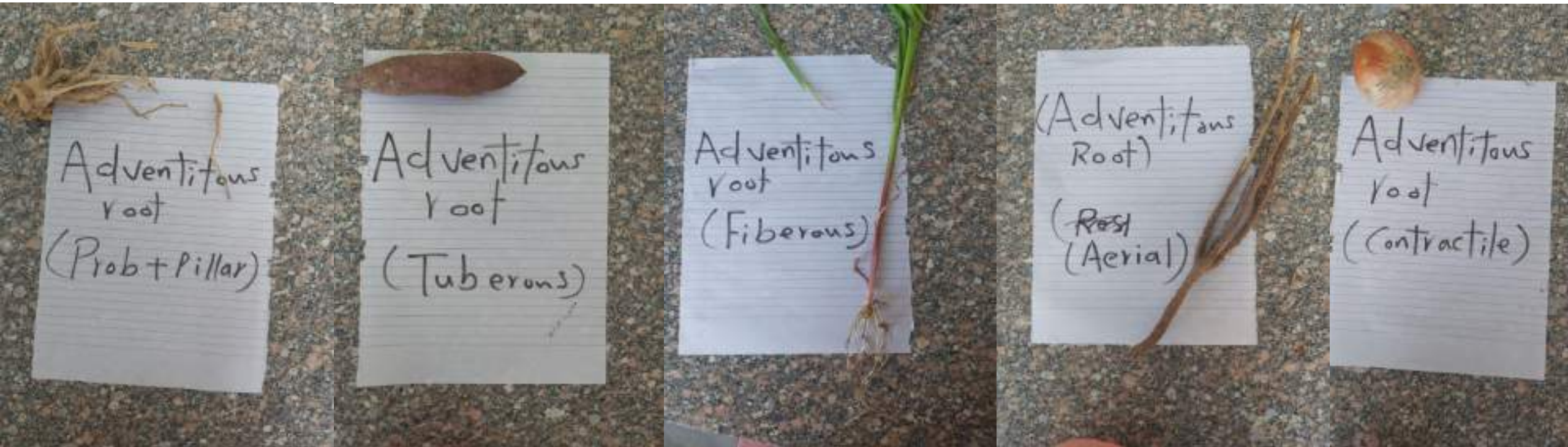


PRACTICAL BOTANY

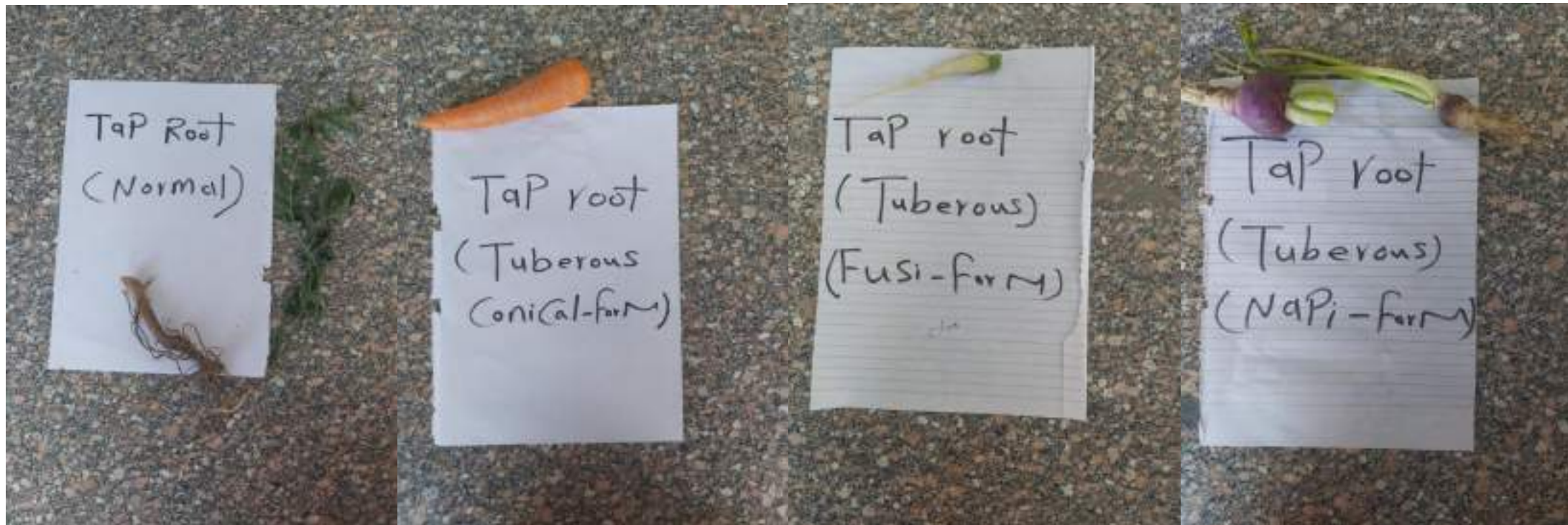
1ST YEAR



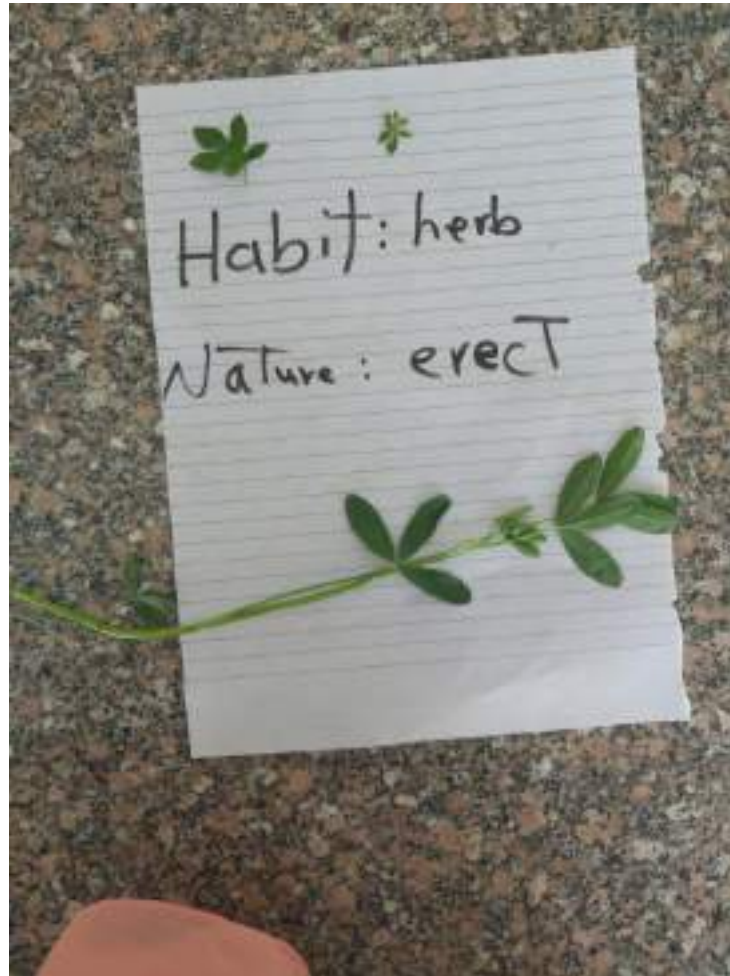
1- ROOTS (ADVETITOUS)

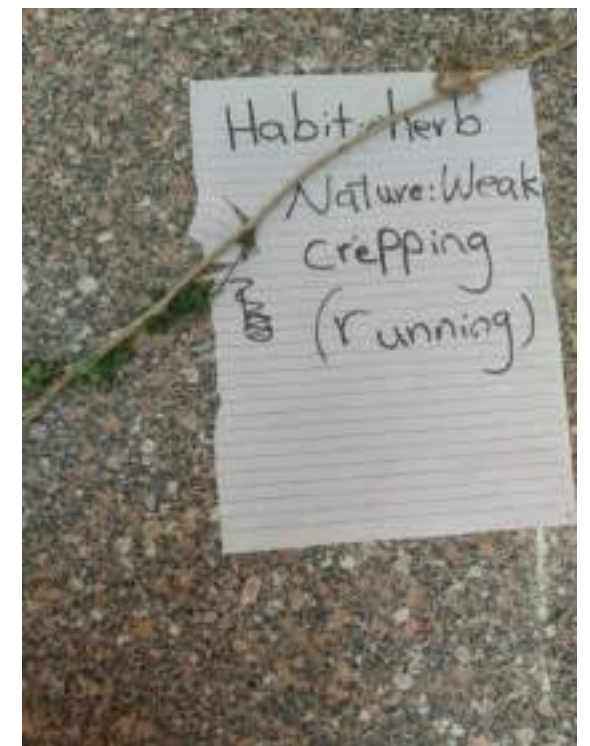
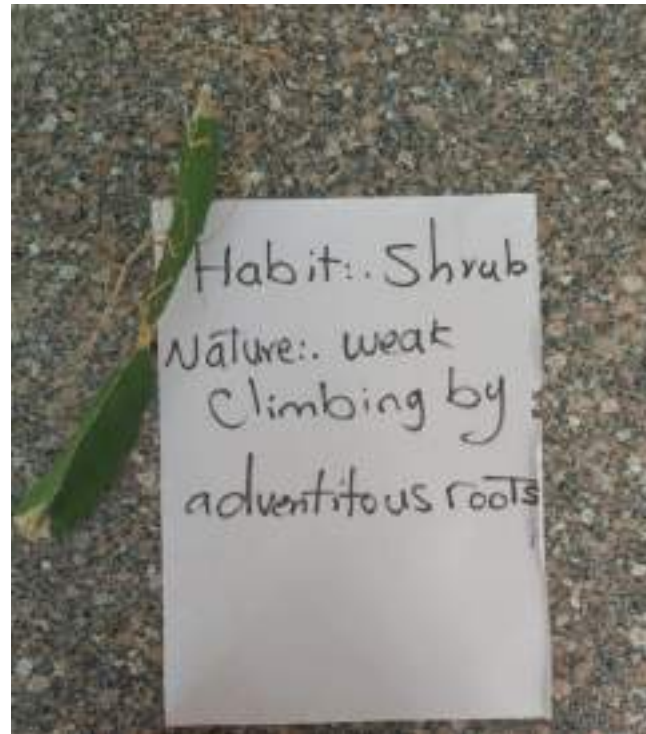


