

BOTANICAL NOTES ON THE IDENTITY OF CERTAIN HERBS USED IN AYURVEDIC MEDICINES IN KERALA .II

*V.V.SIVARAJAN and INDU BALACHANDRAN

Arya Vaidya Sala Oushadhodyanam, Arya Vaidya Sala, Kottakkal 676 503, India.

Received: September 16, 1983

Accepted: August 10, 1984

ABSTRACT: *In the first part the authors have discussed the botanical identity of the drug 'Thamalaki' as it is used in Kerala. The second part deals with the identity of a few more drugs namely, 'Puskaramula, Punarnava, Suryavartha and Nirgundi'.*

Puskaramula:

The drug '*Puskaramula*' as well as well as its plant source are controversial while it is a root which is most popularly taken as the officinal part. Certain authors have referred to it as some sore of a powder on the surface of the fruits (cf. Moos, 1981).

The drug *Puskaramula* has been equated variously by various authors. Thus, its botanical source has been referred to as *Inula racemosa* Hook. F. of Asteraceae (Kurup et al, 1979), *Iris germanica* Linn. of Iridaceae (Balakrishnan, 1975) and *Costus speciosus* (Koenig) Smith, of Zingiberaceae (Ponon; 1918; Kirtikar & Basu, 1918). *Inula racemosa* restricted to the western Himalayas, is known by the Kashmir name 'Poshkar' (Kirtikar & Baus, 1918; Chopra et al, 1956), while *Iris germanica* usually grown in Kashmir has the Sanskrit name 'Padmapuskara'. (Chopra et al 1956); *Costus speciosus*, also referred to as 'Puskara' and 'Puskaramula' in Sanskrit,

is available and '*Puskaramula*' in Sanskrit is available in Kerala but is seldom adopted as the botanical source of '*Puskaramula*' by Kerala physicians. Instead, it is the roots of a very different plant *Coffea travancorensis* Wt. & Arn. (Rubiaceae) that is selected here. This plant does not find any mention in any of the treatises on medicinal plants used in this system. Curiously enough, some of the Kerala authors have adopted the name *Iris germanica* for the plant but the description provided seems to be that *Coffea travancorensis* (Balakrishnan, 1975).

This is a classical example of names misleading the authors. A brief description of the plant along with the figures of *Coffea travancorensis* is provided here, for the benefit of those who are interested in the correct scientific identity of the drug. ***Coffea travancorensis*** Wt. & Arn. (Rubiaceae).

A bushy shrub about 1.5 metres tall, profusely branches; leaves upto 7x3.5 cms,

broadly elliptic, acute or shortly acuminate, entire, slightly coriaceous, glabrous, shining green above; flowers fragrant, white in clusters of 3 or 4 at the tips of branchlets; pedicel short; calyx small, truncate; corolla tube cylindrical, 1.52 cms long, lobes usually 5, ovate or elliptic, spreading; stamens 5, attached to the throat of the corolla tube, ovary inferior, 2-carpellary, 2-chambered with a single ovule in each locule; style short, stigma bifid, fruit didymous, 8 mm across, black when mature; seeds ventrally flat, smooth, 6 mm across.

This species distributed along the Western Ghats in Malabar and Travancore is also recorded from Sri Lanka.

PUNARNAVA:

Punarnava is a very commonly used rug and it owes its name to its ability to sprout or revive every year from a perennial root-stock (punah = again, nava = fresh). As is the general case with Sanskrit names, this name too, does not help in recognizing the actual drug plant. There are several species of herbaceous plants which perennate by means of underground parts during the unfavourable periods and rejuvenating during the next favourable season. Naturally, over the ages, some degree of indecision has crept into the actual identity of the plant, Punarnava. While in some parts of the country this is equated with *Trianthema portulacastrum* Linn., down south, at least in Kerala the accepted source of the drug is *Boerhaavia diffusa*.

Ayurvedic texts mention two commonly used species of Punarnava, viz., Rakta punarnavas and Svetha punarnava. There is

difference of opinion as to the identity of these two. Some attribute this differentiation to the colouration of stems and leaves and select plants of the same species, *B. diffusa* with reddish stems and leaves for the former and those with greenish stems and leaves for the latter. However, this type of colouration is such a highly variable character that one would be able to find both the varieties in the same population. Hence, any such differentiation of the two varieties within the species seems to be of doubtful merit (see also Mooss, 1978).

