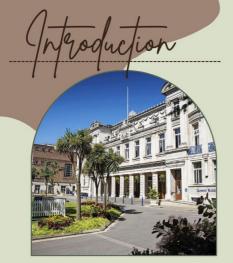


Green Wellness Fournal

+ Guidebook to Medicinal Plants. Vol 1





Your name:

Your degree:

Favourite study break activity:

Welcome to the **Green Wellness Journal!** This journal is designed to help you discover the use of green spaces in enhancing your academic success and overall well-being. As a student, balancing coursework, social life and personal health can be challenging. However spending time in nature has been proven to reduce stress, improve mental clarity and boost physical health- all of which are crucial for thriving in your academic journey.



> Educational Insights: Learn about the science behind the benefits of green spaces and medicinal plants. Short clips and websites on plants, nature and its benefits in health and medicine

# What you'll find inside this journal

QMUL river

- > Medicinal Plant Profiles: Discover the benefits of various medicinal plants you can find in your local green spaces
- > Weekly Reflections: Track your activities in green spaces, note changes in your mood and energy levels, and reflect on your experiences
- > Guided Activities: Engage in nature observations such as mapped study break walks

# Quickeffistory of Medicinal Plants

You're probably wondering how on earth a plant could be used to heal the human body. Well... before modern medicine, there had to be a solution to our aches, pains, and bizarre ailments. Enter the wild world of plants! Imagine a time when you didn't have a pharmacy down the street and your best bet for curing a headache was chewing on a willow bark twig like a beaver. Feeling anxious? Why not brew a cup of chamomile tea, kick back, and let those floral vibes wash over you like a calming meadow breeze. So, buckle up and get ready to explore the magical, sometimes wacky, world of medicinal plants! Your journey to natural wellness is about to get a whole lot greener and a lot more fun.



#### 2500 BC

- > Sumerians recorded over 250 plant based recipes on clay
- > Chinese emperor shen nung's book listed 365 medicinal plants such as ginseng and camphor
- > Ancient indian texts highlighted the use of spices like nutmeg and cloves for healing

#### 1550 BC

- > Ebers Papyrus egyptian document detailed 700 plant based remidies such as pomegranate
- > Homer's Epics greek literature around 800bc mentioned 63 plant species named after mythological characters





#### 476 AD

- > Monasteries cultivated healing plants, growing sage and mint
- > The arabs introduced plants such as aloe and saffron into European medicine

#### 1300 AD

- > Botanical Gardens sprout up and showcased new plants such as tobacco and vanilla to Europe

  Souther 19th century scientists isolated active compounds like
- > By the 19th century, scientists isolated active compounds like quinine from plants, this gave birth to modern pharmacognosy- the study of medicines derived from plants

#### TODAY

> There is a comeback in using medicinal plants due to the side effects of synthetic drugs. Many modern medicines still come from plants! So next time you sip on a chamomile tea or pop a ppermint candy, remember youre a part of a long history of plant-based healing.

# -

## JAN

S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

### FEB

S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

### MAR

S M T W T F S 1 2 1 2 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

### APR

S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

### MAY

S M T W T F S 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 31 31

### JUN

S M T W T F S 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

## JUL

S M T W T F S

1 2 3 4 5 6

7 8 9 10 11 12 13

14 15 16 17 18 19 20

21 22 23 24 25 26 27

28 29 30 31

## AUG

S M T W T F S
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

### SEP

S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28

## OCT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

## NOV

S M T W T F S 1 2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

## DEC

S M T W T F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31



#### MONTH:

	Describe this month in a drawing:
_	



TO-DO LIST

Green space activities completed:



# MEDICINAL PLANT OF THE MONTH:

## LAVENDER

Lavender is found in mountainous zones of the Mediterranean where it grows in sunny, stony habitats. Today it flourishes throughout places like Southern Europe and the United States. It is found as a branched short plant that grows to a height of around 60cm.

The essential oil in the lavender plant gives the herb its fragrant scent, it's extracted from the flowers of the lavender plant and used for medicinal purposes.

Lavender has various health benefits including relieving anxiety and depression and supporting skin health (Bowman, 2014). It can be consumed as a dried flower, essential oil, topical oil, capsules, teas, infusions, creams, beauty products or by aromatherapy.

In folklore, lavender-filled pillows were used to help people sleep better, a practice now supported by modern science. Infact a study conducted on the effect of lavender on college students that reported sleep issues showed a significant finding for waking feeling refreshed. In Germany, lavender tea is approved for treating insomnia, restlessness and nervous stomach issues.