2-TAP ROOT

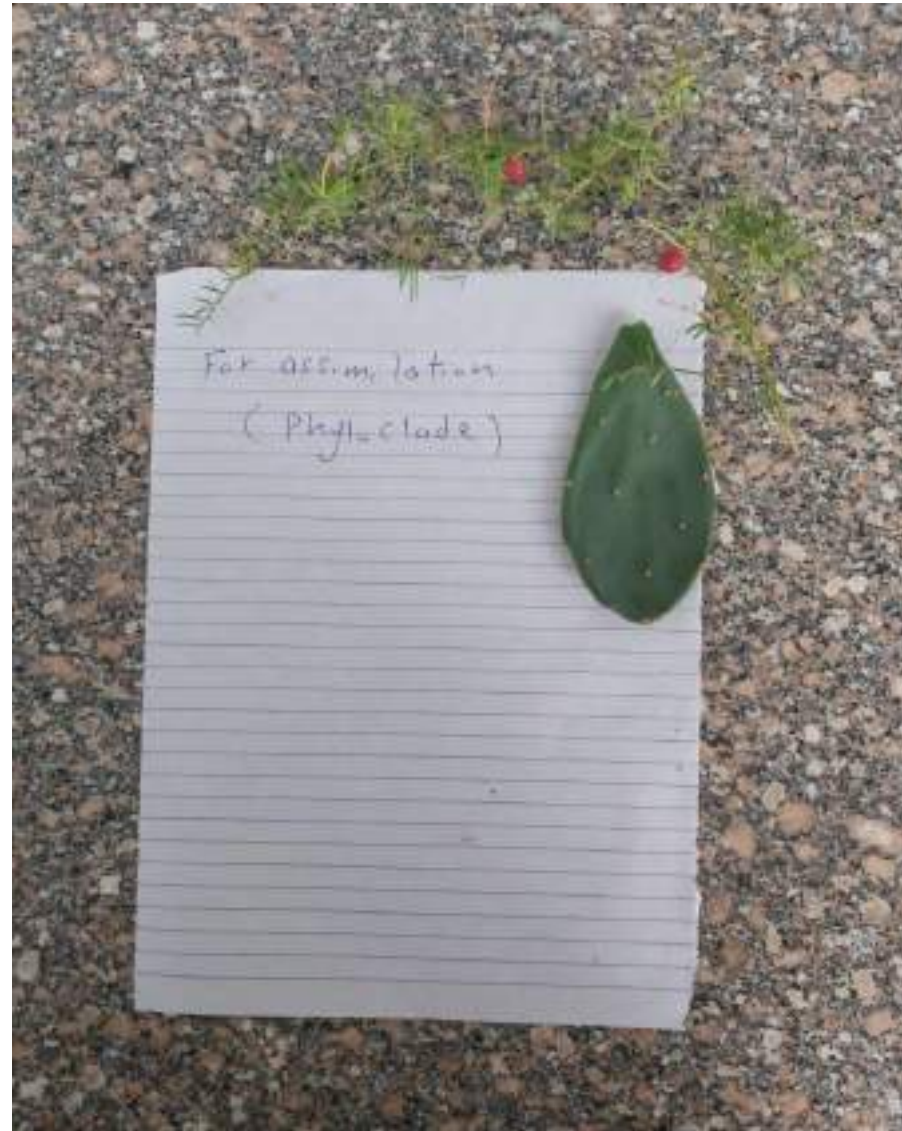


STEMS





METAMORPHOSED STEMS



For assimilation
(cladodes)



for - Perennation

- storage

- vegetative reproduction

(Rhizome)

- branching
semi radial



For - Perennation

- Storage

- Vegetative reproduction

(bulb)





