

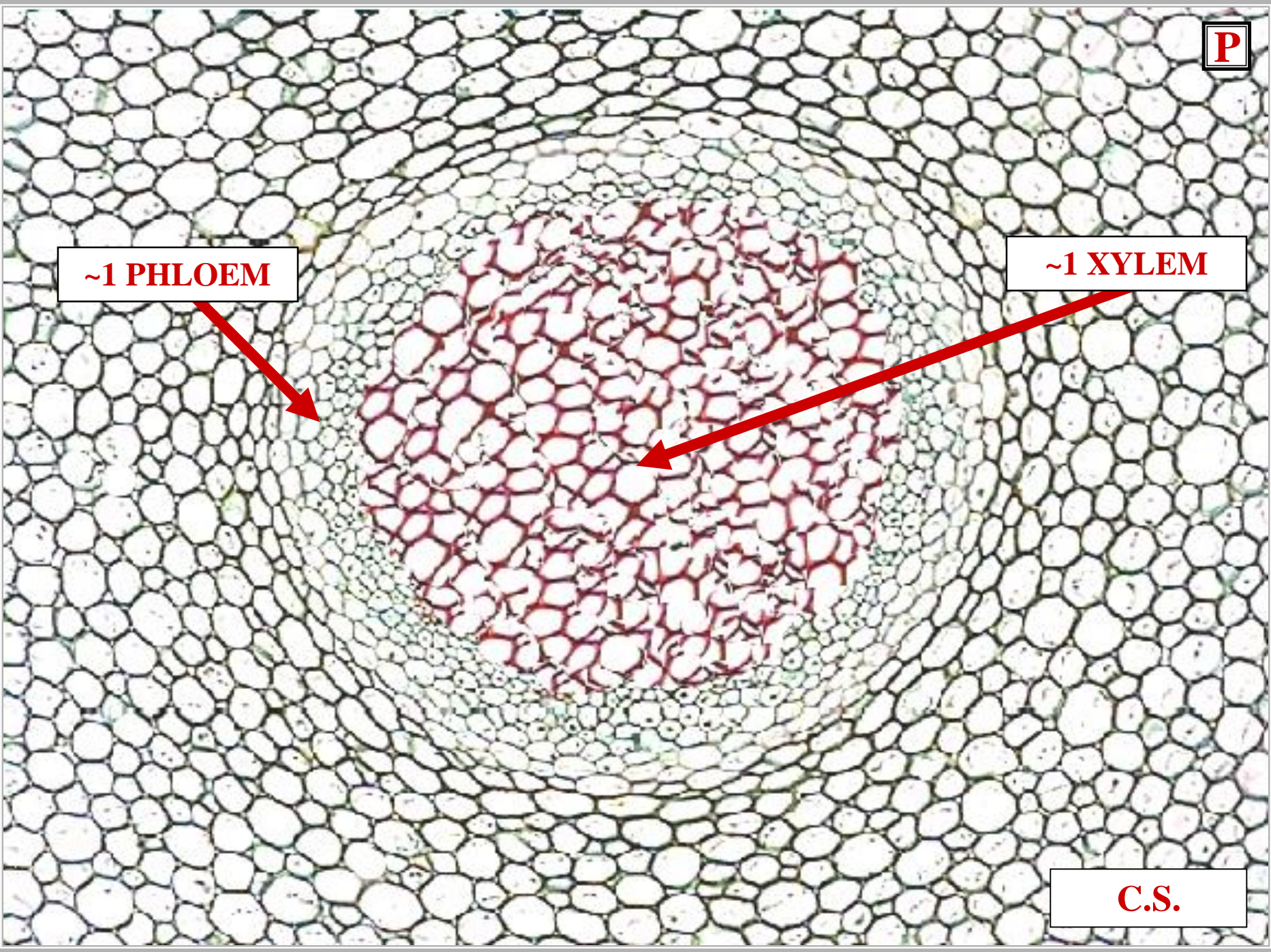
**TRACHEOPHYTE
STELE TYPES
SUMMARY**

P

~1 PHLOEM

~1 XYLEM

C.S.

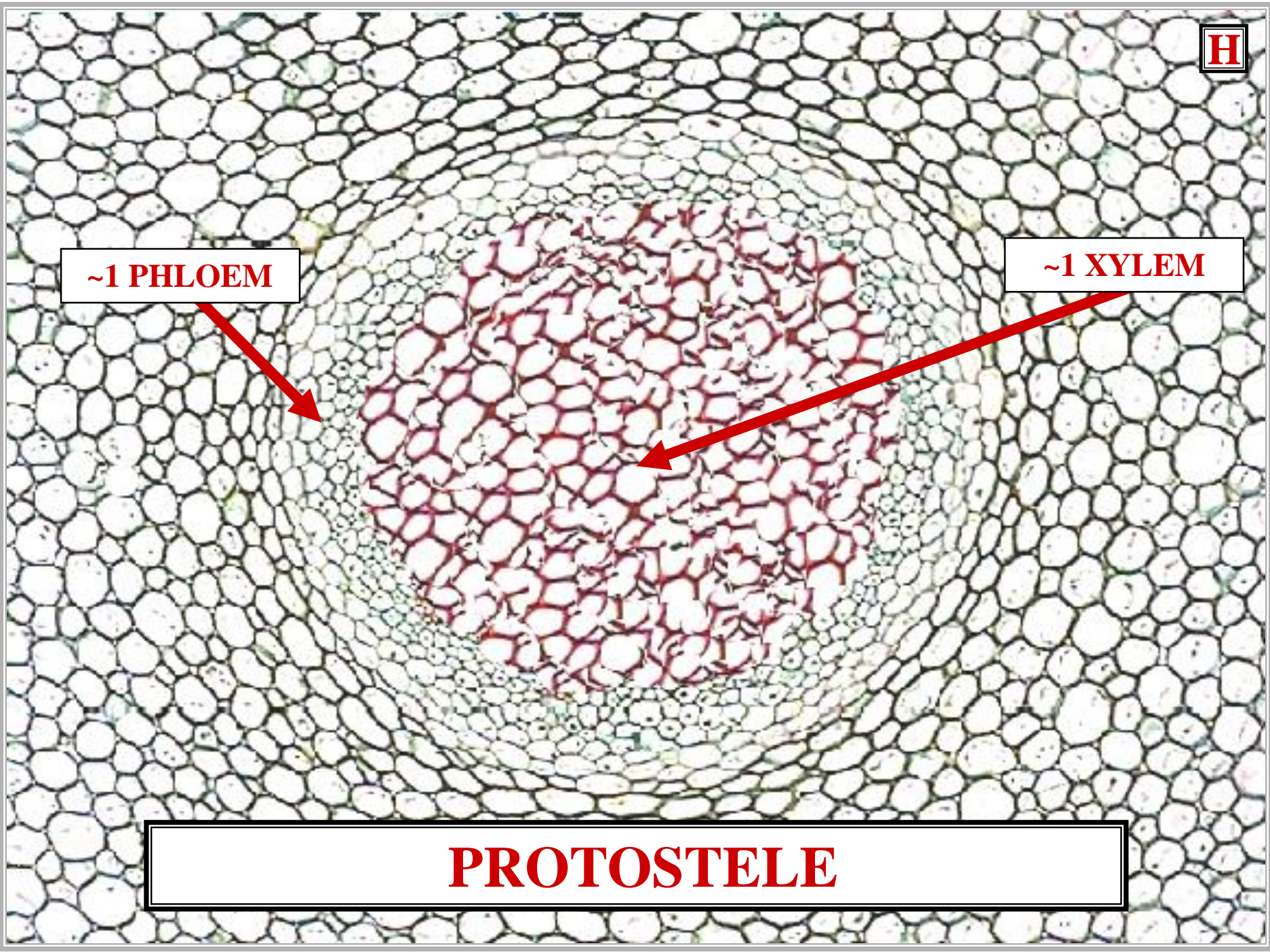


H

~1 PHLOEM

~1 XYLEM

PROTOSTELE

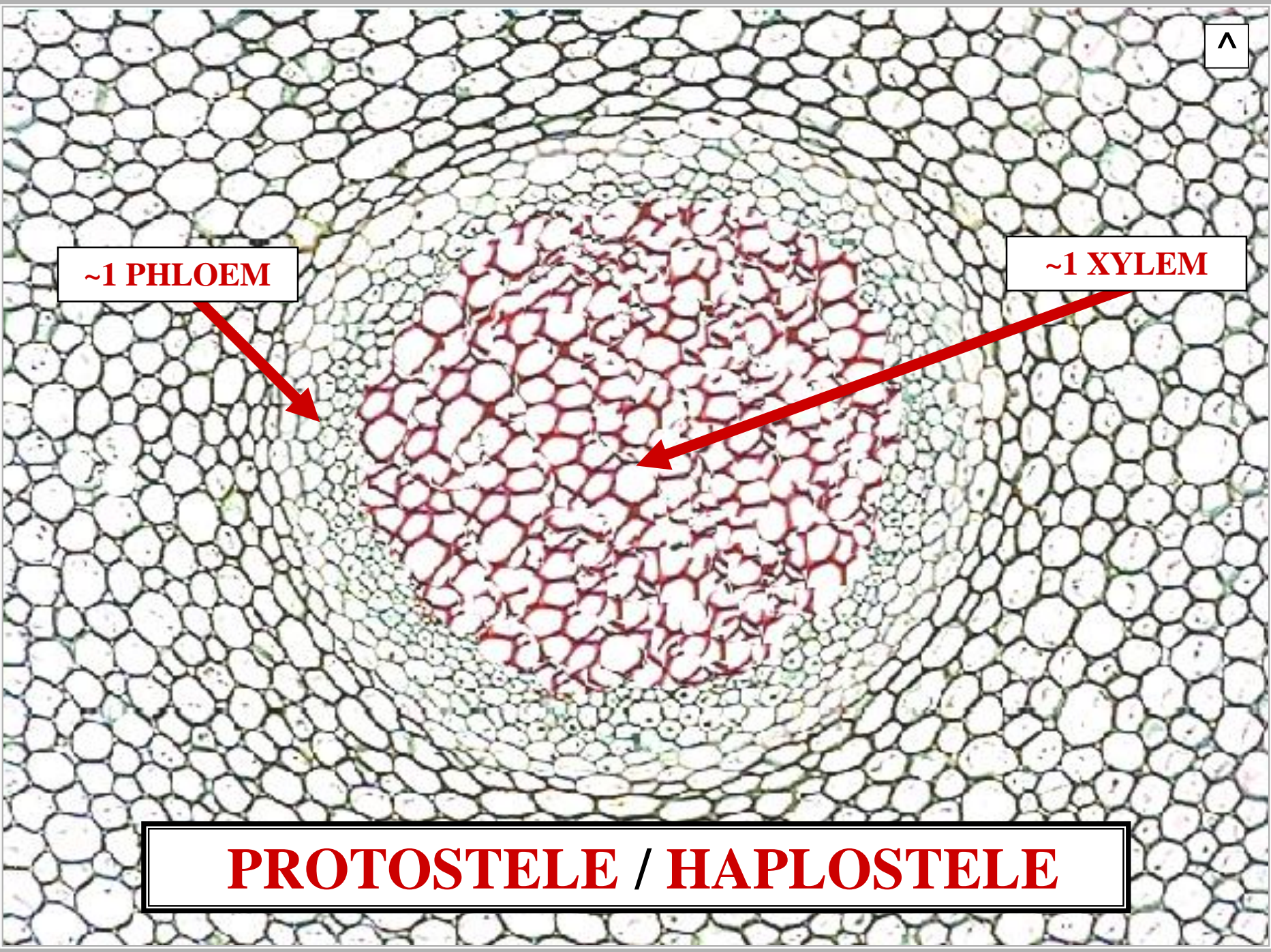




~1 PHLOEM

~1 XYLEM

PROTOSTELE / HAPLOSTELE

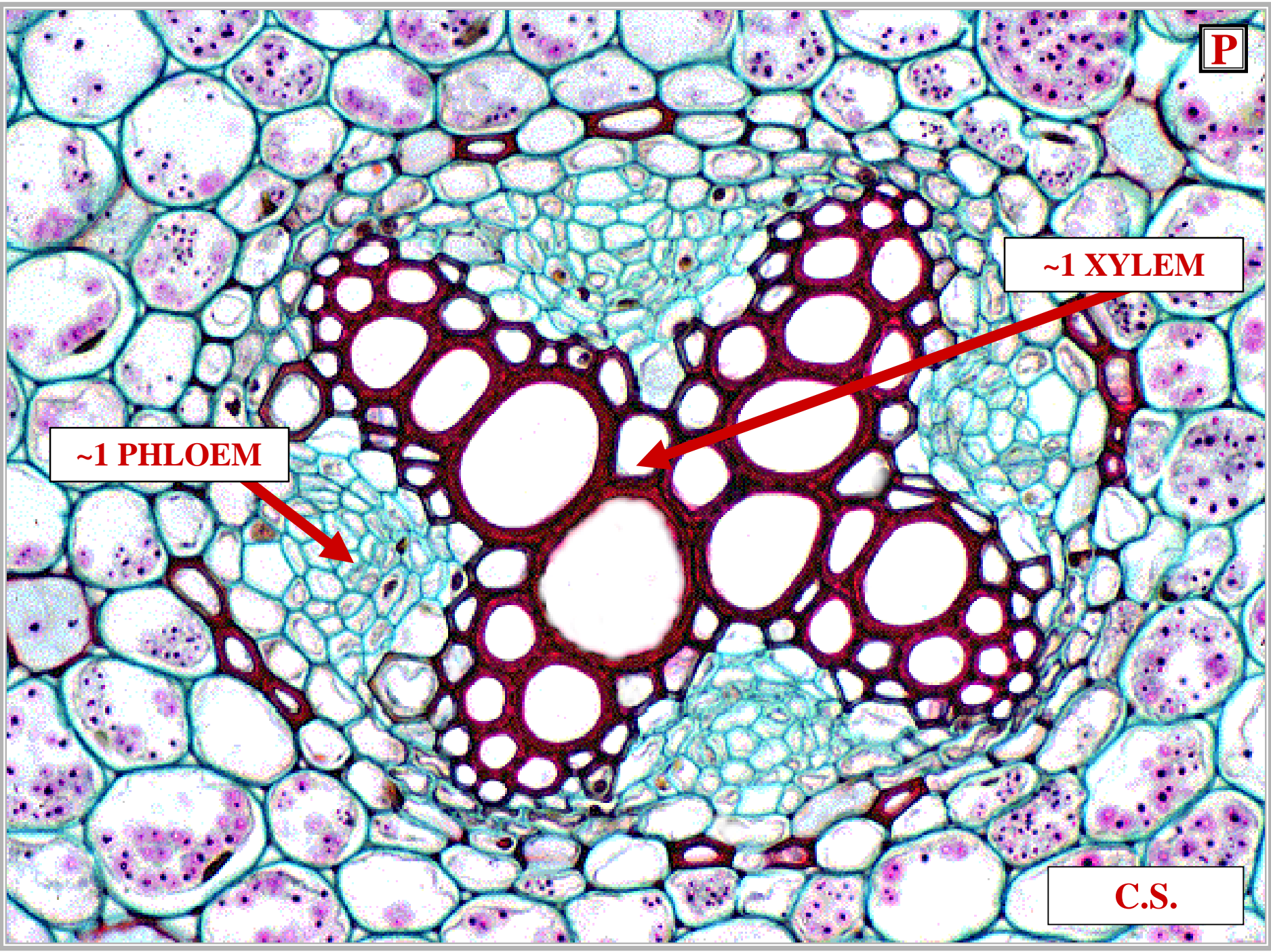


P

~1 XYLEM

~1 PHLOEM

C.S.