Studies conducted on 50 people undergoing breast biopsy surgery showed that oxygen supplemented with lavender oil helped with pain control after surgery (Mount Sinai Health, 2024).

Lavender: Nature's Soothing Superhero



# 01

#### **CHILL OUT WITH LAVENDER**

A 2021 systematic review and meta-analysis found that using aromatherapy has a positive effect in anxiety (Tan, 2023).

 Aromatherapy can be done by adding a few drops of lavender oil to a diffuser and letting the calming scent whisk you away to a serene lavender field or even sprinkling dried flowers to bathwater to experience relaxation.

# 02

#### **SWEET DREAMS ARE MADE OF THIS**

One study of 158 postpartum women found that taking deep breaths of lavender had significantly better sleep quality than those in the placebo group (Olsen, 2020).

- Pillow power: Another study showed that 79 college students who reported sleep issues showed that lavender patches applied to the chest at night improved their sleep quality.
- Sleepy Tea Time: Based on these results, it's possible that enjoying a cup of lavender tea to unwind before bed could help you have better sleep.



# 03

#### **BANISH THE ACHES AND PAINS**

The anti-inflammatory and analgesic (relieving pain) properties in lavender oil are effective for treating pains that arise from muscle stress and tension.

 Massage Magic: Diluted Lavender oil is usually used to penetrate the skin to relieving tension. The oil is used to massage the skin to also help work knots.

# 04

#### **GLOWING SKIN, NATURALLY**

Say goodbye to skin woes with lavender's magical touch.

 Clear and Calm: It is proven that diluted lavender oil helps to prevent acne and reduces inflamation (Cobb,2023). This is done by applying lavender oil after facial washing.



#### MONTH:

Describe this month in a drawing:





TO-DO LIST

a																ŗ		 	1	•			l:	
						 , ,												 		 				
										 								 		 				 ,

Mood









# MEDICINAL PLANT OF THE WEEK:

## **ECHINACEA**

There are nine known species of Echinacea, all of which are native to North America and were used by the Native Americans as traditional medicines such as using it for relief from toothaches.

Echinacea is a genus of flowering plants in the daisy family and they most commonly grow in moist to dry prairies and in open wooded areas.

Echinacea is promoted as a dietary supplement for the common cold and other infections based on the study that its polysaccharides and glycoproteins boost our immune system. (Barrett B, 2010).

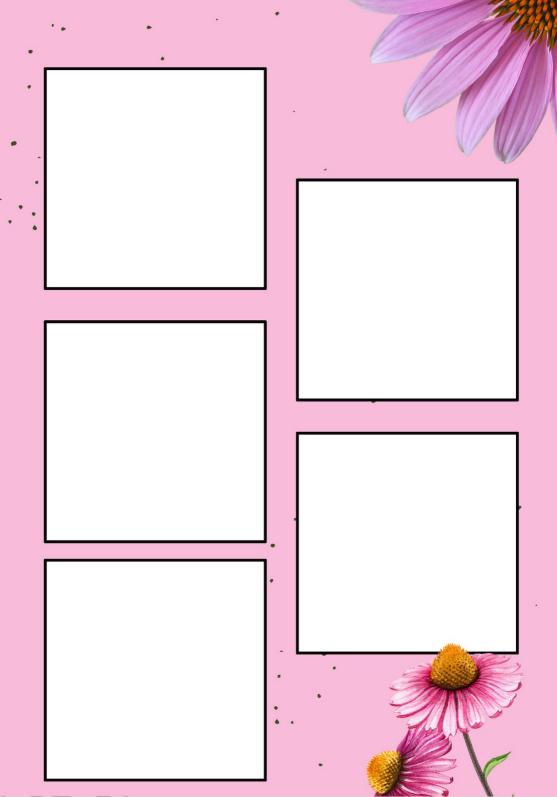
Although now Echinacea is commonly found in pill form, the plant can also be foun in tea, juices and creams. In the creams there is believed to be a substance called cichoric acid that helps with skin concerns such as aging and wrinkling (Mitchell, 2024).

Recent tresearch has shown that Echinacea extract has possible antiviral effects which protect against viruses that affect the respiratory system. Admist the recent outbreak of Covid-19 researches believe that Echinacea extracts helps the body produce IFN-y which helps with immune function and controlling inflammatory chemicals caused by Covid-19 (Mitchell, 2024).

