

The Ethnobotanical Uses of the Aromatic Oils from Two Indian Endemic Plant Species of the Family Lamiaceae, *Pogostemon travancoricus* Bedd., and *Orthosiphon comosus* Wight ex Benth.

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Abstract

The present paper highlights the use of the aromatic oils of two endemic Indian plant species, *Pogostemon travancoricus* and *Orthosiphon comosus*, in the treatment of back pain by the Kanis community of Karaiyar region, Kalakad Mundanthurai–Tiger Reserve Forest, South India.

Key words: Kanis, Ethnobotany, Karaiyar, *Pogostemon travancoricus* and *Orthosiphon comosus*, South India.

Introduction

The word herb derives from the Latin “herba”, meaning grass or, by extension, green crop. The word originally applied to a wide range of leafy vegetables. Herbs are seed plants that lack a woody stem like a tree and that will live long enough to develop flowers and seeds. For thousands of years, herbs have been used as scents, foods, flavorings, medicines, disinfectants, and even as currency. Early cultures probably recognized that certain herbs had healing powers; therefore, some herbs were thought to have magical properties (Gerard, 1975).

However, not everyone believed in ancient times that magic could help with the treatment of diseases. Some physicians understood that illness was natural and not supernatural, and medicine should be given without magic. Chinese herbalism is widely regarded as the oldest because it has the longest unbroken recorded history. The Chinese have practiced herbal use for 5000 years. They are noted for their knowledge of herbs and the use of ginseng which they believe prolongs life. Ancient Egyptians also were highly skilled with herbs. Records of Egyptian culture mention the common uses of many herbs such as garlic, indigo, mint, and opium for food and medicine. The medical inheritance of ancient Egypt passed on to Greece, and Rome. In Greek culture, the physician Hippocrates used diet and herbs as the basis of treatment. Romans were noted for their use of mandrake herb, native to southern Europe, as an anesthetic (Le Strange, 1977). They also used herbs in cosmetics, in magical and religious ceremonies, and in cooking.

In the present work, the authors studied tribal people who gathered forest plant resources for use as medicine, food, and for other purposes. Many of these plant resources are now less abundant than in

the past, when they were more important to the traditional economy. Shown in Plate 1 are two plants of the endemic aromatic species, *Pogostemon travancoricus* and *Orthosiphon comosus* (Family: Lamiaceae), that were collected in April 2007 at the Agastiyamalai peak, Kalakad Mundanthurai Tiger Reserve Forest (KMTR), in South India. The present paper highlights the use of the aromatic oils of *Pogostemon travancoricus* and *Orthosiphon comosus* for the treatment of back pain by the Kanis community of the Karaiyar region, (KMTR), in South India

Materials and Methods

The fresh leaves and flowers of the two species used in this study were collected in April 2007 at the following places: *Pogostemon travancoricus* from Poonkulam; and, *Orthosiphon comosus* from Inzhikuzhi Agastiyamalai peak in Southern Western Ghats, South India. Both Fresh leaves and flowers (100gms) were subjected to hydrodistillation for 3 hr. The distillate was extracted hexane (v/v) and dried over anhydrous sodium sulphate. The following formula was used to determine the essential oils yield:

$$\text{Essential oils yield (\%)} = W_1 / W_2 \times 100$$

W_1 = net weight of oils (grams)

W_2 = total weight of fresh leaves (grams)

Results and Discussion

The results of the hydrodistillation of the leaves and flowers of the two aromatic plant species, *Pogostemon travancoricus* and *Orthosiphon comosus*, are summarized in Table 1. The maximum quantity of *Orthosiphon comosus* leaf-oil yield was 3.55 % (w/w), whereas the minimum quantity of flower oil yield for this species was 1.3%. In the present work, we report for the first time the quantification of essential oils distilled from the leaves of the two Indian endemic species, *Pogostemon travancoricus* and *Orthosiphon comosus*. Future studies will concentrate on bioassays, the first required step in the drug discovery process with regard to ethnomedical systems. The essential oils isolated from *Pogostemon travancoricus* and *Orthosiphon comosus* have already been screened for antimicrobial and anti-inflammatory activities in our laboratory.

Table 1. Percent of essential oils yielded by the hydrodistillation method.

Plant Name	Plant Parts	Color	% Essential oils
Pogostemon travancoricus	Leaves	Yellowish green	2.56
	Flowers	Whitish rose	1.45
Orthosiphon comosus	Leaves	Yellowish green	3.56
	Flowers	Whitish rose	1.3

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Pogostamon travancoricus Bedd.



Orthosiphon comosus Wight & ex Benth.

Plate-1