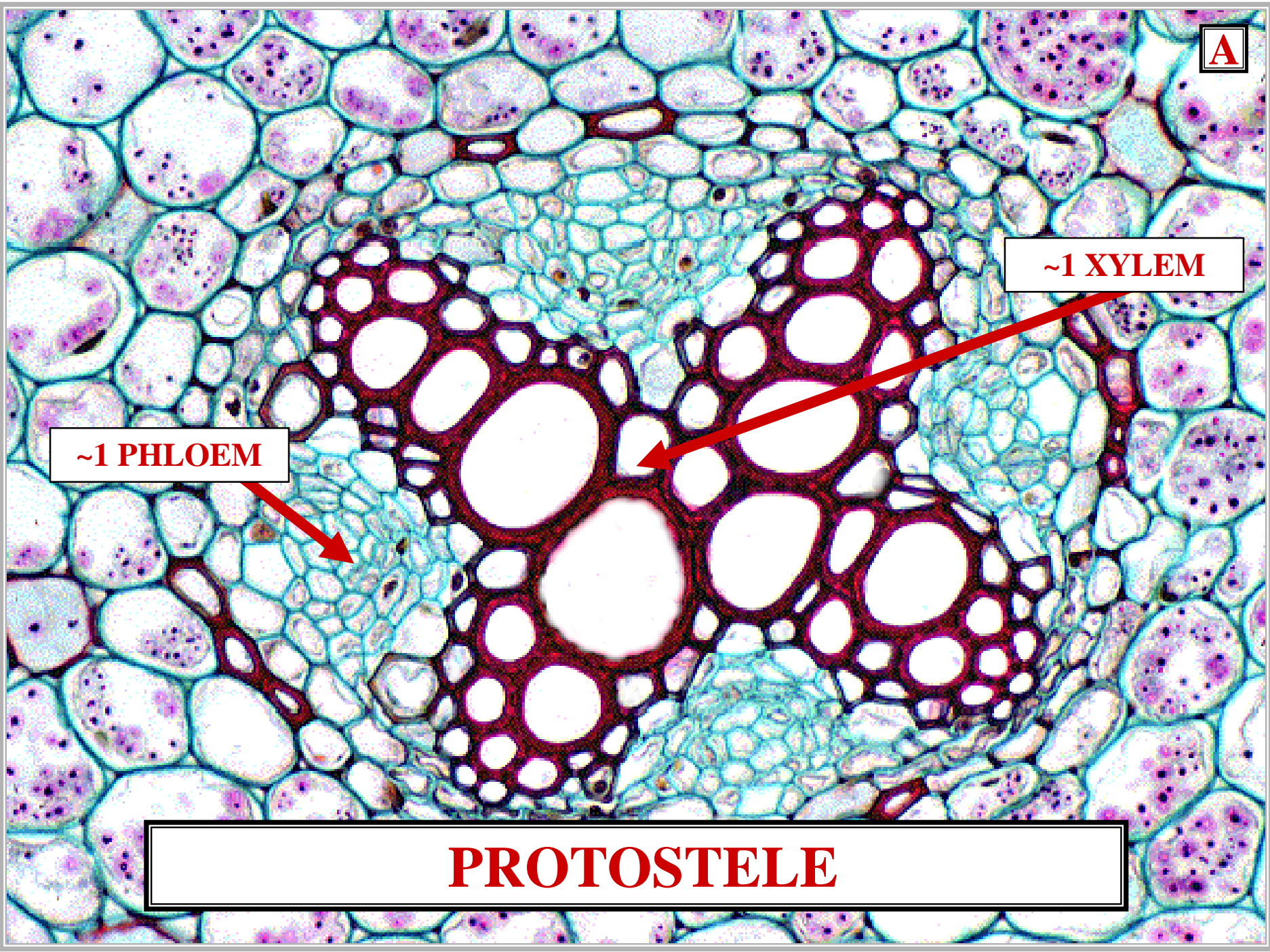


A

~1 XYLEM

~1 PHLOEM

PROTOSTELE

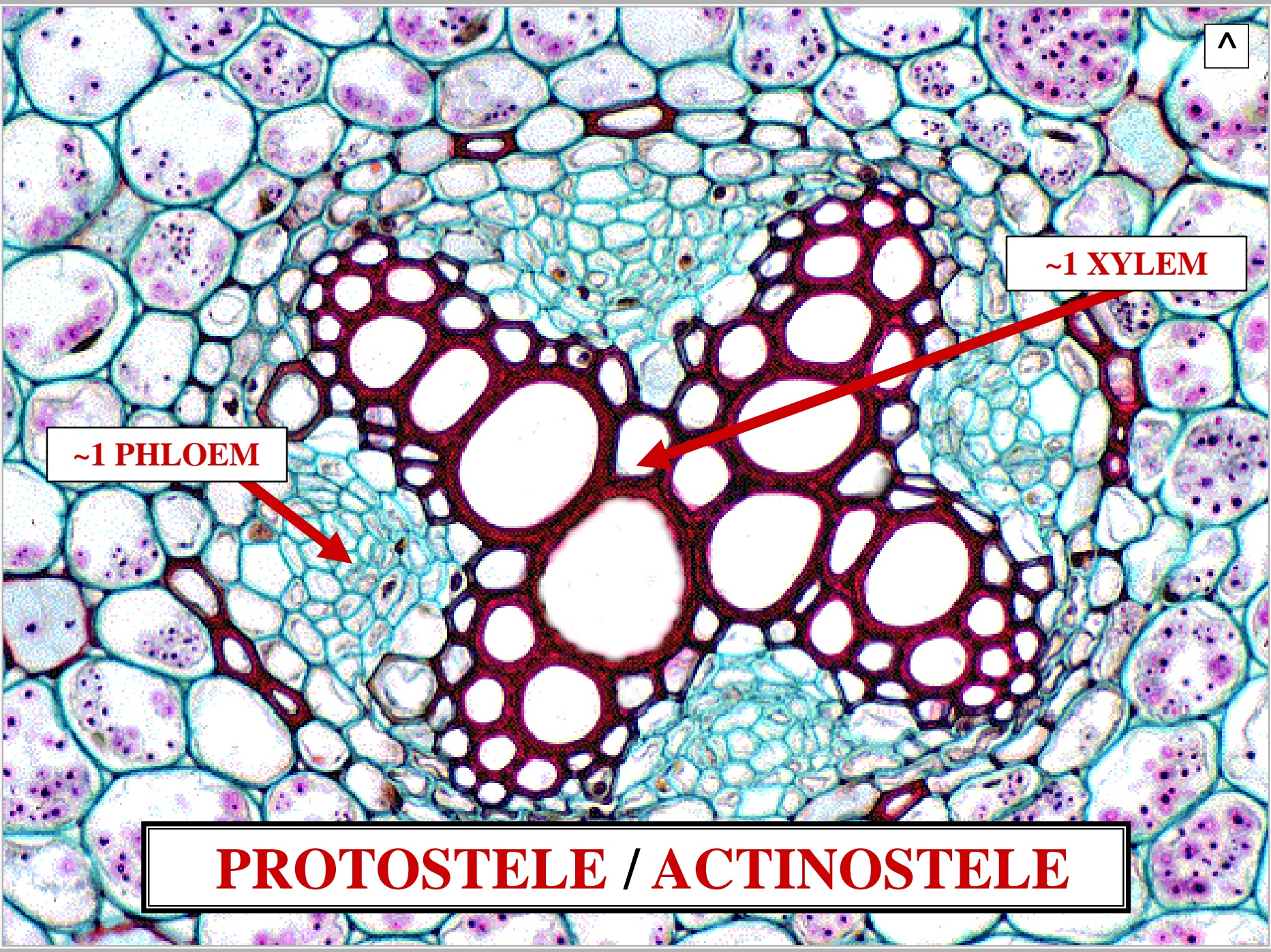




~1 XYLEM

~1 PHLOEM

PROTOSTELE / ACTINOSTELE

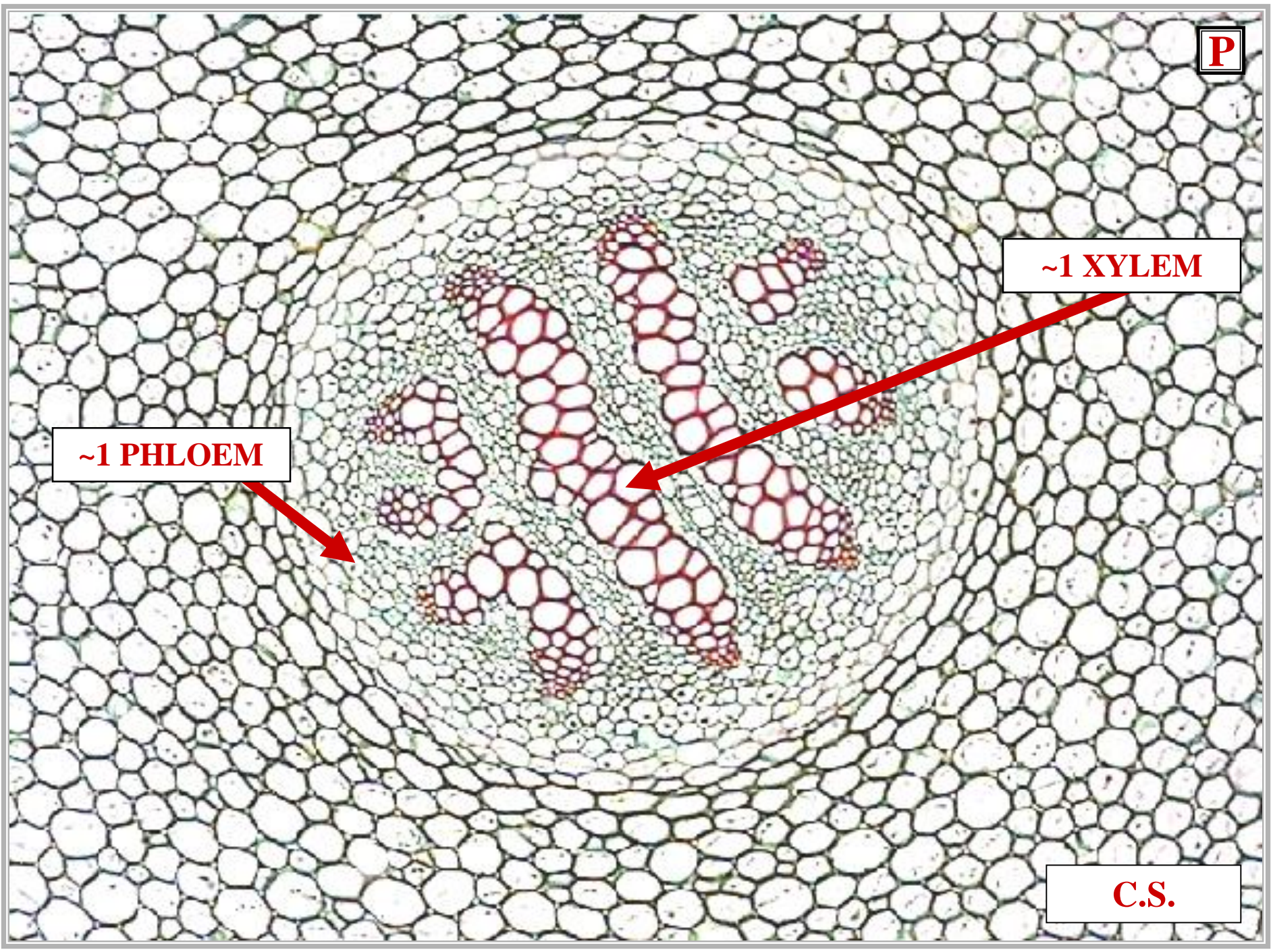


P

~1 XYLEM

~1 PHLOEM

C.S.