# **VARIATIONS OF ECHINACEA**

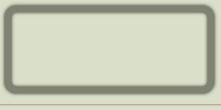
There are 9 species of the Echinacea plant. Use the sites below for more information on the Echinacea plant and fill out the grids below with pictures and information on the 9 species and how they vary from each other:.

Kew Gardens- https://powo.science.kew.org/results?q=echinacea **QMUL Biocapture-**



#### MONTH:

Describe this month in a drawing:





TO-DO LIST

(													Ī																				6			1		
																																,						
																														.,								
						.,																																

Mood









# MEDICINAL PLANT OF THE MONTH:

## YARROW

Yarrow plant flourishes in warm and sunny habitats and usually grows under 3 feet tall. The flowers are typically white but in mountainous areas can be pink pr pale purple.

In European folk medicine yarrow contains chemicals that increase saliva and stomach acid to help improve digestion.

Yarrow is also proven to relax smooth muscle in the intestine and uterus which can relieve stomach and menstrual cramps (Roy et al., 2011).

Traditionally yarrow was used in 3 ways: It was applied to the skin for wounds and minor bleeding, it was ingested to reduce inflammation in the digestive tract and was also taken as a sedative to relieve anxiety or insomnia.

Did you know that Yarrow has been shown to aid certain brain disorders such as multiple scelerosis. A recent animal study noted that yarrow extract reduced the severity of brain inflammations and spinal cord/ brain damage (Ayoobi et al., 2017).

#### PLANTING AND GROWING YARROW IN YOUR GARDEN

#### YARROW IS A CLASSIC GARDEN PLANT KNOWN FOR ITS RUGGEDNESS.

#### Objective:

Learn how to plant and care for yarrow in your garden, promoting its growth for future use in medicinal or ornamental purposes.

#### Materials Needed:

- Yarrow seeds or seedlings
- A sunny spot in your garden
- Garden tools (trowel, rake, watering can)
- Compost or organic matter (optional for soil enrichment)

#### Instructions:

#### 1. Prepare the Soil:

- Choose a well-drained, sunny spot in your garden. Yarrow thrives in poor to average soil but benefits from well-drained conditions. Loosen the soil with a rake.

#### 2. Planting the Yarrow:

- Scatter the yarrow seeds on the surface of the soil and lightly press them in. Do not cover them with too much soil, as yarrow seeds need light to germinate.

#### 3. Watering and Care:

- Water the area lightly immediately after planting. Yarrow is drought-tolerant, so avoid overwatering. Water only when the soil feels dry to the touch.

#### 4. Journal Reflection:

- Record the date of planting and the conditions (weather, soil type, etc.).
- Track the growth of your yarrow plant weekly, noting any changes in height, leaf formation, and overall health.
- Reflect on your gardening experience, challenges you faced, and the satisfaction of nurturing a medicinal plant.

#### MONTH:

Describe this month in a drawing:



TO-DO LIS	Т

(																																			
6	1	,	1	t	i	1	,	i	1	t	i	i	6				(	3	(	0	r	1	r	1		)		6		t	6	9	(		
	•••																																		

Mood









# MEDICINAL PLANT OF THE MONTH:

## **FEVERFEW**



Feverfew comes from the Latin word "febrifugia" meaning "fever reducer".

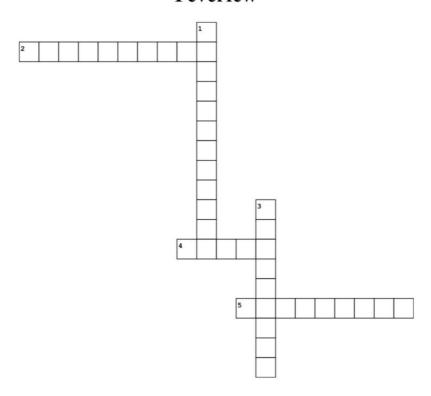
Feverfew is native to parts of western Asia and the Balkans, but now it grows all throughout the world.

In fact feverfew was used for fevers and headaches so frequent that in the 18th century it was called the "medieval aspirin". It was also commonly used for toothaches.

Some research suggests that feverfew may help with migraines and even in some cases feverfew helps with nausea and vomiting (Mayo Clinic, 2019).

The main active compound in Feverfew is called parthenolide, this compound helps to prevent migraines by inhibiting the release of serotonin which is involved in the dilation of blood vessels and inflammation pathways associated with migraine development.

