

ON THE OCCURRENCE AND AVAILABILITY OF MEDICINAL PLANTS USED IN HOMOEOPATHY

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In homoeopathic system, more than 70% drugs are derived from vegetable kingdom. Most of the plants are native of foreign countries and approximately 350 species wild or available in Indian peninsula are native or introduced species. They are available in wild or cultivated state. The distribution and floristic account of the plants are well evident in various floras and survey reports.

While going through literature and dealing with various aspects of homoeopathic medicinal plants, some interesting facts have come to the notice on their occurrence and availability for some of the plants.

(i) **Artemisia vulgaris L.** - Mr. J.D. Hooker has misidentified the plant *A. vulgaris* of Linn. in his Flora of British India 3: 325, 1881 and has been followed by most of the Indian authors like Duthie, Gamble, Fyson etc. *Artemisia vulgaris* Linn. is not found in India but its variety is found as *Artemisia vulgaris* Linn. var *nilagirica* Clarke (Anonymous 1986). The correct name of Indian plant is as follows.

Artemisia nilagirica (C.B. Clarke) Pampanini
= *A. vulgaris* Linn. var *nilagirica* Clarke
= *A. indica* auct. non Willd.
= *A. vulgaris* auct. non Linn.

Pampanini's work proved the Indian plants only as *Artemisia nilagirica*.

(ii) **Phyllanthus niruri** - Hooker (1887) has mentioned *P. niruri* Linn. in the Flora of British India. Webster (1957) and, Mitra and Jain (1985) showed that the *P. niruri* Linn. of Hooker is actually represented by three different species.

- a) *Phyllanthus amarus* Schum & Thonn.
- b) *P. fraternus* Webster
- c) *P. debilis* Klein ex Willd.

True *Phyllanthus niruri* that is *P. niruri* Linn. is endemic to the West Indies and has not been found to occur in India. Much of the botanical, phytochemical and pharmacological work previously carried out in India on the plants called *Phyllanthus niruri* was apparently done on *P. fraternus*, *P. amarus* or *P. debilis*.

Bagchi G.D. et al (1992) have reported identification key of herbaceous *Phyllanthus* species of Lucknow district on the basis of morphological and histological characters.

- A. Plant prostrate and parenchymatous cells are full of starch grains *P. virgatus*
- B. Plants erect and parenchymatous cells have few or no starch grains
 - B1. Capsule verrucose and fibre cells are not present in branchlets *P. urinaria*
 - B2. Capsule smooth and fibre cells are present in branchlets
 - (i) Cymules bisexual, calyx lobes 5, druse crystals are present *P. amarus*
 - (ii) Cymules unisexual, calyx lobes 6, druse crystals are absent *P. fraternus*

(iii) **Ashoka Plants** - Earlier ashoka plants growing in India were regarded as *Saraca indica* but later, De Wilde (1967) recognised it to be a separate species as *Saraca asoca*. Distribution of *S. indica* was found in Thailand, Malaya, Sumatra, Java and east of the Irrawaddy river while *Saraca asoca* was found in Sri Lanka, India, Bangladesh and west of Irrawaddy river. These two species were characterised mainly on the basis of erectness, persistency, clasping and spreading nature of bractioles. Thus nowadays, two separate and distinct species - *Saraca indica* and *Saraca asoca* are well recognised by majority of the plant taxonomists (Srivastava et al 1987). Correct nomenclature of *Saraca asoca* is mentioned as *Saraca asoca* (Roxb.) De Wilde, Blumea 1967 15: 422. *Jonesia asoca* Roxb. Asiat. Res. 1979, 4: 355; *Saraca indica* auct. non Linn. Beddome, Fl. Sylv. 1869, 1: 57.

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(iv) **Ruta graveolens** Linn.

Two species of genus *Ruta* are reported under cultivation in Indian gardens (Anonymous 1972).

I. *Ruta chalepensis* Linn. Syn. *R. bracteosa* DC., *R. angustifolia* Pers., *R. graveolens* Linn. var. *angustifolia* Hook. f. Some taxonomists consider *R. angustifolia* Pers. is different species than *R. chalepensis* Linn. (Tutin 1968).

II. *R. graveolens* Linn. it is occasionally cultivated in Indian gardens. Due to similar morphological appearance *R. chalepensis* Linn. has been misidentified as *R. graveolens* Linn. It was found in the Herbaria of CDRI & NBRI, Lucknow that herbarium sheets were depicted under the name of *R. graveolens* Linn. but all the specimens were identified to be *R. chalepensis* Linn. The same case was with *R. graveolens* Linn. growing in CIMAP garden, Lucknow, (Gupta, 1992). Ramanathan and Ramachandran (1970) reported that specimens obtained from Western India and Southern India were of *R. chalepensis* Linn. instead of *R. graveolens* Linn. Both the species may be differentiated on the basis of the following characters.

	<i>R. graveolens</i> Linn.	<i>R. chalepensis</i> Linn.
1. Floral character	Petals with denticulate margin	Petals fringed with cilia
2. Fruit character	Capsule small with lobes somewhat rounded	Fruits glabrous with pointed lobes
3. Chromosome number	x = 72	x = 36
4. Oil contents	Oil contains chiefly methylnonyl-ketone	Oil contains chiefly methylheptyl-ketone

Availability of the Herbal Raw Material in India

The present source of the herbal raw materials is met mainly from the forests including areas in the forest hills of the country. A number of the herbal drugs are also collected from wild sources in the plains, fields and waste

places all over the country, and to lesser extent from cultivated plants in many parts of the country under the various environmental and climatic conditions. A number of the plants grown and planted on roadsides, gardens, homeyards also provide the raw materials.

Homoeopathic industry in India is mainly based on herbal raw materials supplied through Indian and foreign commercial herb dealers. In India many homoeopathic drug manufacturing units are in the private sector. Till this date, no such unit is established in the public sector. Cultivation centers regarding herbs used in homoeopathy are negligible. Full range of genuine medicinal herbs are not available and hence Indian Homoeopathic Pharmaceutical Industry is facing difficulty to procure them.

Recently, Government of India has released a central assistance of Rs.104.84 lacs to various Institutions for the development and cultivation of medicinal plants. Under this scheme some plants of homoeopathic interest have also been identified to be grown in various cultivation gardens all over India. These plants are *Aconitum napellus* Linn, *Aegle marmelos* Corr, *Arnica montana* Linn, *Carum carvi* Linn, *Crocus sativus* Linn, *Desmodium gangeticum* DC., *Hydrastis canadensis* Linn, *Myristica fragrans* Houtt., *Pilocarpus jaborandi* Holmes, *Saraca indica* Linn, *Cineraria maritima* Linn, *Swertia chirata* Buch. Ham, *Terminalia arjuna* Wight & Arn., and *Tinospora cordiflora* (Willd.) Miers

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