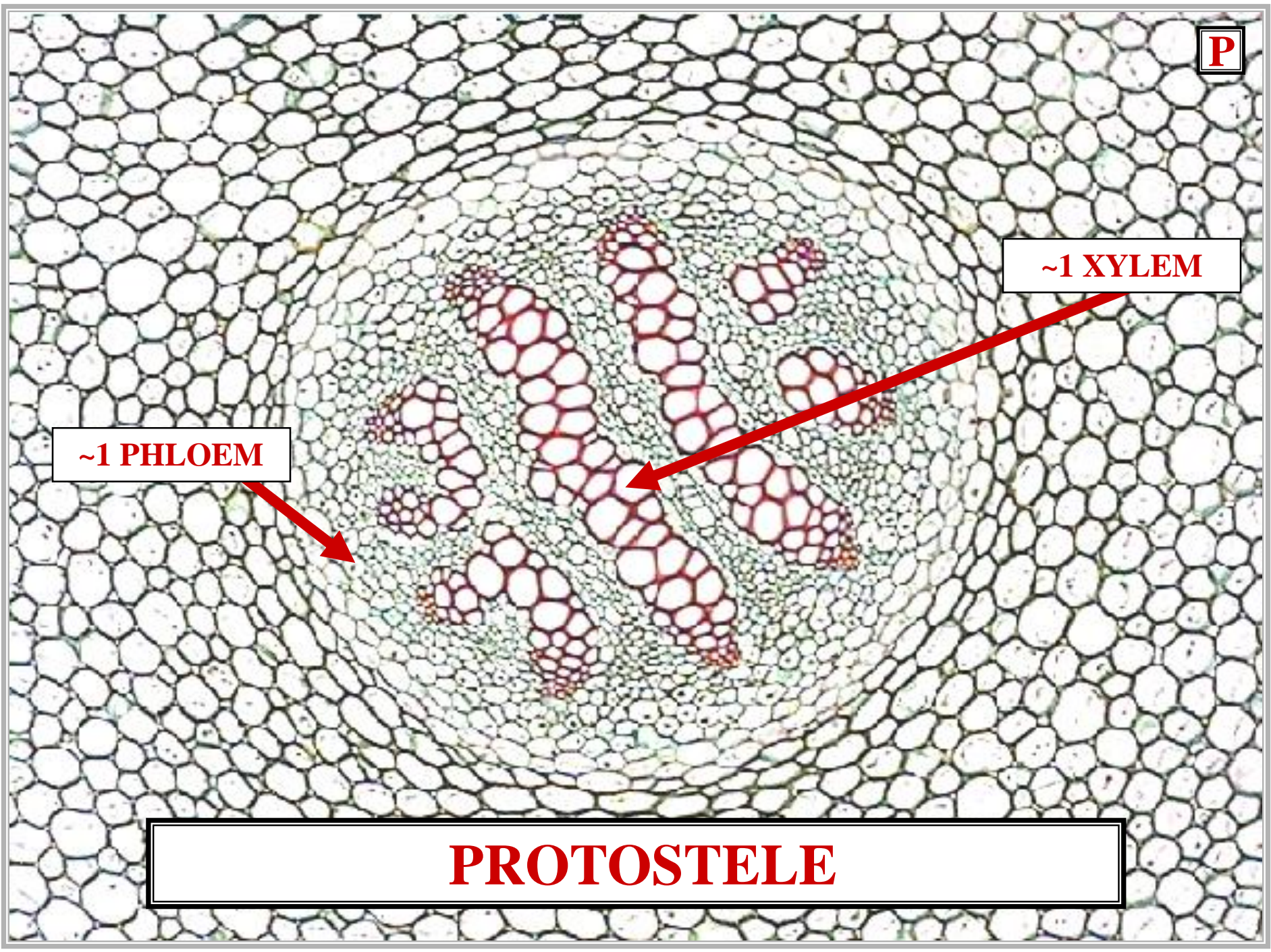


P

~1 XYLEM

~1 PHLOEM

PROTOSTELE

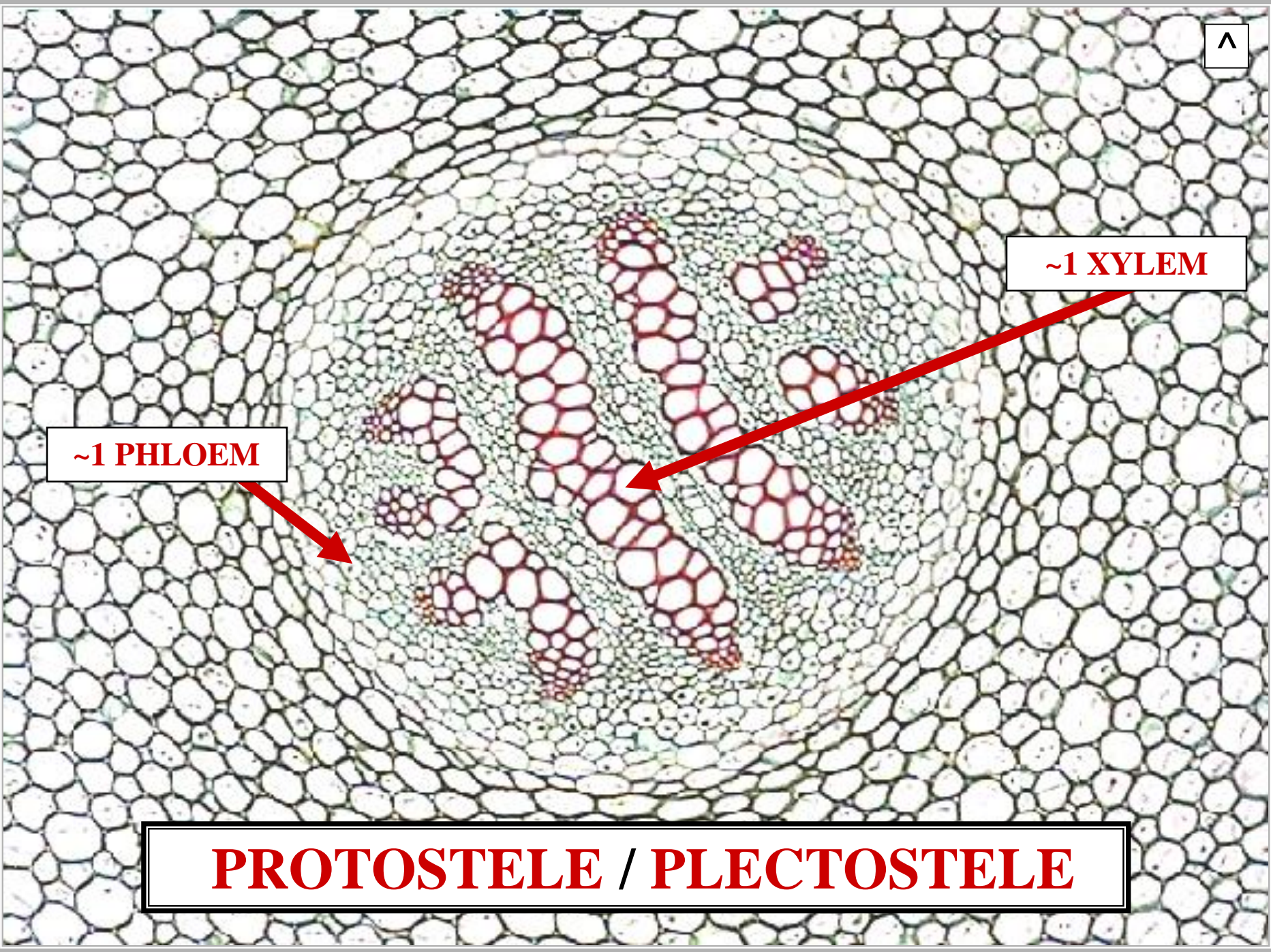




~1 XYLEM

~1 PHLOEM

PROTOSTELE / PLECTOSTELE



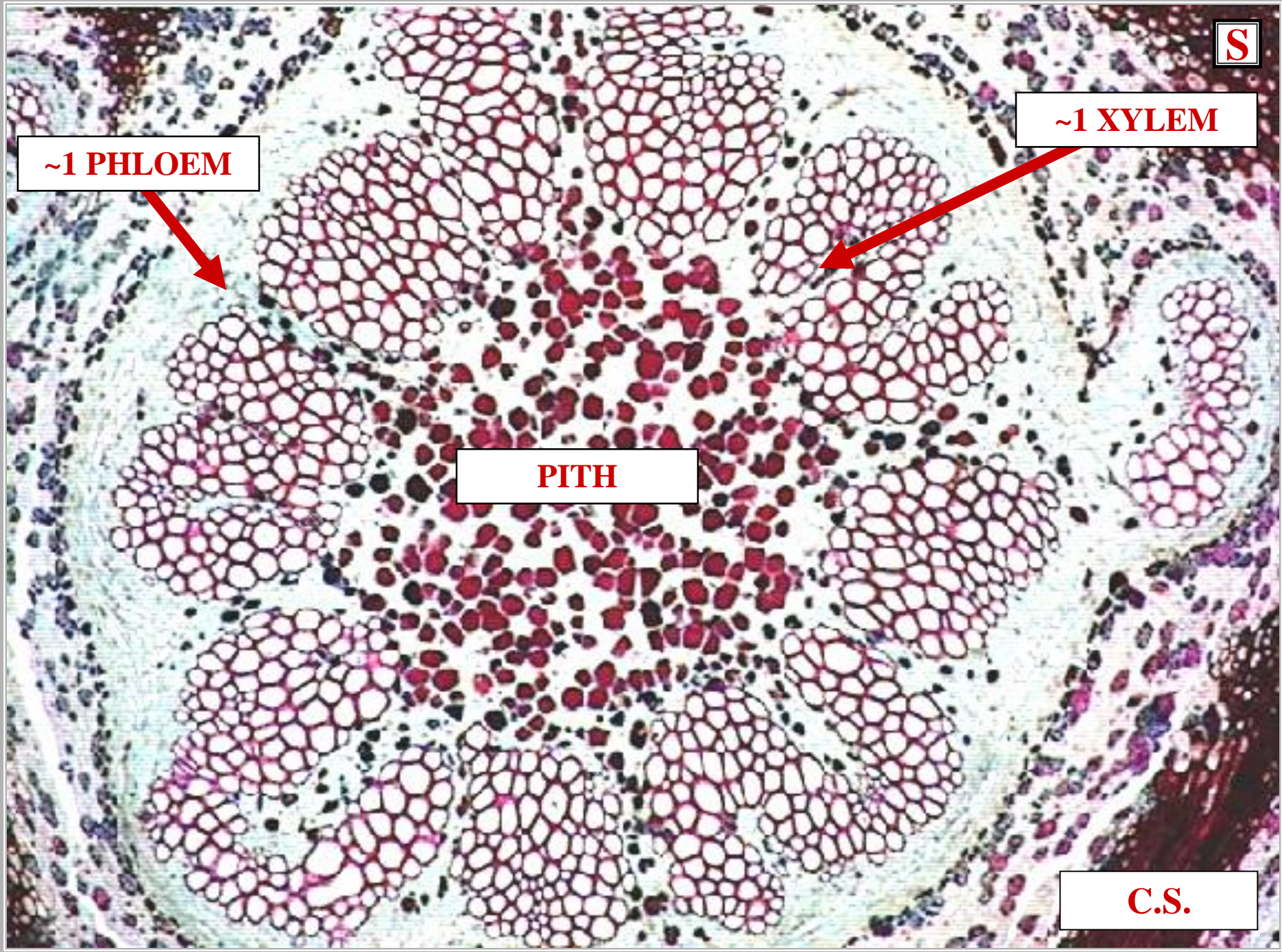
S

~1 PHLOEM

~1 XYLEM

PITH

C.S.



