

Diploma in Animal Sensory Enrichment

**Plant Assignment One
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**Urtica Diocia
(Stinging Nettle)**

by

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Contents

Identification and Background Information

Biochemical Constituents and Medicinal Properties

Actions and Common Uses

Learning Outcomes

Bibliography

Identification and Background Information

It is thought that the name Nettle is taken from the old Anglo-Saxon word Noedl, meaning “needle” because the nettle plant provided thread for sewing prior to the introduction of Flax and in the Middle Ages it was widely believed that nettles protected the places where elves had chosen to live and offered protection against witch-craft.(Herbs; Roger Phillips and Nicky Foy; Pan Limited 1992).

The Nettle is a perennial plant living for over two years, growing during the spring/summer months, dying back in autumn/winter and flourishing again in the spring.

It grows almost anywhere in hedgerows, field edges and grassy areas, thriving on wasteland, rubbish tips and wherever there is litter or rubble. Nettle favours nitrogen rich soil and thrives particularly well near human populations as it benefits from our waste produce and their presence is often an accurate indication of old settlements that have long since disappeared from the countryside

The Stinging Nettle's Latin name is *Urtica Dioica* taken from the Latin verb *Uro*, meaning “to burn” with *Dioica* meaning “two houses”, this being a reference to the fact that the male and female flowers grow on separate plants. The male flowers are green and erect whereas the female flowers are yellowish green and hang in clusters.

The plant itself has tough yellow creeping roots with hairy stems that grow to between 12-60 inches (30-150cm) and the leaves are ovate shaped with toothed margins, are light green in colour and covered in tiny stinging hairs.(Herbs; Roger Phillips and Nicky Foy; Pan Limited 1992).

Each sting is actually a hollow hair stiffened by silica with a swollen venom filled base, the tip of the hair being extremely brittle and when brushed against no matter how lightly, it breaks off, exposing a sharp point that penetrates the skin, depositing the stinging venom.

Until recently it was thought that the substance responsible for the stinging action and the overwhelming urge to scratch the sting site, was caused by formic acid and while formic acid is a component of the sting venom, the main chemicals present are actually histamine, cholinesterase, 5-hydroxytryptamine (serotonin) and a fourth as yet unidentified substance. (www.nettles.org.uk/nettles/lore.asp).

DEBORAH J BENSON 2015

Dock leaves invariably found side by side with nettles are an immediate and effective antidote for the unpleasant burning itch caused by such a sting, as they contain chemicals which neutralise the sting and soothe the skin.

The leaves should be harvested in the Spring and dried for future use and should be picked prior to the emergence of the flowers as consequent usage may cause urinary tract infections. Precautions should also be taken when administering doses to pregnant animals, with care being taken not to eat old plants uncooked as they can cause kidney damage and symptoms of poisoning. ([Jekka's Complete Herb Book](#); [Jekka McVicar](#); [Kyle Cathie Limited 1994](#))

There are a variety of non-medicinal uses of the Nettle which lends it further versatility in that its fibre can be used to make velvet, often of a superior quality to that manufactured using cotton and its fibrous pulp is also successfully used in paper production.

The root of the plant produces a yellow dye previously used in clothing manufacture and the leaves produce a vibrant green dye which is added to foodstuffs such as tinned green beans to enhance their original colour, rather than employ synthetic colouring agents. ([Rudolf Fritz Weiss](#); [Weiss's Herbal Medicine Classic Edition](#); [Beaconsfield Publishers Limited 1985](#))

Nettles have a long history as a culinary plant being used in salads, soups and as a spinach substitute, with Nettle beer being a long-standing popular country drink and Nettle juice can be used as a rennet substitute suitable to curdle milk in the cheese making process making this type of cheese production suitable for vegetarians. ([Herbs](#); [Roger Phillips and Nicky Foy](#); [Pan Limited 1992](#)).

Without the Nettle the Peacock, Red Admiral and Small Tortoiseshell butterflies would have nowhere to lay their eggs and many species of moth larvae would be denied their staple diet while nettle juice can be sprayed on other plants to act as a pesticide. The growth of nettles in a vegetable patch has also been known to act as a similar deterrent to pests and their proximity to other plants has been seen to have a nutritive effect on their growth. ([Nancy & Michael Phillips](#); [The Herbalist's Way](#); [Chelsea Green Publishing Company 2005](#)).

The leaves, stems, roots and seeds can all be used to treat various conditions but for the purposes of producing Macerated Oils only the leaves and stems are utilised. ([Elizabeth Whiter](#); [Certificate in Natural Food Animal Remedies Course Notes](#); [June 2013](#)).

Biochemical Constituents and Medicinal Properties

Nettle is one of the richest sources of chlorophyll which cleanses and oxygenates the blood, alkalises the body, regulates calcium uptake, promotes healthy gut flora, helps skin disorders, reverses anaemia, fights infection, improves liver function and detoxification of the body and contains enzymes for cell rejuvenation, anti-oxidants and amino acids. (www.sacredsourcenutrition.com).

They contain silica which normalizes circulation, promotes healthy hair, skin claw and hoof growth, improves joint elasticity, improves lymphatic circulation, repairs and maintains vital lung tissue and urinary tract health and alleviates arthritic and rheumatic pain.

