

Ethnobotanical uses and bioactivity studies of *Scoparia dulcis* Linn

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ABSTRACT: *Scoparia dulcis* Linn (F. Scrophulariaceae) is a common weed which is widely distributed in many tropical countries. It is claimed to possess many therapeutic potentials according to traditional and folkloric medicine some of which are experimentally proven. This article describes its ethnobotanical claims and published bioactivities.

Keywords: *Scoparia dulcis*, Ethnobotanical uses, Medicinal uses.

INTRODUCTION

The World Health Organization estimates that 80% of the people in developing countries of the world rely on traditional medicine for their primary health care needs and about 85% of traditional medicine involves the use of plant extracts. This means that 3.5 to 4 billion people in the world rely on plants as sources of drugs. (Farnsworth et al., 1985a) However, due to unplanned deforestation the medicinal plants are becoming scarce and their prices at herbal drug outlets have been increased considerably in the recent past. Therefore, knowledge of plants with medicinal properties that are widely distributed and found throughout the year becomes important. *Scoparia dulcis* is one such plant which is considered as a weed and claimed to be used by traditional and folklore medicine world wide for variety of ailments.

The aim of the study is to describe importance of *S. dulcis* and the experimental studies that we have reviewed from different sources.

MATERIAL AND METHODS

Relevant articles were identified through searches (2001-2003) of rain-tree.com, Database file for: Vassourinha (*Scoparia dulcis*), iczm-sa.org, Bodhi Tree-Ficus religiosa and Plant profile for *Scoparia dulcis* flava. Search terms included but were not limited to *Scoparia dulcis*, Vassourinha, Sweet broom, Scrophulariaceae, Distribution of *Scoparia dulcis* and Taxonomy of *Scoparia dulcis*. Further articles and abstracts were identified from reference lists of available articles. An ethnobotanical survey was undertaken in Southern, Western and Sabaragamuva provinces in Sri Lanka to collect data on *S. dulcis* from traditional physicians and from knowledgeable persons of these provinces.

Total ash value, acid soluble ash, water soluble extractives and alcohol soluble extractives were determined using standard laboratory techniques (World Health Organization, 1998). Organoleptic properties were also determined.

RESULTS

Description of the plant :

Taxonomy :-

Kingdom :	Plantae
Subkingdom :	Tracheobionta
Superdivision :	Spermatophyta
Division :	Magnoliophyta
Class :	Magnoliopsida
Subclass :	Asteridae
Order :	Scrophulariales
Family :	Scrophulariaceae
Genus :	<i>Scoparia</i>
Species :	<i>Scoparia dulcis</i>

Scoparia dulcis (Family: Scrophulariaceae, Sinhala: Walkoththamalli) is an erect perineal herb. (Fig.1) Stem up to 60 cm. high, divaricately branched, 5-6 angular glabrous. Roots are profusely branched. Leaves ternately whorled, obovate-oblong to oblanceolate, 1.4 - 3.5 x 0.8 - 1.5 cm, tapering to base, subacute at apex, coarsely crenate-serrate from above base, penninerved, glabrous on both surfaces, punctate beneath; petioles up to 9 mm long. Pedicels 5-7 mm long, glabrous. Calyx lobes divided to base, oval-oblong, 2.5-3 x 1 mm, 3- nerved, glabrous within and without, ciliate at margins. Flowers small, white, in small 2-4 or 5 flowered inflorescence; corolla white; limb 7-8 mm across; lobes spatulate, 3-3.5 x 2 mm, reflexed with age; hairs of throat erect, white. Filaments inserted at top of corolla tube, glabrous; anthers pale greenish-yellow. Capsule subglobose, 3-4 mm, diam. longer than calyx, tipped by withered style, glabrous, pale

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