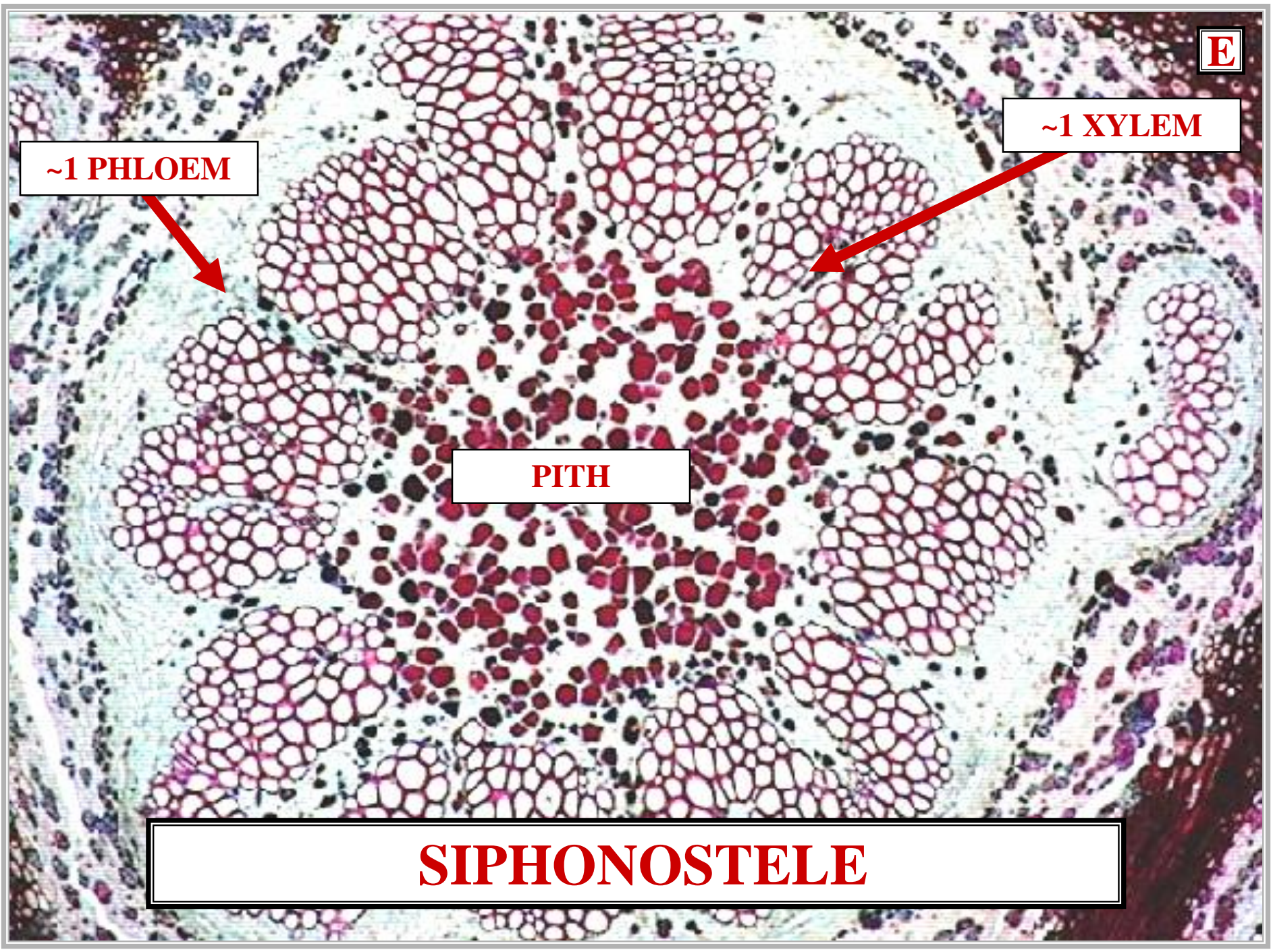
E

~1 PHLOEM

~1 XYLEM

PITH

SIPHONOSTELE

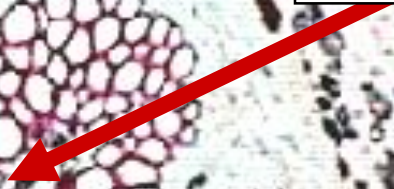




~1 PHLOEM

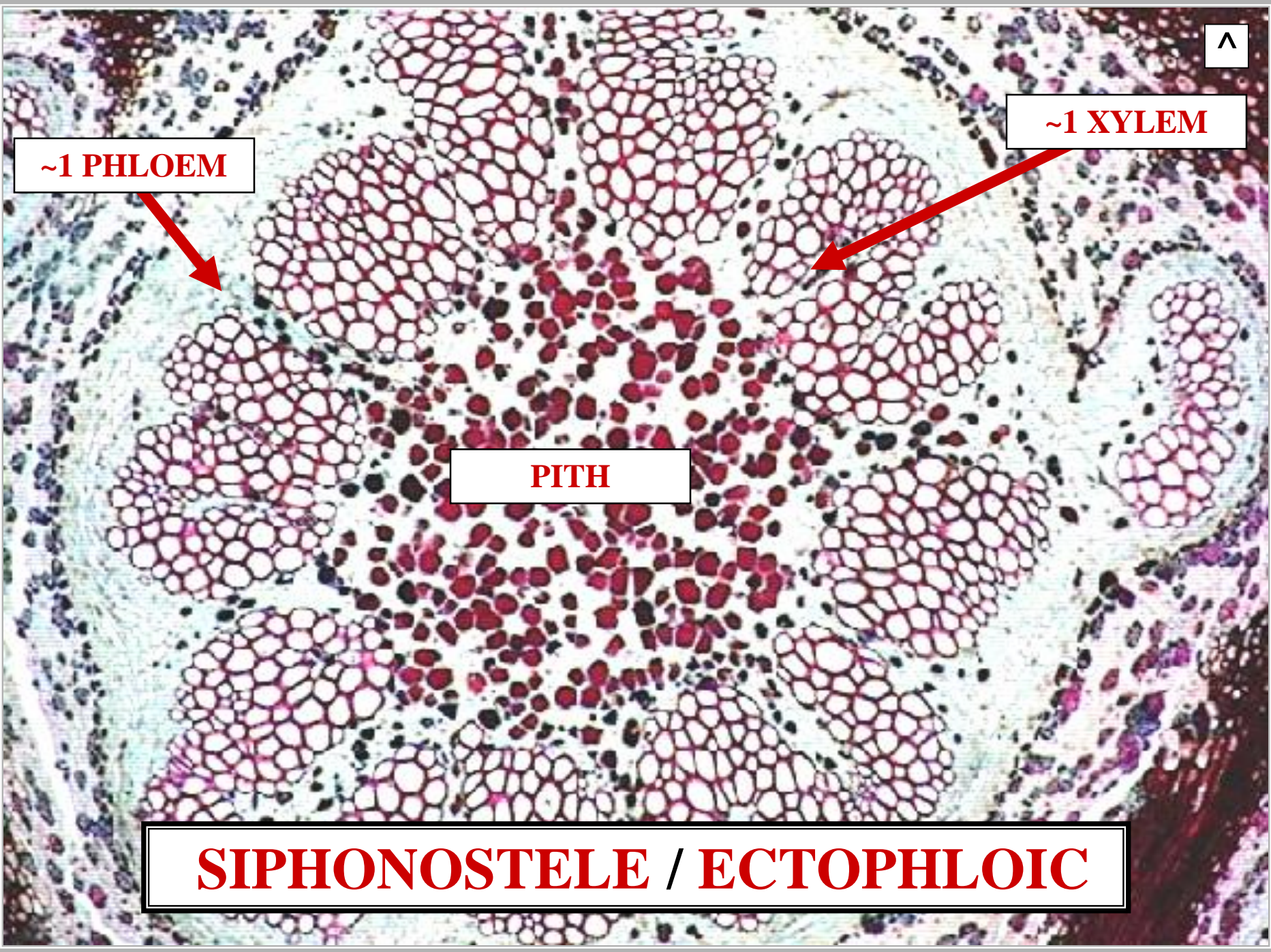


~1 XYLEM



PITH

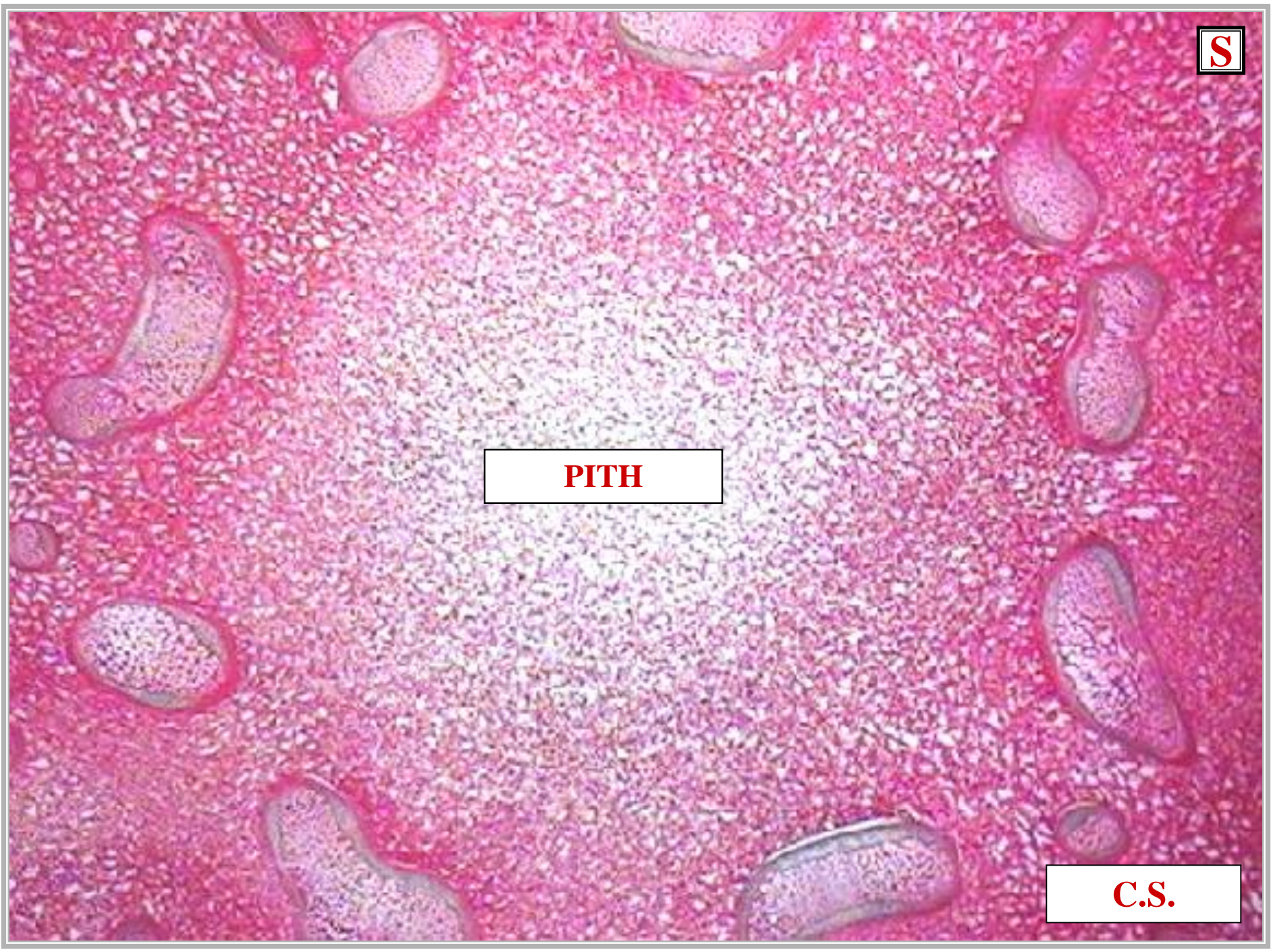
SIPHONOSTELE / ECTOPHLOIC



S

PITH

C.S.





