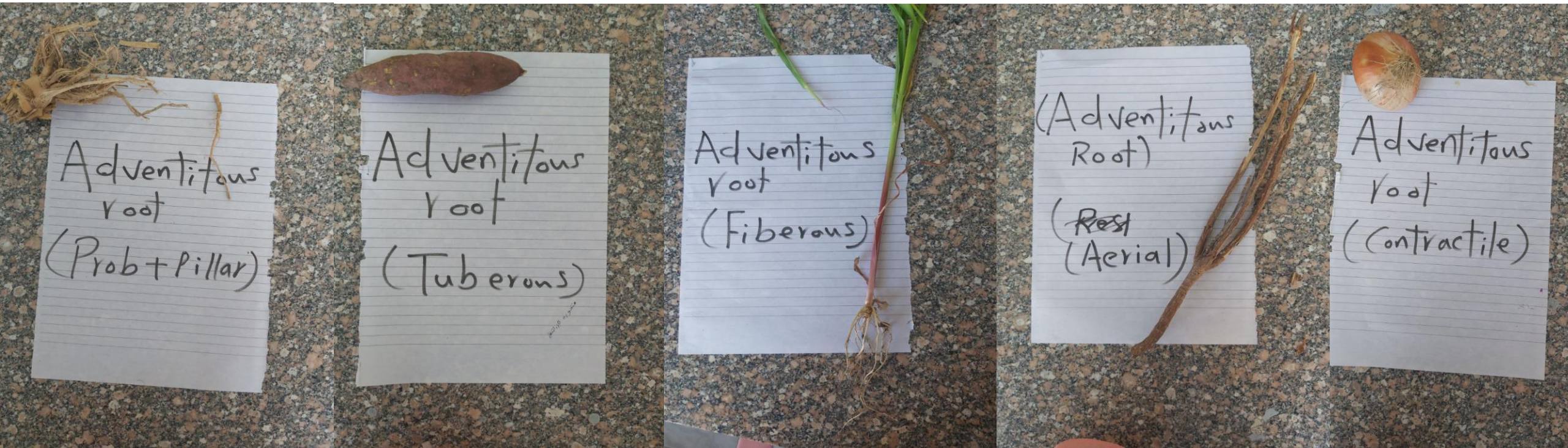


PRACTICAL BOTANY

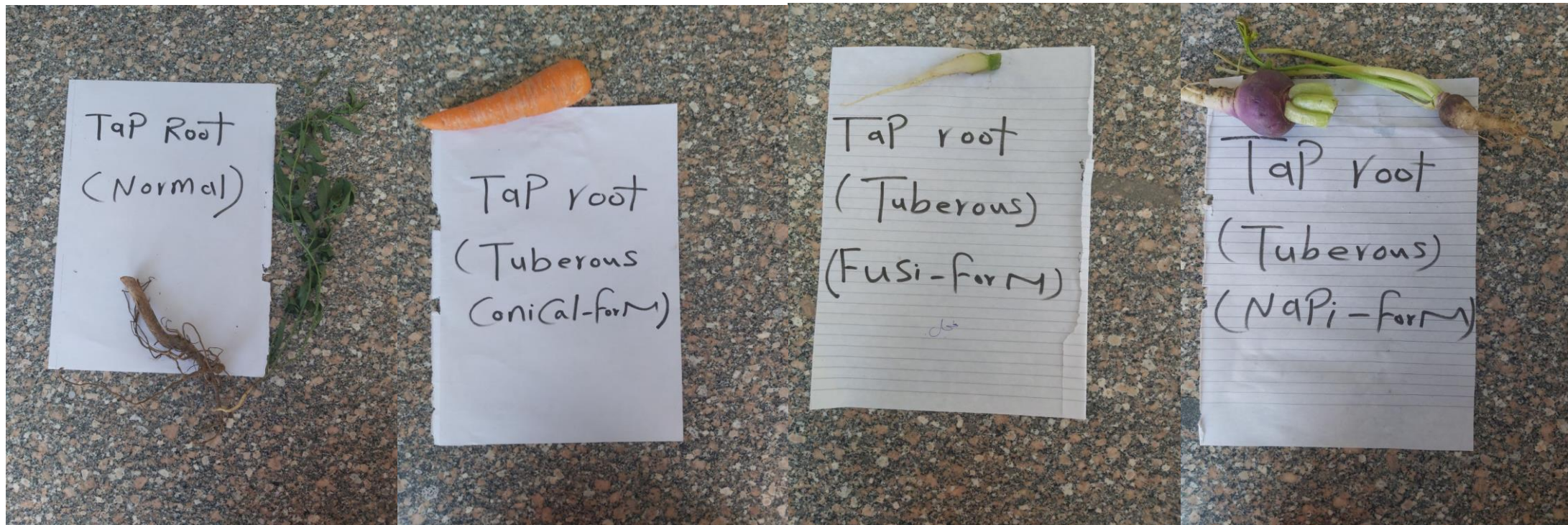
1ST YEAR



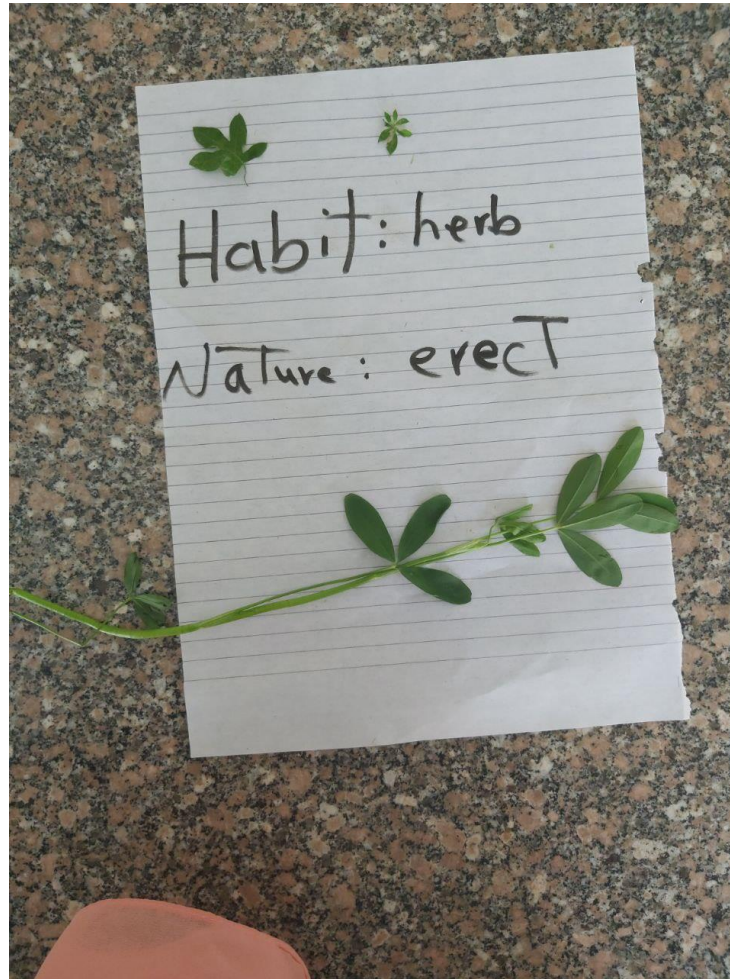
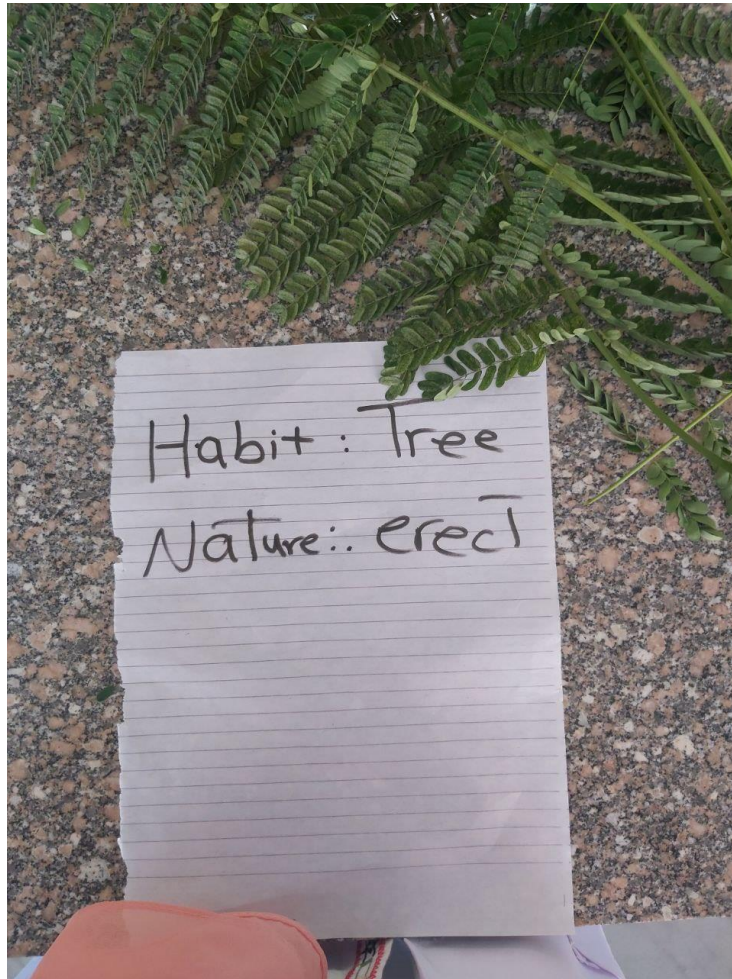
1- ROOTS (ADVETITOUS)

