COP-15
BIODIVERSITY

香出云南

Scent of Yunnan

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一个民族的文明程度反映在他们使用香料的水平上。

The degree of civilization of a nation is reflected in the level of their use of fragrance.

云南地势西北高东南低，形成明显的阶梯型地貌。山区、半山区面积占94%，坝区占6%，其中耕地面积280公顷，人均0.073公顷，是一个典型的高原山区省份。云南的地质构造是一个奇迹。云南属青藏高原南延部分，地质史上的喜马拉雅造山运动使世界屋脊从海底隆起，形成几大山脉南北纵列的横断山纵谷。

云南地势南北间最大直线距离900公里，呈阶梯状下降。北部最高峰是迪庆高原德钦县境内的卡格博峰，海拔6740米；南部的最低点在河口县的红河河谷，海拔仅76.4米；平均每公里递降6米。

云南享有“植物王国”、“药物王国”、“天然花园”、“香料之乡”、“旅游王国”等美誉。



全球独特的纵向岭谷区
七个气候类型
优越的地理位置和得天独厚气候环境孕育了丰富的物种

With typical Longitudinal Range-Gorge landforms, Yunnan is the most highly biodiversified region in the Northern Hemisphere. There are seven climate types and abundant germplasm resources of aromatic plants.

Thanks to various ecological environments, unique vertical-spatial climate, plenty of light, heat, and water sources, Yunnan is the ideal place for growing aromatic plants.

类型 Type	Coverage (10000 Sq.Km.)	%
北热带 North Tropical Zone	0.82	2.10
南亚热带 South Subtropical Zone	6.98	18.40
中亚热带 Mid Subtropical Zone	6.40	16.80
北亚热带 North Subtropical Zone	7.97	20.90
暖温带 Warm Temperate Zone	6.27	16.48
中温带 Mid Temperate Zone	6.28	16.50
寒温带 Cold Temperate Zone	3.26	8.57

云南香料植物品种十分丰富，现已发现和引种的天然香料作物近400种，分属95科，179属，几乎遍布全省，集中分布于热带和亚热带地区，品种数居中国之首,香料植物品种多、门类齐、分布广、特有品种多，种质资源十分丰富。世界上多数的香料植物都能在云南找到适宜种植的地区，这使云南成了闻名遐迩的“天然香料之乡”，具有建设“东方格拉斯”的环境和条件。

There are 400 species in 95 genera belonging to179 families throughout Yunnan but especially numerous in its tropical and subtropical zones. Known as “home of natural flavor and fragrance”, Yunnan is suitable for growing most aromatic plants in the world. Besides, many species are specific from here. Advantaged natural resources and conditions provide Yunnan with good chance to develop into oriental “Grasse”.

北热带：西双版纳大部分地区，德宏、红河、文山及临沧部分地区。香茅，柠檬草，柠檬桉，龙脑，樟脑，安息香，檀香，沉香，降香，九里香，艾纳香，香橼，豆蔻，依兰依兰，鹰爪花，假鹰爪花，黄、白姜花，白兰，黄兰，鸡蛋花，黄葵，吉龙草，甜罗勒，丁香罗勒，香荚兰，胡椒，树胡椒，柠檬，肉桂；以及狭叶阴香、芳樟、细毛樟等数十种精油化学成分独特的樟科香料植物资源。

North tropical zone: Dehong, Honghe, Wenshan, most parts of Xishuangbanna, and some parts of Lincang are in this zone. Aromatic plants distributed in these regions include Cymbopogon winterianus, Cymbopogon citratus, Eucalyptus citriodora, Dipterocarpus retusus, Cinnamomum glanduliferum, Styrax tonkinensis, Santalum album, Aquilaria, Dalbergia odorifera, Murraya paniculate, Blumea balsamifera, Citrus medica, Myristica fragrans, Canaga odorata, Artabotrys hexapetalus, Desmos chinensis, Hedychium coronarium, Hedychium flavum, Michelia alba, Michelia champaca, Plumeria rubra, Abelmoschus, Elsholtzia communis, Ocimum americanum, Ocimum gratissimum, Vanilla planifolia, Piper nigrum, Piper arborescens, Citrus limon, Cinnamomum cassia, Cinnamomum burmannii, Cinnamomum camphora, Cinnamomum tenuipilum and so forth.









Ylang Ylang 依兰

- Cananga odorata, known as the cananga tree (Indonesian: kenanga, Balinese: sandat, Acehnese: seulanga, Filipino: ilang-ilang, Ilocano: allangigan), is a tropical tree that originates in Indonesia, which in early 19th century spread to Malaysia and the Philippines.[1] It is valued for the perfume extracted from its flowers, called ylang-ylang /ˈiːlæŋ ˈiːlæŋ/ EE-lang-EE-lang[2] (a name also sometimes used for the tree itself), which is an essential oil used in aromatherapy. The tree is also called the fragrant cananga, Macassar-oil plant, or perfume tree.[3][4] Traditional Polynesian names include Mataʻoi (Cook Islands), Mohokoi (Tonga), Mosoʻoi (Samoa), Motoʻoi (Hawai), Mokosoi/Mokasoi/Mokohoi (Fiji).[5]
- The ylang-ylang vine (Artabotrys odoratissimus)[6] and climbing ylang-ylang (Artabotrys hexapetalus)[7] are woody, evergreen climbing plants in the same family. Artabotrys odoratissimus is also a source of perfume.[6]