PITH

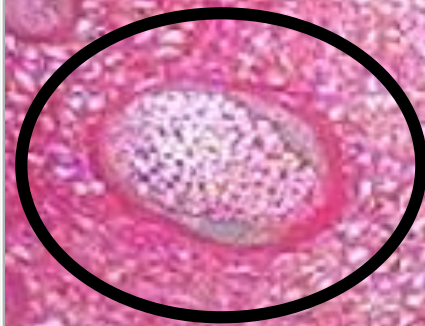
SIPHONOSTELE



PITH

VASCULAR TISSUE

SIPHONOSTELE



A

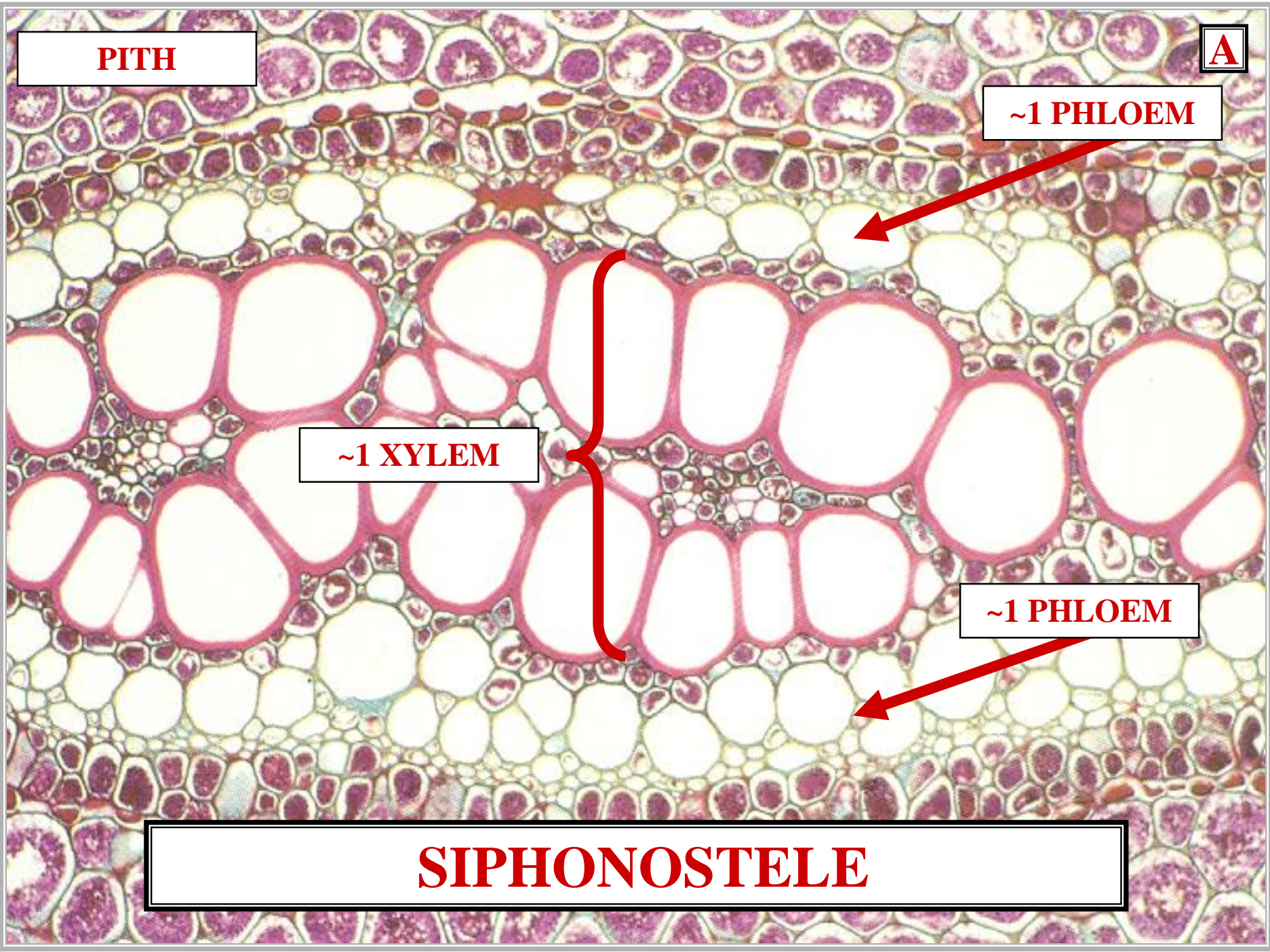
PITH

~1 PHLOEM

~1 XYLEM

~1 PHLOEM

SIPHONOSTELE



PITH

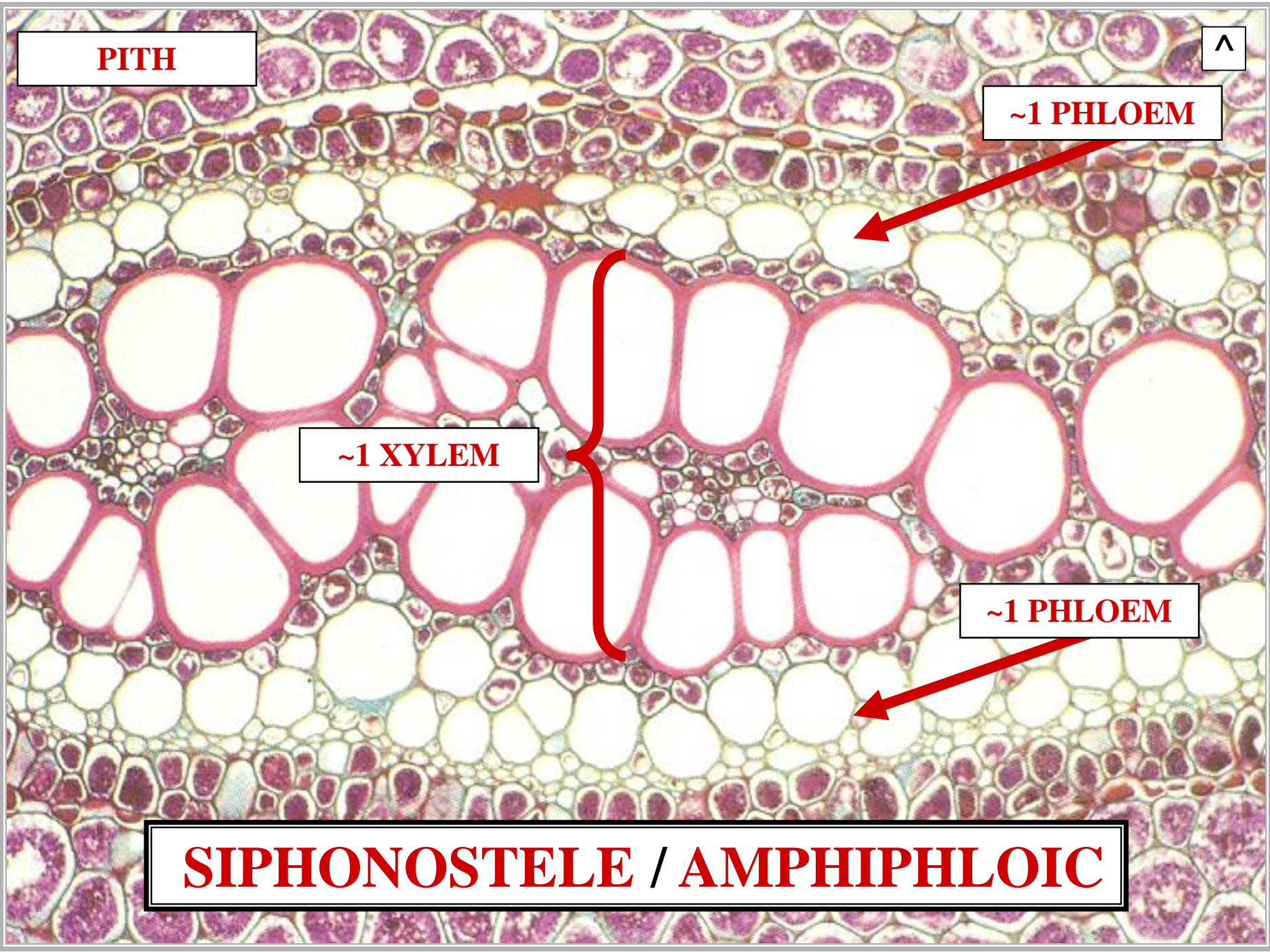
^

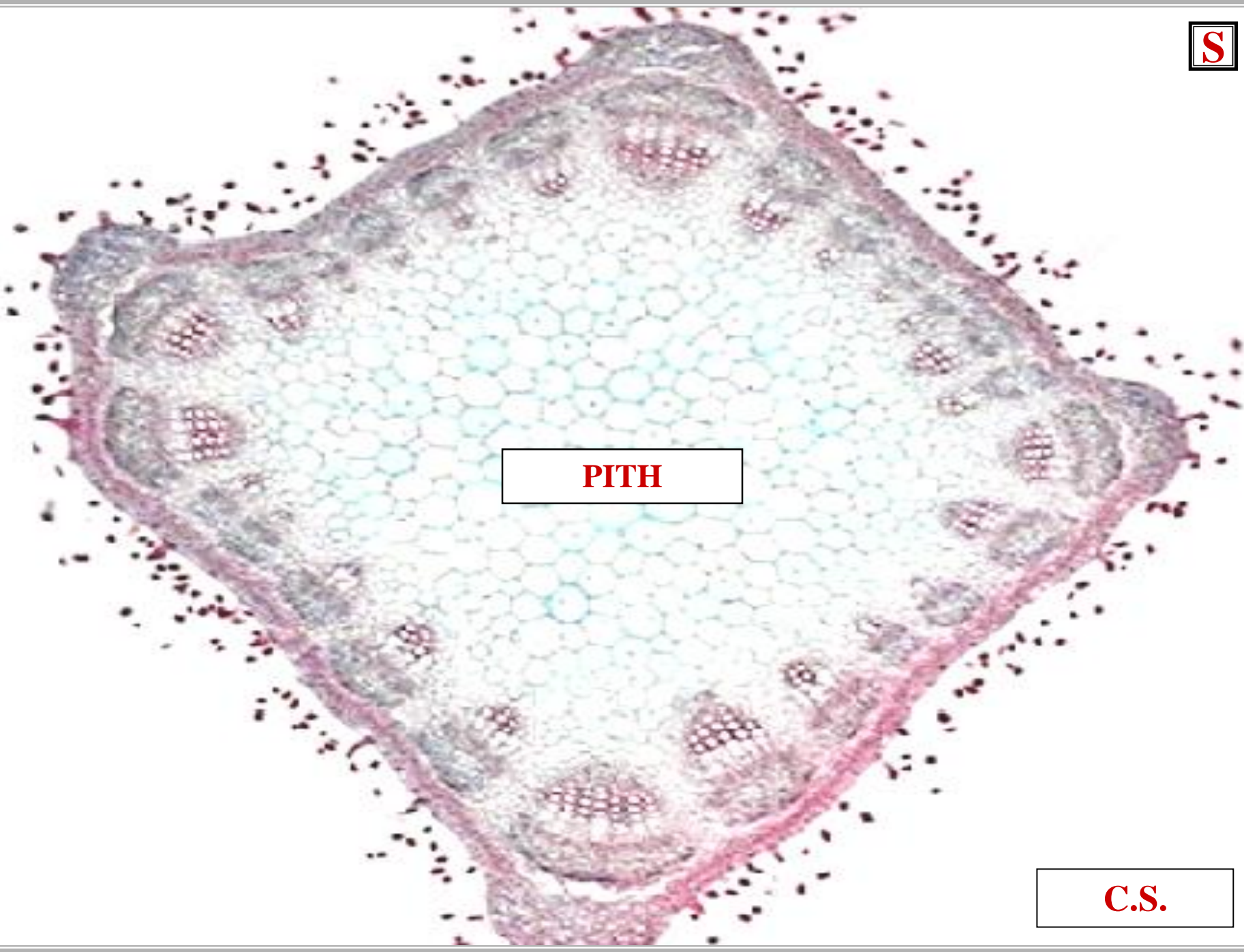
~1 PHLOEM

~1 XYLEM

~1 PHLOEM

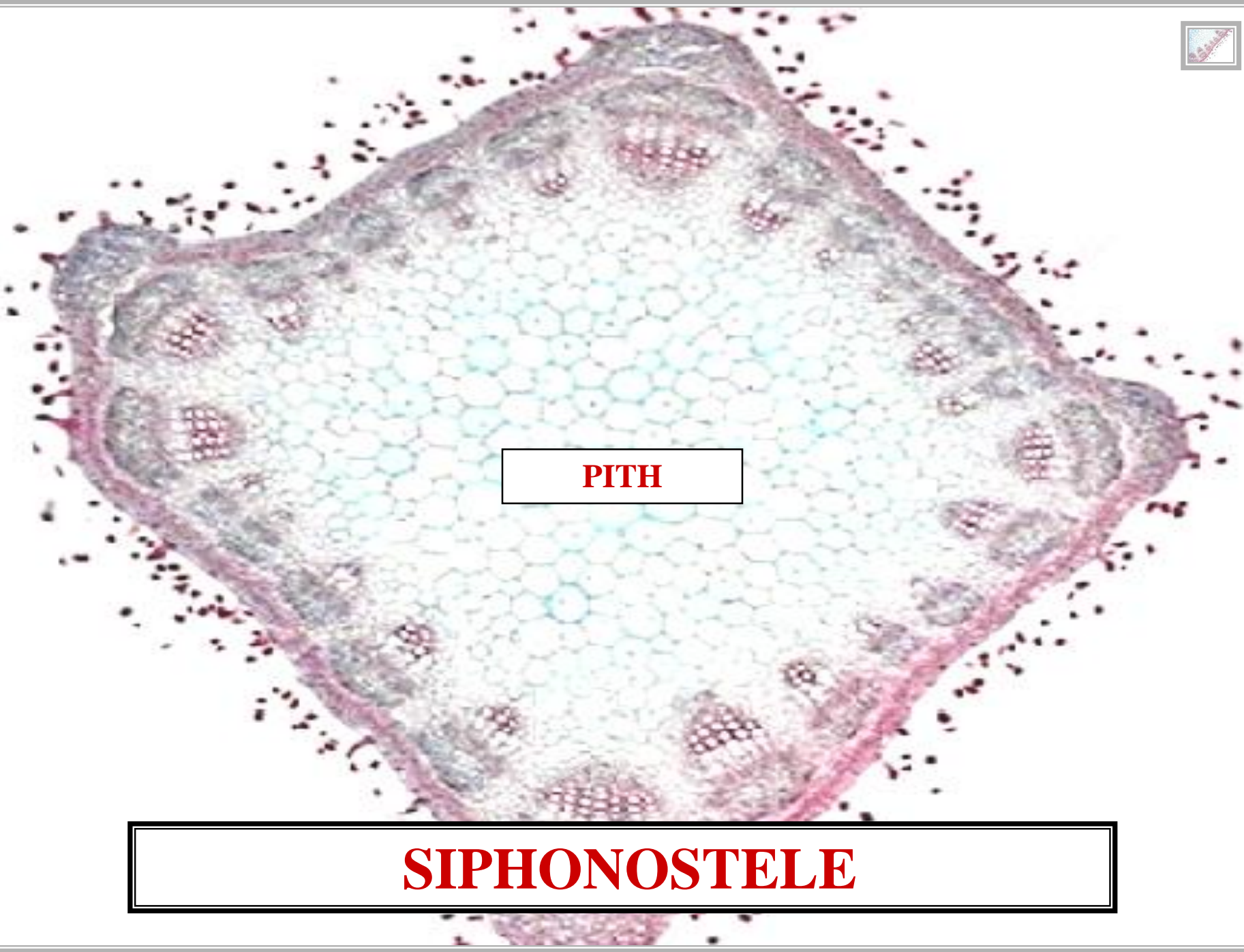
SIPHONOSTELE / AMPHIPHLOIC





PITH

C.S.



PITH

SIPHONOSTELE

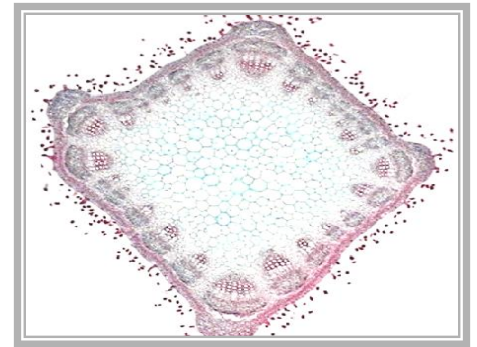
SIPHONOSTELE

PITH

VASCULAR BUNDLE



E



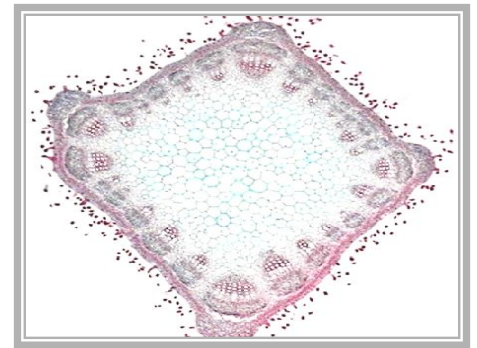
C.S.

SIPHONOSTELE / EUSTELE

PITH

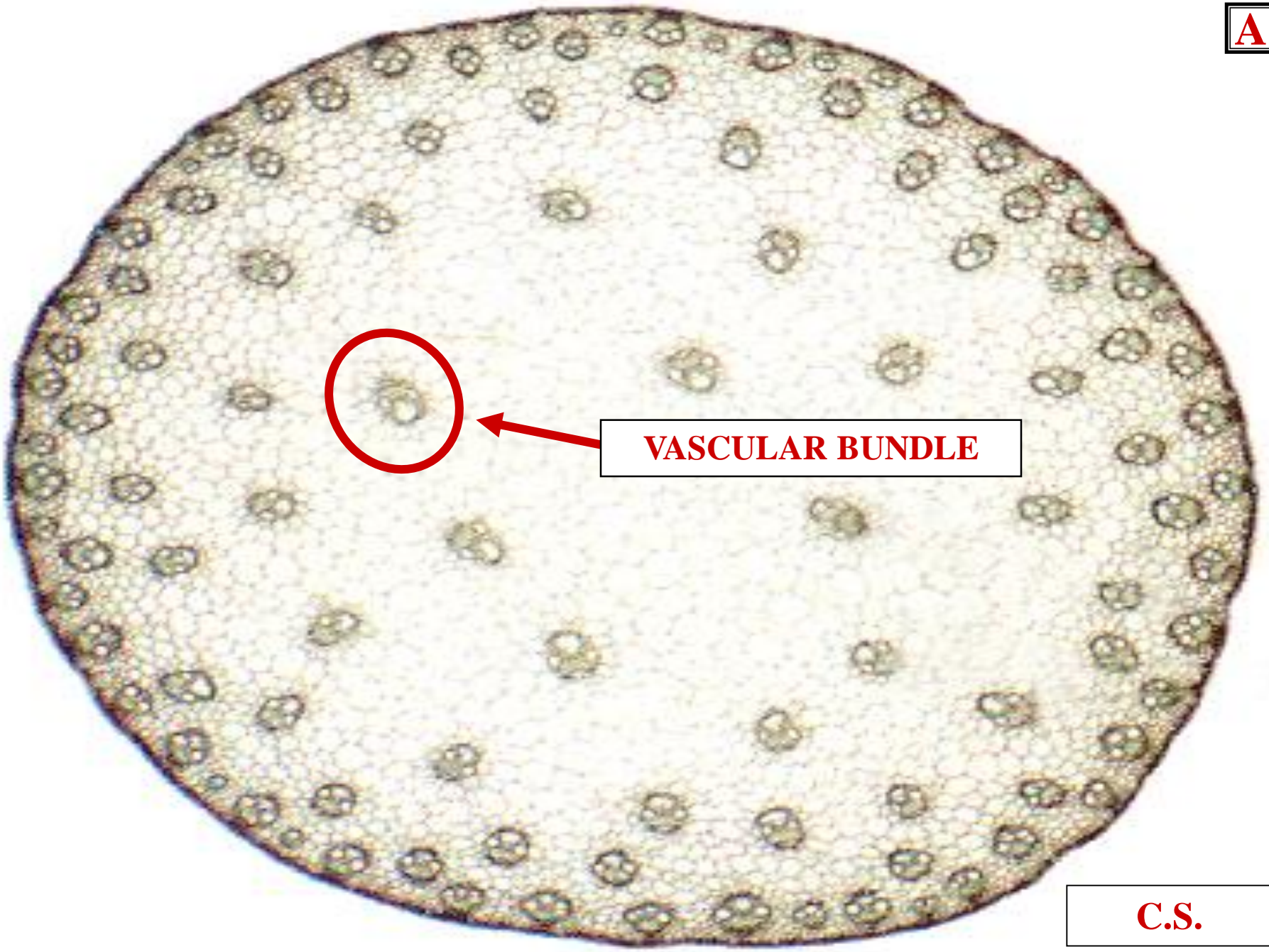
VASCULAR BUNDLE

^



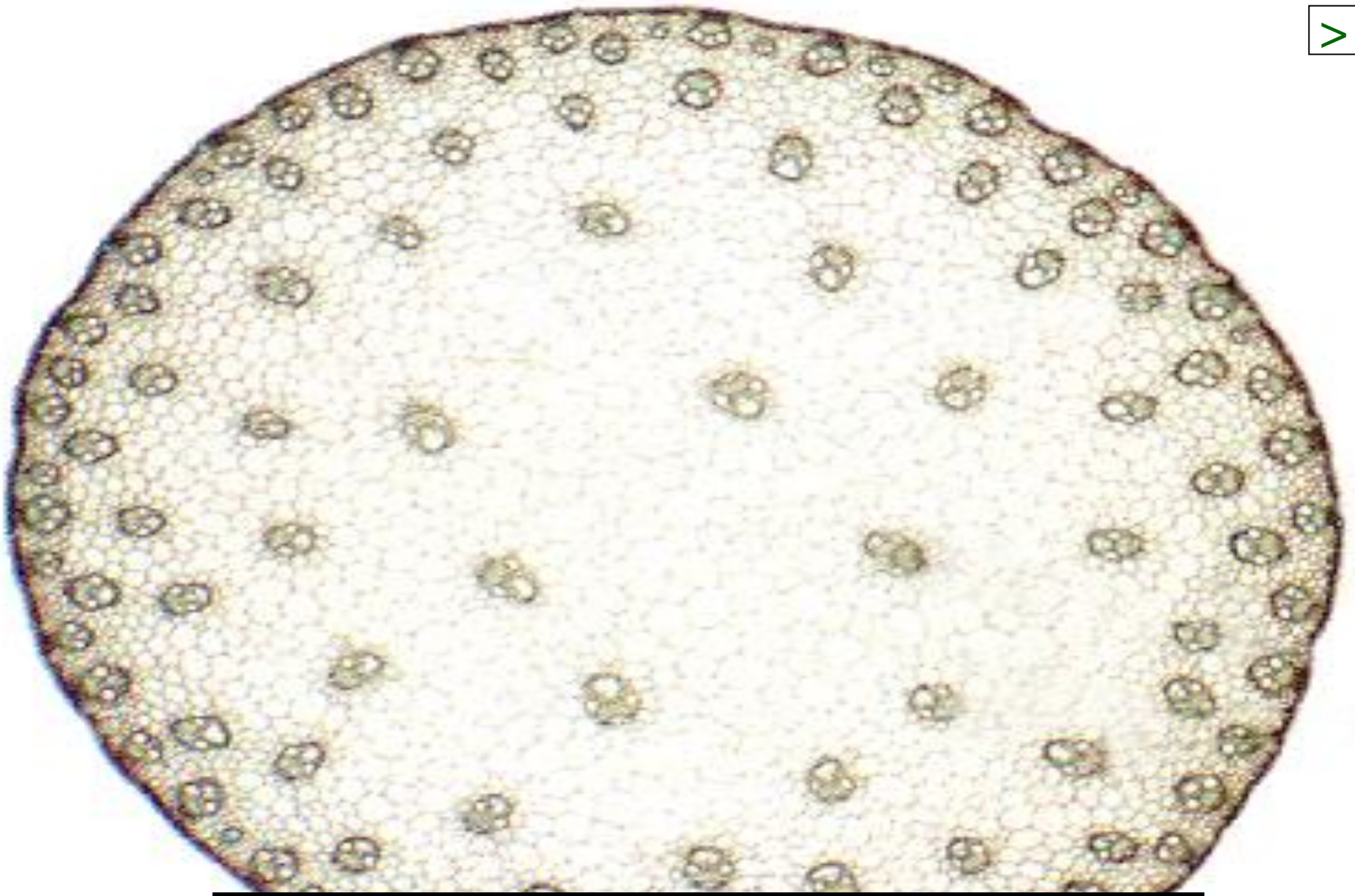
C.S.