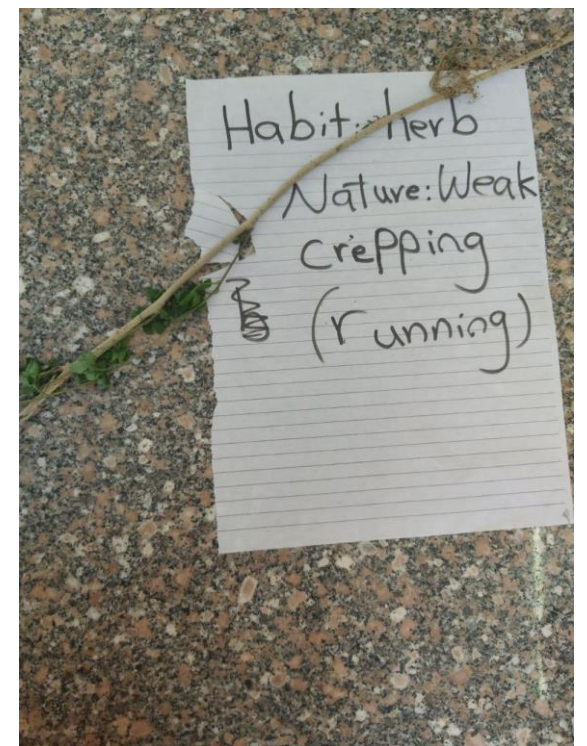
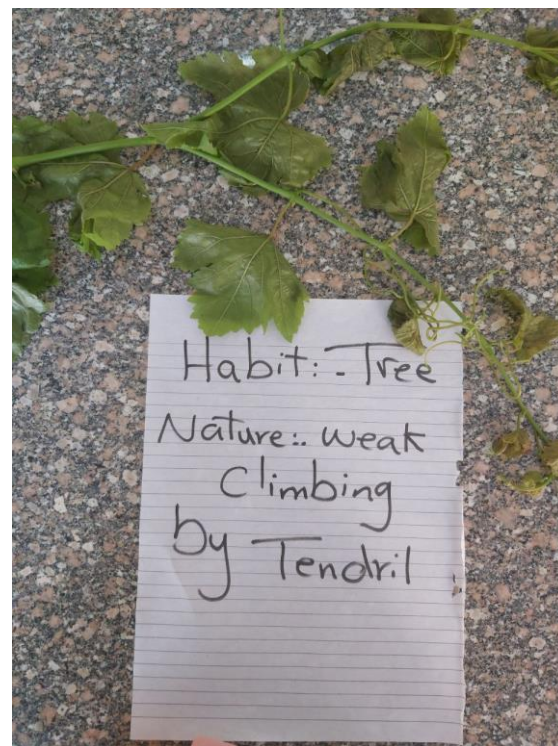
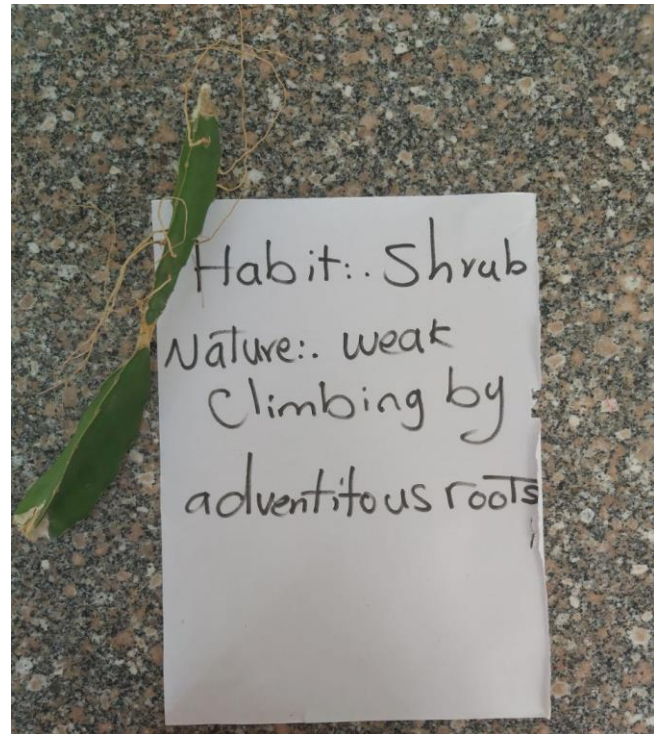
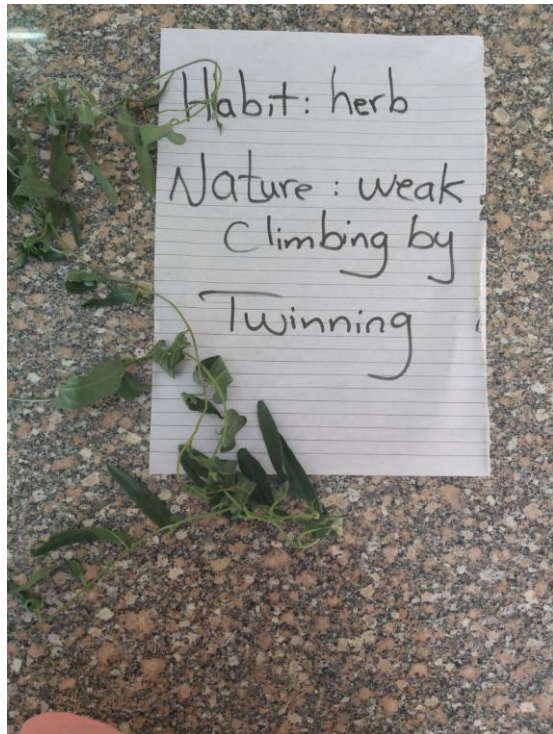