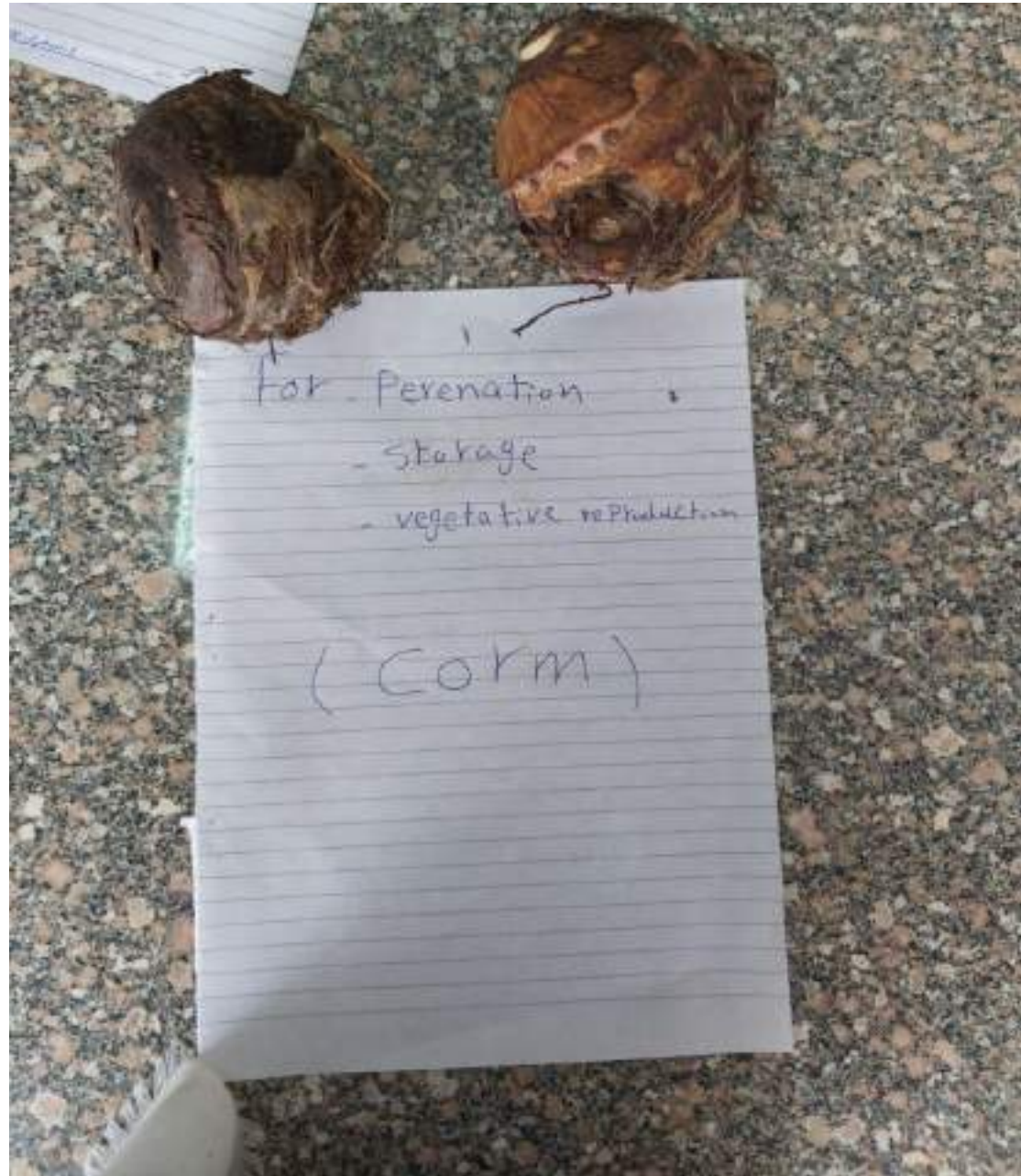
For - Perennation

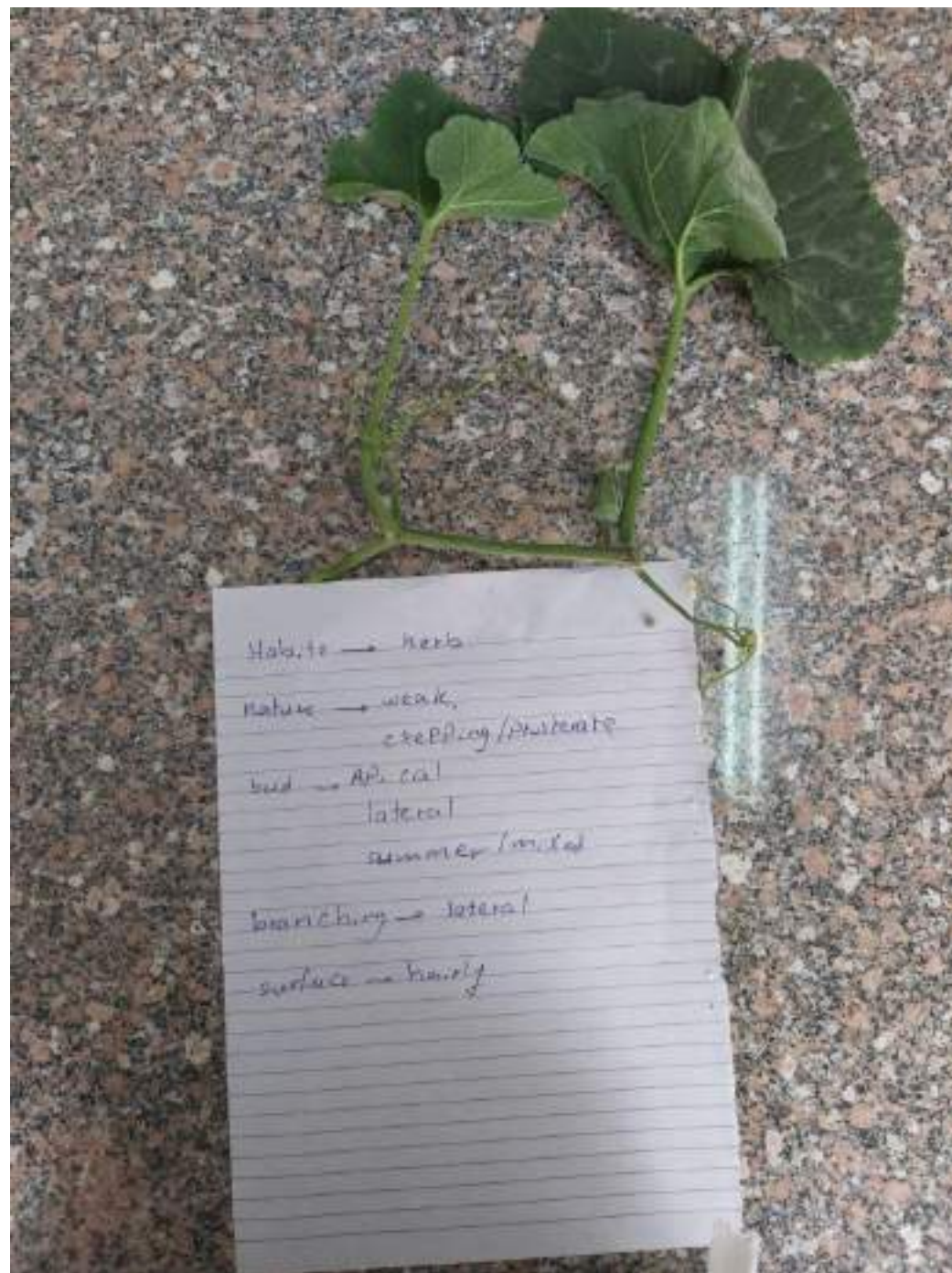
- Storage

- Vegetative reproduction

(tuber)







Habit → Herb

Nature → weak,
creeping/prostrate

Bud → Apical
lateral
summer/inter

branching → lateral

surface → hairy



For climbing

habit weak

climbing by tendrils

branching - semi-radial

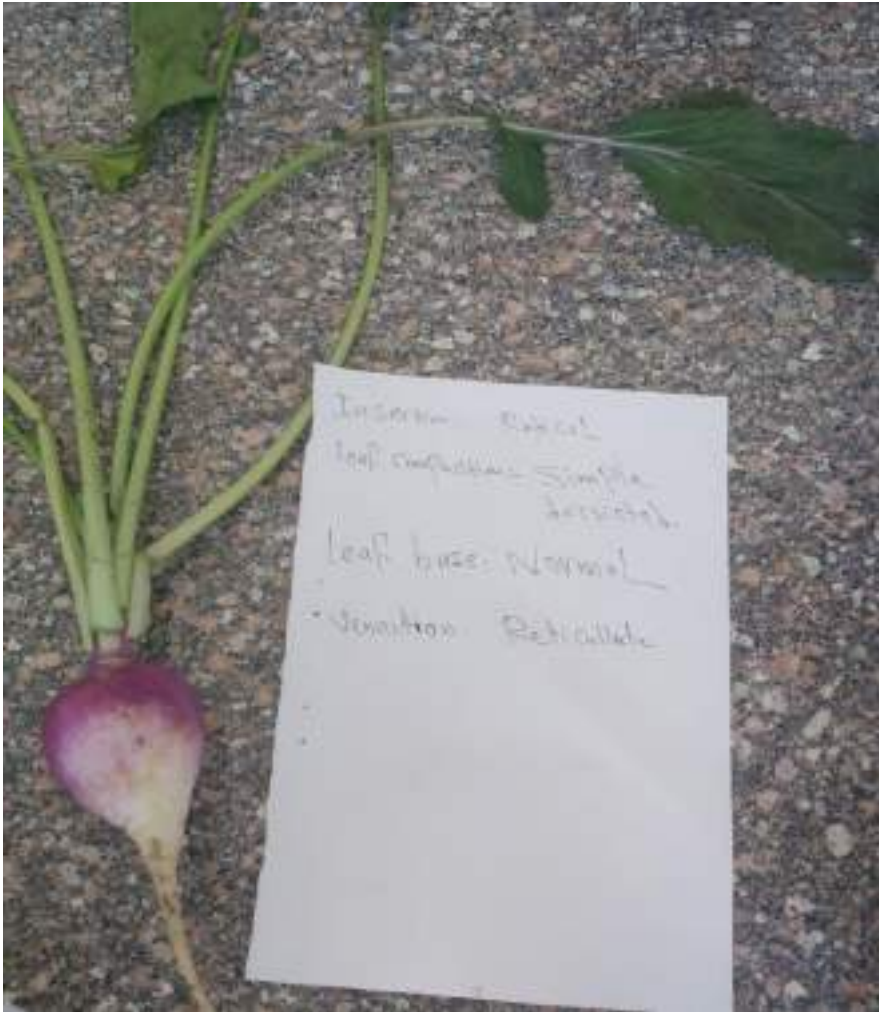


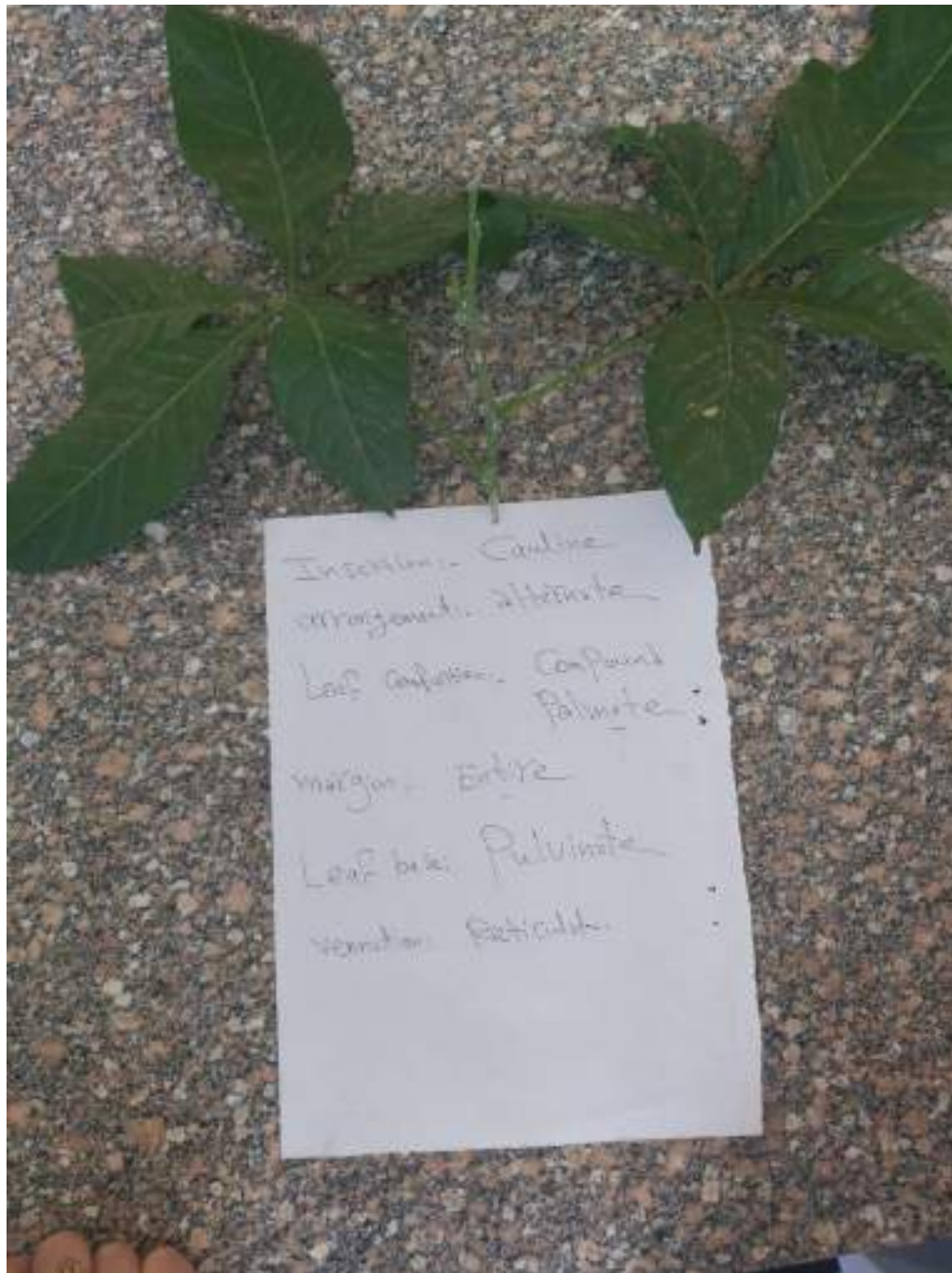
for - reduction of transpiration
surface
- Protection