A




VASCULAR BUNDLE

C.S.



ATACTOSTELE



**RESPONSIBLE
STELE TYPES
LECTURE
&
LABORATORY**



The background of the slide is a close-up photograph of a white magnolia flower with a prominent red stigma and yellow stamens, surrounded by green leaves. The text is overlaid on this image.

**RESPONSIBLE
STELE TYPES
GENERAL
&
SPECIFIC**

LECTURE QUIZ

**TRACHEOPHYTE
STELE TYPES**



XYLEM MATURATION

PRIMARY XYLEM MATURATION

**PRIMARY XYLEM
MATURATION**

PROTOXYLEM

**PRIMARY XYLEM
MATURATION**

PRIMARY XYLEM MATURATION

PROTOXYLEM
METAXYLEM

PRIMARY XYLEM MATURATION

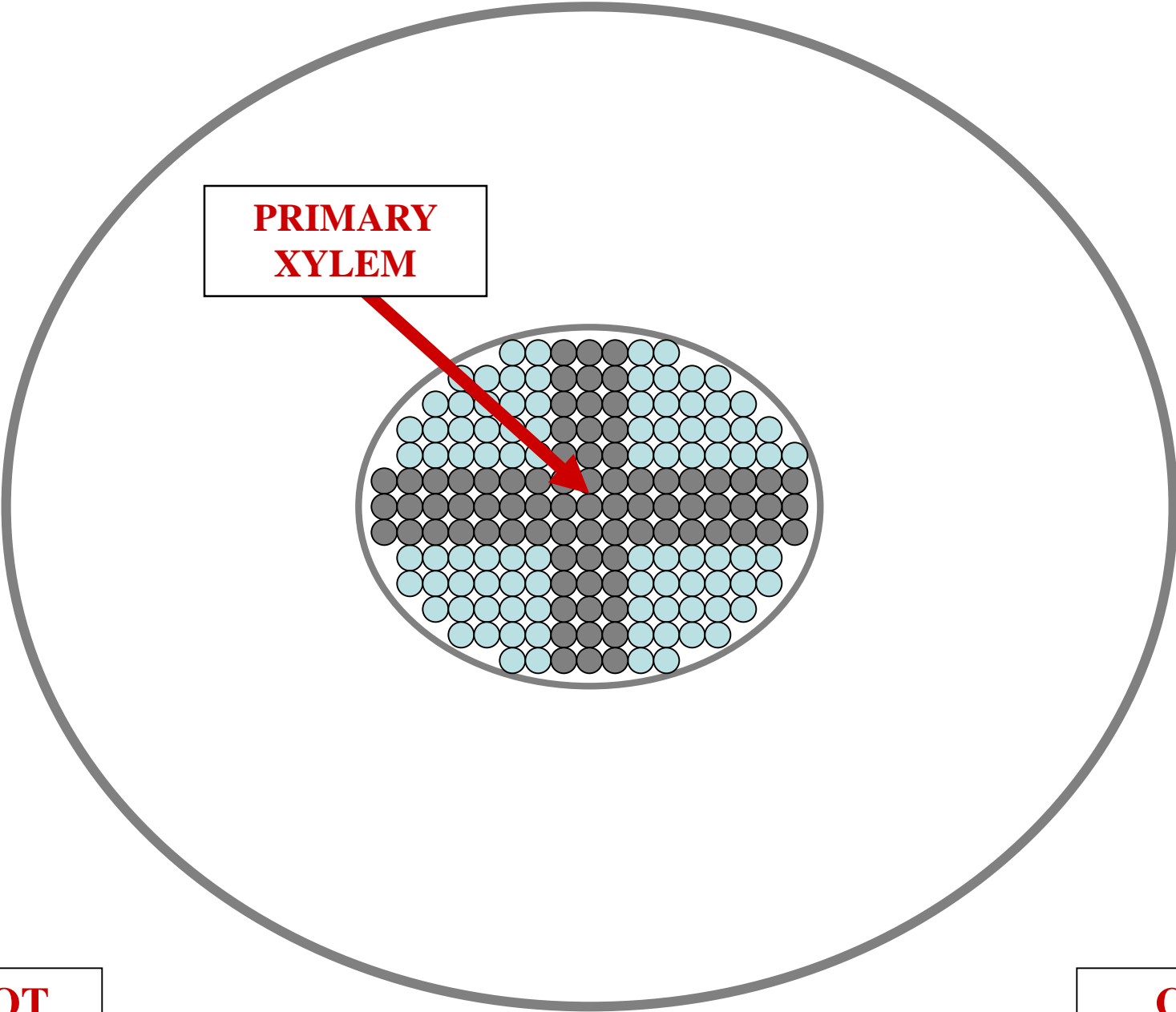
PROTOXYLEM

**PRIMARY XYLEM
PROTOXYLEM**

**MATURES
FIRST/BEFORE
METAXYLEM**

**PRIMARY XYLEM
PROTOXYLEM**

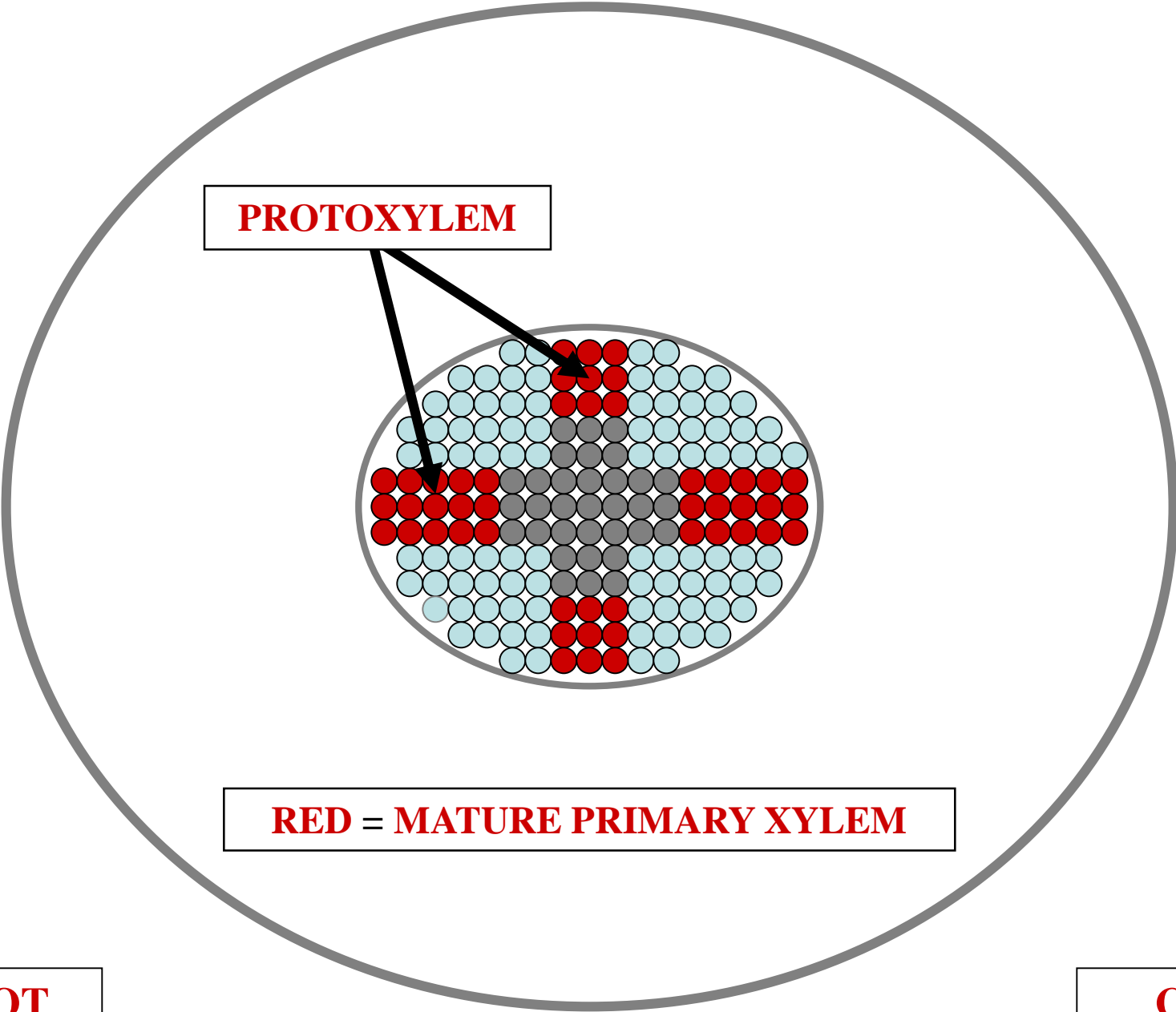




**PRIMARY
XYLEM**

ROOT

C.S.



PROTOXYLEM

RED = MATURE PRIMARY XYLEM

ROOT

C.S.