#### **Feverfew**



#### Across

- 2. Latin Word for Feverfew
- 4. reducer Meaning of feverfew
- 5. Condition that was commonly treated by this plant

#### Down

- 1. Main active compound in feverfew
- 3. this is inhibited to prevent migraines

#### MONTH:



TO-DO LIST

 •••	••	•••	•••	•••	•	•••	•	• •	•	•		•			•••	1					•••		
 		•••				•••					•				••								
 								•••												 			
 								•••			•												



# MEDICINAL PLANT OF THE MONTH:

## GINKGO



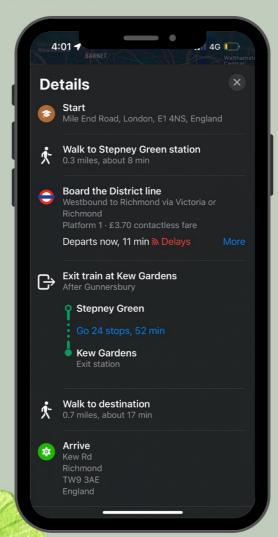
Chinese medicine has commonly used the ginkgo leaf for treatment for deterioration of cognitive functioning associated with old age.

Studies have shown that ginkgo improves blood circulation by opening up the blood vessels and is therefore commonly used to treat muscle pain during activity and also poor circulation in the legs (Boelsma et al., 2004).

Ginkgo leaves contain antioxidants (a substance that protects cells from damage caused by free radicals). Free radicals is a substance that builds up as you age and contribute to heart disease, cancer and alzheimers. The antioxidants found in ginkgo help to fight off the free radicals stopping them from damaging DNA and other cells (Whitbourne, 2022).

In a study conducted with women experiencing PMS symptoms where the women took a special extract of ginkgo in the beginning of their menstrual cycle and reported reduced PMS symptoms (Ozgoli et al., 2009).

IF YOU'RE INTERESTED IN LEARNING MORE ABOUT GINKGO PLANTS AND WANT TO SEE ONE IN PERSON, VISIT KEW GARDENS' BOTANIC GARDENS.



Q

#### MONTH:

Describe this month in a drawing:



TO-DO LIST
Green space activities completed:

Mood









# MEDICINAL PLANT OF THE MONTH: BLOOD FLOWER



Blood flower is typically grown in Britain in well- drained soil in full sun.

Different types of blood flowers have been developed to improve the colour of the flower and create more manageable plants. For example Silky Gold is a blood flower that features large clusters of gold-yellow flowers (Sears, 2024).

Blood flower is known to have emetic (vomiting) and laxative effects.

The root is commonly used to treat ringworms and to also stop bleeding (Nparks, 2022).

The milky sap of the stem is used to treat warts and skin parasites.

### Bloodflower

S	L	В	L	0	0	D	F	L	0	W	E	R	S
Υ	0	R	Α	0	Ε	I	W	0	L	M	S	С	S
K	В	D	R	Α	E	V	I	0	S	0	Α	0	L
L	S	Υ	I	L	G	Р	I	Т	С	S	Р	S	R
I	I	Α	N	L	S	Α	W	T	Т	S	Т	L	I
M	L	E	G	L	Р	R	S	V	Α	M	0	0	W
N	K	M	W	В	Α	Α	I	Α	S	X	L	Т	Α
L	Υ	Ε	0	L	Т	S	L	R	Α	I	Α	0	R
Α	G	Т	R	Α	K	I	M	0	0	W	Α	L	T
I	0	I	M	Α	0	Т	D	S	L	L	Р	Α	S
Α	L	C	S	L	G	E	Y	L	I	L	I	S	G
S	D	S	M	S	0	S	Ε	I	X	G	W	0	I
T	I	0	R	Α	0	M	R	S	T	D	R	W	W
S	Т	K	T	0	R	M	W	G	G	Α	R	W	I

WARTS
LAXATIVE
PARASITES
RINGWORMS
EMETIC
SOIL
BLOODFLOWER
MILKY
SILKYGOLD
SAP

Play this puzzle online at : https://thewordsearch.com/puzzle/7397732/

#### MONTH:





TO-DO LIST
Green space activities completed:



Conclusion



To wrap up, this first volume of our journal on medicinal plants has showcased a variety of studies that highlight how powerful plants can be in healthcare. From ancient remedies to modern applications, these articles emphasize the importance of blending traditional knowledge with cuttingedge science to fully harness the benefits of medicinal plants. The research presented here is just the beginning of what's possible in this fascinating field.