Ylang-ylang tree



Flowers of *Cananga odorata*

Scientific classification

Kingdom:	**Plantae**
Clade:	**Angiosperms**
Clade:	**Magnoliids**
Order:	**Magnoliales**
Family:	**Annonaceae**
Genus:	*Cananga*
Species:	***C. odorata***

Binomial name

Cananga odorata

(**Lam.**) **Hook.f.** & **Thomson**

Ylang Ylang 依兰

- 在优质香水中有40%用了香油树的香油。特别地适用于茉莉、白兰、晚香玉、铃兰、紫罗兰等花香型香精，在香水香精中用它协调整个香气。这种从树叶中提取的香油来自东南亚，香气类似于大花茉莉，但更粗强而留长。开花2周以后，茉莉般的馨香才弥漫开来，这时就要立即将香味采集下来，所以蒸馏往往是在现场进行的。一棵树一年大约开22磅重的鲜花，而两磅重的香油差不多要用掉900磅的花朵。
- 依兰-依兰种植面积5000亩，现在还存留面积为3500亩左右，年产依兰-依兰油1-3吨。





Cinnamon 肉桂

- Cinnamon is a spice obtained from the inner bark of several tree species from the genus Cinnamomum. Cinnamon is used in both sweet and savoury foods. The term "cinnamon" also refers to its mid-brown colour.



Cinnamon sticks, powder, and dried flowers of the Cinnamomum verum plant



Cinnamomum verum, from Koehler's Medicinal-Plants (1887)

Black Pepper 胡椒

黑胡椒(学名:Piper nigrum)，学名为Piper nigrum，是胡椒科的一种开花藤本植物，又名黑川，原产于印度马拉巴海岸(Malabar Coast)。其果味辛辣，是人们最早使用的香料之一，可能是现在使用最为广泛的香料 。

黑胡椒精油中含量较多的化学成分主要有3-蒈烯、柠檬烯、石竹烯、α-石竹烯、β-蒎烯、β-月桂烯、δ-榄香烯和α-蒎烯等8种烯类物质。

医药上也用作驱风药和用于刺激胃分泌。





图片来源：Veer图库 www.veer.com

南亚热带: 普洱、红河、文山及保山大部分地区，德宏、临沧部分地区。 思茅松，草果，八角茴香，山柰，砂仁，山苍籽，驶骨丹，黄樟，枫香，灵香草，排草，互叶白千层，香薷，藿香，地檀香；以及佛手、柚和橙等柑桔类香料。

South subtropical zone: Pu’er, Honghe, Wenshan, most parts of Baoshan, and some parts of Dehong and Lincang are in this zone. Aromatic plants distributed in these regions include Pinus kesiya var.langbianensis, Amomum tsao-ko, Illicium verum, Kaempferia galanga, Amomum villosum, Litsea cubeba, Buddleja asiafica, Cinnamomum parthenoxylum, Liquidambar formosana, Lysimachia foenum-graecum, Lysimachia microcarpa, Melaleuca ahemifolia, Elsholtzia ciliata, Agastache rugosa, Gaultheria forrestii, Citrus medica, Citrus sinensis and so forth.









Coffee 咖啡



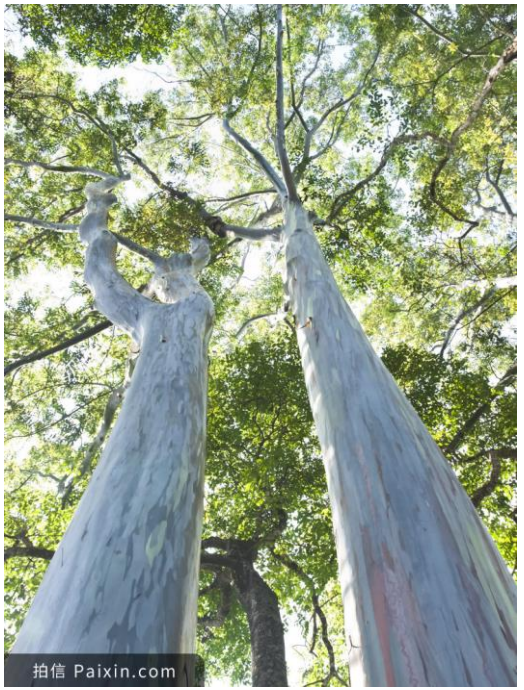
Robusta coffee flowers



Illustration of Coffea arabica plant and seeds

Eucalyptus Lemon 尤加利

- Antiseptic, stimulating and refreshing.
- This species of Eucalyptus has a refreshing lemon-citrus fragrance and makes an effective insect repellent. Lemon Eucalyptus essential oil is also known as Eucalyptus Citriodora.
- South America
- Eucalyptus citriodora
- Leaves and twigs
- Steam distillation
- Citronellal, Isopulegol, p-Citronellol, neo-Isopulegol