METAXYLEM



PRIMARY XYLEM

METAXYLEM

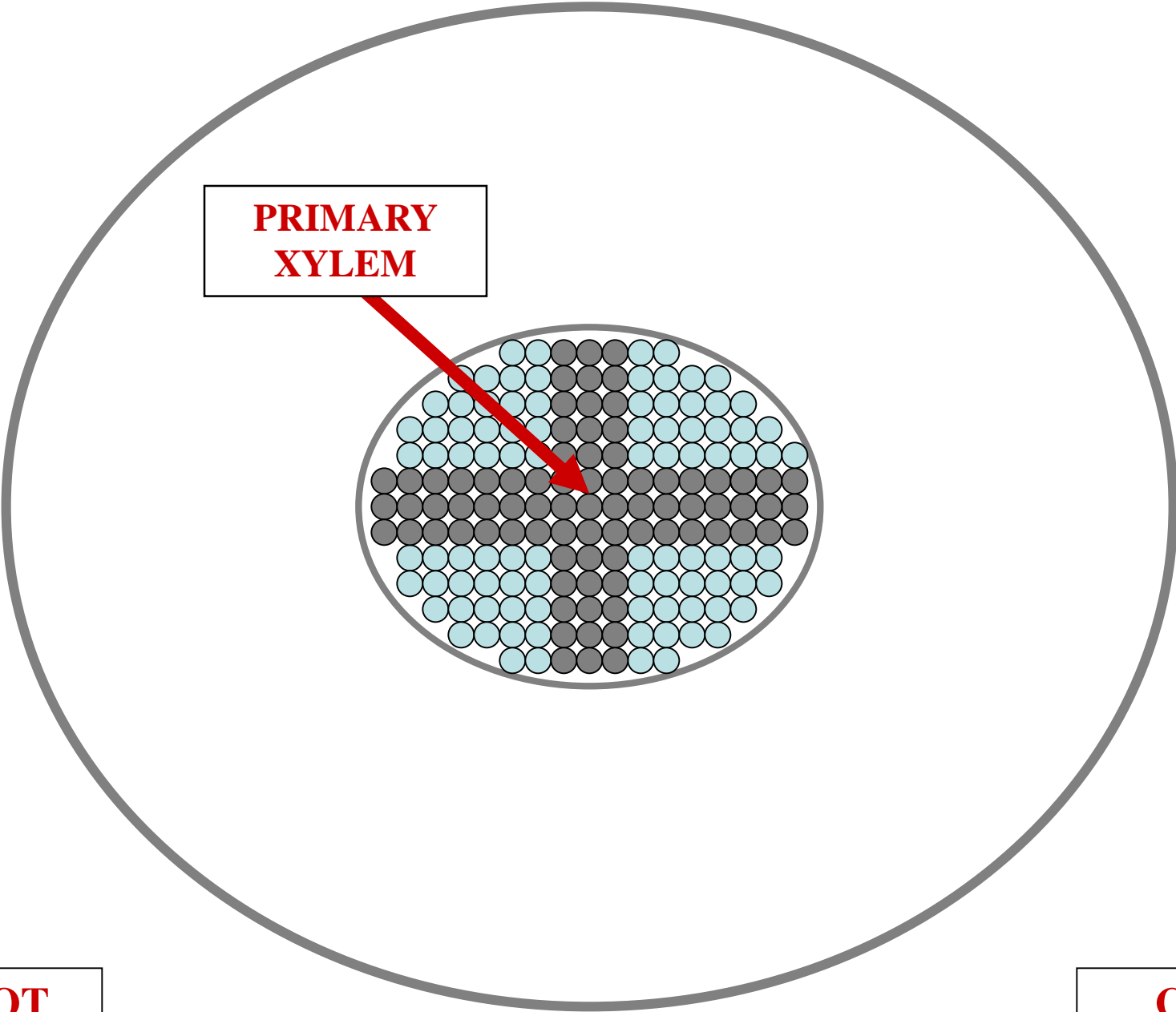
MATURES

SECOND/AFTER

PROTOXYLEM

PRIMARY XYLEM

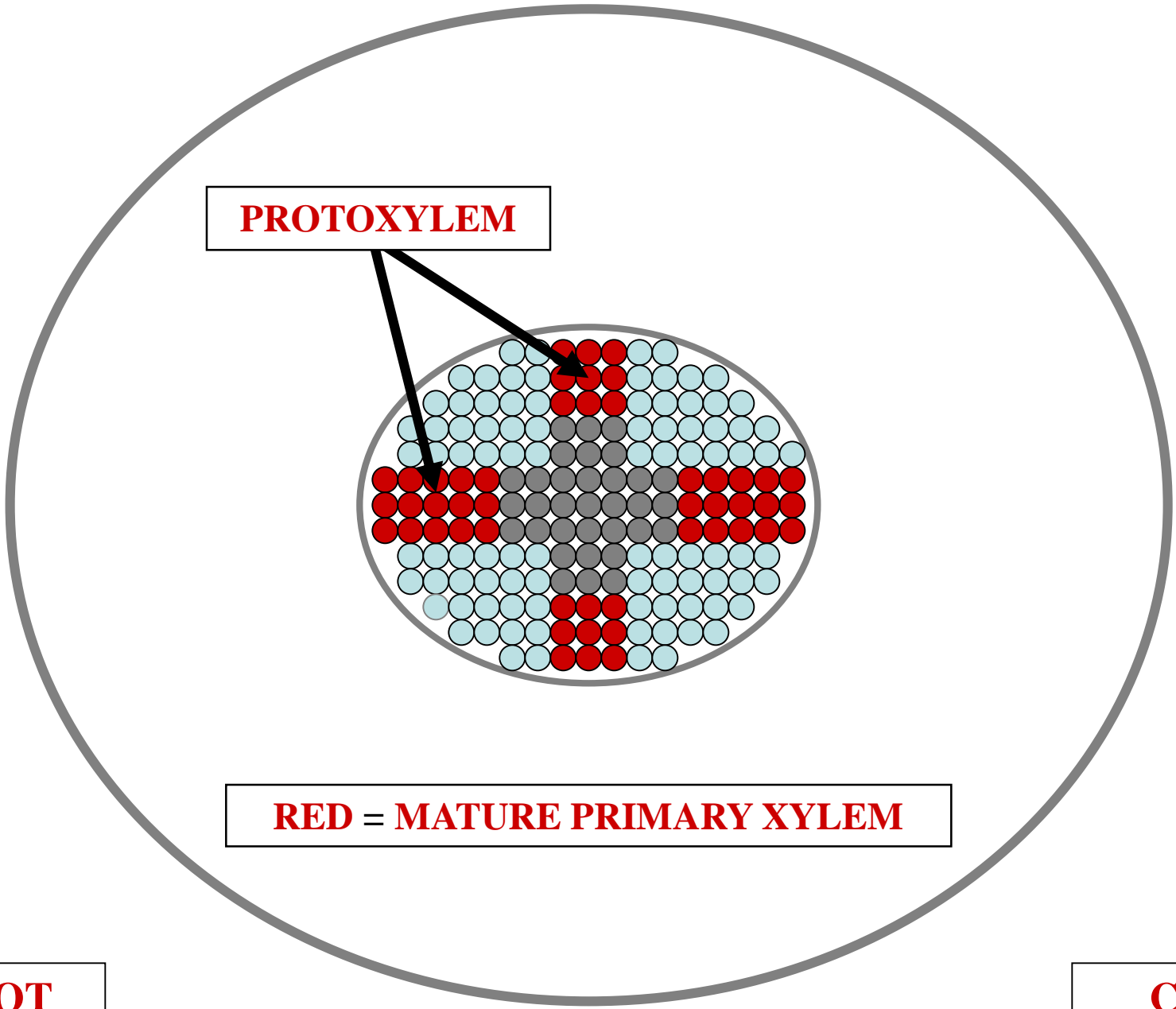
METAXYLEM



**PRIMARY
XYLEM**

ROOT

C.S.

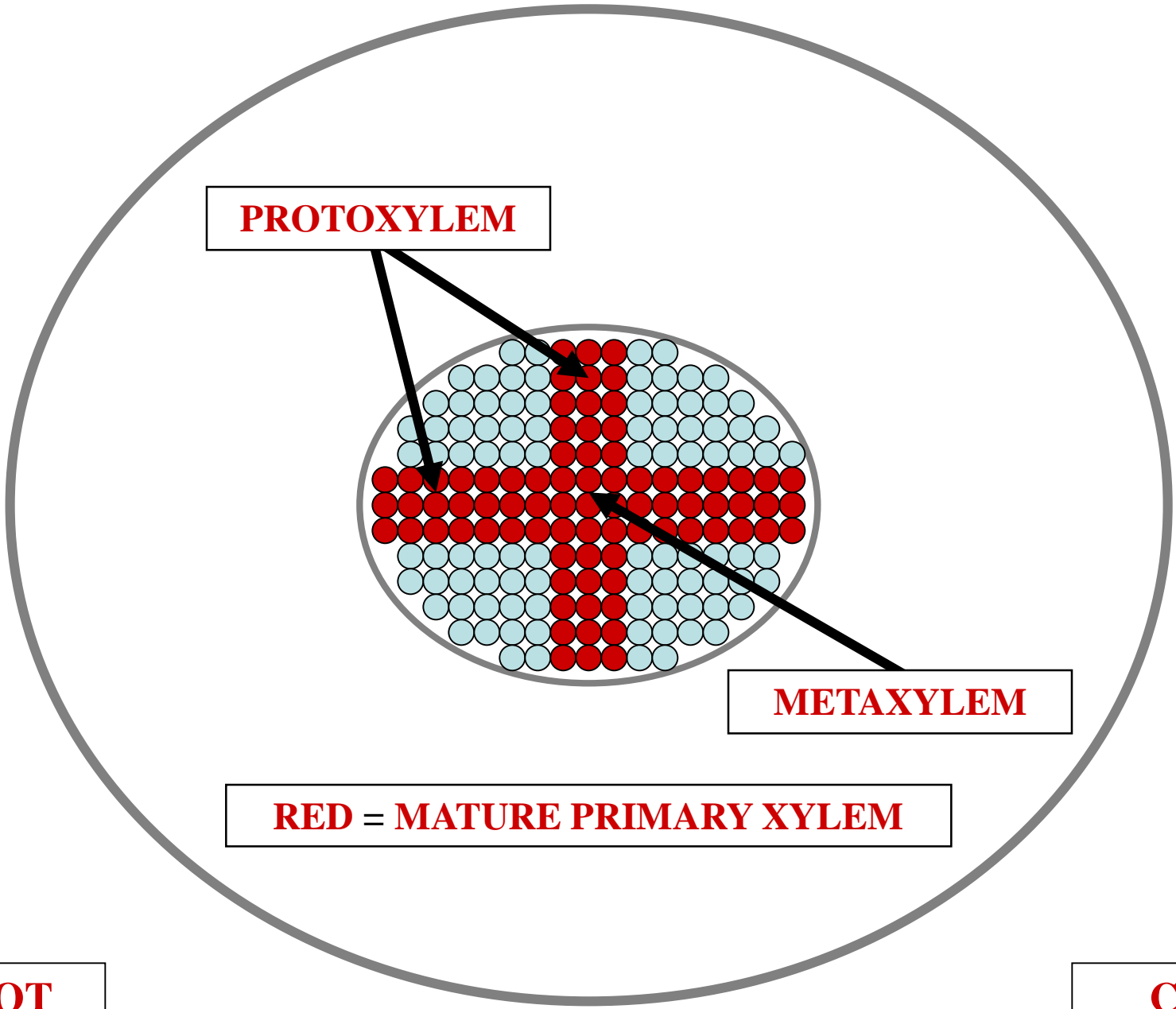


PROTOXYLEM

RED = MATURE PRIMARY XYLEM

ROOT

C.S.



PROTOXYLEM

METAXYLEM

RED = MATURE PRIMARY XYLEM

ROOT

C.S.

PRIMARY XYLEM MATURATION PATTERNS

**PRIMARY XYLEM
MATURATION PATTERNS**

EXARCH

**PRIMARY XYLEM
MATURATION PATTERNS**

**PRIMARY XYLEM
MATURATION PATTERNS**

EXARCH

ENDARCH

**PRIMARY XYLEM
MATURATION PATTERNS**

PRIMARY XYLEM MATURATION PATTERNS

EXARCH

ENDARCH

MESARCH

PRIMARY XYLEM MATURATION PATTERNS

EXARCH MATURATION

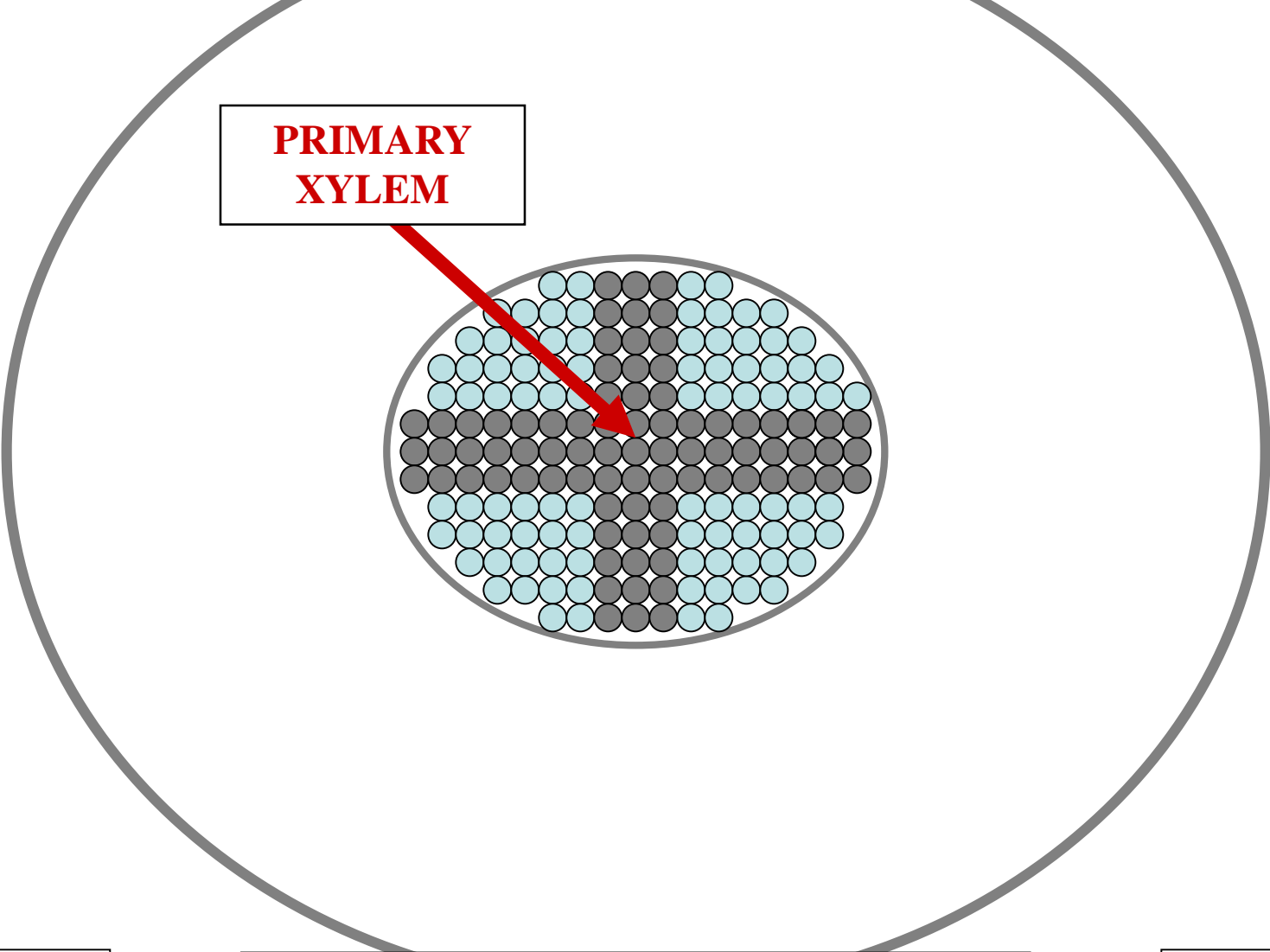
**PRIMARY XYLEM
EXARCH MATURATION**



**INWARD
MATURATION PATTERN**

**PRIMARY XYLEM
EXARCH MATURATION**

EXARCH MATURATION



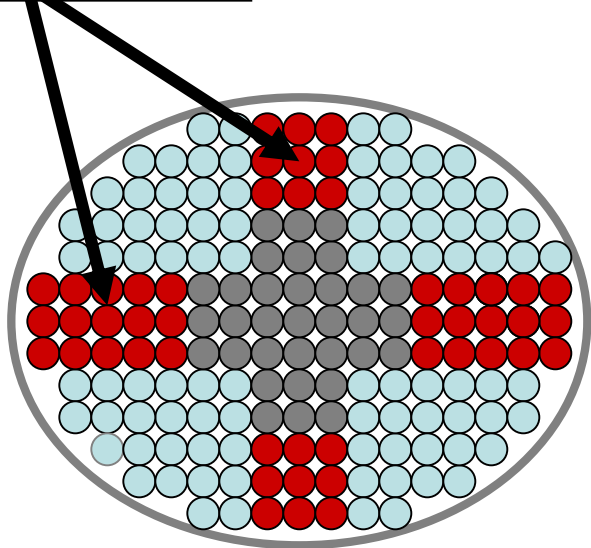
ROOT

INWARD ~1 XYLEM MATURATION

C.S.