DEBORAH J BENSON 2013

Nettles also have a high Vitamin C content, necessary for strengthening the immune system and effective in the treatment of kennel cough and respiratory infection, slowing and reversing degenerative joint disease and counteracting the side effects of cortisone and other steroid based medications.(www.wholedogjournal.com).

The high concentration of Vitamin C in Nettle allows for the absorption of the iron content also present in this plant. Iron is the building block for haemoglobin, the substance in red blood cells that carries oxygen from the lungs throughout the body and which necessitates the renewal of red blood cells which constantly need replacing. Iron also attaches itself to the amino acids present in Nettle and other foodstuffs to facilitate better absorption from the digestive tract.(www.diamondpet.com).

Also present in Nettle is sodium which is an important electrolyte pivotal in enzyme function, glucose absorption, blood and fluid regulation, the transmission of electrical impulses and so facilitating brain function, and assisting in muscular contraction thereby preventing cramping and regulating heartbeat. It is also essential for the elimination of carbon dioxide from the body.(www.organicfacts.com)

Potassium is also present in Nettle and is a critical electrolyte required to maintain correct heart rhythm as without it the heart literally cannot beat. It is also essential for the electrical impulses required in nerve firing to ensure muscle movement and for the filtration of blood through the kidneys.(www.webmd.com).

Vitamins A, D and B complex are also components of Nettle and are respectively necessary for a healthy metabolism, skin, hair and eyes, muscle, nerve and bone health and the regulation of calcium throughout the body, whilst the combination of B vitamins are responsible for the production of blood cells in the bone marrow, the conversion of carbohydrate, protein, fats and glucose to energy, correct amino acid and enzyme function and muscle strength.(www.vetinfo.com).

It is also anti-asthmatic as it contains the indoles histamine and serotonin.

([This comprehensive list of Nettle biochemical constituents was acquired from Elizabeth Whiter's Certificate in Natural Food Animal Remedies course notes, June 2013 and Healing with the Life of Herbs; Lesley Tierra; The Crossing Press 2003](#)).

Actions and Common Uses

Nettle has [diuretic](#), (increases urine production and elimination of waste) [astringent](#),(precipitates protein tightening and the binding of tissue) [haemostatic](#), (stops bleeding by contraction of tissue and blood vessels) [galactogogue](#), (increases lactation) [expectorant](#) (expels excess mucous from the lungs and respiratory system) and [nutritive](#) properties.

([Healing from the Herbs of Life; Lesley Tierra; The Crossing Press 2003](#)).

It is used to treat arthritis, rheumatism, anaemia, asthma, skin complaints, hair loss, energy loss, kidney, bladder and sinus infections, but only when freeze dried as this process enhances the formic acid content which is the active ingredient in this treatment.

Nettle seed has recently been used to treat prostate and kidney disorders in humans. It is particularly effective as a diuretic as it has a high potassium content and therefore does not deplete the body of this vital electrolyte when increasing urinary output as most diuretic medications do.([Healing from the Herbs of Life; Lesley Tierra; The Crossing Press 2003](#)).

DEBORAH J BENSON 2013

Nettle is an effective treatment for the prevention and restoration of hair loss, as a treatment for eczema and dandruff and as a shampoo and conditioner for animals and humans alike.

In conclusion it is therefore obvious from the preceding research that the Stinging Nettle, *Urtica Diocia*, is an extremely powerful nutraceutical, providing a vast array of nutritional and medicinal benefits to both the animals kingdom and mankind alike.

**Honour the Earth.
Give Glory to the Creator.
Cherish that sweet connection with the plants.
And your medicine power will be deep and strong.**

(Nancy & Michael Phillips;The Herbalist's Way;Chelsea Green Publishing Company 2005).

Learning Outcomes

- 1. Identify and harvest local culinary herbs specific to this course.**
- 2. How to use fresh and dry herbs for simple remedies**
- 3. Equipment needed, drying and storage of herbs.**
4. How to create a herb garden.
5. How to use specific culinary Macerated Oils; Nettle, Marigold, Rose-hip, Mint, Catnip, Chickweed, and Seaweed infused oils and cold pressed Linseed Oil.
6. Create delicious, culinary, herbal pet treats specific to this course.
- 7. Make simple animal topical preparations such as insect repellent and cooling gel using plants, herbs, clays and honey.**
- 8. Have a clear understanding of what animal self-selection is and how animals can benefit from an enhanced, nutritional, healthy, balanced diet, containing plant material.**
9. Able to work and communicate with pet owners vets and other healthcare professionals.
10. How to keep professional standard records of all animal self-selection sessions undertaken.
11. Be aware of the importance of personal and animal safety as well as the relevant insurance, the law and vet liaison.

DEBORAH J BENSON 2013

- 12. Be able to observe and understand why animals self-select culinary macerated oils/herbs/clays/honey specific to this course at animal rescue centres and with private clients.**
13. Be aware of when not to conduct an animal self-selection session.
- 14. Be more aware of yourself as an animal healer and consider how and when you will use your training and experience from this course.**

Bibliography

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