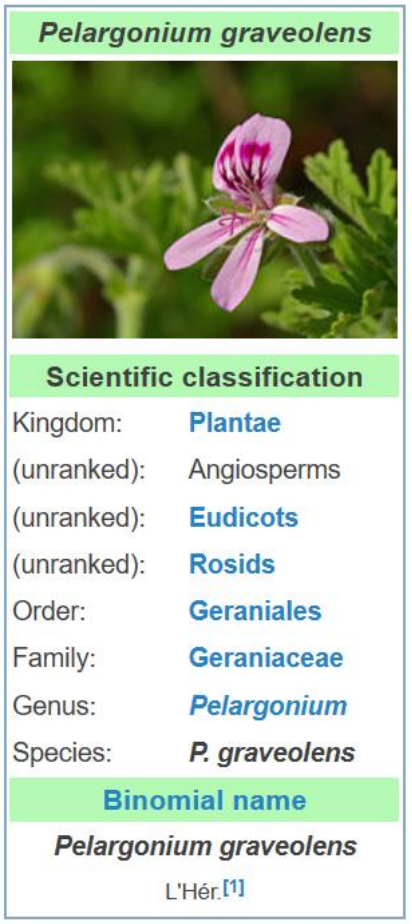
Geranium 香叶天竺葵

Pelargonium graveolens

- Pelargonium graveolens is an uncommon Pelargonium species native to the Cape Provinces and the Northern Provinces of South Africa, Zimbabwe and Mozambique.[1] It is in the subgenus Pelargonium along with Pelargonium crispum and Pelargonium tomentosum.

Etymology

- Pelargonium comes from the Greek pelargos which means stork. Another name for pelargoniums is stork's-bills due to the shape of their fruit. The specific epithet graveolens refers to the strong-smelling leaves.
- Description
- Pelargonium graveolens is an erect, multi-branched shrub, that grows up to 1.5 m and has a spread of 1 m. The leaves are deeply incised, velvety and soft to the touch (due to glandular hairs). The flowers vary from pale pink to almost white and the plant flowers from August to January. The leaves may be strongly rose-scented, although the leaf shape and scent vary. Some plants are very strongly scented and others have little or no scent. Some leaves are deeply incised and others less so, being slightly lobed like P. capitatum.



Ginger 罗平小黄姜

- Stimulating and toning.
- Ginger root essential oil was used in ancient China over two thousand years ago and has been used in traditional herbal medicine for hundreds of years throughout Europe. This warming, spicy oil is excellent for maintaining good circulation and joint mobility. It also has a positive action on the digestive system when used in massage.
- China
- Zingiber officinale
- Rhizomes
- Steam distillation
- a-Zingiberene, b-Sesquiphellandrene, ar-Curcumene, a,b & g-Bisaboline





Litsea Cubeba山苍籽

- The tree of Litsea cubeba is widely spread in China, Indonesia and other part of Southeast Asia. The essential oil of Litsea cubeba (EOLC) is obtained by steam distillation from the pepper-like fruits tree Litsea cubeba. The EOLC consists of about 29 active compounds. Among them, citral is the main component; the content of citral is nearly 80% of the EOLC. Due to the special function group, citral is easy to react with many chemicals. Thus, EOLC is usually applied as starting ma_x0002_terial to carry out aldol condensation, reduction, and six-member ring forming reaction. The EOLC is extensively employed to synthesis of geranal nitriles, pseudonoe, ionone, methyl ionone, Vita_x0002_min E and Vitamin A. These products are broadly applied in the fields of fragrance, perfume, med_x0002_icine and so on.
- 主要分布在西双版纳、德宏、保山和文山等地，可年产山苍籽油20-40吨。





中、北亚热带：大理、楚雄、玉溪、曲靖和昆明大部分地区。蓝桉，香叶天竺葵，云南松，柏树，香根鸢尾，迷迭香，薰衣草，桂花，晚香玉，银白合欢，茉莉，玫瑰，岩蔷薇，素馨，留兰香，薄荷，芸香草，滇白珠，姜味草，石椒草。

Mid &North subtropical zones: Dali, Chuxiong, Yuxi, Qujing, and most parts of Kunming are in these zones. Aromatic plants distributed in these regions include Eucalyptus globulus, Pelargoniium graveolens, Pinus yunnanesis, Cupressus funebris, Iris pallida, Rosmarinus officinalis, Lavandula angustifolia,Osmanthus fragrans, Polianthes tuberosa, Acacia dealbata, Jasminum sambac,Rosa rugosa, Cistus ladaniferus, Jasminum officinale, Mentha spicata, Menthahaplocalyx, Cymbopogon distans, Gaultheria yunnanensis, Micromeria biflora,Boenninghausenia Reichb and so forth.










Citronella 香茅草

- Cymbopogon nardus, common name citronella grass, is a perennial of the Poaceae grass family, originating in tropical Asia.
- It is the source of an essential oil known as "citronella oil".
- Uplifting, refreshing and antiseptic.
- This oil is best known as an effective insect repellent, but it also has antiseptic and stimulating properties. Citronella essential oil has a deodorant action and helps neutralise excessive perspiration.
- Madagascar
- Cymbopogon nardus
- Grass
- Steam distillation
- Citronellal, trans-Geraniol, b-Citronellol, Geranyl acetate

lemongrass (Cymbopogon citratus), citronella (Cymbopogon nardus, C. winterianus).

