show the actual and relative numbers of plants, producing official drugs, found in North America and in Indiana:

NATURAL ORDERS.	GENERA.	SPECIES.
Entire number	73	186
In America	59	110
In Indiana	47	68

Of total number of species Indiana has $\frac{756}{2325}$, or about $\frac{1}{3}$.

Of total number of genera there are represented in Indiana $\frac{68}{188}$, or about $\frac{1}{3}$.

Of total number of natural orders there are represented in Indiana $\frac{47}{73}$, or about $\frac{2}{3}$.

Of American species (as defined above), Indiana has $\frac{73}{134}$, or about $\frac{5}{9}$.

Of American genera there are represented in Indiana $\frac{68}{116}$, or about $\frac{7}{11}$.

Of American families there are represented in Indiana $\frac{47}{59}$, or about $\frac{4}{5}$.

Below is given a list of plants found in Indiana which produce official drugs. The action and use of the drug also are given. For convenience, the plants are listed alphabetically under their natural orders, which also have an alphabetical arrangement.

LIST OF PLANTS WHICH PRODUCE OFFICIAL DRUGS.

NATURAL ORDER. Genus and Species.	DISTRIBUTION.	PART.	COMMON NAME.	PROPERTIES AND USES.
ANACARDIACEÆ.				
<i>Rhus glabra</i> L.	Common	Fruit	<i>R. glabra</i> . .	Refrigerant, diuretic, astringent.
<i>Rhus radicans</i> L.	Common	Leaves	<i>R. Toxicodendron</i> . .	Irritant, rubefacient.
APOCYNACEÆ.				
<i>Apocynum cannabinum</i> L.	Common	Root	Apocynum . .	Emetic, cathartic, expectorant, diuretic aperient.
ARISTOLOCHIACEÆ.				
<i>Aristolochia Serpentaria</i> L. . . . .	. . . . .	Rhizome	Serpentaria . .	Stimulant, diaphoretic, tonic.
ASCLEPIADEÆ.				
<i>Asclepias tuberosa</i> L.	Common	Root	Asclepias . .	Sudorific, expectorant, carminative, anodyne.
BERBERIDACEÆ.				
<i>Caulophyllum thalictroides</i> (L.) Michx.	Common	Rhizome	Caulophyllum	Antispasmodic, diuretic, emmenagogue
<i>Podophyllum peltatum</i> L.	Common	Rhizome	Podophyllum .	Alterative, cholagogue, cathartic.
BETULACEÆ.				
<i>Betula lenta</i> L. . . . .	. . . . .	Oil of Bark . .	Oil of Betula .	Antiseptic, poisonous in over doses.

LIST OF PLANTS WHICH PRODUCE OFFICIAL DRUGS—Continued.

NATURAL ORDER. Genus and Species.	DISTRIBUTION.	PART.	COMMON NAME.	PROPERTIES AND USES.
CAPRIFOLIACEÆ.				
<i>Sambucus canadensis</i> L.	Common . . .	Flowers	Sambucus . . .	Stimulant, carminative, diaphoretic.
<i>Viburnum prunifolium</i> L.	Common . . .	Root Bark . . .	Black Haw . . .	Diuretic, tonic, nervine.
CELASTRINEÆ.				
<i>Euonymus atropurpureus</i> Jacq.	Common	Root Bark . . .	Euonymus	Tonic, diuretic, laxative, aperient.
CHENOPODIACEÆ.				
<i>Chenopodium ambrosioides</i> L., var. <i>anthelminticum</i> Gray	Common . . .	Fruit . . .	Chenopodium.	Anthelmintic.
COMPOSITEÆ.				
<i>Arctium Lappa</i> L. and other Sp. of <i>Arctium</i>	Common . . .	Root	Lappa	Diaphoretic, diuretic, alterative.
<i>Artemisia Absinthium</i> L.	Common	Leaves and inflorescence.	Absinthium	Stimulant, tonic, febrifuge anthelmintic.
<i>Erigeron Canadense</i> L.	Common . . .	Herb	Oil of Erigeron	Hemostatic, irritant stimulant.
<i>Eupatorium perfoliatum</i> L.	Common . . .	Leaves and inflorescence. . .	Eupatorium . .	Stimulant, tonic, diaphoretic, laxative, emetic.
<i>Inula Helenium</i> L.	Common . . .	Root.	Inula	Stimulant, diaphoretic, expectorant, rubefacient.
<i>Tanacetum vulgare</i> L.	Cultivated	Herb.	Tansy	Stimulant, tonic, anthelmintic, diuretic, emmenagogue.