2-TAP ROOT

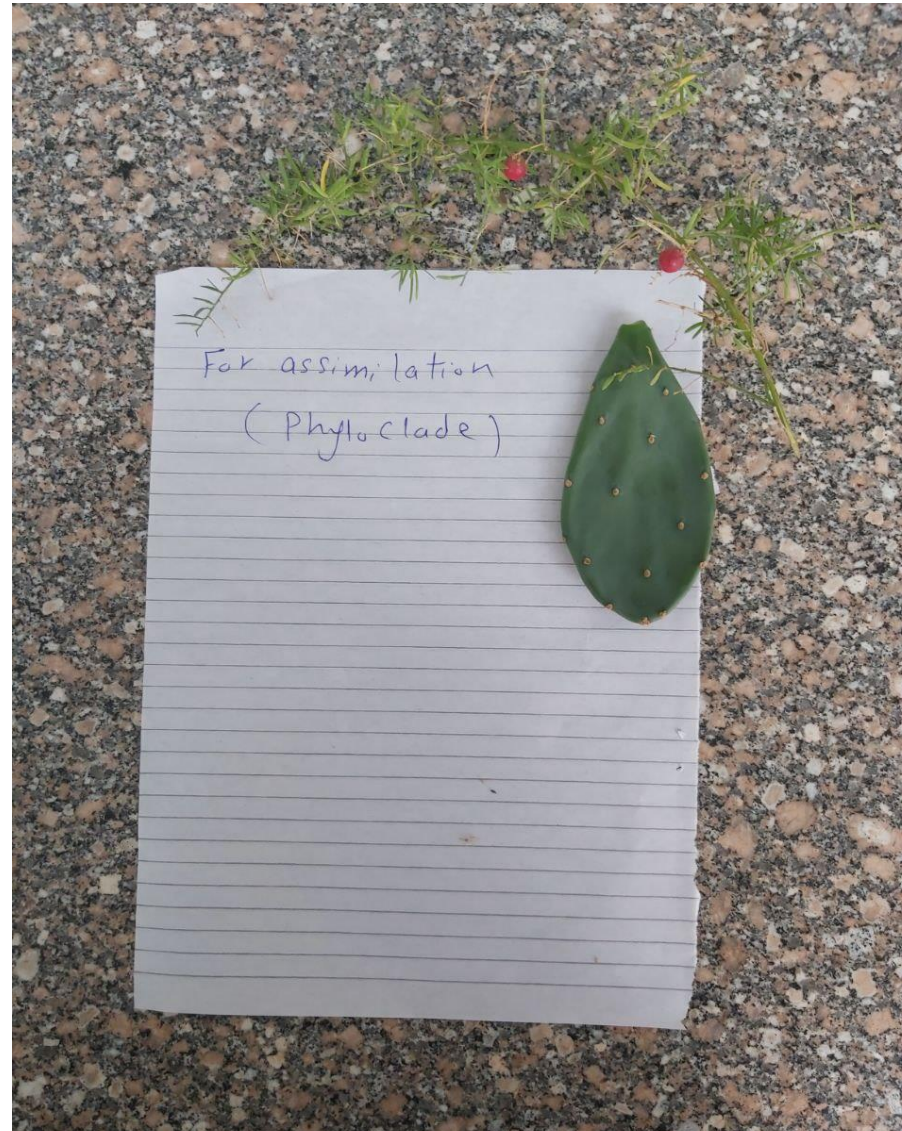


STEMS



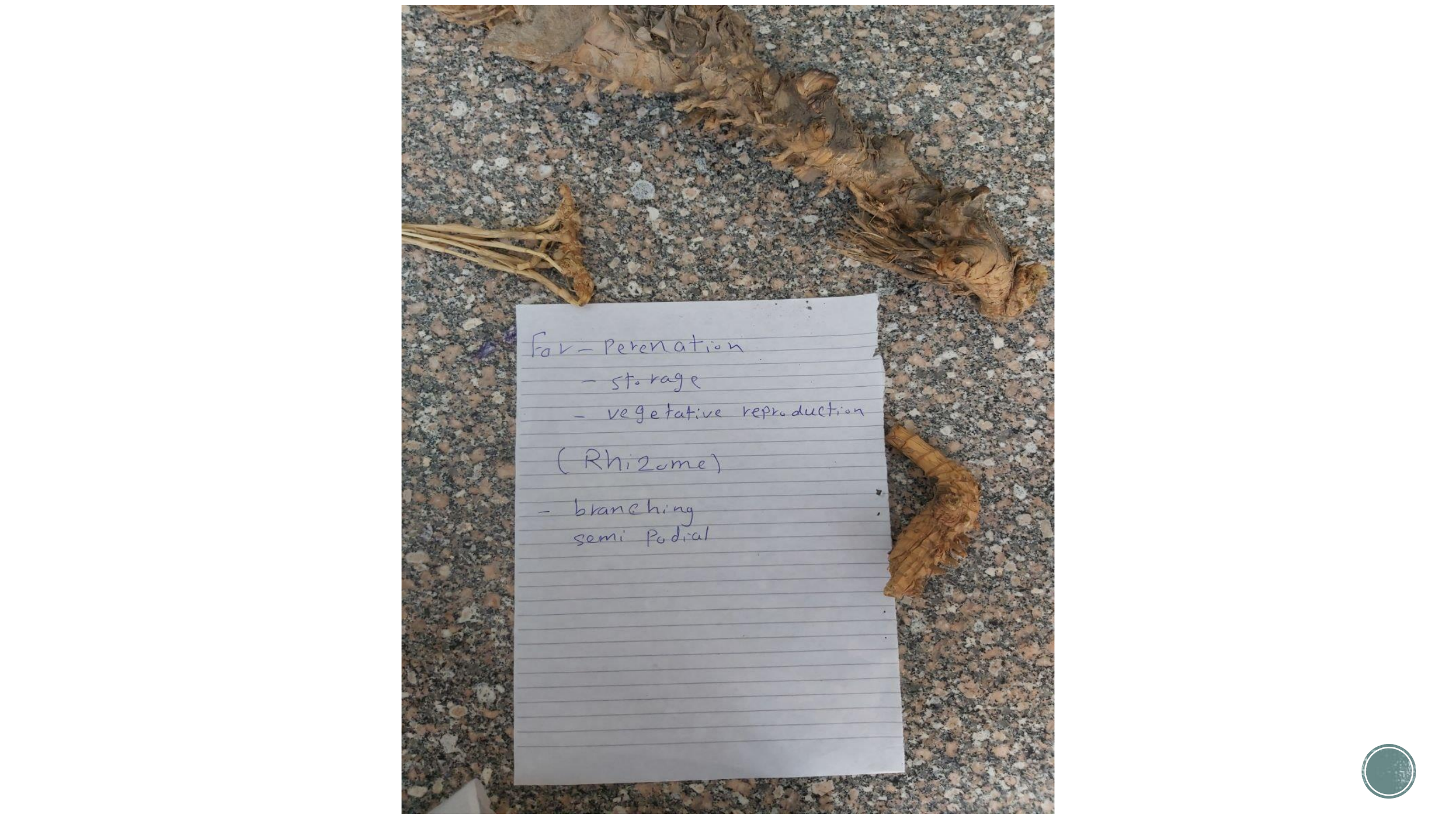


METAMORPHOSED STEMS



For assimilation
(cladodes)



A photograph showing a piece of ginger rhizome (root) lying on a speckled, grey and brown surface. A small, rectangular piece of lined paper is placed next to the rhizome, containing handwritten text. The rhizome is light brown, fibrous, and has a knobby, irregular shape. The paper is white with horizontal lines and has some text written in blue ink.

For - Perennation

- storage

- vegetative reproduction

(Rhizome)

- branching
semi Podial



For - Perennation

- Storage

- Vegetative reproduction

(bulb)





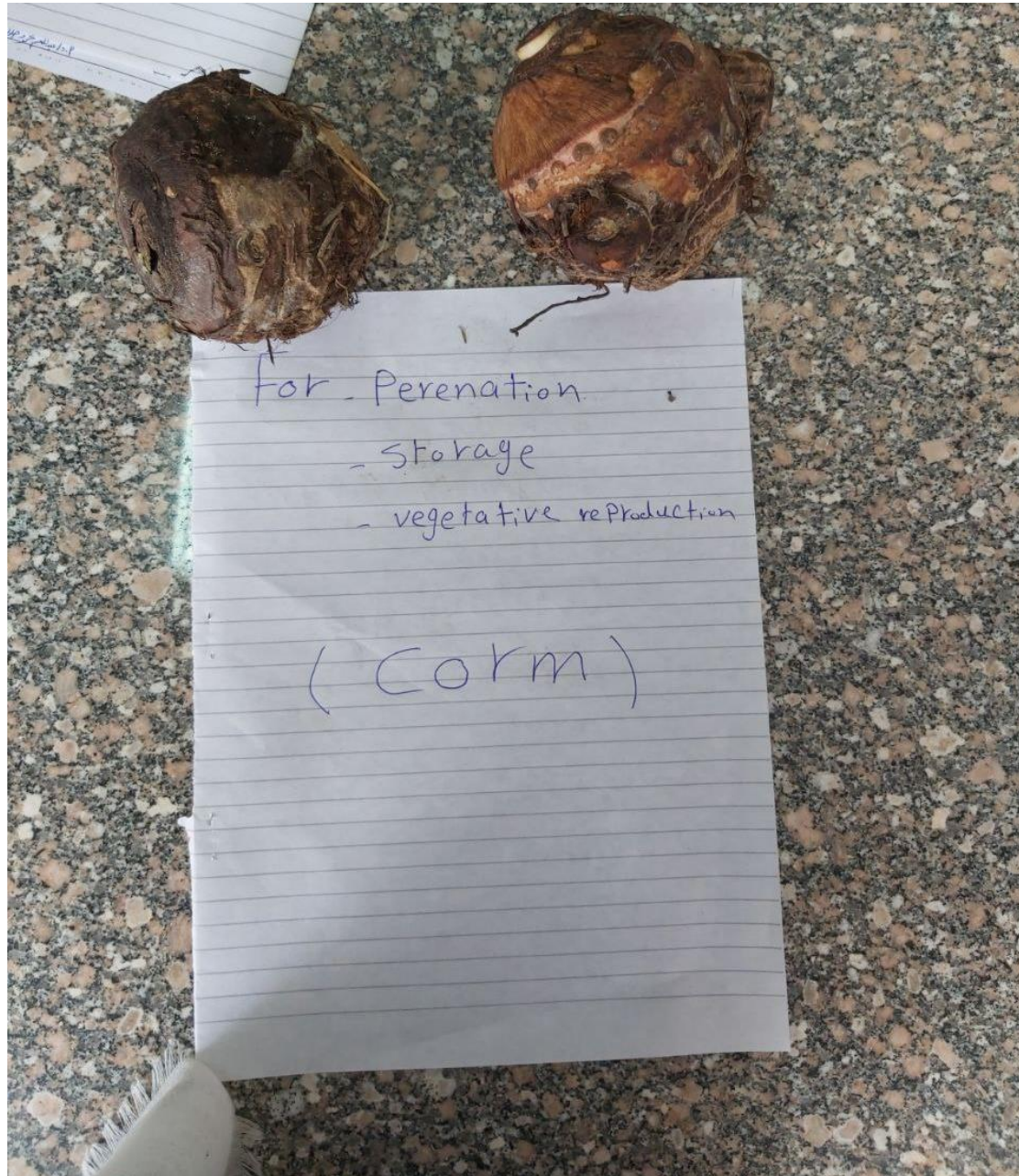
For - Perennation

- Storage

- Vegetative reproduction

(tuber)





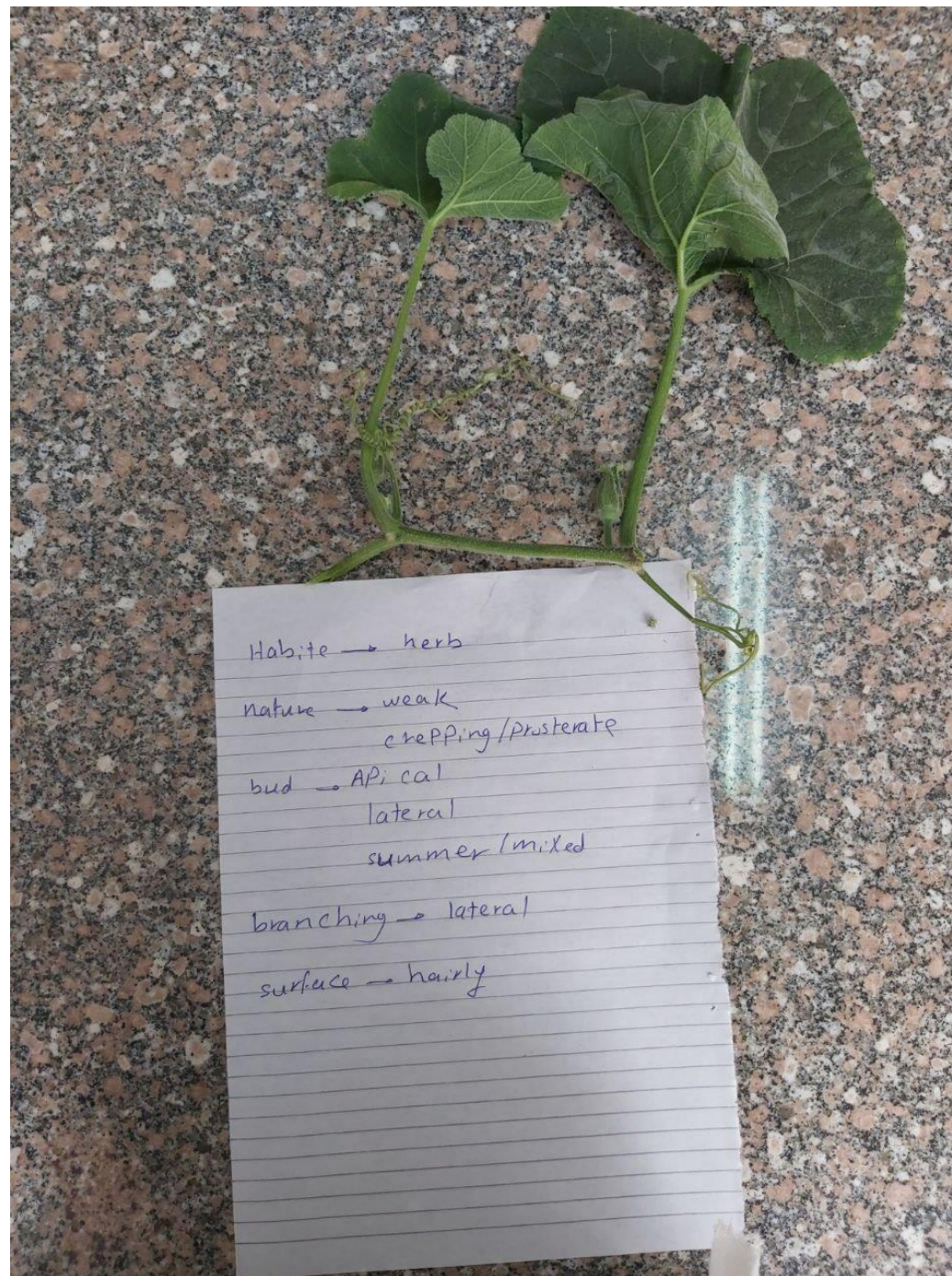
for Perenation

- storage

- vegetative reproduction

(Corm)