Cymbopogon nardus	
	
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Monocots
(unranked):	**Commelinids**
Order:	**Poales**
Family:	**Poaceae**
Genus:	***Cymbopogon*** Spreng.
Species:	***C. nardus***
Binomial name	
Cymbopogon nardus (L.) Rendle	

Jasminum officinale 素馨花

Safety

- This oil can cause irritation in some people if used too frequently or in high concentrations, so use with caution, preferably in low concentrations. A major component of jasmine is benzyl acetate (~25%) which is known to be absorbed through the skin and known to be an allergic sensitizer. Those who show allergies to spicy food, perfumes and cosmetics are most likely to react. However, the power of the scent is such that only tiny amounts are required anyway. Jasmine is also an emmenagogue and therefore should not be used during pregnancy.



Common (officinale) Jasmine

玉溪元江茉莉花



雨滴向茉莉低语：“愿吾永驻君怀！”

茉莉滴头叹息，纷纷落在尘土里。

——泰戈尔《飞鸟集》第237首



白兰花/缅桂花 Machelia/Michelia

- Michelia is a genus（属） of flowering plants belonging to the Magnolia family (Magnoliaceae，木兰科). The genus includes about 50 species of evergreen trees and shrubs（常绿乔木和灌木）, native to tropical and subtropical south and southeast Asia (Indomalaya), including southern China.

- 云南白兰花种植面积4000-5000亩，每年可产花油0.5吨、叶油3-5吨。



Michelia



Michelia × alba

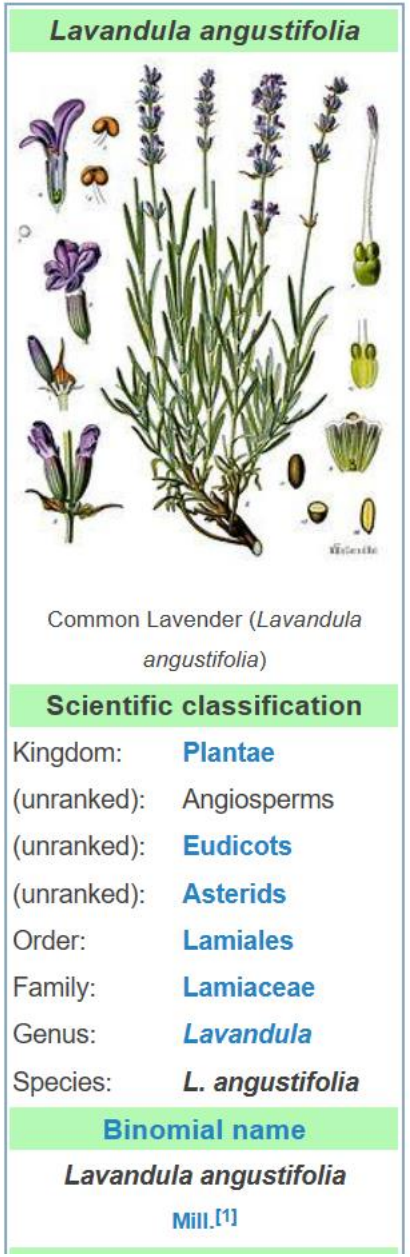
Scientific classification	
Kingdom:	Plantae
(unranked):	Angiosperms
(unranked):	Magnoliids
Order:	Magnoliales
Family:	Magnoliaceae
Subfamily:	Magnolioideae
Genus:	*Michelia* L.

Species

about 50; see text

Lavandula angustifolia薰衣草

- Lavandula angustifolia (lavender most commonly true lavender or English lavender,[2] though not native to England; also garden lavender,[3] common lavender, narrow-leaved lavender), formerly L. officinalis, is a flowering plant in the family Lamiaceae, native to the Mediterranean (Spain, France, Italy, Croatia etc.).
- Antiseptic, relaxing, soothing and rejuvenating.
- Cultivated throughout Europe, the essential oil produced in France is by far the most popular and it offers an almost endless list of therapeutic uses. This highly versatile oil eases tired muscles, balances head tension and soothes sensitive skin.
- France
- Lavandula angustifolia
- Flowering tops
- Steam distillation
- Linalyl acetate, Linalool, b-Caryophyllene



Spearmint 留兰香薄荷

- Spearmint, or spear mint (binomial Mentha spicata, synonym Mentha viridis), also known as garden mint, common mint, lamb mint and mackerel mint,[2][3] is a species of mint native to much of Europe and Asia (Middle East, Himalayas, China etc.), and naturalized in parts of northern and western Africa, North America, and South America, as well as various oceanic islands.
- Cooling, clearing and reviving.
- From the mint family, Spearmint is similar in action to Peppermint, but has other properties too. Like Peppermint, Spearmint oil is very clearing and makes a good inhalant oil, but it is particularly good at reviving mental fatigue and strengthening negative emotions. Some people prefer the slightly more gentle odour of Spearmint to Peppermint oil.
- USA
- Mentha spicata
- Flowering tops
- Steam distillation
- Carvone, Limonene, 1,8 Cineole

Spearmint



Mentha spicata

Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Lamiaceae**
Subfamily:	Nepetoideae
Tribe:	Mentheae
Genus:	***Mentha***
Species:	***M. spicata***

Binomial name

Mentha spicata
L.[1]

Synonyms

Mentha viridis

寒温带：迪庆、怒江、丽江、昭通大部分地区，昆明的东川、绿劝部分地区。树苔，橡苔，杜鹃、铁杉，冷杉，侧柏，瑞香，云木香，马蹄香，甘松，猴樟，岩桂。

Cold temperate zone: Deqing, Nujiang, Lijiang, most parts of Zhaotong, and some parts of Kunming are in this zone. Aromatic plants distributed in these regions include Evernia furfuracea, Evernia prunastri, Rhododendron, Tsuga chinensis, Cedrus deodara, Sabina chinensis, Thymelaeaceae, Saussurea lappa, Valeriana jatamansii, Nardostachys jatamansi, Cinnamomum petrophilum, Cinnamomum bodinieri. and so forth.