Nature - weak
climbing by spiny



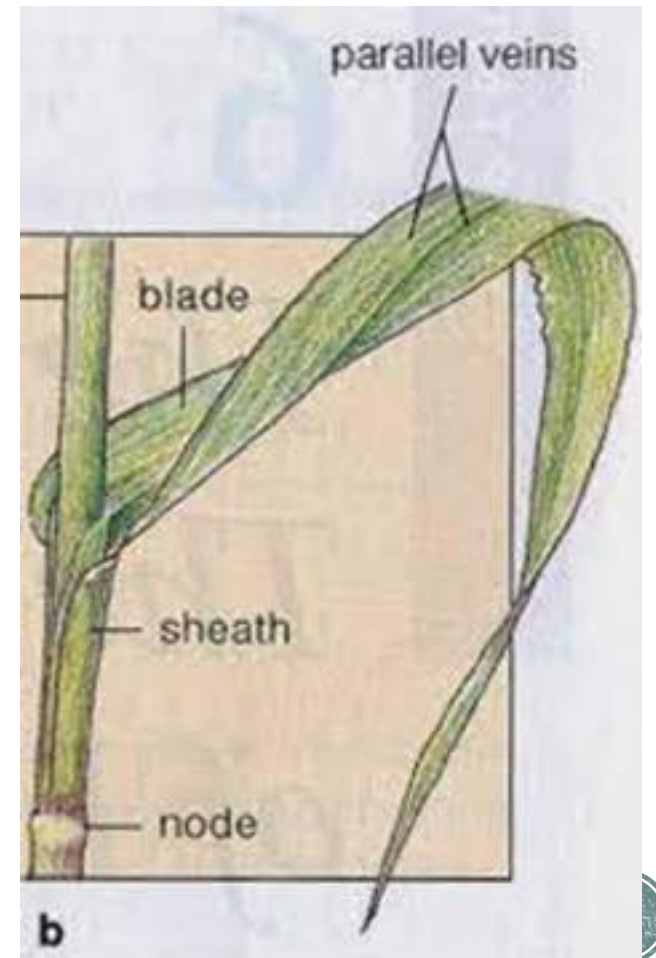
Leaves





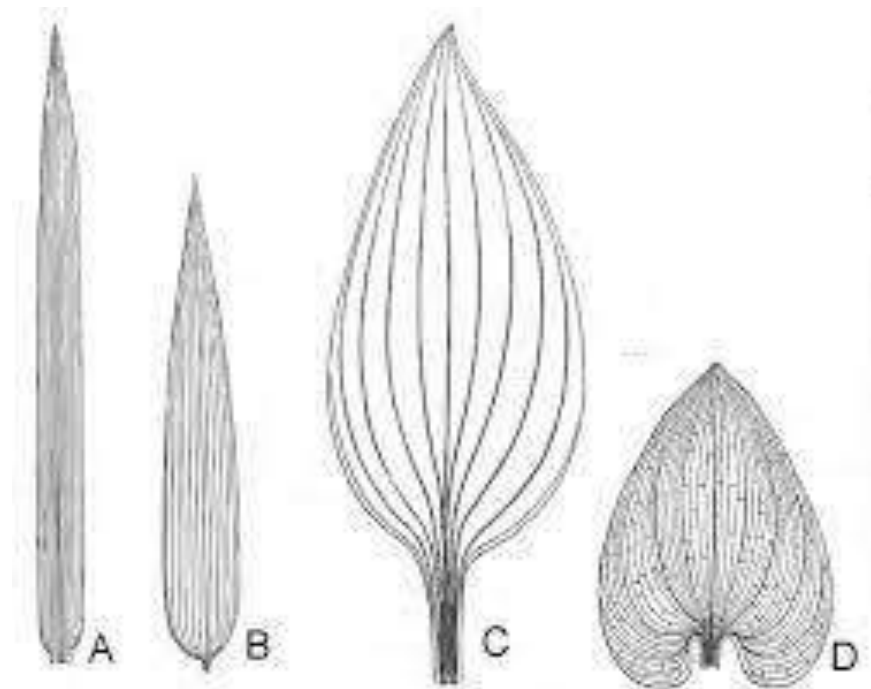
Isodon *Carlini*
 arrangement: Alternate
 leaf base: sheathing
 Leaf configuration: Simple
 Normal
 leaf margin: Entire
 Apex: Acute
 venation:  Parallel
 Pinnate

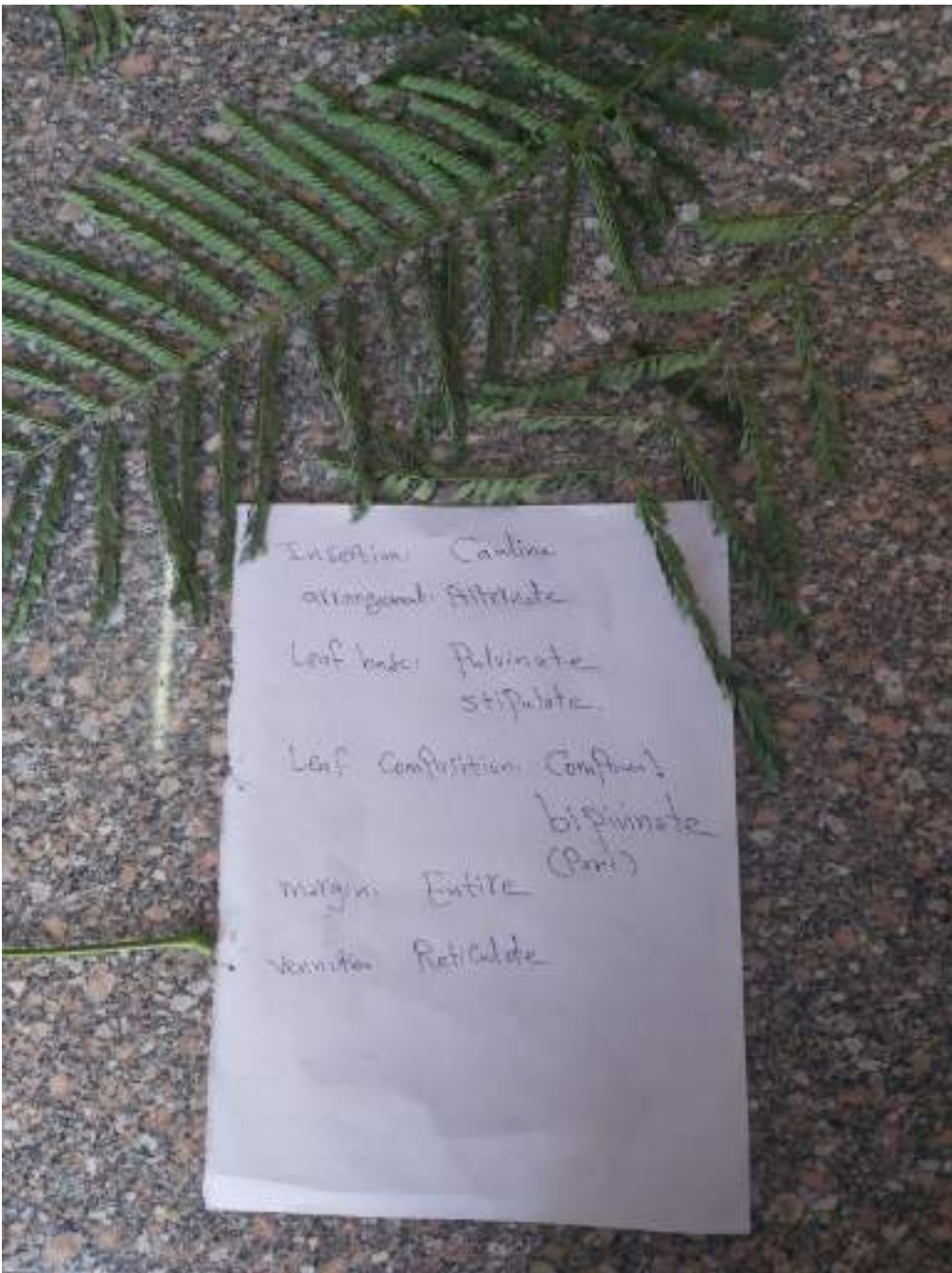
Sheathed leaf base



Insertion: Conline
arrangement: Alternate
base: Sheathing
leaf: Confession: Simple
margin: Entire
Apex: Acuminate
venation: Parallel
basal