Habite → herb

nature → weak
creeping/prostrate

bud → Apical
lateral
summer/mixed

branching → lateral

surface → hairy



For climbing

habite: weak



climbing by tendrils

branching - semi Podral



For - reduction of transpiration
surface
- Protection

nature - weak
climbing by spiny

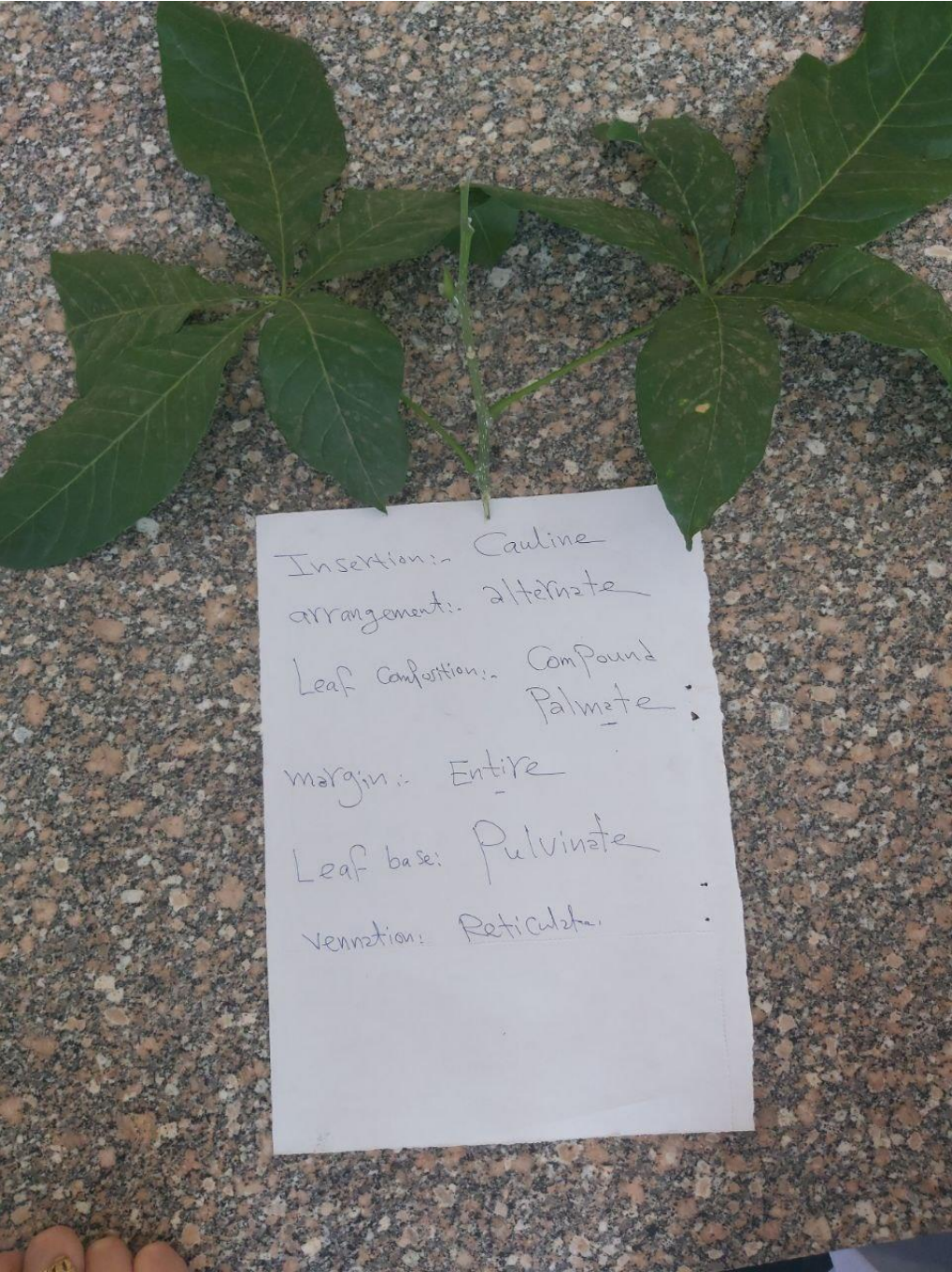


Leaves



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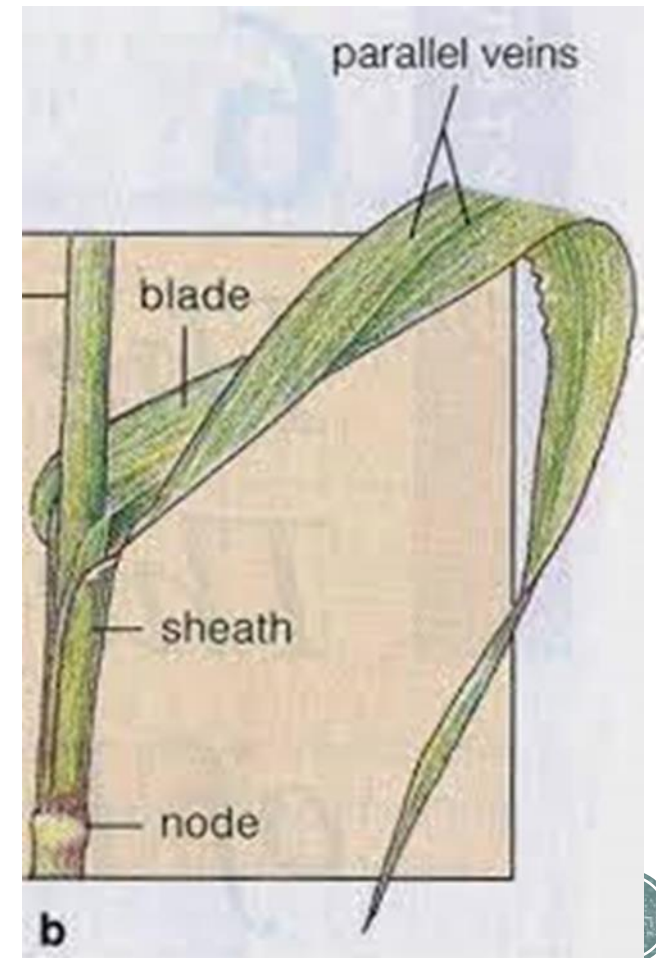




Insertion:- Cauline
arrangement:- alternate
Leaf configuration:- Compound
Palmate
margin:- Entire
Leaf base:- Pulvinate
venation:- Reticulate

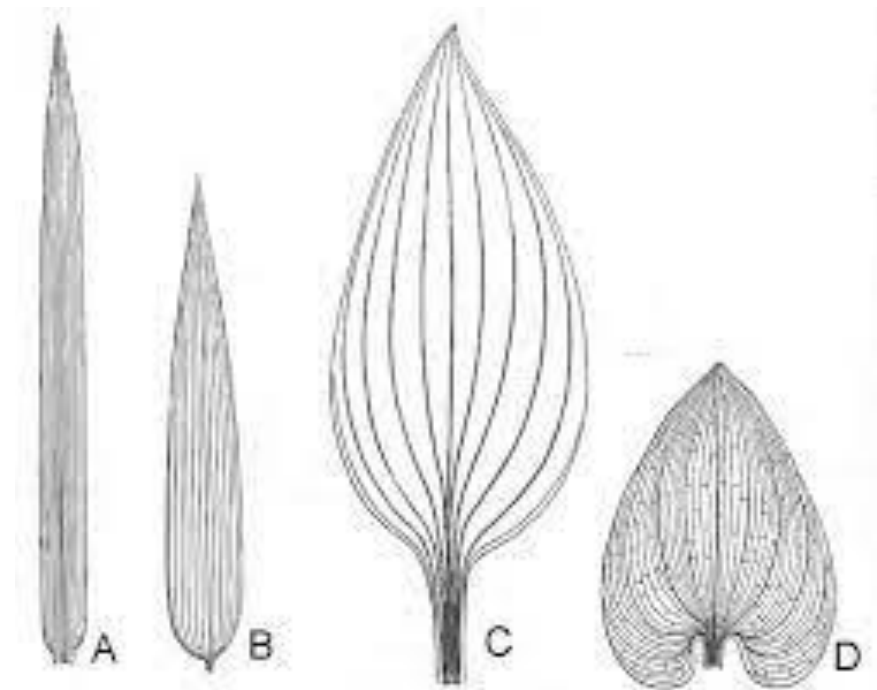
Insertion: Cauline
arrangement: Alternate
leaf base: sheathing
• Leaf Composition: Simple
Normal.
leaf margin: Entire
• Apex: Acute
• Venation: ~~Pinnate~~ Parallel
pinnate

Sheathed leaf base



Insertion: Canine
arrangement: Alternate
base: Sheathing
leaf Composition: Simple
margin: Entire
Apex: Acuminate
Vennation: Parallel
basal