Iris germanica 鸢尾

- Iris x germanica is the accepted name for a species of flowering plants in the family Iridaceae commonly known as the bearded iris or the German iris. It is one of a group of hybrid origin.

Description

- Iris x germanica grows up to 120 cm high and 30 cm wide. It is a European hybrid, rather than a true wild species. The roots can go up to 10 cm deep and it is a rhizomatous perennial that blooms mid to late spring. It is known to produce the isoflavone irilone.[6] Hundreds of hybrids exist representing nearly every colour from jet black to sparkling whites, except bright scarlet. Varieties include I. g. var. florentina and I. g. var. germanica.

Growing

- Lifting, dividing and replanting the rhizomes is best done once flowering has finished as this is when the plant grows the new shoots that will flower the following year. The rhizomes are placed on the surface of the soil facing towards the sun and with at least 45 cm of open ground in front of them - this allows two years growth and flowering. The plant is held in place by removing half the leaf mass to reduce wind rock and by using the old roots as anchors in the soil. The rhizome is placed on well dug ground and the roots placed either side into 10 cm deep grooves. The soil is then gently firmed around the roots, so holding the plant steady. New roots and leaves are created rapidly as the rhizome moves forwards.

Iris germanica





Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	Monocots
Order:	**Asparagales**
Family:	**Iridaceae**
Subfamily:	Iridoideae
Tribe:	Irideae
Genus:	***Iris***
Subgenus:	*Iris*
Section:	*Iris*
Species:	***I. germanica***

Binomial name

Iris germanica

L.

桂花Osmanthus

- Osmanthus /ɒzˈmænθəs/ is a genus of about 30 species of flowering plants in the family Oleaceae. Most of the species are native to eastern Asia (China, Japan, Indochina, the Himalayas, etc.) with a few species from the Caucasus, New Caledonia, Sumatra, and North America (Mexico, Central America, southeastern United States).
- Osmanthus range in size from shrubs to small trees, 2–12 m (7–39 ft) tall. The leaves are opposite, evergreen, and simple, with an entire, serrated or coarsely toothed margin. The flowers are produced in spring, summer or autumn, each flower being about 1 cm long, white, with a four-lobed tubular-based corolla ('petals'). The flowers grow in small panicles, and in several species have a strong fragrance. The fruit is a small (10–15 mm), hard-skinned dark blue to purple drupe containing a single seed.



Osmanthus



Osmanthus heterophyllus in flower

Scientific classification

Kingdom:	**Plantae**
(unranked):	**Angiosperms**
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Oleaceae**
Tribe:	Oleeae
Genus:	***Osmanthus*** **Lour.**

Synonyms[1]

- *Cartrema* Raf.
- *Pausia* Raf.
- *Siphonosmanthus* Stapf
- *Amarolea* Small

百叶玫瑰Rose Centifolia
（五月玫瑰）

百叶玫瑰，每年五月开花，一年一季，用以提取玫瑰精油，得率为万分之二左右，所提炼的玫瑰精油称为：液体黄金。





Rosemary 迷迭香

- Rosmarinus officinalis, commonly known as rosemary, is a woody, perennial herb with fragrant, evergreen, needle-like leaves and white, pink, purple, or blue flowers, native to the Mediterranean region.
- It is a member of the mint family Lamiaceae, which includes many other herbs. The name "rosemary" derives from the Latin for "dew" (ros) and "sea" (marinus), or "dew of the sea".The plant is also sometimes called anthos, from the ancient Greek word ἄνθος, meaning "flower". Rosemary has a fibrous root system.
- Stimulating, reviving and clearing.
- A very invigorating oil which re-energises tired muscles and weary feet. Rosemary essential oil promotes clear thinking, aids concentration and is said to improve the memory. It also gives a healthy shine to hair.
- Tunisia
- Rosmarinus officinalis
- Flowering tops
- Steam distillation
- 1,8 Cineole, a & b Pinenes, b-Caryophyllene

Rosmarinus officinalis
Rosemary



Flowering rosemary

Scientific classification

Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	**Eudicots**
(unranked):	**Asterids**
Order:	**Lamiales**
Family:	**Lamiaceae**
Genus:	***Rosmarinus***
Species:	***R. officinalis***

Binomial name

Rosmarinus officinalis
L.[1]

