

Botanic name : *Calotropis procera* W.T. Aiton -- Hort. Kew., ed. 2 [W.T. Aiton] 2: 78. 1811 (IK)

Common name: Akondo (Bengali), Rubber bush, Apple of sodom

Family: Asclepiadaceae

Habitat: Terrestrial

Distribution: Native to Indian subcontinent. Distributed throughout India. Found in Indo-China to Malaysia, Macaronesia, West Africa North and East Africa, Madagascar, and Arabian Peninsula. Naturalized in Australia, Central America, North, South America, and West Indies. Accepted in culture in many countries such as Central and South America, Pacific islands, Australia, and the Caribbean

Description: A spreading shrub or a small tree of 4 m, oozing copious milky sap/latex when cut or broken; leaves opposite-decussate, grey-green, slightly pubescent broadly elliptical but varying between ovate and obovate, large with a pointed tip, two rounded basal lobes and sessile to sub sessile; flowers waxy white; corolla slightly campanulate, petals 5, petals often fused end to end to form a bulby structure which on opening shows a purple-tipped inside and with a central purplish crown, carried in stalked clusters at the ends of the branches by a dense, multiflowered, umbellate cyme arising from the nodes and appearing axillary or terminal. Stames 5, adnate with stigma to form gynostegium, each stamen with a coronary outgrowth at back is represented by two polinia with their retinaculæ which joins two polinia of adjacent anthers to corpusculum in a groove, to form a unit called translator. Bicarpellate, stigmatic head pentagonal; fruit-an etaerio of follicles, grey-green, inflated, with numerous seeds with tufts of long silky hairs at one end.

Phytochemicals: Alkaloids, flavonoids, tannins, saponins, and cardiac glycosides. Latex contains acetate calotropenyl, calotropenyl, and 1-(2',5'-dimethoxyphenyl)-glycerol, essential oils, cardiotoxic agents such as calotropin, calotropagenin, calotoxin, calactin, uscharin, amyirin, amyirin esters, uscharidin, coroglaucigenin, frugoside, corotoxigenin, calotropagenin, and voruscharine. Flower contains α - and β -amyirins, an alkaline phosphate, cyanidin-3-rhamnoglucoside, cycloart-23-en-3 β , 25-diol, cyclosadol, multiflorenol, procestrol, quercetin-3-rutinoside, β -sitosterol, β -sitost-4en-3one, and stigmasterol, cyanidin-3-rhamnoglucose and the triterpene calotropenyl acetate. The root-bark possesses benzolisoleneolone, benzollineolone, long-chain fatty acids, and C (18) isoursane

Medicinal/Economic uses: In ancient Hindu literature, three varieties of Arka are mentioned: Dhanvantari Nigantu as Suklarkah, Rajarkah, and Sveta mandaraha. Different parts such as leaves, roots and bark, flower, fruits, stem, and latex of the plant have been reported to possess various phytochemicals which might possess various

pharmacological activities. The coarse shrub possesses acaricidal, schizonticidal, cardiogenic, antimicrobial, anthelmintic, insecticidal, anti-inflammatory, antidiarrheal, schizontocidal activity, anticancerous, and larvicidal activities with other beneficial properties. Since the Vedic times, leaves were used in sun worship. Root bark exudates were used by Hindu physicians to treat skin diseases, cough, intestinal worms, ascites, and anasarca and also in enlargements of abdominal viscera. Flowers were considered to improve digestion, catarrh, and increase appetite. Parts used to treat elephantiasis (root bark), toothache (latex), asthma (flowering top), rheumatism (leaf poultice), leprosy, hepatic, and splenic enlargements (the whole plant), paralysis (leaves were boiled, and prepared oily), The milky juice was considered as a drastic purgative and caustic. Leaf powder has been considered as a substitute for ipecacuanha and also possesses the properties of Gutta-persica also used in wound healing. The juice was used as infanticide and was abortifacient. Milky juice are used in tanneries to remove hair from hides (Parihar and Bolekar 2016). The whole plant when dried exhibits good tonic, anti-helminthic and expectorant activities. The roots also have similar activities and also act as an effective laxative. Traditionally, the powdered root is used to treat bronchitis, asthma, leprosy, eczema, elephantiasis while the latex is used to, treat vertigo, baldness, hair loss, toothache, intermittent fevers, rheumatoid/joint swellings, and paralysis. Also used for the treatment of parasites in small ruminants, stimulating the scientific validation of anthelmintic effects. The leaves are used to treat joint pain, and reduce swelling. The pungent latex extracted from the leaves and flowers is processed and used in the commercial preparation of eye tonics.

More read: Parihar and Balekar (2016): <http://www.tjps.pharm.chula.ac.th/>

Verma R, Satsangi GP, Shrivastava JN (2010). Ethno-medicinal profile of different plant parts of *Calotropis procera* (Ait.) R.Br. Ethnobot. Leaflet. 14:721-42