Parallel basal



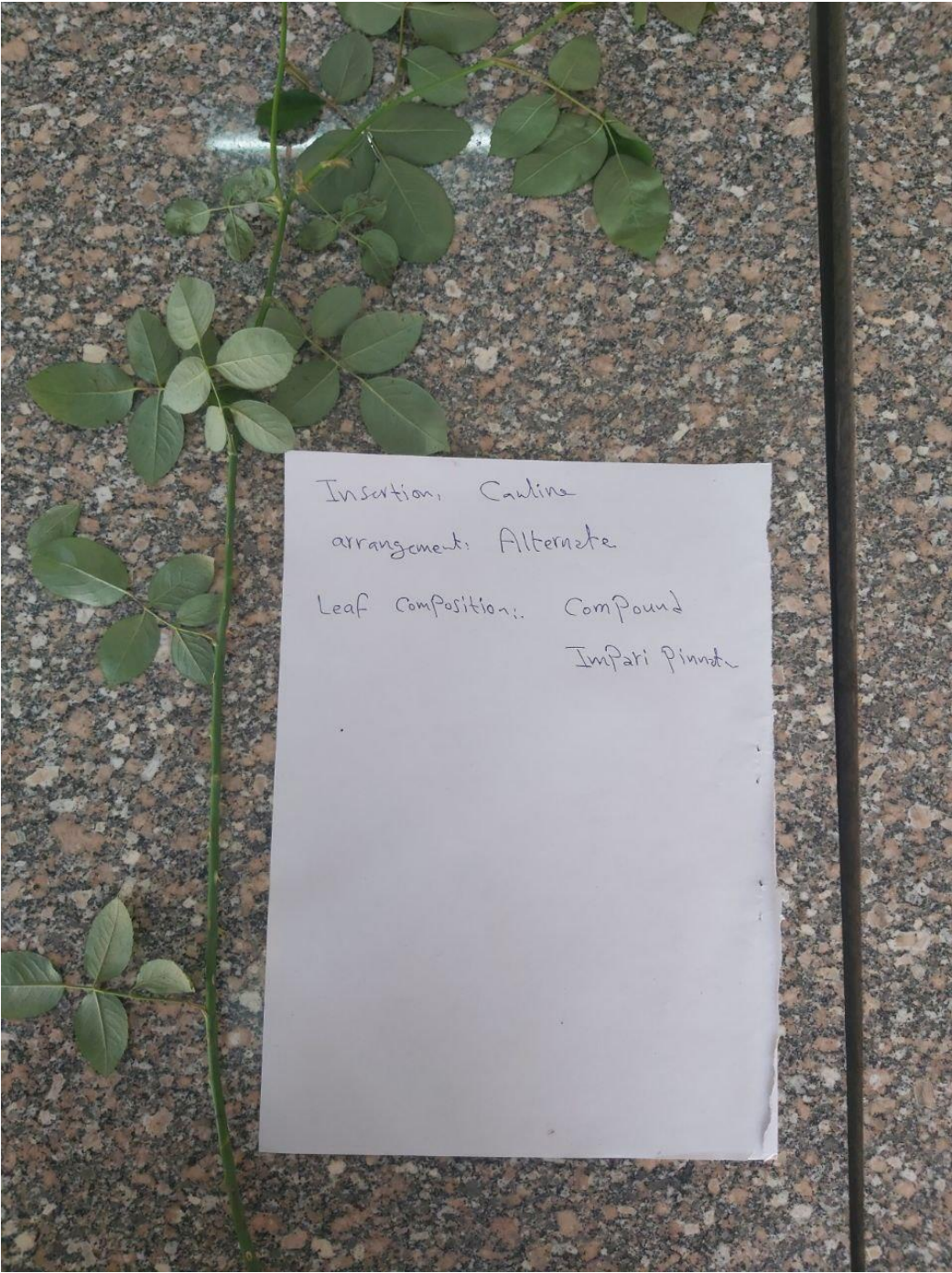
Inflection: Cauline
arrangement: Alternate.
Leaf base: Pulvinate
stipulate.
Leaf Composition: Compound
bipinnate
(Pari)
margin: Entire
Venation: Reticulate.

Bipinnate(pari)



Pulvinate leaf base





Insertion: Cauline
arrangement: Alternate
Leaf composition: Compound
Impari Pinnate

imparipinnate



Insertion: ~~at~~ Cauline

Arrangement: Opposite

~~decussate~~
decussate

Composition: Simple

margin: Entire

Shape: obovate

Venation: Reticulate

pinnate



Insertion: Cauline

arrangement: Opposite

~~Decussate~~ ^{verticillate}
Decussate

Leaf base: Normal

leafy stipulate

Vennation: Reticulate
pinnate



Pinnately compound leaf



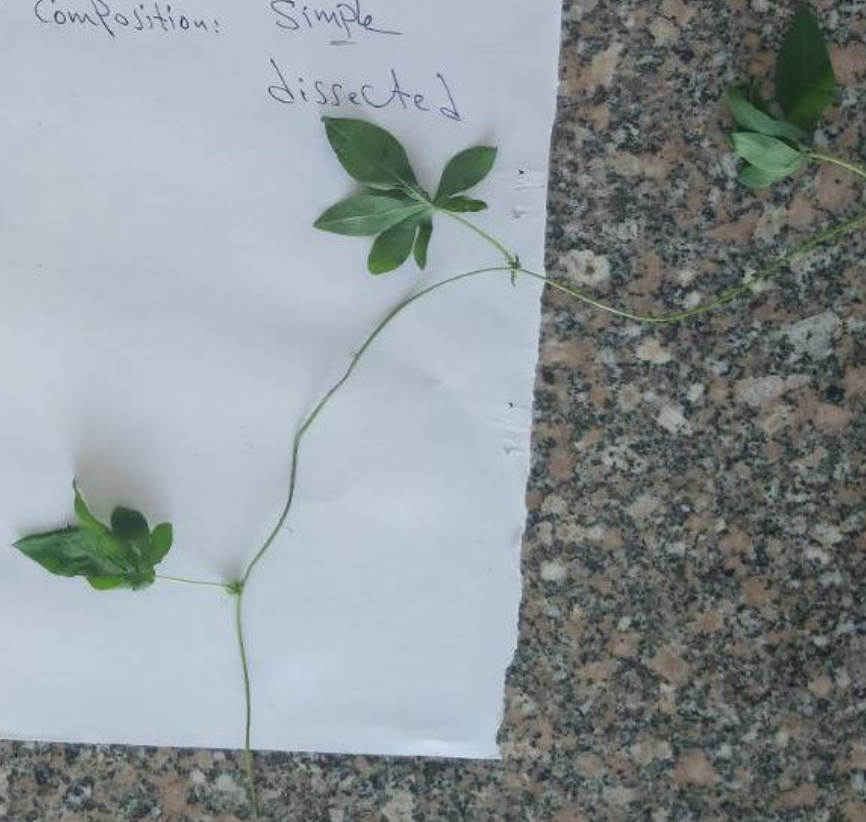
Metamorphosis (Kind of leaf).

Arrangement: whorled. (flower)