藏红花Saffron

番红花（学名：Crocus sativus L.）又称藏红花、西红花，是一种鸢尾科番红花属的多年生花卉，一直以来都是最贵重的香料之一。是亚洲西南部原生种，最早由希腊人人工栽培。主要分布在欧洲、地中海及中亚等地，明朝时传入中国，《本草纲目》将它列入药物之类，中国浙江等地有种植。是一种名贵的中药材，具有强大的生理活性，其柱头在亚洲和欧洲作为药用，有镇静、祛痰、解痉作用，用于胃病、调经、麻疹、发热、黄胆、肝脾肿大等的治疗。





Saffron crocus	
A single shell-shaped *C. sativus* blossom with crimson stigmas	
Scientific classification	
Kingdom:	**Plantae**
(unranked):	Angiosperms
(unranked):	Monocots
Order:	**Asparagales**
Family:	**Iridaceae**
Subfamily:	Crocoideae
Genus:	*Crocus*
Species:	***C. sativus***
Binomial name	
Crocus sativus L.	

树苔Treemoss/Usnea

Usnea species



Wintergreen 冬青

- Wintergreen is a group of aromatic plants. The term "wintergreen" once commonly referred to plants that remain green (continue photosynthesis) throughout the winter. The term "evergreen" is now more commonly used for this characteristic.
- Most species of the shrub genus Gaultheria demonstrate this characteristic and are called wintergreens in North America, the most common generally being the American wintergreen (Gaultheria procumbens). Wintergreens in the genus Gaultheria contain an aromatic compound, methyl salicylate, and are used as a mintlike flavoring.



Wintergreen from Greeley, Pennsylvania early December.

Gaultheria from Fountain Springs, Pennsylvania



Angelica Root 云当归

- Angelica archangelica
- Rhizomes
- Steam Distillation
- Balancing and strengthening.
- a-Pinene, delta-3-Carene, a & b-Phellandrene, p-Cymene
- Angelica essential oil is distilled from the roots of the plant and was referred to in medieval times as 'Angels Herb' or the 'Root of the Holy Spirit'. It gives a boost to both the immune and nervous system and has a strengthening action to the nervous and glandular systems.
- Angelica was arguably the most popular herb of the Middle Ages due to the belief it was a panacea for almost every ailment as well as being the finest cleansing agent. Angelica root essential oil is used in aromatherapy to maintain flexible mobile joints, and to help with problem skin conditions, painful periods, stress and detox regimes.





干热河谷：怒江、红河、金沙江、元江等的低热河谷地区。香根，金合欢，山草果，芸香草，清香木。

Hot-dry Valley areas: Vetiveria zizanioides, Acacia farnesiana, Aristolochia delavayi, Cymbopogon distans, Pistacia weinmannifolia. are found in hot river valleys at low altitude, to name a few, Nujiang River Valley, Honghe River Valley, Jinshajiang River Valley and Yuanjiang River Valley.













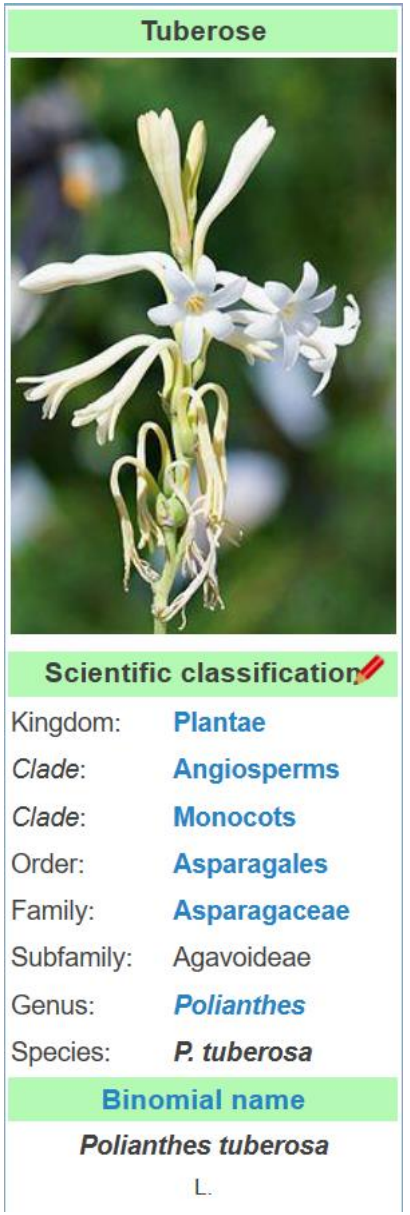
晚香玉 Tuberose

- Polianthes tuberosa (redirected from tuberose) 晚香玉;晚香玉属
- Polianthes tuberosa, the tuberose, is a perennial plant related to the agaves, extracts of which are used as a note in perfumery.

Cultivation

- Tuberose is best cultivated in hardiness zones 8-10(耐寒区). It is a tropical plant, and is perennial（多年生） in hardiness zones 9 to 11.