We're excited to share that Volume 2 is on the way! It will explore even more new findings and creative uses of medicinal plants. We hope you'll continue to be part of this journey with us, contributing and learning as we dive deeper into the world of medicinal plants. Stay tuned!

Learn more and get involved in preserving the planets rich biological heritage. Scan the QR Code to visit the Biocapture website and deepen your knowledge about biodiversity today!





# References



- Ayoobi, F., Shamsizadeh, A., Fatemi, I., Vakilian, A., Allahtavakoli, M., Hassanshahi, G. and Moghadam-Ahmadi, A. (2017). Bio-effectiveness of the main flavonoids of Achillea millefolium in the pathophysiology of neurodegenerative disorders- a review. Iranian Journal of Basic Medical Sciences, [online] 20(6), pp.604–612. doi:https://doi.org/10.22038/IJBMS.2017.8827.
- Barrett, B., Brown, R., Rakel, D., Mundt, M., Bone, K., Barlow, S. and Ewers, T. (2010).
   Echinacea for Treating the Common Cold. Annals of Internal Medicine, [online] 153(12),
   p.769. doi:https://doi.org/10.7326/0003-4819-153-12-201012210-00003.
- Boelsma, E., Lamers, R.-J.A., Hendriks, H.F., van Nesselrooij, J.H. and Roza, L. (2004). Evidence of the Regulatory Effect of Ginkgo biloba Extract on Skin Blood Flow and Study of its Effects on Urinary Metabolites in Healthy humans. Planta Medica, 70(11), pp.1052–1057. doi:https://doi.org/10.1055/s-2004-832646.
- Bowman, J. (2014). What Lavender Can Do for You. [online] Healthline. Available at: https://www.healthline.com/health/what-lavender-can-do-for-you.
- Gotter, A. (2018). How to Improve the Health of Your Skin with Lavender Oil. [online] Healthline. Available at: https://www.healthline.com/health/lavender-oil-for-skin.
- Mayoclinic.org. (2019). Chronic daily headaches Diagnosis and treatment Mayo Clinic. [online] Available at: https://www.mayoclinic.org/diseases-conditions/chronic-daily-headaches/diagnosis-treatment/drc-
- 20370897#:~:text=Herbs%2C%20vitamins%20and%20minerals. [Accessed 19 Aug. 2024].
- Mitchell, K. (2024). Health Benefits of Echinacea. [online] WebMD. Available at: https://www.webmd.com/diet/health-benefits-echinacea.
- Mount Sinai Health System. (n.d.). Lavender Information | Mount Sinai New York. [online]
   Available at: https://www.mountsinai.org/health-library/herb/lavender.
- Olsen, N. (2020). 4 Benefits and Uses of Lavender Tea and Extracts. [online] Healthline. Available at: https://www.healthline.com/nutrition/lavender-tea-benefits.
- Ozgoli, G., Selselei, E.A., Mojab, F. and Majd, H.A. (2009). A Randomized, Placebo-Controlled Trial of Ginkgo biloba L. in Treatment of Premenstrual Syndrome. The Journal of Alternative and Complementary Medicine, 15(8), pp.845–851.
   doi:https://doi.org/10.1089/acm.2008.0493.
- Roy, A. (2011). (PDF) Yarrow (Achillea millefolium Linn.) a herbal medicinal plant with broad therapeutic use - A review. [online] ResearchGate. Available at: https://www.researchgate.net/publication/285763271\_Yarrow\_Achillea\_millefolium\_Linn\_a\_ herbal\_medicinal\_plant\_with\_broad\_therapeutic\_use\_-\_A\_review.
- Sears, C. (2024). Blood Flower: Plant Care & Growing Guide. [online] The Spruce. Available at: https://www.thespruce.com/blood-flower-plant-profile-4800536.
- Tan, L., Liao, F.-F., Long, L.-Z., Ma, X.-C., Peng, Y.-X., Lu, J.-M., Qu, H. and Fu, C.-G. (2023). Essential oils for treating anxiety: a systematic review of randomized controlled trials and network meta-analysis. Frontiers in Public Health, [online] 11, p.1144404. doi:https://doi.org/10.3389/fpubh.2023.1144404.
- Whitbourne, K. (2022). Health Benefits of Ginkgo Biloba. [online] WebMD. Available at: https://www.webmd.com/vitamins-and-supplements/benefits-ginkgo-biloba.
- www.nparks.gov.sg. (n.d.). NParks | Asclepias curassavica. [online] Available at: https://www.nparks.gov.sg/florafaunaweb/flora/1/6/1693.