Insertion: Cauline
arrangement: alternate

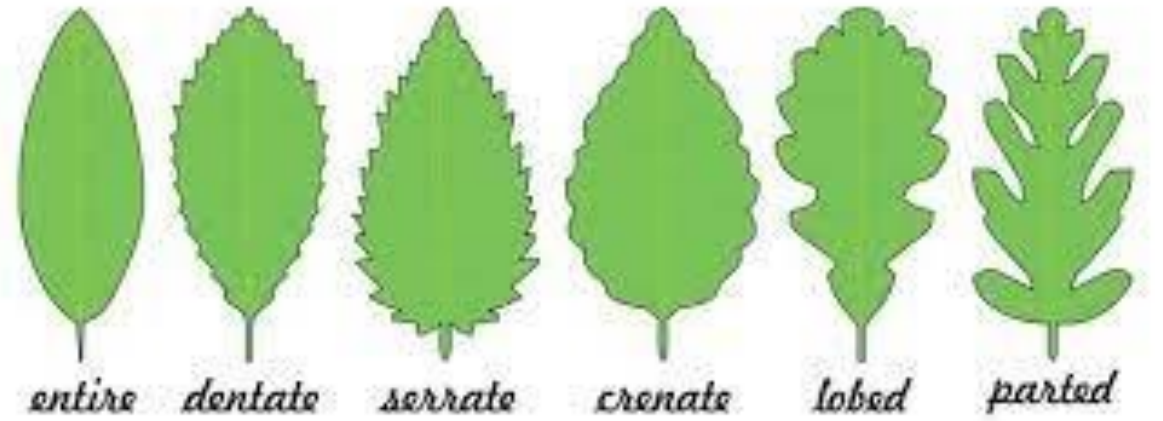
Leaf Composition: Simple
dissected



© tree-guide.com



Leaf composition: Simple
Lobed



shutterstock.com · 411967195



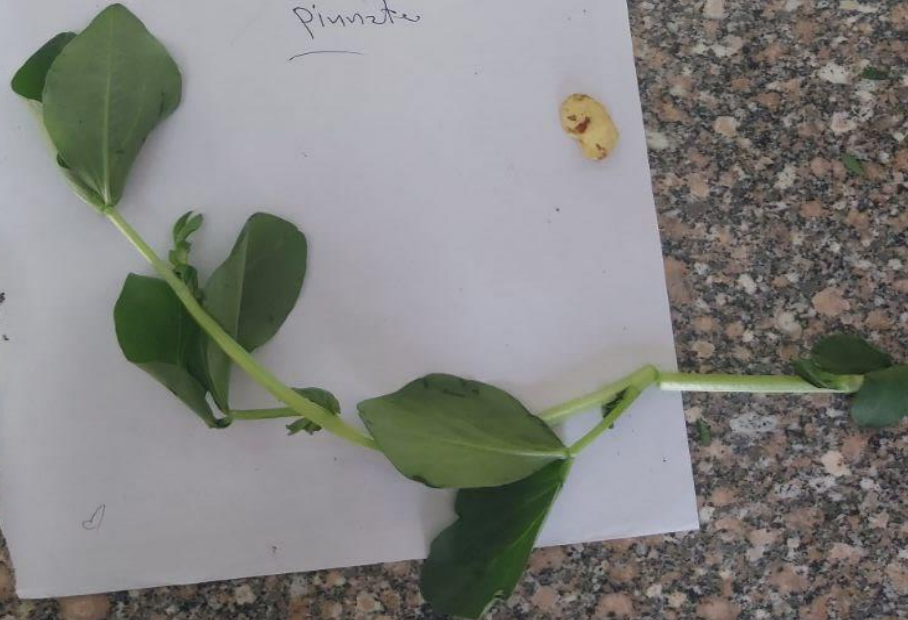
© beimgoat.de

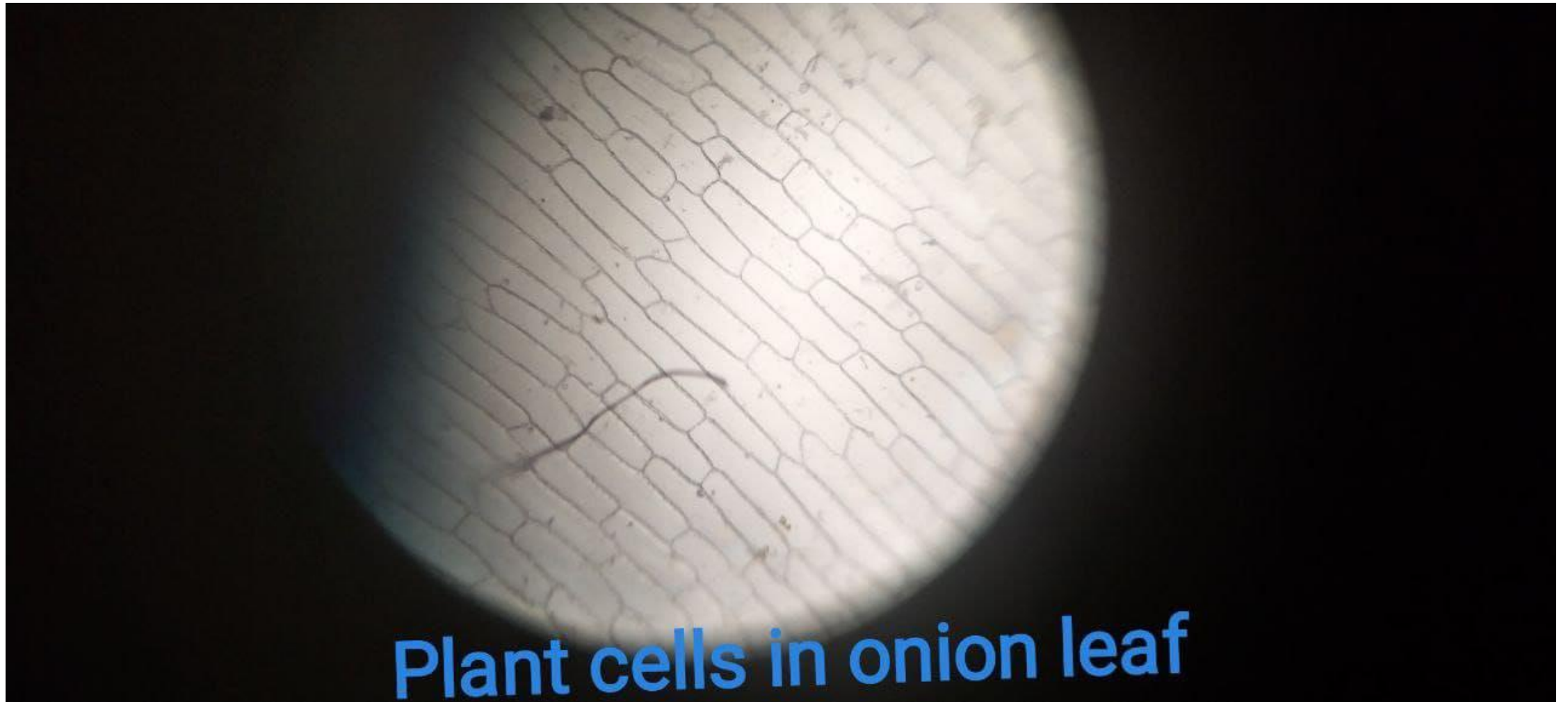


Insertion:- Cauline

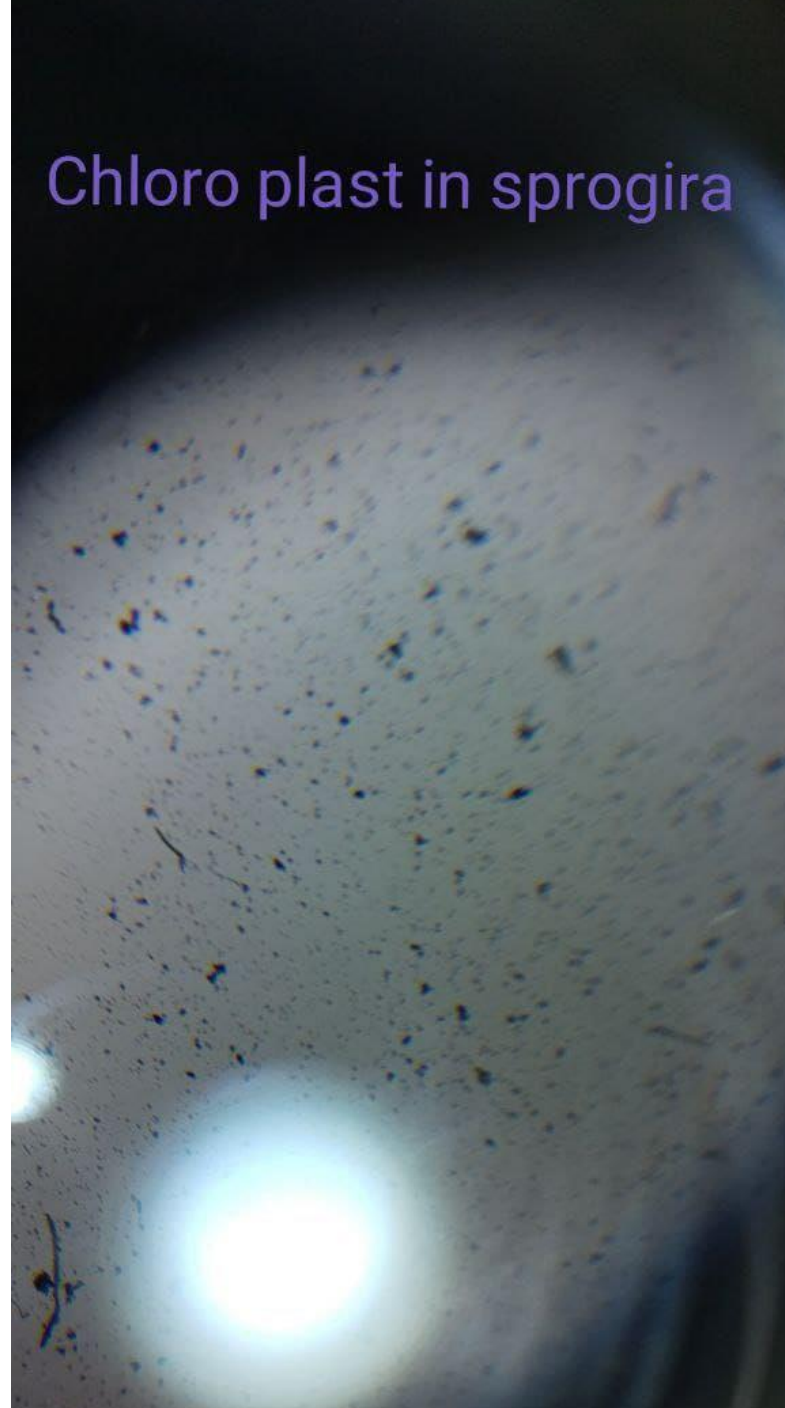
Leaf Composition: Compound
Pari pinnate

Venation: Reticulato-
pinnate

