

eFlora of India

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Curcuma angustifolia

Curcuma angustifolia Roxb., *Asiat. Res.* 11: 338 1810. ;

Uttarakhand to Indo-China: Assam, Bangladesh, India, Myanmar, Nepal, Thailand, Vietnam, West Himalaya; Introduced into: China Southeast as per POWO;

Common name: East Indian Arrowroot, Bombay arrowroot • **Hindi:** Tikhur तिखुर • **Bengali:** Keturi halodhi • **Manipuri:** য়াইপন Yaipan • **Marathi:** Tavakeera, Tavakhira, Tavakila • **Malayalam:** Koova, Kuva-kizhanna • **Tamil:** Ararutkilangu, Kua, Ararut-kizhangu • **Kannada:** Koove-hittu • **Telugu:** Ararut-gaddalu • **Sanskrit:** Tavakshira

Curcuma angustifolia is one of over 80 species belonging to the *Curcuma* genus,^[3] in the family Zingiberaceae (which also contains plants such as ginger and turmeric). This species is native to the Indian subcontinent and is more commonly known as wild or **East Indian Arrowroot**^[2] or **narrow-leaved turmeric** in English, and is called **yaipan** in Manipuri, "tikhur" in Hindi, "Koova" in Malayalam. While this species has been gradually increasing in popularity in the Western hemisphere for its medicinal potential, it is no stranger to the Eastern hemisphere where it plays an integral role in many Eastern cultures.^[4]

Curcuma angustifolia is rhizomatous herb. It is a perennial and a flowering plant, with modest and small spiked inflorescences of three or four yellow, funnel-shaped flowers within tufts of pink terminal bracts (coma bracts).^[4] The bracts are boat-shaped and encase the entire perianth of the flower. As is common to the genus, the flowers of *C. angustifolia* have double anthers, a slender style, and a globular stigma.^[5] Flowers are usually seen at the beginning of the monsoon (rainy) season from July to August, before the leaves have had the chance to fully develop, and they continue to flower even after the leaves have fully developed.^[4] The calyx of the flower is usually 1 centimeter long and very hairy, with 3 lobes that may appear to be triangular or obtuse. The corolla is white, and usually grows to be about 1.5 to 2 centimeters long with glabrous lobes that are also hairy. Seeds are a reddish-brown color.^[6]

Leaves are typically simple, green, glabrous, and lanceolate, with margins that are entire. They appear in an opposite arrangement and are deciduous. They display fine parallel venation off of a central midrib. The upper surface of the leaves are usually a darker shade of green than the lower surfaces. Leaves may grow to about 36–37 cm length and 8–10 cm in width. The leaves also smell and taste similar to turmeric.^[7]

Of great significance to *C. angustifolia* is its strong rhizome, which can grow to be up to 1.5 meters in length. The rhizome of this plant is the primary source of its nutritive and medicinal properties.^[4] *C. angustifolia* also uses its rhizome to reproduce asexually via vegetative propagation.^[8]

The plant in its entirety typically grows to be from three to four feet in height.^[5]

Curcuma angustifolia requires specific environmental conditions which may places in India provide, thus making it an ideal host country. The species requires temperatures at or above 34 degrees Fahrenheit. It prefers shady areas and grows best in moist soil that is sandy, pebbly, or loamy.^[9] As such, *C. angustifolia* is often found at the edges or in the clearings of forests.^[6]

This species of plant is of great nutritional value, especially as a source of starch for Indian foods and medicines. The rhizomes of *Curcuma angustifolia* are typically ground into a flour, which can then be mixed together with milk or water to form a nutritious meal. This flour was a common commercial crop in the 1800s.^[4]

Most importantly, the West has begun to notice its potential as a source of nutrition and as a non-irritating diet for patients suffering from specific chronic ailments, recovering from fevers, or experiencing irritations of the gastrointestinal tract, the lungs, or the excretory system. A drink including *C. angustifolia* as an ingredient is also used as a replacement of breast-milk, or as a nutritional supplement for babies a short while after weaning.^[7]

It is found as a primary ingredient in cakes, fruit preserves, biscuits, and puddings.^[7]

The rhizomes of *Curcuma angustifolia* can be used on the external surface of the body, as well as internally to promote healing. It can be used to heal peptic ulcers, is beneficial in treatments of dysentery, diarrhea, and colitis, and is often employed as an herbal tonic for patients suffering from tuberculosis. It is also used to soothe coughs, and as such is used to treat bronchitis.^[7]

Essential oils from *C. angustifolia* have been extracted and are used in antifungal medications. Compounds in the leaves of this plant have also been shown to have potential as antibacterial agents.^[7]

In addition, scientists have extracted the starches within the flour produced by the ground rhizomes of *C. angustifolia* and compared it to corn starch. Its binding and disintegration properties make it a viable, and perhaps superior, substitute for cornstarch as an excipient in medicinal tablets.^[10]

(From Wikipedia on 6.9.14)