Parallel basal



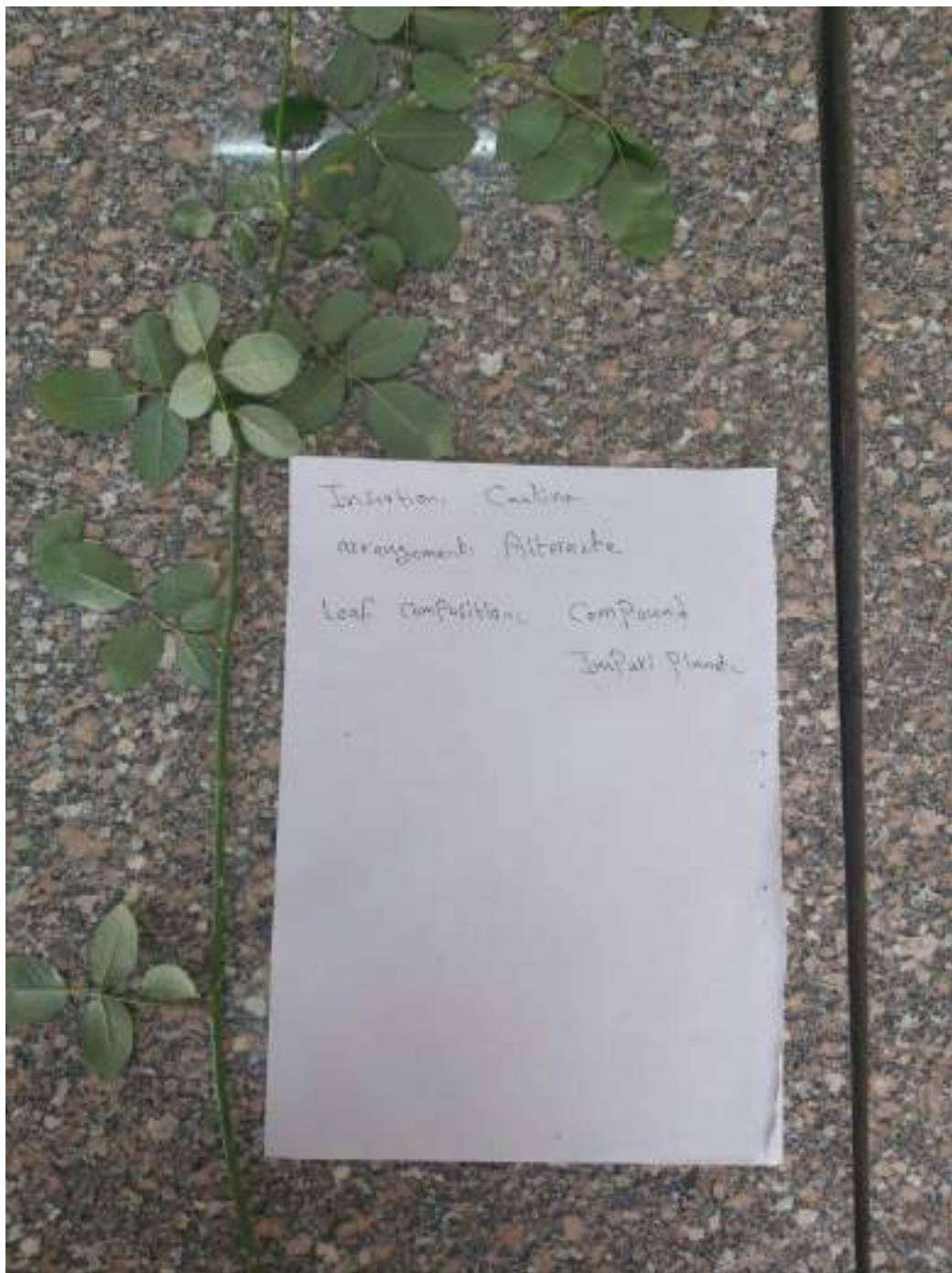


Bipinnate(pari)