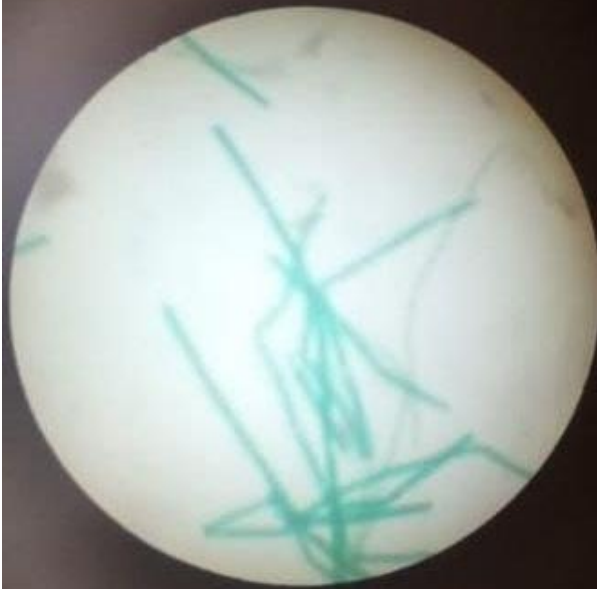




Chloro plast in sprogira



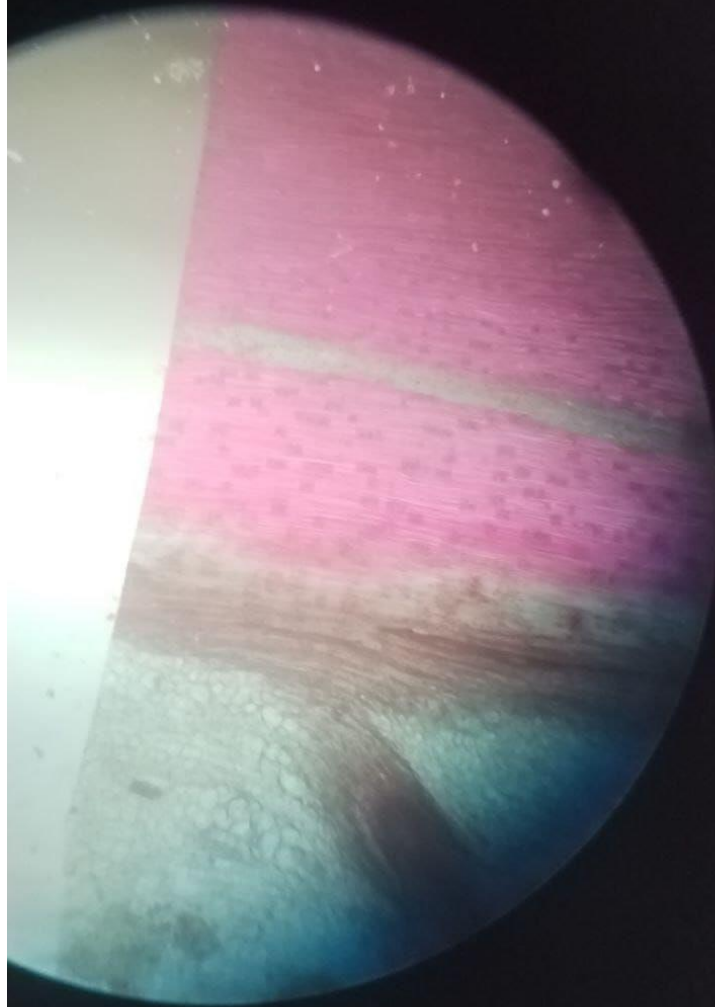
spiral shape chloroplast



T. S xylem, phelom



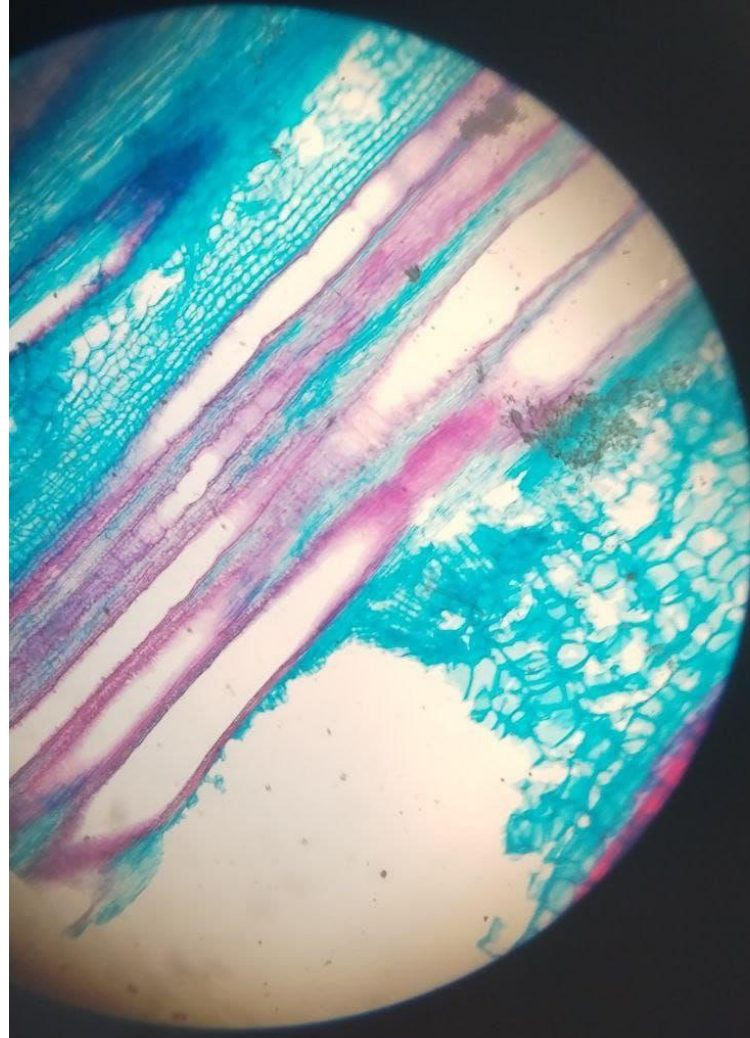
L. S in tracheides



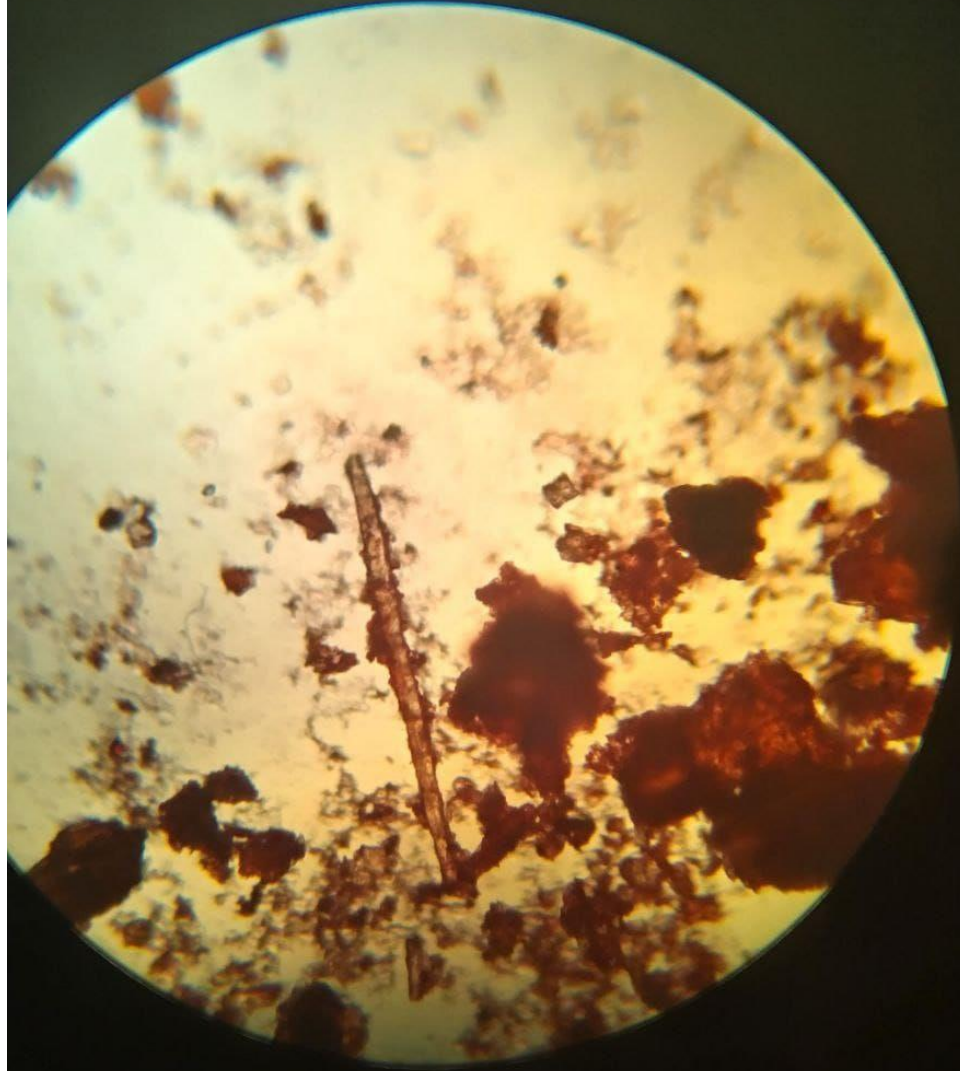
T. S tracheides in gymnosperm



L. S in vessels



L. S in fibers



Ca_carbonate

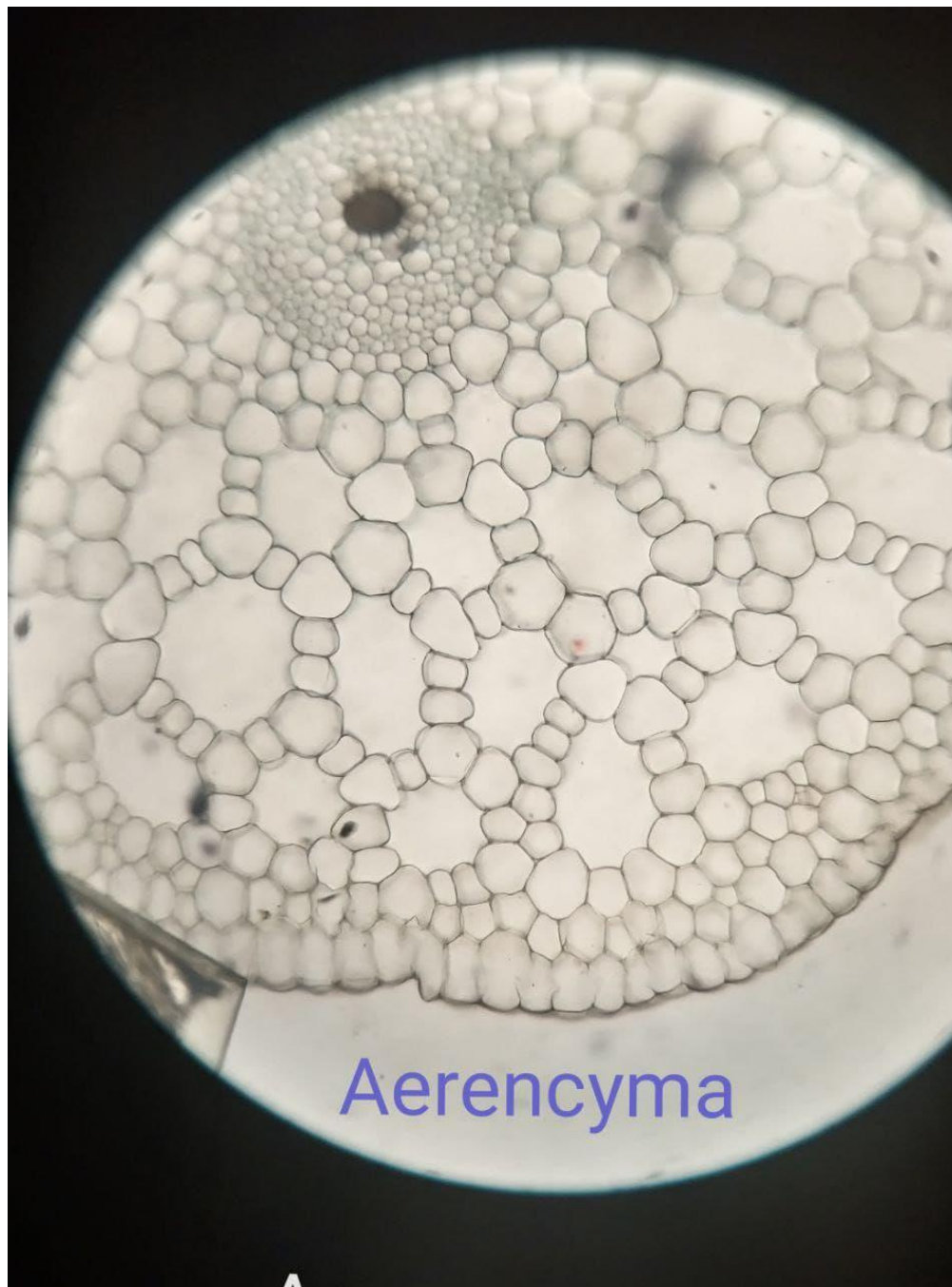


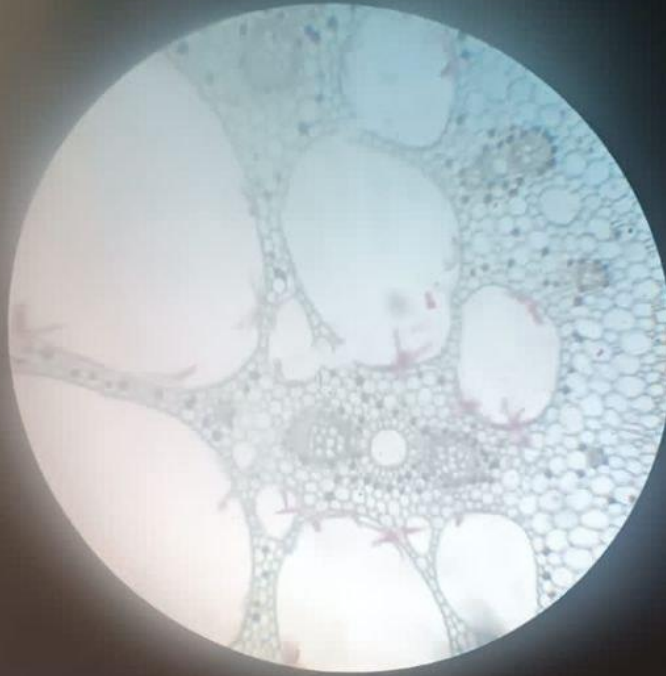
starch grain



L.s in shoot apex