- 俗称夜来香，它的香味被形容成晚间香花满园的芬芳气息，香气幽雅，这种花提炼出来的香油在20%的优质香水中可以找到，特别是清幽类型香水。纯香精的产量很低，每2600磅这种花朵只能产出7盎司(约28.35克)的香精，所以它比同等重量的黄金还贵。



Tsaoko草果

- 草果（学名：Amomum tsaoko Crevost et Lemarie）是姜科，豆蔻属多年生草本植物，茎丛生，高可达3米，全株有辛香气，叶片长椭圆形或长圆形，顶端渐尖，基部渐狭，边缘干膜质，两面光滑无毛，叶舌全缘，顶端钝圆，穗状花序不分枝，每花序有花多达30朵；总花梗被密集的鳞片，鳞片长圆形或长椭圆形，苞片披针形，顶端渐尖；小苞片管状，萼管约与小苞片等长，顶端具钝三齿；花冠红色，裂片长圆形，唇瓣椭圆形，蒴果密生，熟时红色，种子多角形，浓郁香味。4-6月开花，9-12月结果。
- 分布于中国云南、广西、贵州等省区，栽培或野生于疏林下，海拔1100-1800米。
- 草果是药食两用中药材大宗品种之一，草果作调味香料；全株可提取芳香油。果实入药，具有燥湿健脾，除痰截疟的功能。主治脘腹胀满，反胃呕吐，食积疟疾等症。好多中成药离不开它的配方，如透骨搜风丸、益肾丸、开郁舒肝丸、宽胸利膈丸、洁白丸等。
- 种植面积为100万亩左右，年产干草果10000吨，主产于红河州金平县和保山市的腾冲市，市场以国内的西北和东北为主，在东南亚国家的华人中也有一定需要。草果是云南省最独特的一种辛香料和南药。





香荚兰Vanilla



- 香子兰是从香子兰花蔓上的果荚里提炼出来的。原产于墨西哥和美洲的热带地区，提取前要经过发酵。气味甜蜜辛香，自被考迪(Coty)用于"吸引"(L'AIMANT)之后，其在香水业中的运用越来越普遍，目前大约四分之一的香水用到它。
- 香荚兰是典型的热带雨林中的一种大型兰科香料植物，含有香兰素及其他多种化合物，是各国消费者最为喜欢的一种天然食用香料，有“食品香料之王”的美称。
- 具有特殊的香型，广泛用作高级香烟、名酒、冰淇淋、巧克力、奶油、咖啡、可可等高档食品的调香原料。
- 原产于中美洲，中国1960年从印尼引种成功之后，先后在福建、海南和云南种植。
- 种植面积2000亩，近年来香荚兰商品类的产量为3-4吨，产品供不应求。

