

## Boom in Himalayas: Rhododendron Arboretum

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The Himalayas are a plentiful source of several medicinal herbs. Burans, often known as Himalayan rhododendron, is one among them. A small evergreen tree that is found all over the world and has deep red or pale pink flowers, the rhododendron is a member of the Ericaceae family and is prized for its magnificent blooms. Rhododendron is derived from the Greek words "rhodo" for "rose" and "dendron" for "tree." Carl



Linnaeus published the first description of it in 1837. The plant is native to Himalayas from Kashmir eastwards to Nagaland and widely grows in Bhutan, China, India, Myanmar, Nepal, Sri Lanka, Pakistan and Thailand. It is the national flower of Nepal and is widely distributed throughout the Himalayas. It serves as the state tree of India's Uttarakhand and Sikkim states. One of the naturally occurring plants, rhododendron, offers a number of health advantages, including the ability to treat and prevent conditions including asthma, bronchitis, dysentery, diarrhoea, and inflammation while also detoxifying the body.

### **Nutritional attributes of Rhododendrons**

Due to their high quantities of phenolic acids, rhododendrons are known to be powerful antioxidants and free radical scavengers, making them an important component in the advancement of human health. Calcium, potassium, vitamin C, and iron are all abundant in burans flowers. It is made up



of 7.6% fat, 16.3% protein, and 68.5% carbohydrates.

### **Medicinal properties of Rhododendron plant**

Rhododendron has a long history of use as a traditional medicine in Far-West Nepal, where it is valued for its wide range of therapeutic benefits and lack of negative side effects. Its leaves and twigs contain phenolic acids, which have been shown to have anti-HIV, anti-inflammatory, and anti-nociceptive properties. Additionally, its leaves and blooms are used to treat ailments like headaches, diabetes, rheumatism, and other conditions. The flowers of Rhododendron arboretum contain phenolic compounds, Quercetin, Rutin, Coumaric acid, Sponins, Steroids, and Tannins that are beneficial against diabetic nephropathy, anti-diarrheal activity, and anti-microbial activity. Because these flowers contain an anti-diabetic factor, they can be used as nutraceuticals or functional foods for people with diabetes. The astringent leaves of this plant are traditionally prepared into a paste and applied to the forehead as a treatment to relieve headaches.

### **Potential health benefits**

#### **Reduces inflammation**

Quercetin and rutin, two flavonoids with anti-inflammatory properties, help to lessen inflammation. Rutin is used to cure mouth and stomach ulcers, whereas Quercetin lowers inflammation of the prostate, kidney, and urine bladder. In addition, buransh cures rheumatism, gout, bronchitis, and arthritis.

#### **Prevents Cancer**

Burans flowers contain quercetin and rutin, which inhibit the growth of cancer cells and reduce the chance of developing cancer. Quercetin and rutin, along with other phytochemicals, have antioxidant capabilities that prevent cellular damage that might result in cancerous mutations.

#### **Reduces Stomach Pain**

Juice made from buransh flowers might ease stomach discomfort. It is well known that buransh flower extract reduces pain stimuli.

#### **Useful in Diabetes**

The blossoms of buransh may be used to treat diabetes. It can handle both type I and type II diabetes. Certain glucose enzymes activity is constrained when hyperin, an antioxidant, is present. The ultimate outcome is lower blood sugar and cholesterol levels.

### Good for Heart

The antioxidant compounds of Buransh are useful for the heart and the circulatory system. It fight against heart attacks. The flowers' extract is good at lowering blood pressure and harmful cholesterol. Buransh has a lot of poly fatty acids, which prevent the body from producing additional cholesterol. The two flavonoids, Quercetin and rutin present in the flowers of Buransh are advantageous for heart health.

### Good for healthy skin

It works wonders for youthful skin and is advantageous in preventing ageing. Buransh juice shields skin from the sun's UV radiation. Strong antioxidants present in this floral juice protect the skin from the damaging effects of pollution. In order to treat eczema, acne, other skin inflammation, and rashes, it most importantly provides anti-bacterial and anti-inflammatory characteristics for the skin.

### Other possible health benefits

Buransh health drink has a number of components that help it stop health issues like headaches and stomach aches. The juice benefits the heart, liver, skin, and kidneys as an antioxidant. It is also thought to be effective for curing diarrhoea. It has anti-microbial properties that are efficient against a variety of bacteria, similar to those offered by quercetin and p-coumaric acid. Additionally, the quercetin in Burans flower juice prevents allergies. Applying burans juice to the skin can help with skin inflammation, itching, and wrinkles. Sportspeople take it as a supplement to build endurance and stamina.

### Utilization of Rhododendron flower

**Rhododendron flower juice:** Rhododendron juice is a traditional, refreshing, summertime beverage with medicinal benefits for stomach problems, headaches, fever, and nosebleeds. It has hepatoprotective, anti-inflammatory, anti-nociceptive, and anti-diarrheal properties. Cold pressing and hot pressing are the two procedures that can be used to extract rhododendron juice.



**Rhododendron honey:** Mad honey is another name for rhododendron honey. It is made by honeybees that gather nectar from Rhododendron flowers. It is reportedly used as medicine



and has a history of treating various illnesses. The active components are andromedotoxin and grayanotoxin. If taken in excessive quantities, the grayanotoxin found in Rhododendron honey can lead to severe dizziness, arterial hypotension, and bradycardia. Additionally, it has been claimed to have anti-bacterial, antifungal, antioxidant, and antimicrobial properties.

**Chutney:** In mountainous regions, fresh or dried petals are used to make a chutney known as "Buransh Ki chutney" that is typically made with mint and other regional spices, salt, anardana, or tamarind for adding a sour flavour. This chutney has a truly reviving scent and taste. As this chutney has numerous health advantages, including being high in antioxidants and vitamin C and being beneficial for heart health and aches and pains.



**Dried Rhododendron Flower:** This flower's dried powder is used as a medication to treat "blood dysentery." Dried flowers are supposedly highly efficacious in checking diarrhea and blood dysentery.



**Tea:** Tea made from rhododendron flowers promotes youthful skin and delays ageing. It is a potent antioxidant that shields the skin from the harmful effects of pollution and sunlight. Acne can also be treated with it. There are no additional flavours, colours, or preservatives.



**Squash:** For the treatment of mental retardation, rhododendron is used to make squash.



**Conclusion:**

Pharmaceutical and different culinary products can be produced at the Rhododendron Arboreum for commercial purposes. The growth of employment for the rural tribal community benefits from the year-round availability of rhododendron flowers and items made from flowers. Because rhododendron plants can be utilised to make a variety of life-saving medications, there are also tremendous chances to develop better marketing methods. The sustainable usage of this plant is essential for the future viability of the community's economy.