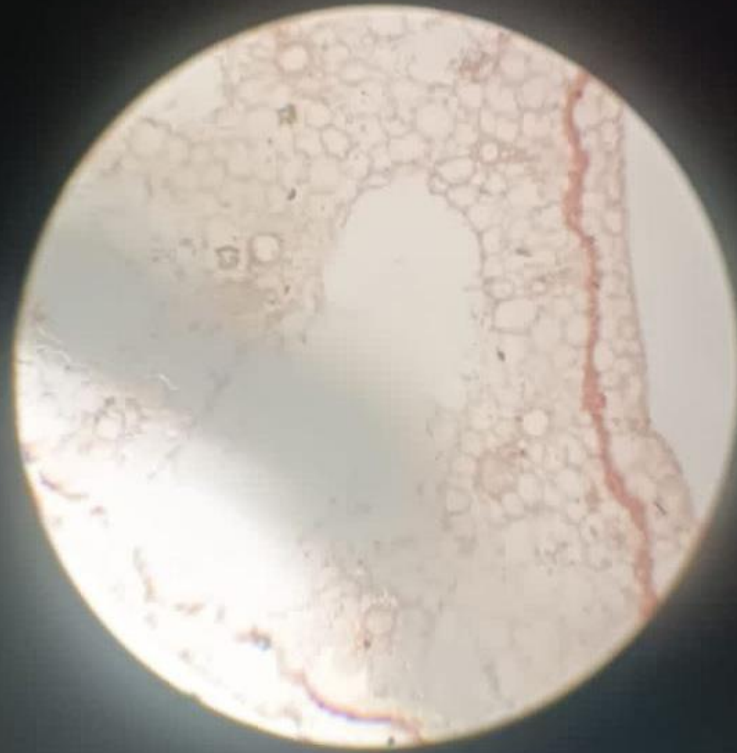




Astro Sclereids



Armed shape of parenchyma



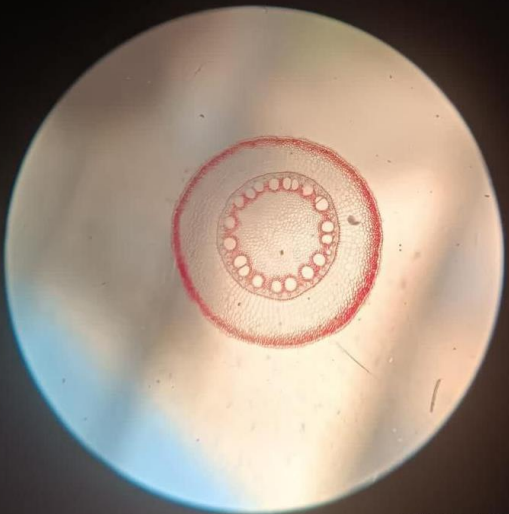
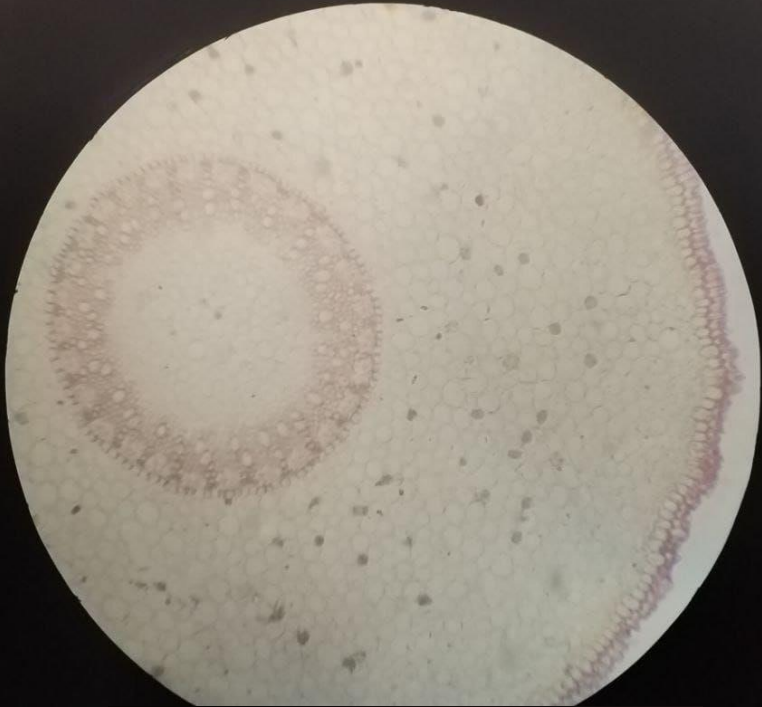
Osteosclerides



Macro sclereids (rod shape)



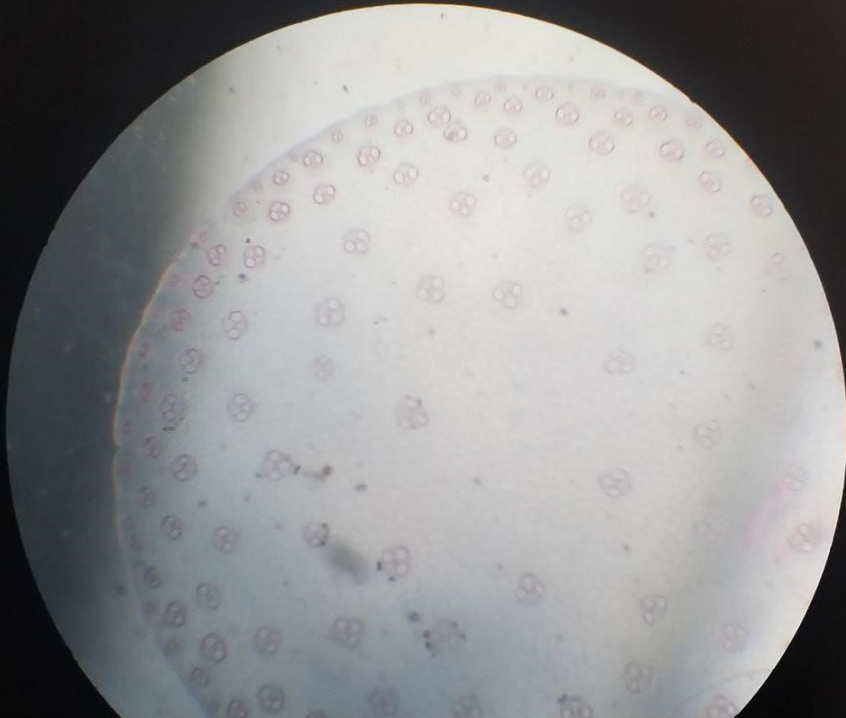
T. S in monocot root



T. S in dicot root



T. S in monocot stem



T. S in dicot stem





T. S in dicot leaf



04/12/2022 11:52

REDMI NOTE 11 PRO
DR/M.SILEM

T. S in monocot leaf