<i>Taraxacum officinale</i> Weber . . .	Common . . .	Root	Taraxacum . .	Deobstruent, tonic in hepatic disorders.
CONIFERÆ.				
<i>Juniperus communis</i> L . . .	General, but not abundant.	Fruit	Oil of Juniper.	Stimulant, carminative, diuretic.
CRUCIFERÆ.				
<i>Brassica alba</i> (L.) Hooker f. et Thompson	Common near cult. ground.	Seed	White Mustard	Tonic, laxative, diuretic, sternutatory, epispastic, emetic, ext. rubefacient.
<i>Brassica nigra</i> (L.) Koch. . . .	Common near cult. ground.	Seed	Black Mustard	Tonic, laxative, diuretic, sternutatory, epispastic, emetic, ext. rubefacient.
CUCURBITACEÆ.				
<i>Cucurbita Pepo</i> L	Cultivated . .	Seed	Pumpkin Seed.	Tanifuge.
CUPULIFERÆ.				
<i>Castanea dentata</i> (Marshall) Sudworth	General, but not abundant.	Leaves	Castanea . . .	Tonic, mild sedative.
<i>Quercus alba</i> L	Common . . .	Bark	White Oak . .	Astringent, chiefly used externally.
ERICACEÆ.				
<i>Arctostaphylos Uva-ursi</i> (L.) Sprengle	N. Indiana, on hills of southern part.	Leaves	Uva Ursi. . .	Astringent, tonic, nephritic, diuretic.
<i>Chimaphila umbellata</i> L	Common in rocky woods .	Leaves	Chimaphila . .	Astringent, tonic, diuretic, nephritic.
<i>Gaultheria procumbens</i> L	N. part of state	Oil of leaves	Oil of Gaultheria . . .	Stimulant, antiseptic, diuretic, poisonous in over doses.

LIST OF PLANTS WHICH PRODUCE OFFICIAL DRUGS—Continued.

NATURAL ORDER.	DISTRIBUTION.	PART.	COMMON NAME.	PROPERTIES AND USES.
Genus and Species,				
FILICES.				
<i>Dryopteris marginalis</i> (L.) Gray.	Common in cool, rocky woods. . . .	Rhizome . . .	Aspidium . . .	Tenuifuge.
GERANIACEÆ.				
<i>Geranium maculatum</i> L.	Common . . .	Rhizome . . .	Geranium . . .	Tonic, astringent.
GRAMINEÆ.				
<i>Agropyrum repens</i> (L.) Beauv. . . . .	. . . . .	Rhizome . . .	Triticum . . .	Diuretic, aperient.
<i>Zea Mays</i> L.	Cultivated . . .	Starch from grain . . .	Starch	Demulcent, nutritive.
<i>Zea Mays</i> L.	Cultivated	Stigmas and styles (silks)	Zea	Diuretic, lithonrictic.
HAMAMELACEÆ.				
<i>Hamamelis virginiana</i> L.	Common	Leaves	Witch hazel . . .	Tonic, astringent, sedative.
IRIDEE.				
<i>Iris versicolor</i> L.	Common . . .	Rhizome . . .	Iris	Alterative, purgative, emetic.
JUGLANDACEÆ.				
<i>Juglans cinerea</i> L.	Common . . .	Root bark . . .	Juglans	Cathartic, tonic.

