



Ethnomedicinal and Phytopharmacognostic Review on *Bryonia laciniosa* Linn.

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ABSTRACT

Infertility varies throughout the areas of the sector and it's been envisioned to have an effect on eight to 12% couples worldwide. Bryonia laciniosa Linn. typically referred to as shivlingi is a medicinal plant belongs to the own circle of relatives Cucurbitaceae. It is a uterine tonic and improves the possibilities of theory in girls laid low with infertility. Main chemical constituent is "Bryonin" and its miles peoples medicine, its conventional makes use of also are said like adenopathy, ague, asthma, bronchitis, carbuncles, cholera, colic, consumption, convulsions, cough, delirium, fertility, headache, megalosplen, paralysis, phthisis, snake bite. Its pharmacological tested as antidiabetic, anti-inflammatory, for weight problems and in particular for remedy of infertility. According to literature its miles fertility enhancer herb utilized in ayurveda at the side of Putrajeevak Beej.

Keywords: *Bryonia laciniosa, Putrajeevak Beej, Bryonia*

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INTRODUCTION

The medicative plants square measure wide employed by the standard medicative practitioners for set varied diseases in their everyday observe. In ancient system of medication, totally different elements (Leaves, stem, flower, seeds and even whole plant) of *Diplocyclos palmatus* are accustomed treat varied diseases. it's sizable name as a potent adjunct within the treatment of assorted ailments like jaundice, inflammation and fever. Shivalingi (*Diplocyclos palmatus* Linn.) could be a lesser detected medicative plant of writing with the fruits having vital use within the space of generative medication (female physiological condition, aphrodisiac, tonic, leucorrhoea etc.). The plant particularly the fruits have vast traditional knowledge usage even these days. it's been delineated in Ayurvedic classical texts like Rajanighantu and Nighantu ratnakara. to date no study reports square measure on the market on qualitative analysis on the dried fruits of shivalingi[1-10].

Basic information and ethnobotany of plant:

"Shivlingi" is a other name of *Bryonia laciniosa*. It is belonging to family Cucurbitaceae. Shivlingi name because the surface of seed has a making and morphology which resemble "shivlingi", icon of a Lord Shiva. It is a basically annual climber having bright red fruits along with high medicinal value. The main use of shivlingi is for women infertility problem and also in male child purpose as a "Putrajivak". In a Porbandar region is commonly used as hypoglycemic herb. The literature survey of this plant is showing the use as a bitter tonic, hepatoprotective, antipyretic and laxative. It also used as for correct metabolic abnormalities. The plant leaves paste are applied as an anti-inflammatory purpose [11-15].

Botanical name	<i>Bryonia laciniosa</i>
Botanical synonym	<i>Bryonopsis laciniosa, Diplocyclos palmatus</i>
Sanskrit synonym	Lingini, Bahupatra, Ishwari, Shaivamallika, Swayambhu, Lingsasambhuta, Lingi, Chitraphala, Amruta, Pandoli, Lingaja, devi
Common name	Shivlingi, Gargumara
Plant family	Cucurbitaceae – groids of squashes
Genus	<i>Bryonia</i>
Distribution	India-Madhya Pradesh, Uttar Pradesh, Gujrat, Uttarakhand
Habitat	Tropical & subtropical regions

Parts used	Leaves, Fruits, Seeds (Especially seeds)
Chemical constituents	Main constituent: Bryonin 1. Punicic Acid 2. Goniotalamin 3. Glucomannan
Medicinal properties	Uterine tonic Fertility booster Aphrodisiac Spermatogenic Antioxidant Anodyne Anti-inflammatory Carminative Anti-fungal Antimicrobial Antihyperlipidemic Anti-diabetic Antipyretic
Dosage	The general dosage of Shivlingi Beej is as follows. Adults: 1 to 3 grams. Maximum Possible Dosage: 6 grams Per Day (in divided doses). Doses: Twice a day with Milk; warm water for weight loss. Best Time to Take: 3 hours after meal. Recommended Treatment Duration: Minimum 3 months (some patients may require treatment with Shivlingi for 6 months or more depending on the health condition).
Safety profile	It is safe to all type of patient when used in recommended dose; it is applicable to pregnant women's also. There is no any allergic reaction.

Biology:

Life span of a species may be decided via way of the organic phenomenon. The span and length of biology fluctuate from species to species. It may also require a quick length in cryptogams, which might be dispersed by using spores consisting commonly of an unmarried cell. These minute spores can journey a more distance via way of the wind in order that their real dispersal turns into powerful sufficient however this dispersal is fruitless if a hit germination does now no longer occur. Only minute meals reserves are to be had in spores. With evolution of heterospory and the retention of the megaspore with inside the ovule the original, approach of dispersal has been misplaced to angiosperms, however is changed via way of a brand-new shape for broadcasting the species- the seed. Functionally the seed is an organ of propagation and pay a critical position in organic phenomenon.



