

Himalayan Nettle –Amazing Wild Plant from Sub-Himalayan Region

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Kingdom; Plantae

Phylum; Tracheophyta

Class: Magnoliospsida

Order:Rosales

Family: Urticaceae

Genus: Girardinea

Species: diversifolia



Introduction:

Himalayan Nettle is an wild plant that grows in Sub-Himalayan Region of Uttarakhand hills, Himachal Pradesh, Jammu and Kashmir and Nepal. It is also known as Nilgiri Nettle. Scientifically it is known as *Girardinea diversifolia* also known as ‘bicchughas’ in Hindi, also known as ‘Shishod’ in Kumaon Region , ‘Kandeli’ in Garhwal Region of Uttarakhand and ‘Allo’ in Nepal.

Nilgiri nettle is a perennial shrub which is around 3-7 feet tall and grows in wild everywhere in Sub-Himalayan region. It dries in winter season. Leaves resemble spinach a lot and it has lot of hairs on the leaves, under side of leaves and on stem. The sting is painful and cause swelling for sometime due to chemicals present in it. Chemicals like histamines and acetylcholine causes an itching reaction that lasts for twelve hours. It is also a rich source of fiber and is used to make clothing, mats and rugs. Other uses include fodder and feed, also eaten as a vegetable. Nettle tea using fresh and dried leaves is marketed and has therapeutic uses.

As mentioned, nettle has had multiple uses as drug, food, fiber, dye or cosmetic for centuries. Numbers of pharmacological studies about nettles have been done. Nettle has good



fiber content, light, long and resistant fiber that is excellent for making ropes. Nettle has dark green leaves, root stem and serrations. Flowers are small and green. (Taylor, K. 2009)

The scientific research has increased and positive effects of phenolic compounds into coronary heart disease, high blood pressure, diabetes, cancer, inflammatory, viral, parasitic disease and psychotic disorders have been established. (Hosbas, S. 2008)

Fabric Production:

Khar's experimentation with Himalayan Nettle brought this plant some recognition . There is a community in Khar, Dharchula district in Nepal which produces fabric from Himalayan Nettle. The fabric and things made from it are sold in local, national and international markets as high end products like mufflers, stoles suits, purses, bags, mats are made. The local people have amazed us by making such valuables from this local wild plant. The products are exhibited at national and international trade fairs and are considered an excellent souvenir option. At 5th Herbal Trade Fair held at Bhopal, Madhya Pradesh nettle products from Khar caught attention of some highest dignitaries as well as local and tourist. (ADHIKARI, L. 2017.icimod.org)

In most recent studies Nepal is producing vests, shawls and a range of other articles aimed at tourists and international markets. The fiber is often blended with ramie (*Boehmeria nivea* L) and cotton (*Gossypium* spp.) or wool. The woody stem part is used for paper making. The leaf and inflorescence are eaten as vegetables. The source is used as livestock feed, bedding material, fuel and for making dye. (Himalayanwildfibre. Com)

Chemical composition:

The quantitative and qualitative studies conducted on the plant leaves, stalk and roots presence of phenolic compounds. The stinger hair contains formic acid, histamine and acetylcholine. The leaves contain provitamin A, vitamin B1, vitamin K xanthophyll and sesterin. Ash of leaves contain ferric oxide, potassium, calcium and silicium. (Ogles and Yalcin.2012).Another study suggests that bark of *Girardinia diversifolia* from Nepal yield 61% of fibre. it contains 16 percent of moisture content, 38 percent of cellulose, 8 percent of lignins and 7 percent of ash. After degumming fibre contains 11 percent moisture, 67 percent cellulose, 8 percent hemicelluloses and 4 percent lignin. In India the fiber contains 7 percent of moisture, 90 percent of cellulose and 1.5 percent of ash. (prota4u.org) the trichome of the leaves are associated with contact dermatitis when touched release the mixture of formic acid,

histamine and acetylcholine, serotonin and leukotrienes B4 and C4 from the trichomes. Also, impalement of the stings into the skin likely account for the mechanical irritation. (J. Cumming and Oslen, 2011)

Properties of Himalayan Nettle:

The fiber has very good tensile strength. It is the longest fiber known. It is hollow from inside which makes it a very good natural insulator. The fabric is stronger than linen and can be mixed with other fibers to make different type of fabric materials. The fiber has also antibacterial, antimicrobial and fire retardant properties and also anti wrinkle in nature. (Lanzilao, 2015). The fabric made from it can be worn in winters and also in summers.

Extraction of Fiber:



Fig- Extraction process of Nettle Fiber

Fibers are extracted in the month of August and the stems are cut down. They are sundried for a day and then boiled in water. The sheath is removed and the inner part which contains fibre is obtained. After removing inner part it is again washed and then rubbed with a special mud called Kamedu, this helps separating fibre. The separated fibers are dried in sunlight and yarns are made with it. (www.textilesphere.com)

Nettle health benefits:

1. Natural diuretic and laxative.
2. Soothes nausea.
3. It also helps in diabetes and has a positive effect on pancreas by balancing blood sugar levels.
4. It helps in arthritis and joint pain by imparting anti-inflammatory properties.
5. Improves urinary tract health.
6. Promotes respiratory health, open constricted bronchial passages and nasal passage and help allergy symptoms and asthma.
7. It is also used to make mouthwash that prevents plaque and gum disease.

8. Nettle has been used to alleviate skin conditions, like eczema and also improve scalp health, remove dandruff and promote healthy hair growth.
9. It also helps in breaking kidney stones.
10. Provide relief in the common cold.
11. Pesticidal activity also exhibited, destroying intestinal worms and parasites.
12. Benefits in the treatment of Alzheimer's disease also reported.
13. Used for treatment of enlarged prostate gland.
14. Recently it has been used to make a drug that aids in treatment against ovarian cancer in the United kingdom.

Nettle cultivation:

It is very easy to cultivate nettle. One can have his nettle patch in his home. Nettle prefers soil with good moisture content specially grows well near the sides of stream and medium shady areas. It can be grown by rubbing and spreading seeds after making beds or by transplanting stolon and rhizome whichever is convenient. Select the place wisely as it spreads quickly under favorable conditions. It can tolerate a wide range of soil pH 5.5 to 7.5 and is easy to cultivate.

Management:

Cultural and mechanical methods are the best way to get rid of the weed if it is growing unnecessary and is bothering your garden or is spreading out to other cultivated areas. Cut the flowering heads of the plant to avoid seed production.

Nettle warnings:

Do not take it as tea for a long period of time or if you are pregnant or breastfeeding. Do not use it without doctor consultation if you are taking diabetes medication or suffer from high blood pressure or low blood pressure.

Concluding Remark:

Nettle is a weed that grows in the wild in India, Europe and North America and has amazing health benefits. Its medicinal use has been known for years but still not very popular in India. Nettle tea can be consumed to reduce arthritis inflammation, for keeping urinary track healthy and for controlling blood sugar. It is an amazing plant found in the wild with extraordinary health benefits.

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