LABIATEÆ.

<i>Hedeoma pulegioides</i> (L.) Pers	Common . . .	Herb	Hedeoma . . .	Carminative, stimulant, emetic.
<i>Marrubium vulgare</i> L.	Common . . .	Herb	Melissa	Carminative, sternutatory, diaphoretic, emetic.
<i>Mentha canadensis</i> L. var. . . .)	Common along	Stearopten	Menthol . . .	Stimulant, rubefacient, anodyne.
<i>glabrata</i> Benth.)	brooks . . .	from herb)		
<i>Mentha piperita</i> Smith	Common, cultivated . . .	Stearopten		
		from herb .	Menthol . . .	Stimulant, rubefacient, anodyne.
<i>Mentha viridis</i> L.	General . . .	Leaves and inflorescence .	Spearmint . . .	Carminative, stimulant, nervine.
<i>Monarda punctata</i> L.	Common . . .	Herb	Thymol	Stimulant, antispasmodic.
<i>Scutellaria lateriflora</i> L.	Common . . .	Herb	Scutellaria . . .	Tonic, nervine, antispasmodic.

LAURINEÆ.

<i>Sassafras varifolium</i> (Salisbury) O. Kuntze	Common . . .	Part of root .	Sassafras . . .	Stimulant, diaphoretic, alterative, used as a flavor.
<i>Sassafras varifolium</i> (Salisbury) O. Kuntze	Common . . .	Pith of stem .	Sassafras pith	Demulcent.

LILIACEÆ.

<i>Veratrum viride</i> Solander	General . . .	Rhizome . . .	<i>Veratrum viride</i>	Emetic, diaphoretic, sedative, irritant.
<i>Convallaria majalis</i> L.	Escaped from gardens . .	Rhizome . . .	<i>Convallaria</i> . .	Heart tonic, poisonous.

LINEÆ.

<i>Linum usitatissimum</i> L.	Escaped from cultivation .	Seed	Linseed	Demulcent.
<i>Linum usitatissimum</i> L.	Escaped from cultivation .	Oil of seed . .	Linseed oil . .	Demulcent, laxative.

LIST OF PLANTS WHICH PRODUCE OFFICIAL DRUGS—Continued.

NATURAL ORDER.	DISTRIBUTION.	PART.	COMMON NAME.	PROPERTIES AND USES.
Genus and Species.				
LOBELIACEÆ.				
<i>Lobelia inflata</i> L.	Common . . .	Leaves and inflorescence .	Lobelia. . . .	Expectorant, nervine, purgative, emetic, narcotic.
LOGANIACEÆ.				
<i>Spigelia Marylandica</i> L. . . . .	. . . . .	Rhizome . . .	Spigelia . . .	Anthelmintic, toxic, dilates pupil.
MENISPERMACEÆ.				
<i>Menispermum Canadense</i> L. . . .	Common . . .	Rhizome . . .	Menispermum.	Tonic, alterative, diuretic.
ORCHIDEEÆ.				
<i>Cypripedium parviflorum</i> Salisb. . . . .	. . . . .	Rhizome . . .	Cypripedium .	Diaphoretic, stimulant, anti-spasmodic.
<i>Cypripedium pubescens</i> Swartz. . . . .	. . . . .	Rhizome . . .	Cypripedium .	Diaphoretic, stimulant, anti-spasmodic.
PAPAVERACEÆ.				
<i>Papaver somniferum</i> L.	Escaped from cultivation .	Concrete, milky erudation. .	Opium	Narcotic, sedative, anodyne, anti-spasmodic, hypnotic.
<i>Sanguinaria Canadensis</i> L. . . .	Common in shady woods	Rhizome . . .	Sanguinaria. .	Alterative, tonic, stimulant, emetic, stermitatory.