Pulvinate leaf base





imparipinnate



Insertion, ~~at~~ Caudine

Arrangement: Opposite

~~Alternate~~
decussate

Composition: Simple

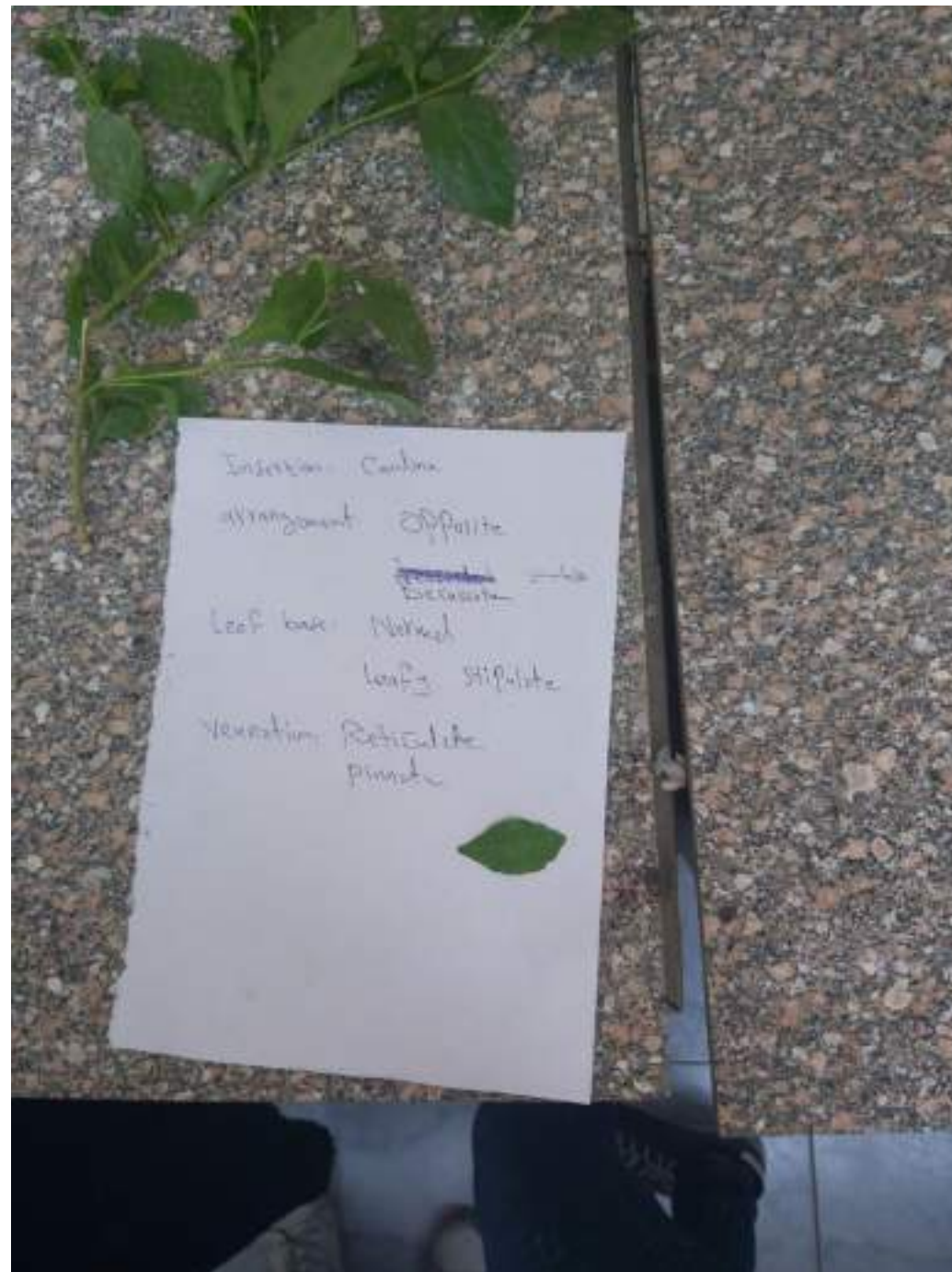
margin: Entire

Shape: obovate

Venation: Reticulate

pinnate





Pinnately compound leaf



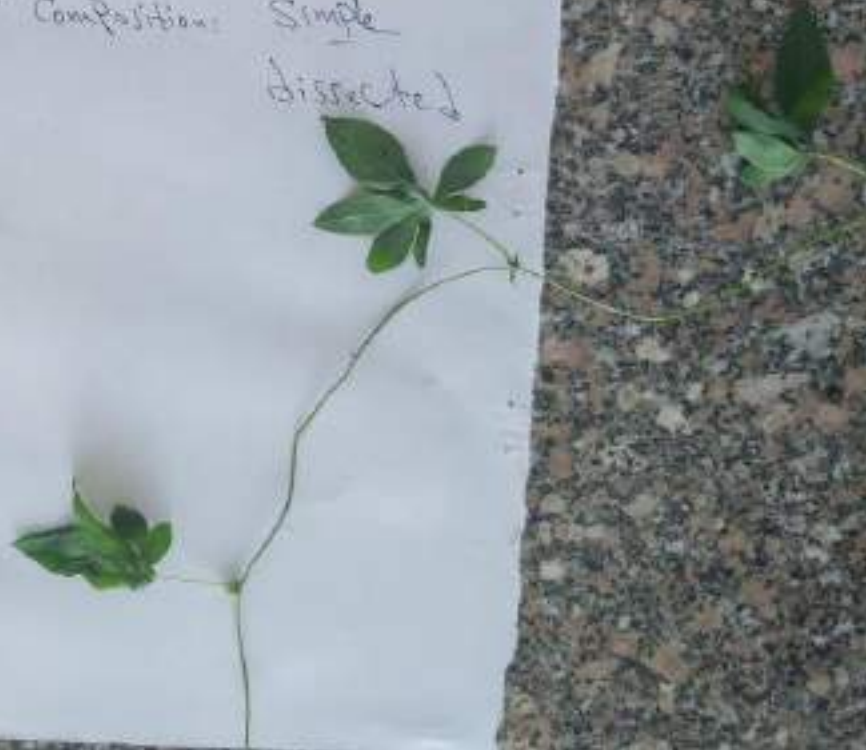
Metamorphosis (kind of leaf).

Arrangement: whorled (flower)



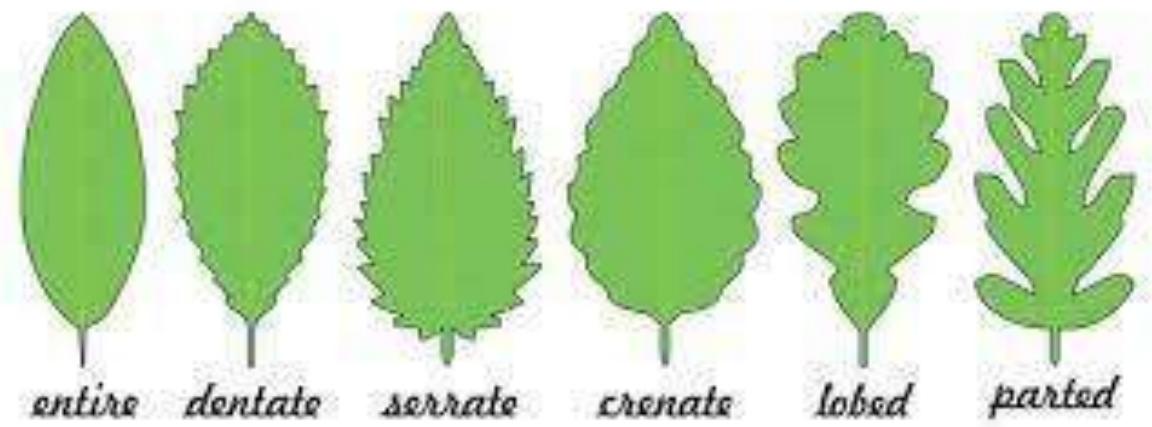
Insertion: Cauline
arrangement: alternate

