

## NOMENCLATRURAL CONFUSION OF SOME SPECIES OF *ANDROGRAPHIS WALL*

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**ABSTRACT:** *Andrographis paniculata* Nees, *Andrographis alata* Nees and *Andrographis lineate* Nees. (Acanthaceae) are important medicinal plants useful in the treatment of various human ailments. Nomenclatural confusion prevails with regards to these medicinal plants in India medical literature and vernacular nomenclature. This nomenclatural confusion has been clarified in the present paper.

### INTRODUCTION

India is endowed with a rich wealth of medicinal plants. Most of these plants continue to be gathered only from the wild. The correct identification of wild medicinal herbs used in Indian systems of medicine is one of the most serious problems confronting medicinal plant collectors, medical practitioners, botanists and phytochemists. The nomenclatural systems used by the ancient Indians, attributing different names to the same plants and same name for different plants together with the time lapse, have caused considerable confusion in procuring the medicinal herbs in various parts of the country by various people. Nomenclatural confusion prevails with reference to some species *Andrographis wall*. (Acanthaceae). Some medicinally important species of *Andrographis* are called *Nilavembu*, *Siriyaanangai* and *Periyanangai* in the Siddha, and *Kalmegh* in the Ayurvedic medical literature and drug markets. These plants were valued by the Indian medicine men for their febrifuge, alternative, bitter, tonic and hepato protective properties

(Kirtikar and Basu., 1975; Nadkarni., 1976; De et al. 1993). They are also found to be value in dysentery and malaria (Nadarni., 1976). Valuable drugs are prepared from these plants in India. But there exists a confusion with regard to the vernacular and botanical nomenclature of these species. The present study has been undertaken to clarify this nomenclatural confusion and to find out the correct botanical identities of the species of *Andrographis*.

### OBSERVATIONS

The medicinally important species of *Andrographis* are distributed from the plains up to an elevation of about 1500 meters above the mean sea level in the hilly regions of Tamil Nadu. The species of hilly regions are very much restricted in their distribution due to environmental and biotic factors.

The varied Indian vernacular nomenclatures of *A. paniculata* Nees have been observed to be as follows:

Sanskrit	:	<i>Kirata, Bhunimba, Mahatikta Kiraathathiktha.</i>
Hindi	:	<i>Kirayat, Mahatita, Kaalmeg.</i>
Bengali	:	<i>Kalmegh</i>
Tamil	:	<i>Nilavembu, Sิริyanangai Periyangai</i>
Malayalam	:	<i>Kiriyaathu, Nilaveppu</i>
Gujarathi	:	<i>Kiriyato</i>
Telugu	:	<i>Nilabempu</i>
Cannada	:	<i>Nilabaevu</i>
Marathi	:	<i>Oli-kiriyata</i>

In English it is known as Create, Chiretta and King of Bitters. It is reported to be a bitter annual herb, found in the plains throughout India and Ceylon. In the plains of Tamil Nadu this spices is identified as either *Periyangai* or *Siriyangai* and widely used for various medicinal purposes. Its reputation is attributed by the local medicine men to its antivenom and snake-repellent properties.

It is claimed by the medicine men of the hills of Tamil Nadu that the herb *Periyangai* is not available in the plains. Its availability has been said to be restricted only to hills above 1500 m altitude. The species *A. alata* (Fig.1) and *A. lineata* (Fig.2) are claimed by them as *Periyangai* and used for various therapeutic purposes, namely antivenom and snake-repellent properties. These two species are also bitter in taste like *A. paniculata* (Fig.3).

*A. alata* has been mentioned as *Periyangai* by some authors (Matthew, 1983; Lakshmanan and Kalyani, 1988) *A.*

*lineate* has not been assigned any local names in the available floras.

The Tamil vernacular names *Periyangai* and *Siriyangai* are attributed to certain species of *Polygala* (Polygalaceae) *P. elongata* Klein ex Willd. and *P. telephioides* Willd are called *Periyangai*; and *P. arvensis* Willd (syn. *P. chinensis* L) is called *Siriyangai* (Chopra, et al. 1956 ; Anonymous, 1969; Murugesu Mudaliar, 1988). Literature available on the species of *Polygala* was investigated in order to ascertain its correct identify.

*Polygala* Linn. (Polygalaceae) is a large genus of herbs, under shrubs or shrubs distributed in the warm temperate regions of the world. About 20 species occur in India. *P. senega*, indigenous to North America is source of the drug *senega*. The roots of *P. chinensis* have been mentioned in the Indian Pharmacopoea as a substitute for true *senega*. The roots were supposed to have been derived from 3 to 4 years old plants of *P. chinensis*; but *P. chinensis* is a annual herb. The anatomical structure of *P. chinensis* roots available in the market shows 3 – 5 rings of secondary growth, indicating that the source of these roots must be some perennial plants. It appears that the confusion arose as some authors considered *P. glomerata* as a synonym of *P. chinensis*. The two species are considered distinct by all Indian floras. *P. glomerata* is a perennial robust plant with caduceus bracts, found from Sikkim to Assam. *P. chinensis* is merely an annual with persistant bracts, distributed in the plains throughout India. The roots of *P. chinensis* are so thin that their commercial exploitation is not economical, even though they are reported to contain considerable quantities of saponins *P. chinensis* and its preparation were, therefore, deleted from the Indian Pharmacopoea.