Figure 1: Morphology of plant part *Bryonia laciniosa*

Morphology:

Root	Tap root system with secondary roots and numerous root hairs. Seldom fibrous roots arise from the nodes of vines.
Stem	Herbaceous, glabrous, branched, obscurely mottled, becoming thickened and white dotted with darker green white-punctate on the ridges when old.
Leaves	Leaves are alternate, petiolate, broadly ovate with palmately 3-5 lobes and palminerved. The lobes are linear-lanceolate to elliptic, glabrous; margins often irregularly toothed. Tendrils have 2 branches
Inflorescence	Flower unisexual, monoecious. Male flowers in clusters of 2-8, arrange in cymose manner, along with female flowers in the same axil.
Flower	Pedicellate, acinomorphic, unisexual, epigynous,

	incomplete, pentamerous, and pale yellow in colour.
Male flower Calyx	Sepal -5, gamosepalous, quincuncial aestivation, often narrow and pointed, odd sepal posterior, calyx tube 3-4 mm long.
Corolla	Petal -5, alternating with the sepal, gamopetalous, imbricate aestivation
Androecium.	Stamens apparently -3, two with dithecos anther and one with monotheous anther, dehiscence by extrorse longitudinal slits.
Female flower calyx	Sepal -5, gamosepalous, quincuncial, calyx tube 1.5-2.5 mm long, adnate to the ovary wall and often produced beyond it.
Corolla	Petal -5, alternating with the sepal, gamopetalous, imbricate aestivation, and inserted on the calyx tube.
Gynoecium	Carpel - 3, syncarpous, ovary inferior, trilobular ellipsoid, with longitudinal white strips having numerous ovules borne on thick, fleshy, bifurcating parietal placenta, style single, stigma forked and epigynous nectary present.
Fruits	Special type of berry known as pepo, solitary or in clusters, globose, 2.5-3.5 cm diameter, at maturity it is red with white stripes having 5-7, compressed seeds.

Phytochemistry and chemical composition:

Bryonia laciniosa contain 23% oil and also contain Alkaloids, Flavonoids, Triterpenoids, Saponin, Steroids, Proteins, Resins with sugars and starch.

Proteins also contain Goniotalamin, Glucomannan, Bryonin, and Lipids.

- The UV, IR, H1-NMR, C13-NMR spectrometry of seed oil and oxidation, reduction and Gas liquid chromatography (GLC) of methyl ester of conjugated fatty acid isolated by preparative TLC showed presence of punicic acid.
- Trace amount of β -Sitosterol with Oleic acid and Linoleic acid.

Chemical composition and their activity:

Chemical constituent	Pharmacological activities
Terpenoids	Antioxidant activity
Mustard oil	Cytotoxic activity
Flavonoids	Hypoglycemic activity
Tannins	Antimicrobial activity
Alkaloids	Larvicidal activity
Glycosides	Antipyretic activity
Phenolic compound and other biomolecules	Aphrodisiac, anthelmintic, Antiemetic, Anti-inflammatory activity

Uses according to their parts used:

Fruits and Seed: Anti-inflammatory, Spasmolytic, Vaginal dysfunctions, as fertility selling drug. In the remedy of colitis, acrid thermogenic, foetid, well-known debility, theory in ladies, in opposition to snake-bite, occurrence of malnutrition, anemia, eosinophilia and pneumonia. The Indian ladies once in a while take the seeds in aggregate with different plant pills for assisting theory and save you miscarriage and guys take the seed for growing sperm rely additionally as an aphrodisiac and tonic.

Roots: Given to assist theory in ladies, Used for remedy of asthma, Rheumatoid arthritis. Whole plant: Used in venereal diseases.

Leaves: Good for inflammation, Snake bite. Used in vitiated situations of vata - pitta, cough, flatulence, pores and skin disease.

Fruits: Area of reproductive medicine, etc. [16-18]

CONCLUSION

The herbals possessed a selected spot with inside the existence proper from the primitive duration until date and gave statistics at the usage of plant life or plant gadgets and gadgets as medication. The usage of restorative plant life with inside the management of various diseases is due to their phytochemical components and is going returned relic. It is visible from the writing that *Bryonia laciniosa* is a critical plant for its expansive quantity of healing houses and moreover therapeutically vital chemical substances like Glucomannan, Goniotalamin, Arabino glucomannan. The plant demonstrates several pharmacological physical activities like ache relieving, antipyretic, opposed to convulsant, antimicrobial, cytotoxic, antiasthmatic, mitigating and opposed to richness.

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