Leaf Composition: Simple
dissected



© tree-guide.com

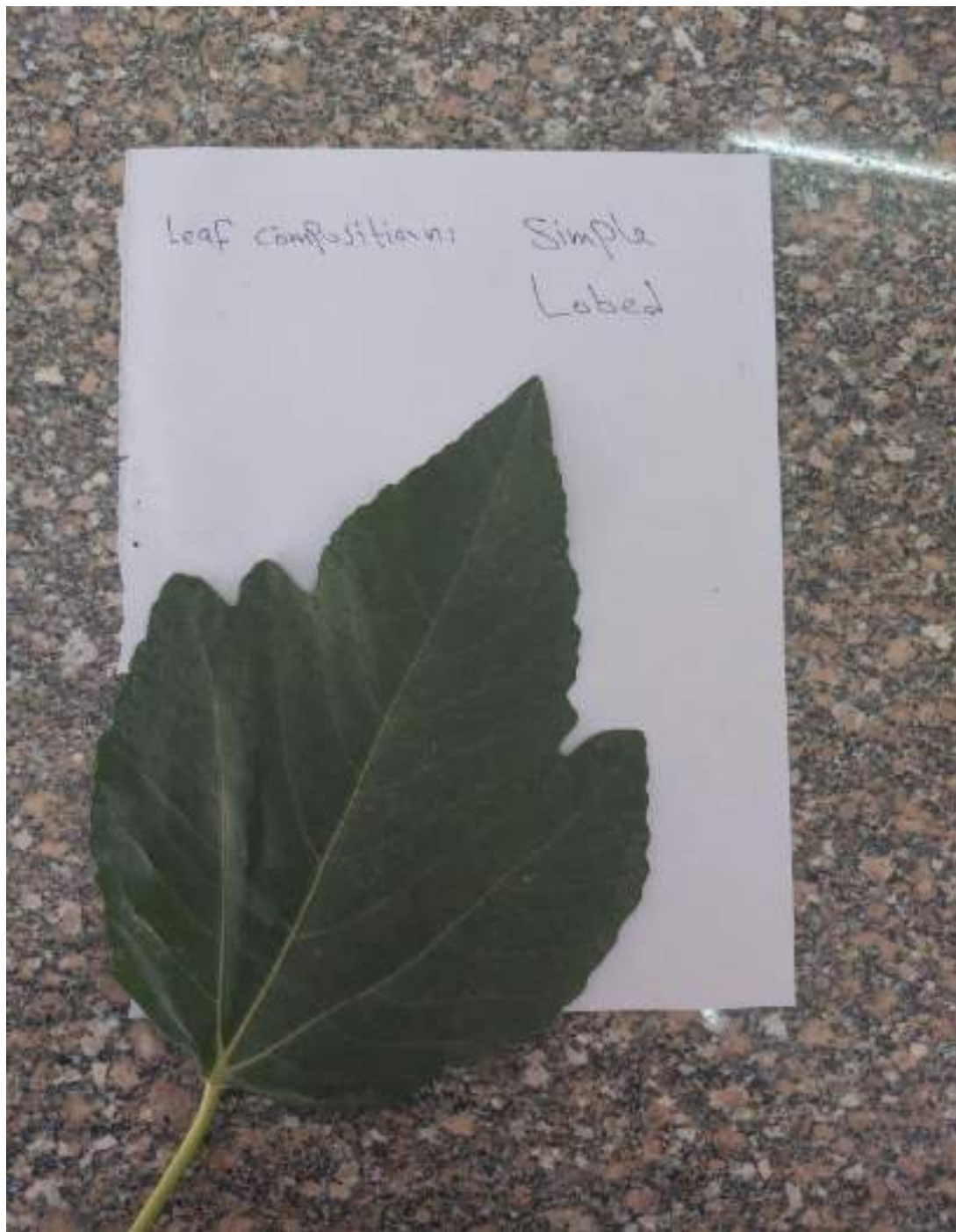




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© iStockphoto.com



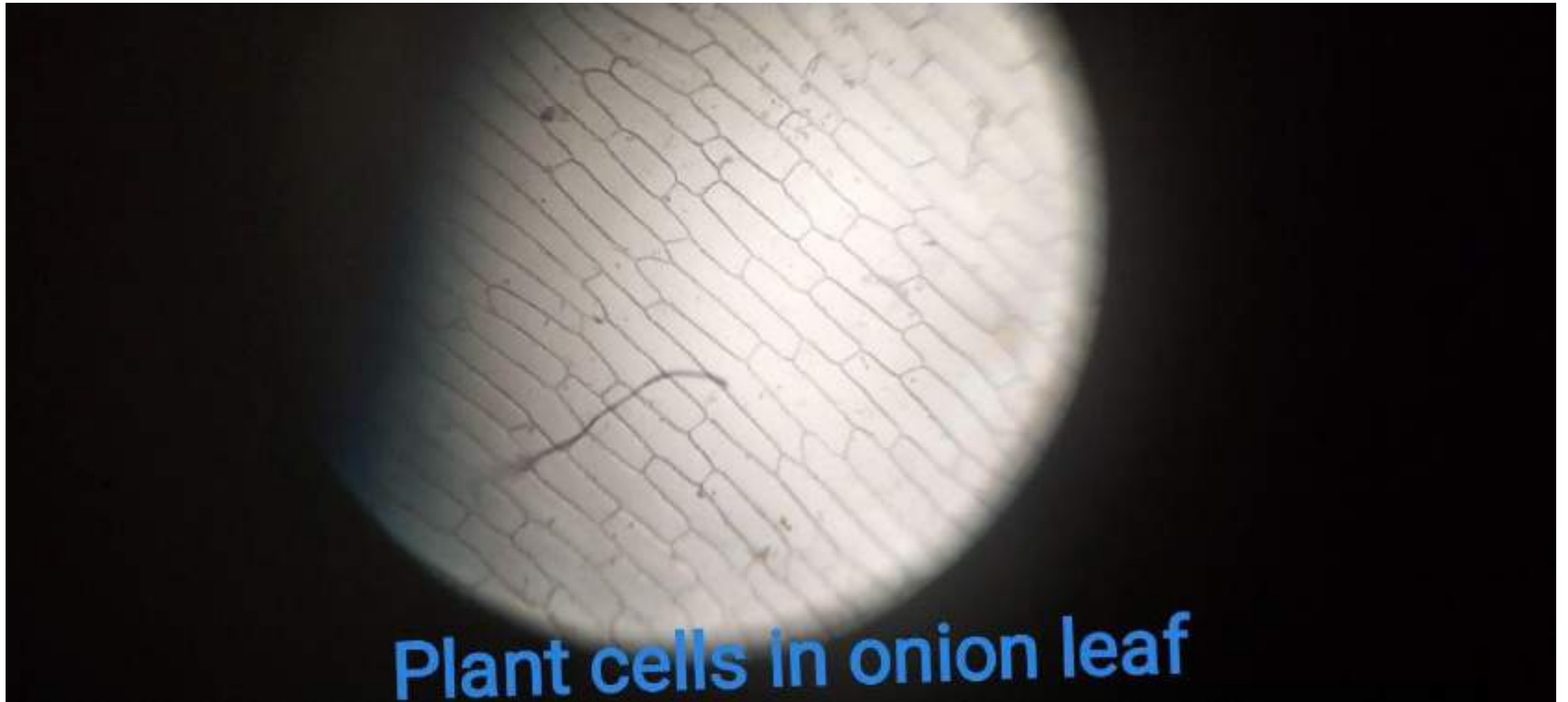
Insertions: Cauline

Leaf Composition: Compound

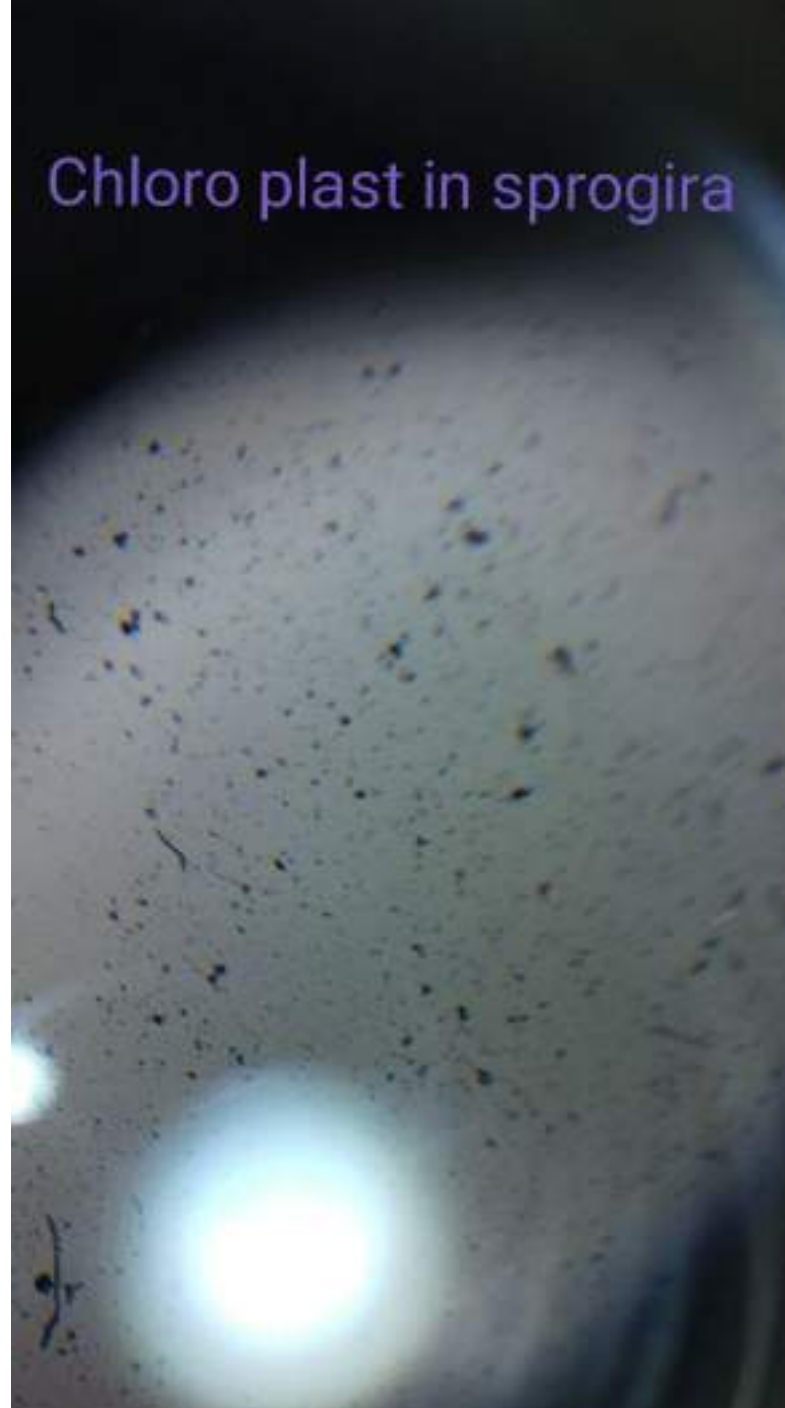
Pari pinnate

Venation: Reticulate
Pinnate





Chloro plast in sprogira



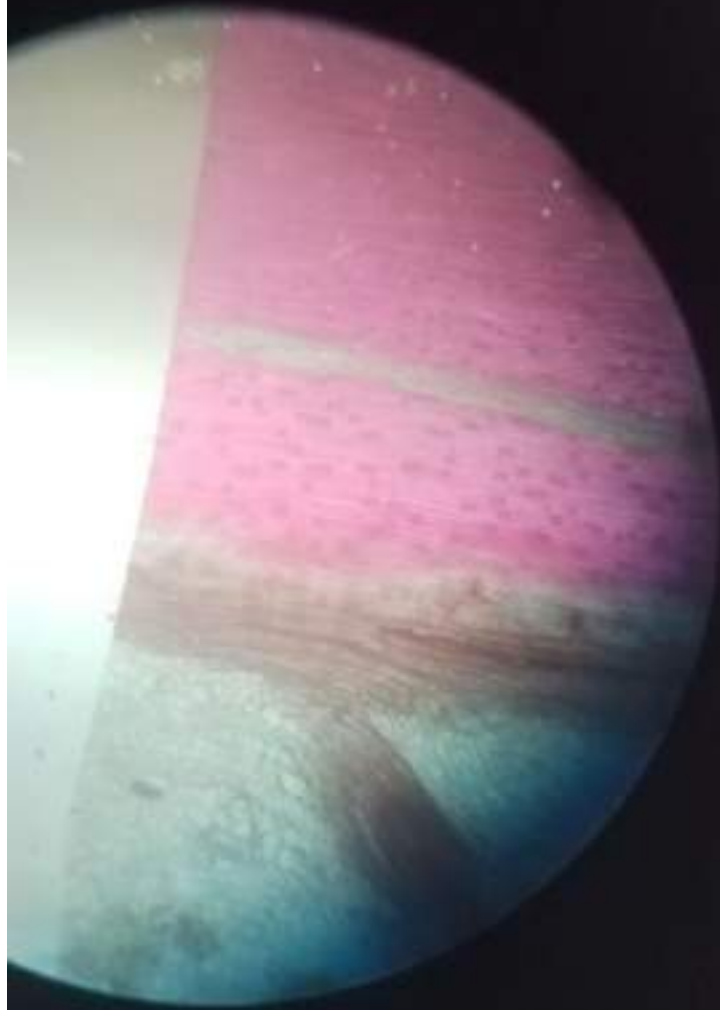
spiral shape chloroplast



T. S xylem, phelom