The medicine men of the plains attribute antivenom and snake-repellent properties only to the species of *Andrographis*. The Tamil vernacular names of the species of *Andrographis* are observed to be as follows:

*A. paniculata* - Nilavembu,  
Periyanangai and  
Siriyanangai

*A. alata* - Periyanangai

*A. lineate* - Periyanangai

The species of *Polygala*, viz; *P. elongate* (Fig.4) and *P. telephioids* (Fig.5) are claimed as *Periyanangai* and *P. arvensis* (Fig.6) as *Siriyanangai* in the Indian medical literature (Murugesu Mudaliar, 1988).

Hence, the Tamil vernacular nomenclature *Periyanagai* and *Siriyanangai* have to be revised because the species of *Andrographis* are more commonly known and used as

*Periyanangai* and *Siriyanangai* than the species of *Polygala*.

In the ayurvedic drug industry *A. paniculata* is known as *Kalmegh*. *Kalmegh* is observed to be its Bengali vernacular nomenclature. In the ayurvedic herbal market the name *chiretta* is also applied for *A.paniculata* and some other plants of the family *Gentianaceae*, namely *Swertia chirata*, *Gentiana kurroo* and *Ophelia augustifolia* (Moodeen sherife, 1978).

In order to avoid this confusion *A. paniculata* must be assigned with the existing ayurvedic drug name *Kalmegh* only. The name *Chiretta* must be restricted only to the species of *Gentianaceae*. This will facilitate the correct identify of the herb in the drug market. The plants *A. alata* and *A. lineate* are known to have no ayurvedic drug names.

Table.1 clarifies the currently existing nomenclatural confusion among these medicinal plants.



1. Andrographis alata



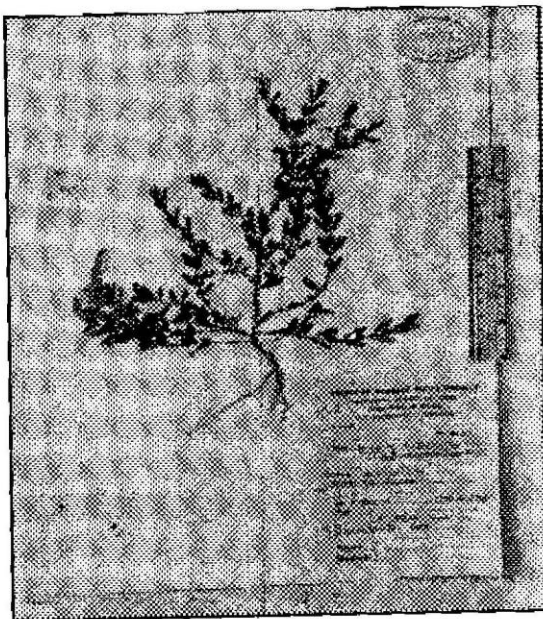
Fig. 2. Andrographis lineata



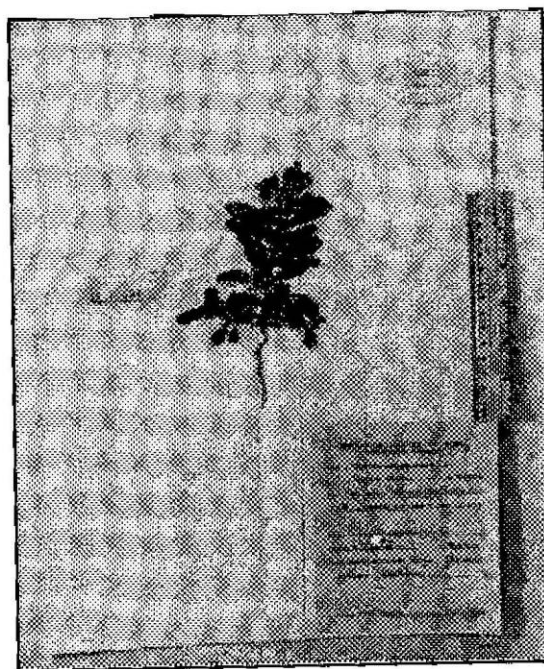
Andrographis paniculata



Fig. 4. Polygala elongata



**Fig. 5. Polygala telephioides**



**Fig. 6. Polygala arvensis**

**TABLE 1**

Sl. No	Botanical Name	Family Name	Ayurvedic Name	Siddha Name	English Name	Local Name
1	<i>Andrographis paniculata</i>	Acanthaceae	<i>Kalmegh</i>	<i>Nilavembu</i>	King of bitters	<i>Periyanangai</i>
2	<i>Andrographis alata</i>	Acanthaceae	-	-	-	<i>Siriyangai</i>
3	<i>Andrographis lineate</i>	Acanthaceae	-	-	-	<i>Periyanangai</i>
4	<i>Polygala arvensis</i>	Polygalaceae	-	<i>Siriyangai</i>	Common Indian Milk Wort	<i>Periyanangai</i>
5	<i>Polygala telephioides</i>	Polygalaceae	-	<i>Periyanangai</i>	-	-
6	<i>Polygala elongate</i>	Polygalaceae	-	<i>Periyanangai</i>	-	-

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