Many authors are of the opinion that these two Punarnavas are to be recognised by the flower colour, Rakta punarnava with red flowers and svetha punarnava with white ones and at least two unrelated genera have been involved. Rakta punarnava, without exception, is equated with *Boerhaavia diffusa* (I Nyctaginaceae). *Trianthema portulacastrum* Linn. (Aizoaceae) is considered to be the source of the drug Svetapunarnava by many, probably due to the resemblance of its foliage to that of *Boerhaavia diffusa* (Narayana Iyer & Kolammal, 1962). Quite contrary to this practice, the suggestion in Astanga Hridaya (ed, Kuttikrishna Menon, 1976 p,475) that the different varieties of Punarnava have to be recognised by their flowers colour gives one the impression that they are a set of closely related species and hence the conclusion that the white flowered *Boerhaavia punarnava* Saha & Krishnamurthy. (a superfluous name for the Linnaean species *B. erecta*) is the actual source of Svetapunarnava (Saha & Krishnamurthy, 1961; Nair 1967) merits

serious consideration and investigations by Ayurvedic practitioners and researchers. The two species can be recognised as follows:

Flowers pink, fruits clavate, glandularB. diffusa

Flowers white, fruits truncate, eglandular B. erecta

SURYAVARTHA (SRIHASTINI):

Commonly known as 'Thelkada', in Malayalam, this is equated with *Heliotropium indicum* Linn. of Boraginaceae, a herb growing commonly in our sandy low lands with a coiled inflorescence resembling the sting of scorpion and hence the vernacular name. but, there is another species of the genus namely *H. keralense* Siv. & Mani., which is also common in this region and often grows intermixed with the former, this species is also used as the source of the drug. These two species are virtually indistinguishable in the vegetative condition, but can easily be made out by their flowers, as follows:

Flowers pink, corolla tube much longer than the calyxB. indicum

Flowers white, corolla tube hardly longer than the calyx ...; *H. keralense*

NIRGUNDI: The botanical source of Nirgundi in Kerala is *Vitex negundo* Lin. Of Verbenaceae (Narayana Iyer & Kolammal, 1966). It is a highly polymorphic species and has several varieties in it. Two varieties of Nirgundi are cited in the texts namely, *Svethanirgundi* which is called 'nocchi' or 'Vennochi' in vernacular and *Nilanirgundi*

which is called *Karinochi*. Ponon (1918) equates *Nilanirgundi* with *Vitex trifolia* Linn., as it is used in Karnataka. But, in Kerala *Vitex negundo* is taken for both *Svethanirgundi* and *Nilanirgundi*. However, these two correspond to two distinct varieties of *Vitex negundo* namely, var. *negundo* and var. *purpurascens* Siv. & Mold. Respectively. The two can easily be recognized by the colouration of the young shoot, leaves and panicles; var. *negundo* being grayish due to grey pubescence and var. *purpurascens* with deep purple pubescence all over.

REFERENCES

- Balakrishnan, V.V. Plants and their medicinal properties (in Malayalam) Part II, Kottayam, (1975).
- Chopra, R.N., S.L. Nayar & I.C. Chopra, Glossary of Indian Medicinal Plants., New Delhi, (1956).
- Kiritikar, K.R. & B.D. Basu, Indian Medicinal Plants, Allahabad, (1918).
- Kurup, P.N. V., V.N. K. Ramdas & P. Joshi, Hand-book of Medicinal Plants, New Delhi, (1979).
- Moos, N.S. Single Drug Remedies, Kottayam, (1976)
- Moos, N.S. Ayurvedic Flora Medica, Kottayam, (1976)
- Moos, P.T. Narayanan, the scarcity of crude drugs. Proc. Sem. Med. Plants (KRFI, Peechi), 44-45 (1981) (in Malayalam).

Nair, N.C. On the identity of Boerhaavia punarnava Saha et Krihnamurthy. Bull. Bot. Sur. Ind. 1957, 9:283.

Narayana Iyer & Kolammal, Pharmacognosy of Ayurvedic drugs, Kerala, 1962, 8-26.

Narayana Iyer & Kolammal, Ibid. 24-36 (1966)

Ponon, B.J. Five hundred Indian Plants Their use in Medicine and Arts, Mangalore (1918).

Saha, J.C. & K.H. Krishnamurthy, Identity of Sweta punarnava-Boer-haavia punarnava Sp. nov. of Ayurveda J. Sci. Industr. Res. 21C: 249-255. (1961)