PHYTOLACCACEÆ.

<i>Phytolacca decandra</i> L	Common . . .	Root	Phytolacca root	Alterative, anodyne, resolvent, emetic.
<i>Phytolacca decandra</i> L	Common . . .	Fruit	Phytolacca fruit	Alterative, laxative, emetic.

POLYGALACEÆ.

<i>Polygala Senega</i> L	General . . .	Root	Senega	Expectorant, emetic, diuretic.
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POLYGONACEÆ.

<i>Rumex crispus</i> L. and other species of <i>Rumex</i>	Common . . .	Roots	Rumex	Astringent, tonic, alterative, laxative.
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PYRENOMYCETES.

<i>Claviceps purpurea</i> (Fries.) Tulasne	Common in rye fields	Sclerotium	Ergot	Emetic, ebolic, parturient, hæmstatic, poisonous.
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RANUNCULACEÆ.

<i>Cimicifuga racemosa</i> (L.) Nuttall	Common . . .	Rhizome	Cimicifuga	Alterative, emmenagogue, sedative.
<i>Hydrastis Canadensis</i> L	General, more abundant in southern p't of State	Rhizome	Hydrastis	Tonic, deobstruent, alterative.

ROSACEÆ.

<i>Prunus serotina</i> Ehr	General . . .	Bark	Wild cherry	Tonic, sedative, pectoral.
<i>Rubus Canadensis</i> L	General . . .	Root bark	Rubus	Astringent, tonic.
<i>Rubus villosus</i> Aiton	Common . . .	Root bark	Rubus	Astringent, tonic.
<i>Rubus idæus</i> L	Cultivated . . .	Fruit	Raspberry	Refrigerant, mild laxative, dietetic.

LIST OF PLANTS WHICH PRODUCE OFFICIAL DRUGS—Continued.

NATURAL ORDER. Genus and Species.	DISTRIBUTION.	PART.	COMMON NAME.	PROPERTIES AND USES.
RUTACEÆ.				
<i>Xanthoxylum Americanum</i> Miller	Common . . .	Bark	Xanthoxylum	Sialagogue, stimulant, alterative, emetic.
SCROPHULARINEÆ.				
<i>Veronica Virginea</i> L. . . . .	. . . . .	Rhizome	Leptanda . . .	Alterative, cholagogue, cathartic.
SOLANACEÆ.				
<i>Datura stramonium</i> L.	Common	Seed	Stramonium seed	Diuretic, dilates pupil, narcotic poison.
<i>Datura stramonium</i> L.	Common	Leaves	Stramonium leaves	Diuretic, dilates pupil, narcotic poison.
<i>Nicotiana tabacum</i> L.	Cultivated in southern pt of State . . .	Leaves	Tobacco	Diuretic, sedative, diaphoretic, emetic, narcotic.
<i>Solanum dulcamara</i> L.	General	Young br'ch's	Dulcamara . .	Deobstruent, resolvent, alterative, ano- dyne.
UMBELLIFERÆ.				
<i>Conium maculatum</i> L.	Common	Fruit	Conium	Sedative, narcotic.

URTICACEÆ.

<i>Cannabis sativa</i> L	Escaped from cultivation	Female inflorescence . .	Indian cannabis . .	Anodyne, nervine, narcotic, sudorific.
<i>Humulus lupulus</i> L	Escaped from cultivation .	Glandular powder from strobiles . .	Lupulin .	Stimulant, tonic, anodyne.
<i>Humulus lupulus</i> L	Escaped from cultivation .	Strobiles . . .	Hops . . .	Tonic, sedative, anodyne.
<i>Urtica fulva</i> Michx.	Common .	Inner bark . .	Elm . . .	Demulcent emollient.

VITACEÆ.

<i>Vitis vinifera</i>	Cultivated	Fermented juice of fruit	Wine, white and red .	Chiefly as a stimulant.
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