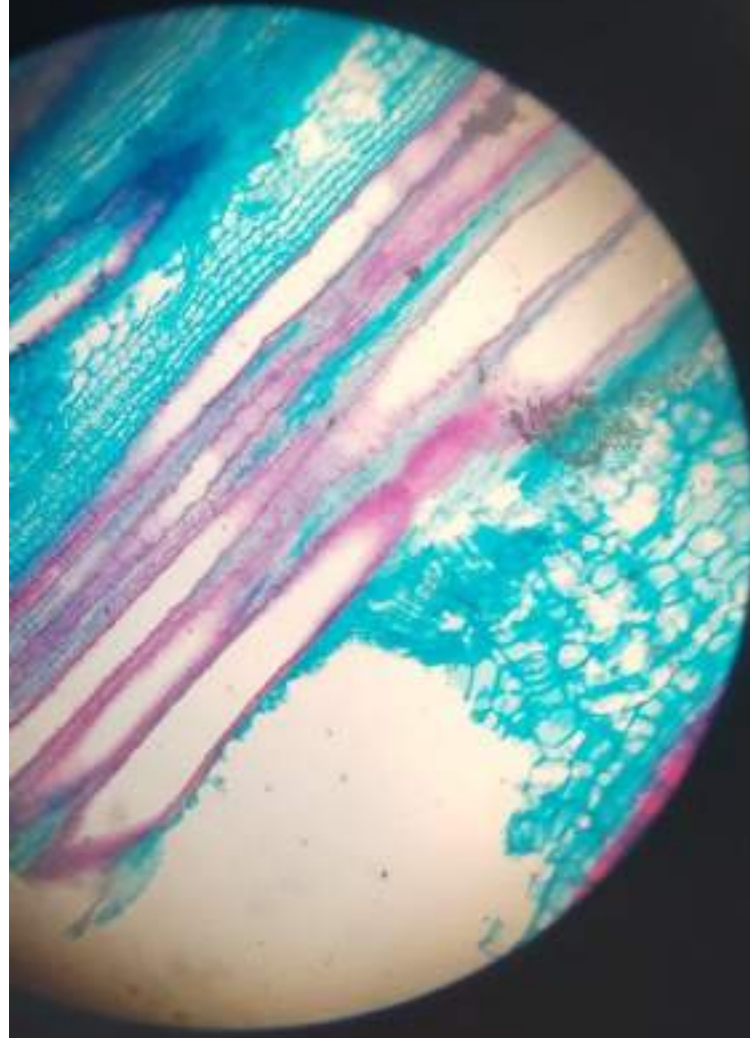
L. S in tracheides



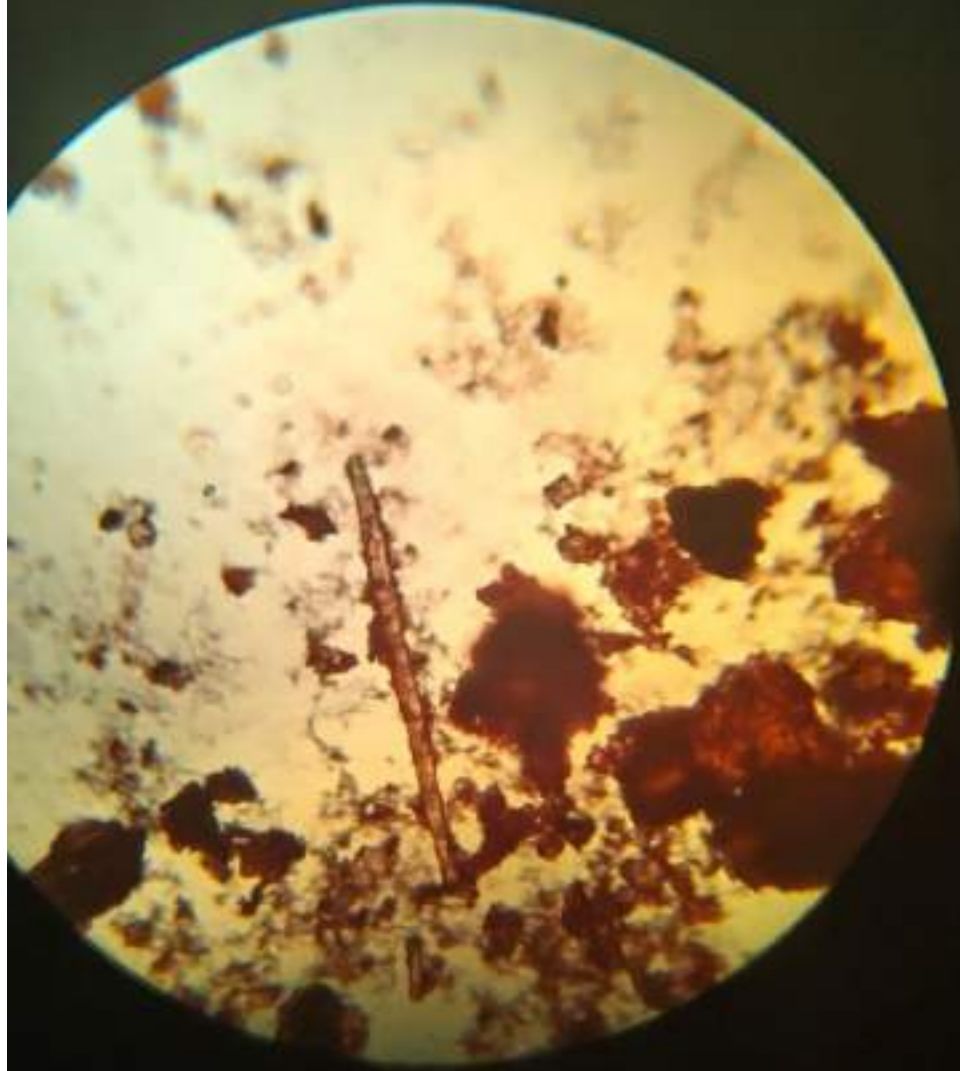
T. S tracheides in gymnosperm



L. S in vessels



L. S in fibers



Ca_carbonate



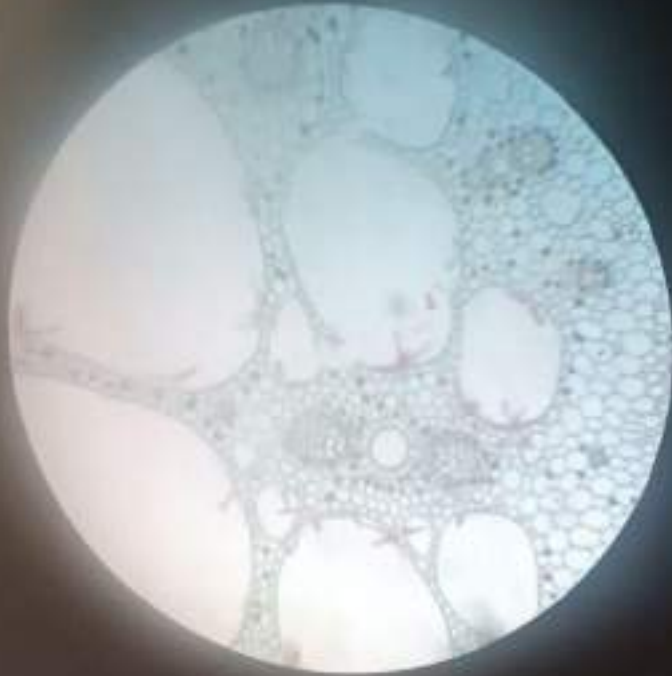
starch grain



L.s in shoot apex



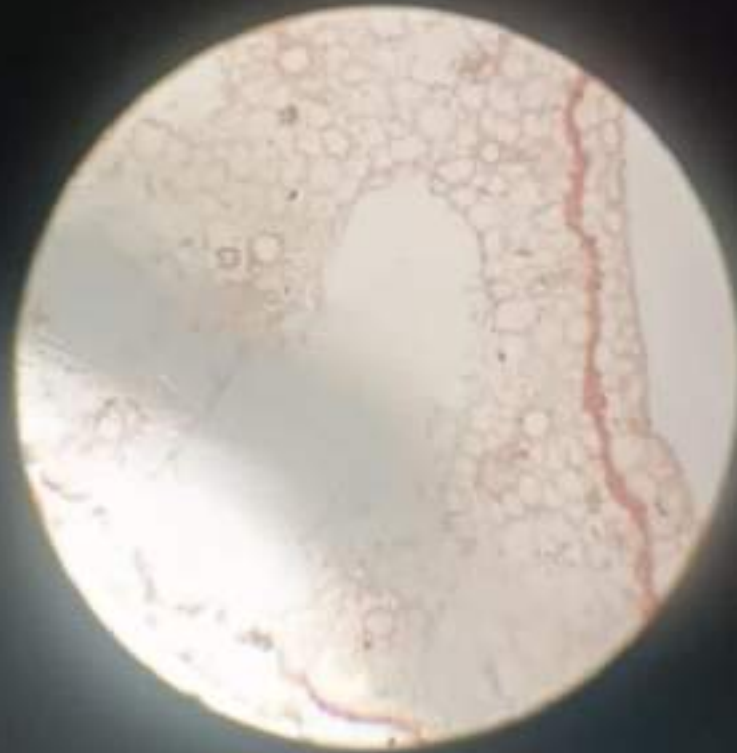




Astro Sclereids



Armed shape of parenchyma



Osteosclerides



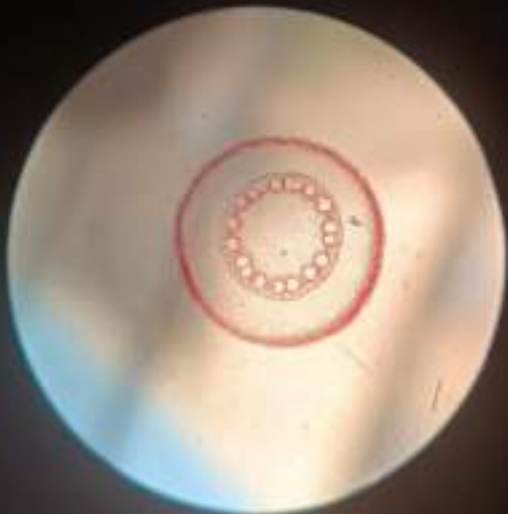
Macro sclereids (rod shape)



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

