



Studies on ethnomedicines and Preliminary Phytochemistry of *Dendrophthoe falcata* (L.f.), Loranthaceae of Kinwat forest

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ABSTRACT

Kinwat forest is rich in vegetation with number of highly medicinal plants. *Dendrophthoe falcata* is an important ethnomedicinal plant in the study region. It is used traditionally for human as well as domestic animals' health care. During this study some new ethnomedicinal uses of the plants are recorded in addition to the known. It is found that phytochemically this plant is very rich having carbohydrates, proteins, aminoacids, flavonoids, tannins and phenolic compounds.

Key words: Ethnomedicine, phytochemistry, *D. falcata*, Kinwat forest

INTRODUCTION

Ethnobotany is natural and traditional relationship and interaction between man and his surrounding (Hershbarger, 1895). Broadly it is the direct relationship with plants and peoples of the region. Kinwat is popular tribal taluka (Tahsil) in Marathwada region of Maharashtra. It is rich in vegetation, valleys, mountain with variety of medicinal plants. Similarly, it is dominated by tribal communities those having ethnomedical knowledge about the plants growing in the local forest. Kinwat forest covers 73,690.669-hectare area dividing into number of ranges of the forest. Many of the workers studied the plants of this area mainly in view of floristic studies, (Zate, 1983, Khan, 1985, Naik, 1998) few of them add a note on ethnomedicine of some plants. The carbohydrates, proteins and lipids from plant sources are used as food since antiquity by man. In addition to this the different phytochemical exert physiological effect on human body (Bhakuni, 1997). In this context it is significant to undertake preliminary phytochemical studies of this highly ethnomedicinal plant of the area.

MATERIALS AND METHODS

Ethnomedico-botanical survey of tribal villages was conducted by organizing forest exploration trips. A tribal traditional practitioner was interviewed by visiting the house and also taken to the forest for observation and collection of the plant. A special questionnaire was made in proforma and it has been adopted for interview. The collected plant from the forest brought to the

laboratory and identified with the help of Flora of Marathwada (Naik, 1998), Flora of Maharashtra, BSI Publication and Flora of Kolhapur district. (Yadav, 2002). For preliminary phytochemical studies different tests are adopted as mentioned in the table number 1 showing phytochemicals of the plant.

RESULTS AND DISCUSSION

Morphological description:

Botanical name : *Dendrophthoe falcata* (L.f)
Family : Loranthaceae
Local Name : Kawarka / Bandgul

Large, branched, semi-parasitic shrub growing on tree species with hanging branches, bark grey, smooth. Leaves lanceolate or elliptic ovate, entire usually opposite, thick, obtuse or notched at apex glabrous. Flowers in axillary, solitary or paired, unilateral receme with short pedicels. Calyx 3-4mm long tubular and shortly toothed. Corolla five lobed, scarlet 2.5-5 cm long, corolla tube curved lobes acute. Stamens 5, free, anthers linear. Ovary inferior, unilocular with single basal ovule, stigma capitate. Fruits berry, ellipsoid, 8-12 mm long, red or pink when ripe. Seed solitary, adnate to pericarp.

Fls and frts : Jan to March

Exsiccata : Wadoli-Kinwat-Mahur Road.

Local Ethnomedical use:

For human: Fruit power is used as medicine. Fruit powder is used to treat tuberculosis. The fruit power to given the patient with cow milk early in the morning for 15 days and found to cure the patient.

For domestic animals : The fruits are used as medicine in bone fractures of domestic animals 5-10 gm of fruit powder +5gm of oleogum resin (Hing) which is exudation of a herbaceous plant *Ferula asafoetida* + an Egg, mixed thoroughly and applied (as like poultice) on fractured part of domestic animals and bandaged for 10-15 days. Simultaneously the same mixture with 250ml water given to the affected animal orally for 8-10 days. It is found that the fractured bone is sealed.

Recorded uses of the plants:

The whole plant is used as a contraceptive and stem bark is used as necrotic (Chetty, 2008) The various parts of the plants are used for abortion, antifertile, as braintonic, headache, impotency, paralysis, skin diseases (Jain,2012).

Table 1 : Primary phytochemical test of fruit powder of *Dendrophthoe falcata*.

Sr.No.	Phytochemical	Test	Observation
1	Carbohydrates	Molish's	+ve
		Fehling	+ve
		Benedicts	+ve
2	Proteins	Biuret	-ve
		Millons	+ve
3	Aminoacids	Tyrosine	+ve
		Cystine	-ve
4	Glycosides	Killer killani	-ve
5	Flavonoids	Shinoda	+ve
		Suphuric Acid	+ve
		Lead acetate	+ve
6	Alkaloids	Hagger's	-ve
7	Tannins and phenolic compounds	Lead acetate	-ve
		Acetic acid	-ve
		Pot.dichromate	+ve
		Dil.HNO ₃	+ve

+ve = present, -ve= absent



Figure 1: Photographs showing plant habit, survey and treatment

Fruit powder of this ethnomedicinal plant tested for its phytochemical investigation and results are summarized in table no. 1. After investigation it is found that the carbohydrates, proteins, amino acids, flavonoids, some tannins and phenolic compounds are present in the plant. Alkaloids and glycosides are not detected from the fruit powder during the preliminary phytochemical screening.

CONCLUSION

It is clear from the above noted findings the wild plant *Dendrophthoe falcata* is significant ethnomedicine of the study region on the basis of its part used which have high medicinal potential and traditionally to treat tuberculosis of human being and bone fractures in domestic animals like goat, cow etc. In the preliminary phytochemical investigation, the fruit powder shows various groups of phytochemicals noted in table no. 1. The ethnomedicinal and preliminary phytochemical

studies on this plant indicates that, there is a scope for pharmacological studies in order to search the pure and potential drug of the plant for betterment of human society. It is also helpful to draw the attention of botanists, ethnobotanists, and young researchers for further advance studies in medicines and drugs.

Conflict of Interest

The author declares that there is no conflict of interest.

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