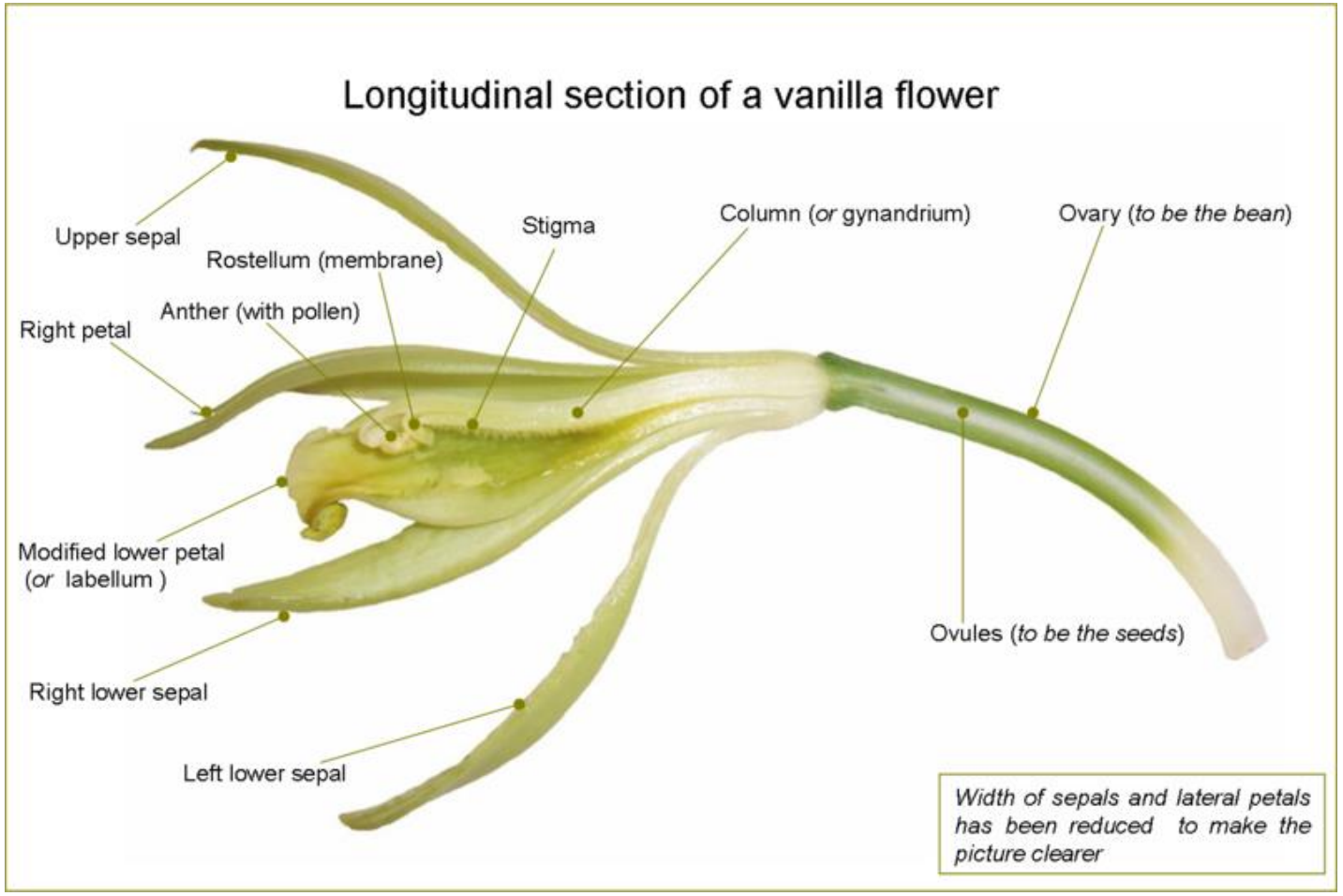






香荚兰 Vanilla

V. planifolia – flower



香根草 Vetiver

- Chrysopogon zizanioides, commonly known as vetiver (derived from the Tamil: வெட்டிவேர் veṭṭivēr) is a perennial bunchgrass of the Poaceae family, native to India. In western and northern India, it is popularly known as khus.
- Vetiver is most closely related to Sorghum but shares many morphological characteristics with other fragrant grasses, such as lemongrass (Cymbopogon citratus), citronella (Cymbopogon nardus, C. winterianus), and palmarosa (Cymbopogon martinii).



Chrysopogon zizanioides



Scientific classification

Kingdom:	**Plantae**
(unranked):	**Angiosperms**
(unranked):	Monocots
(unranked):	**Commelinids**
Order:	**Poales**
Family:	**Poaceae**
Genus:	*Chrysopogon*
Species:	***C. zizanioides***

Binomial name

Chrysopogon zizanioides

(L.) Roberty









果
Fruit

花
Flower

籽
Seed

云香

木
Wood

叶
Leaf

根
Root







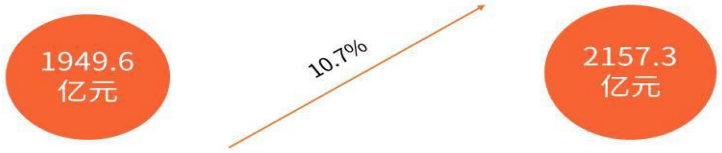


- 唐·陆羽《茶经》：“茶之为饮，发乎神农氏。”

中国茶叶产值：2018年总产值达到2157.3亿元

艾媒咨询 iiMedia Research

图1-2 2017-2018年中国茶叶总产值及增幅（亿元）



数据来源：中国茶叶流通协会，iiMedia Research（艾媒咨询）

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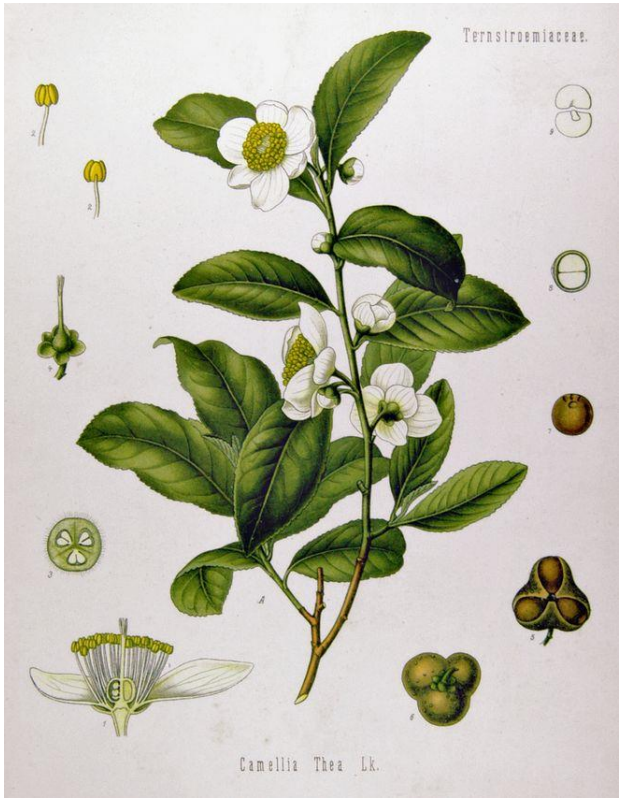

- 咖啡是世界第二大大宗商品，仅次于原油，全世界平均每天要喝掉20亿杯咖啡。





COP-15

BIODIVERSITY

生物多样性四点主张

1、坚持相互尊重，平等相待。（每一种生物都有生存权，都有它存在的价值）

2、坚持美人之美，美美与共。（每一种生物都是美的结晶，都彰显着创造之美）

3、坚持开放包容，互学互鉴。（平等、多元、多向，交流互鉴）

4、坚持与时俱进，创新发展。（永续发展，保持多样性）

文明因多样而交流，因交流而互鉴，因互鉴而发展。

——在亚洲文明对话大会开幕式上的主旨演讲

（2019年5月15日，北京）

中华人民共和国主席　习近平

穿越历史的迷雾
超越嗅觉的芬芳

Discover the history of perfume
Beyond the scent of smell

制作：尹开云

演唱： **Andy Williams**

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