Gentiana lutea
[jen-shee-AN-uh LOO-tee-uh]

Names: yellow gentian; pale gentian; gall weed; bitter root; Bitterwort; Gelber Entian, Enzian (German); grande gentiane, gentiane jaune (French); genziana maggiore (Italian); Goryczka Zolta, Gencjan (Polish)

Family: Gentianaceae

Pharmaceutical Name: Radix Gentianae

Description: Height 3 feet sometimes taller; width: 1 foot. Flowers are 1-inch pale yellow blooms in clusters of 3 to 10. It takes about 3 years to flower. Leaves are shiny up to 10 inches long, tightly clasped on upright stems; occur at each joint of the stem with five prominent veins marking the underside. Upper leaves are small with no leafstalks. Fruit is a two-valved capsule of oblong shape. Root: thick taproot. Blooms from May to June. Mountain plant from southern Europe growing wild in pastures above a height of 3,300 ft. Excessive harvesting of the roots has jeopardized the survival of the species.

Cultivation: Perennial. Zone 3. Germination 14-28 days. Stratify for 3 weeks. Space 10-14 inches. Soil temperature 70-75F. Soil: rich humus, moist with good drainage and heavy watering. (native habitat is high bogs and wet pastures); pH: 5.5-6.5. Sun: Light shade. Prefers cool climate. May be difficult to establish, but plants can live over 50 years. Propagation: for best results sow fresh seeds in the autumn to naturally stratify. Established plants can be divided. The seeds require a period of vernalization at a low temperature or treatments to stimulate germination. In spring, after some two months of germinating in a substratum of sand and peat, the seedlings may be transplanted, ten to the square yard, taking care to water and weed. They benefit from an annual top dressing fresh acid soil or peat moss. In very cold climates with inadequate snow cover, they need light mulching with hay or evergreen boughs to protect them.

Harvest: The rhizome and roots are harvested in autumn and spring in the fifth or sixth year before the renewal of plant growth. They are fleshy, give out a penetrating odor of damp earth and have a very bitter taste. The entire hypogean apparatus is removed and after cursory cleaning this is dried, for herbal use swift action is necessary, in an oven at about 120F; in the liquor industry the plants have to be slightly fermented before drying. If dried slowly and then powdered, the root will retain its desired bitterness and color. Good-quality roots are dark reddish brown, tough and flexible with a strong disagreeable odor.
taste should be sweet at first, and then deeply bitter.

History: King Gentius of Illyria (180-67 BC) is said to have introduced gentian to medicine and given the herb his name after it cured his army of a mysterious fever. Gentian was used by the ancient Egyptians, Arabs, Greeks and Romans as an appetite stimulant, antiseptic wound wash, and treatment for intestinal worms, digestive disorders, liver ailments and "female hysteria." It is a bitter flavoring used for alcoholic drinks, especially in Germany and Switzerland, where gentian flavored beer before the introduction of hops. Gentian wine was served as an apertif at 18th century dinner parties to encourage the guests' digestion.

The term "moxie" (meaning courage tinged with recklessness) comes from Moxie, a bitter soft drink available only in New England since the 1890s which uses gentian root.

 Constituents: Iridoids including amarogentin, gentiopicroside and swertiamarin; Xanthones such as gentisein, gentisin, isogentisin, 1,3,7-trimethoxynanthone and others; alkaloids mainly gentianine and gentialutine; phenolic acids including gentisic, caffeic, protocatechuic, syringinc and sinapic acids; sugars such as gentianose and gentiobiose, traces of volatile oil. Gentiopicrin, one of the most bitter substances known, converts when the herb is dried to glycosides such as gentin, amarogentin, alkaloids, essential oil.

Character: very bitter, cold, astringent, drying

Meridians/Organs affected: liver, gall bladder

Properties: bitter, tonic, alterative, antipyretic, appetite and gastric stimulant, anti-inflammatory, febrifuge

Culinary: Gentian is found in any liquor store as the chief flavor in vermouth, and in Stockton bitters and Angostura bitters, both originally hailed as digestive tonics. Angostura bitters does not contain the bark of that name, but was produced in Angostura, Argentina (now Ciudad Bolivar) by Dr. J.G.B. Siebert, Chief Surgeon at the U.S Military Hospital, in 1824.

Medicinal: One of the most bitter of the bitter digestive tonics, gentian is often called "bitter root". Taken 30 minutes before eating, it increases the appetite, stimulating digestive juices, pancreas activity, the blood supply to the digestive tract, and intestinal peristalsis. It also decreases intestinal inflammation and kills worms. Digestive juice begin flowing about 5 minutes after the herb reaches the stomach, and the level achieved in 30 minutes is maintained for 2 to 3 hours. It is especially helpful in fat and protein digestion and slightly raises stomach acidity. A German study found it extremely effective in curing indigestion and heartburn when volunteers were given gentian with small amounts of cayenne, ginger, and wormwood. Gentian is also used to treat liver and spleen problems, and to promote menstruation. At times, its fever-lowering action has been considered superior to Peruvian bark. There is some evidence that it makes the body more sensitive to adrenalin and may indirectly stimulate more than appetite. It was once used externally to clean wounds.

America's 19th-century Eclectics considered gentian a powerful tonic and prescribed it to improve appetite and stimulate digestion. Gentian was listed in the U.S. Pharmacopoeia from 1820 to 1955 as a digestive stimulant.

Applications:
Decoction: Use 10 g herb to 500 ml water and decoct for 20 minutes. Take before meals for fullness and stomach pains
Tincture: Take up to 2 ml three times a day as a digestive stimulant, or in drop doses to allay cravings for sweet foods. Prescribed for liver disease, including hepatitis, gall bladder inflammations, and where jaundice is a symptom. Add tinctures of dandelion root, vervain, holy thistle, or barberry as additional liver tonics and stimulants, up to a combined total dose of 5 ml tincture.
Gentian Digestive Tonic:
½ cup fresh gentian root
¼ cup fresh peppermint leaves
1 Tbsp fresh gingerroot, peeled and sliced
1 cup water
1 cup glycerin

Combine water and glycerin in a saucepan and simmer all ingredients over low flame for about 45 minutes. Strain. When liquid is cool, store in an amber jar or bottle. Take one teaspoon before each meal to aid digestion. Tonic will keep for about a year on the shelf and longer when refrigerated.

Other Uses: Used by veterinarians to improve animals' appetites. Fermentation and subsequent distillation of the root produces "gentian grappa." It is used in the liquor industry to prepare apertifs, syrups, and sparkling drinks as well as in vermouth and angostura. Apertifs can also be prepared quite easily by infusing the root in white wine.

Ornamental: Valued for their looks in rock gardens, woodland plantings and informal wild gardens. They have flowers of spectacular beauty. In Europe, gentians rank with primroses in popularity among alpine rock gardens.

Ritual: Gender: Masculine. Planet: Mars. Element: Fire. Power: Love, Power. Gentian is added to love baths and sachets. When used in any incense or sachet gentian adds a great deal of extra power. It is also used to break hexes and curses. Culpeper wrote that gentian may be used when helping someone who has suffered from matters of the heart and needs emotional strength.

Toxicity: Large doses can produce nausea and even vomiting. Gentian should not be given to children under age 2 or in cases of peptic ulcers. German physicians discourage its use by people with high blood pressure.

References:
The Complete Medicinal Herbal, Penelope Ody, Dorling Kindersley, 1993


The Healing Herbs, Michael Castleman, Rodale Press, 1991

The Illustrated Herb Encyclopedia, Kathi Keville, Mallard Press, 1991