EXARCH MATURATION

PROTOXYLEM



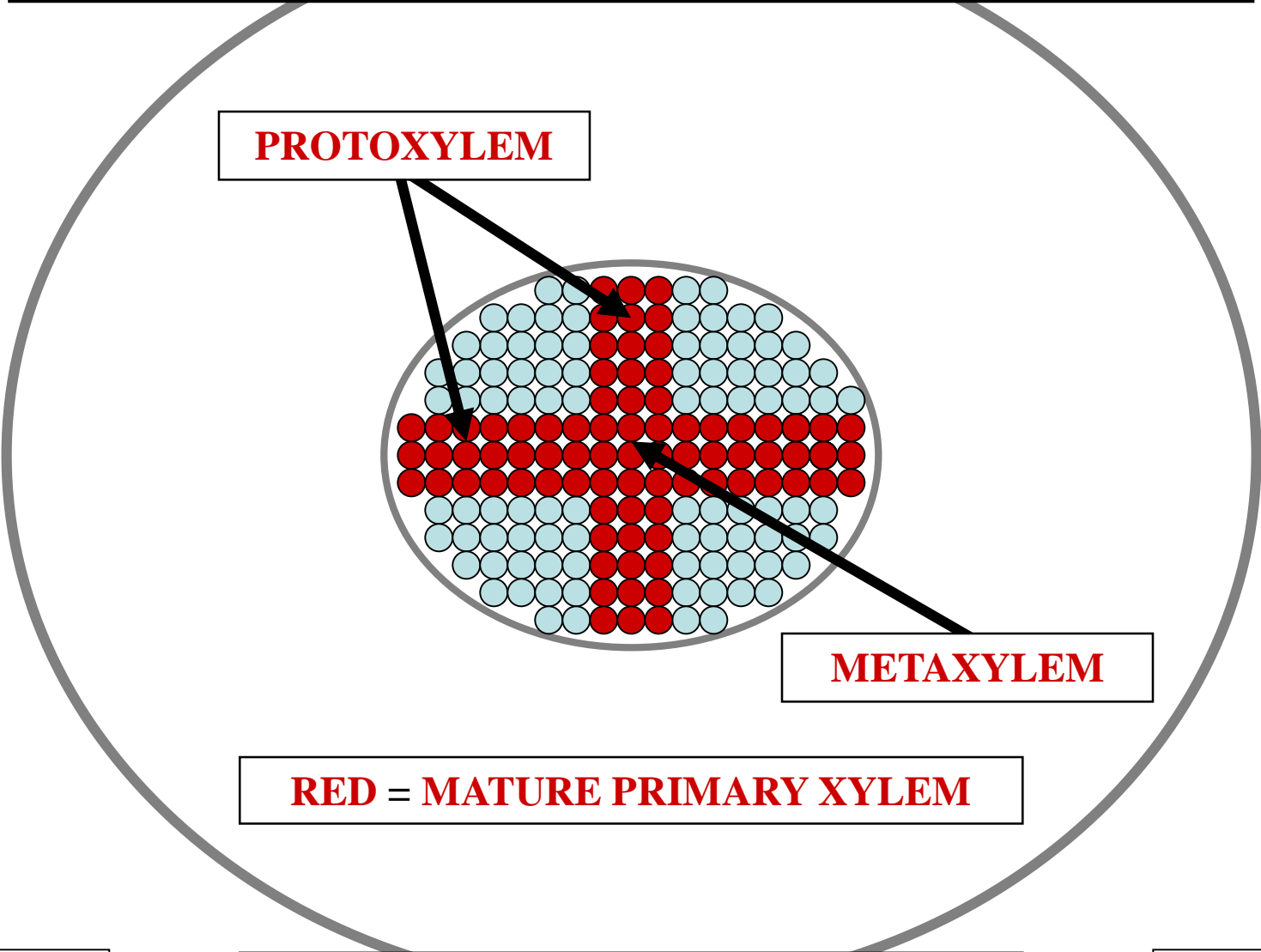
RED = MATURE PRIMARY XYLEM

ROOT

INWARD ~1 XYLEM MATURATION

C.S.

EXARCH MATURATION



PROTOXYLEM

METAXYLEM

RED = MATURE PRIMARY XYLEM

ROOT

INWARD ~1 XYLEM MATURATION

C.S.

ENDARCH MATURATION

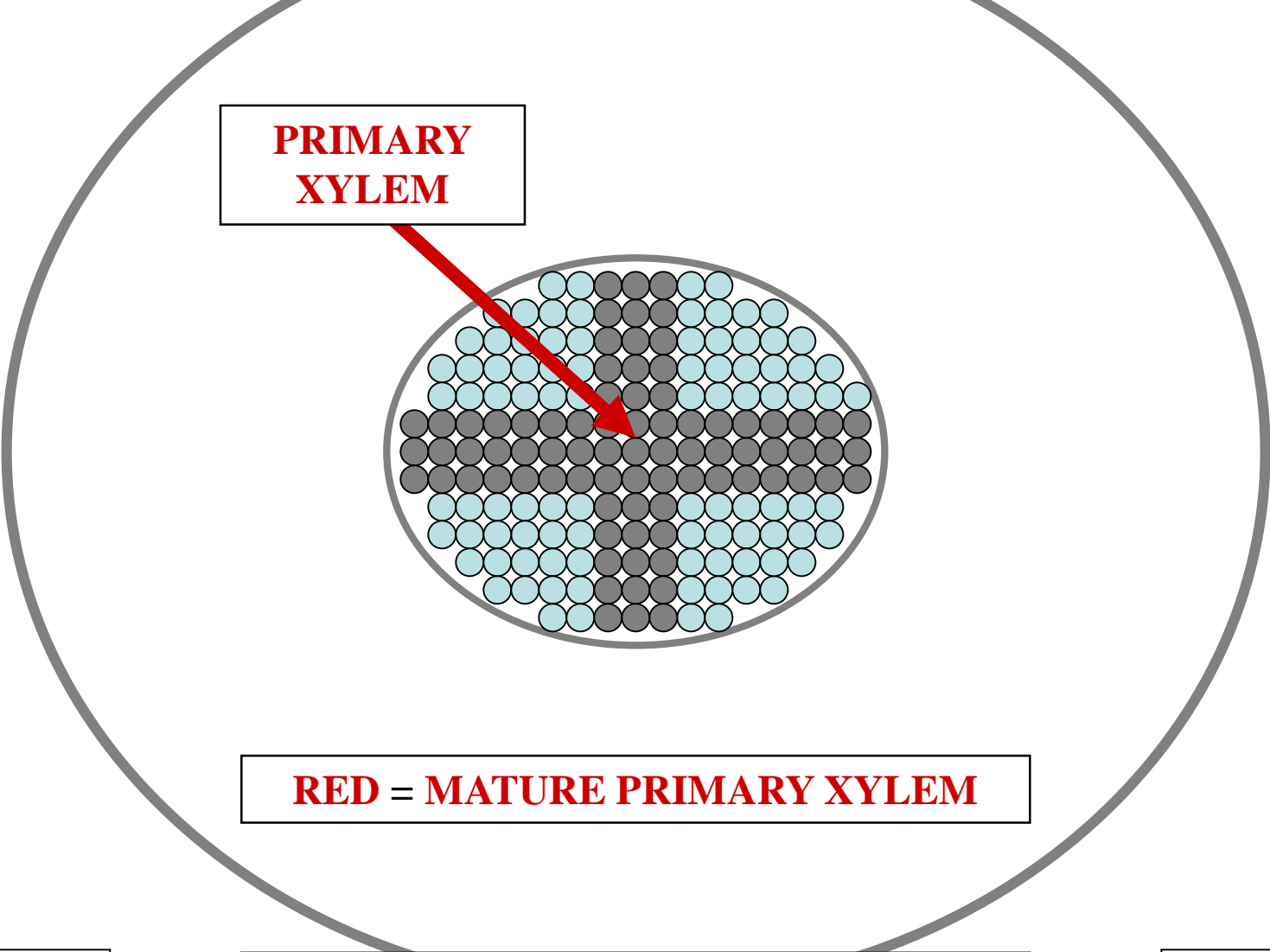
**PRIMARY XYLEM
ENDARCH MATURATION**



**OUTWARD
MATURATION PATTERN**

**PRIMARY XYLEM
ENDARCH MATURATION**

ENDARCH MATURATION



**PRIMARY
XYLEM**

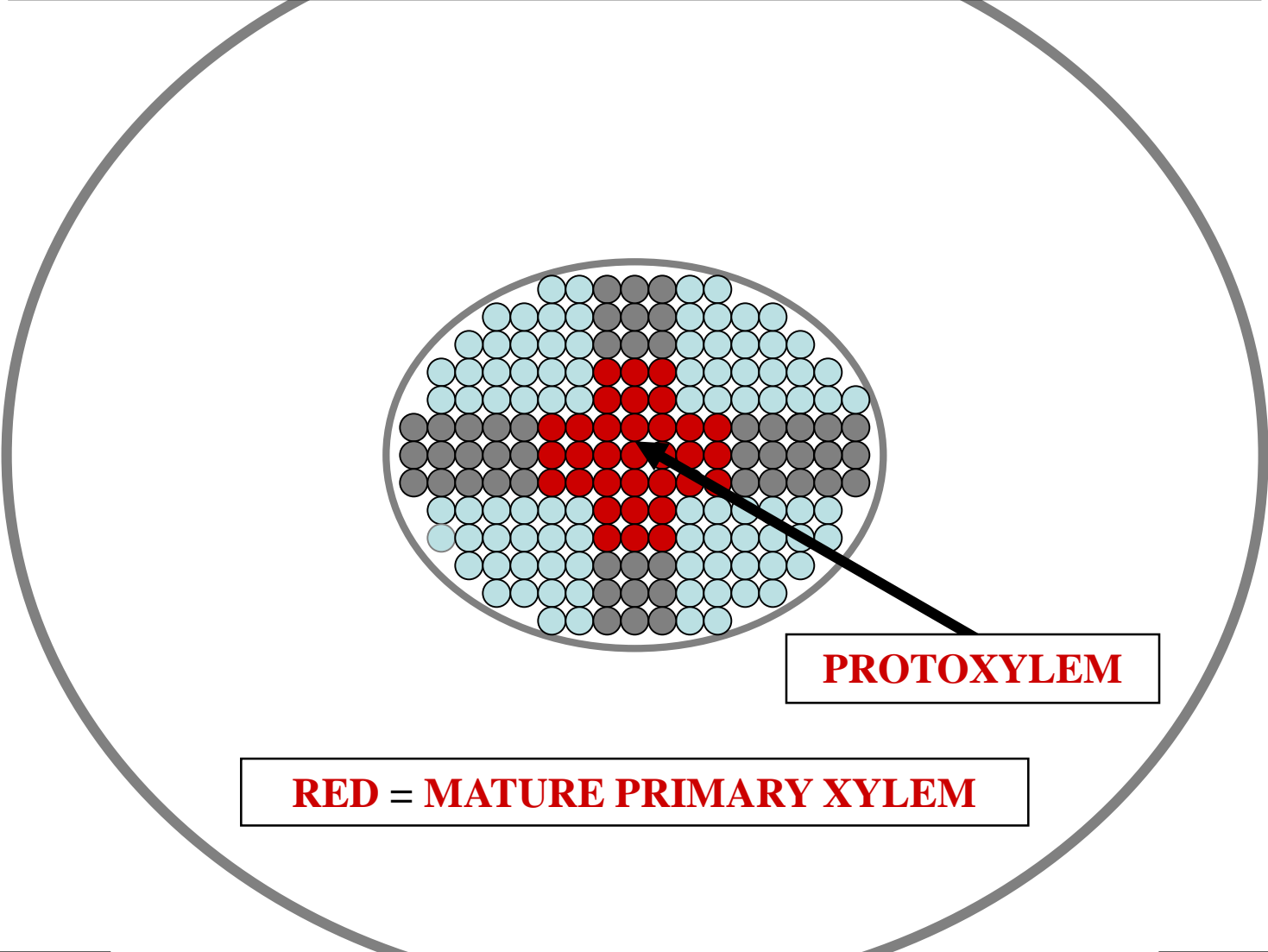
RED = MATURE PRIMARY XYLEM

ROOT

OUTWARD ~1 XYLEM MATURATION

C.S.

ENDARCH MATURATION



PROTOXYLEM

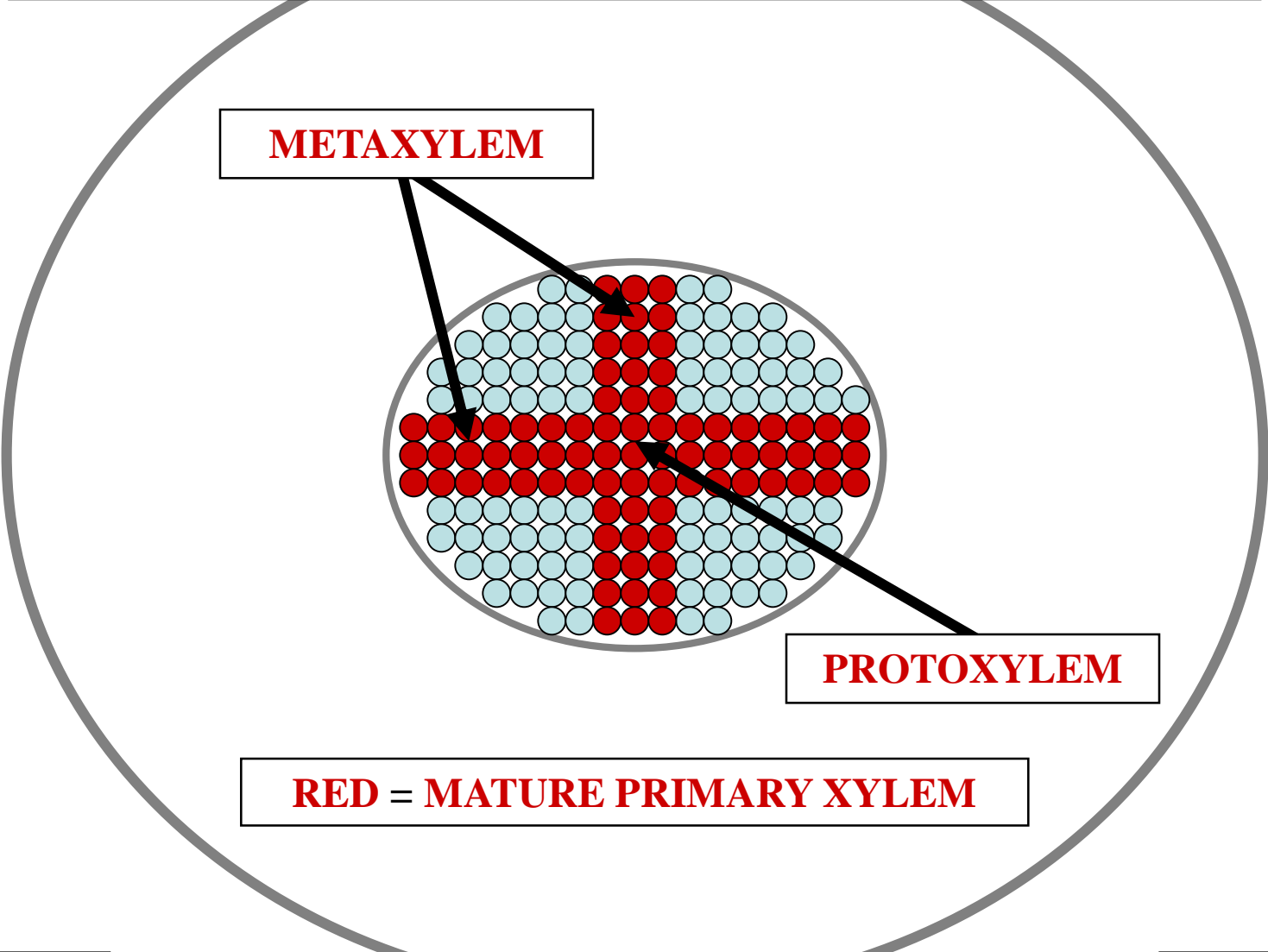
RED = MATURE PRIMARY XYLEM

ROOT

OUTWARD ~1 XYLEM MATURATION

C.S.

ENDARCH MATURATION



METAXYLEM

PROTOXYLEM

RED = MATURE PRIMARY XYLEM

ROOT

OUTWARD ~1 XYLEM MATURATION

C.S.

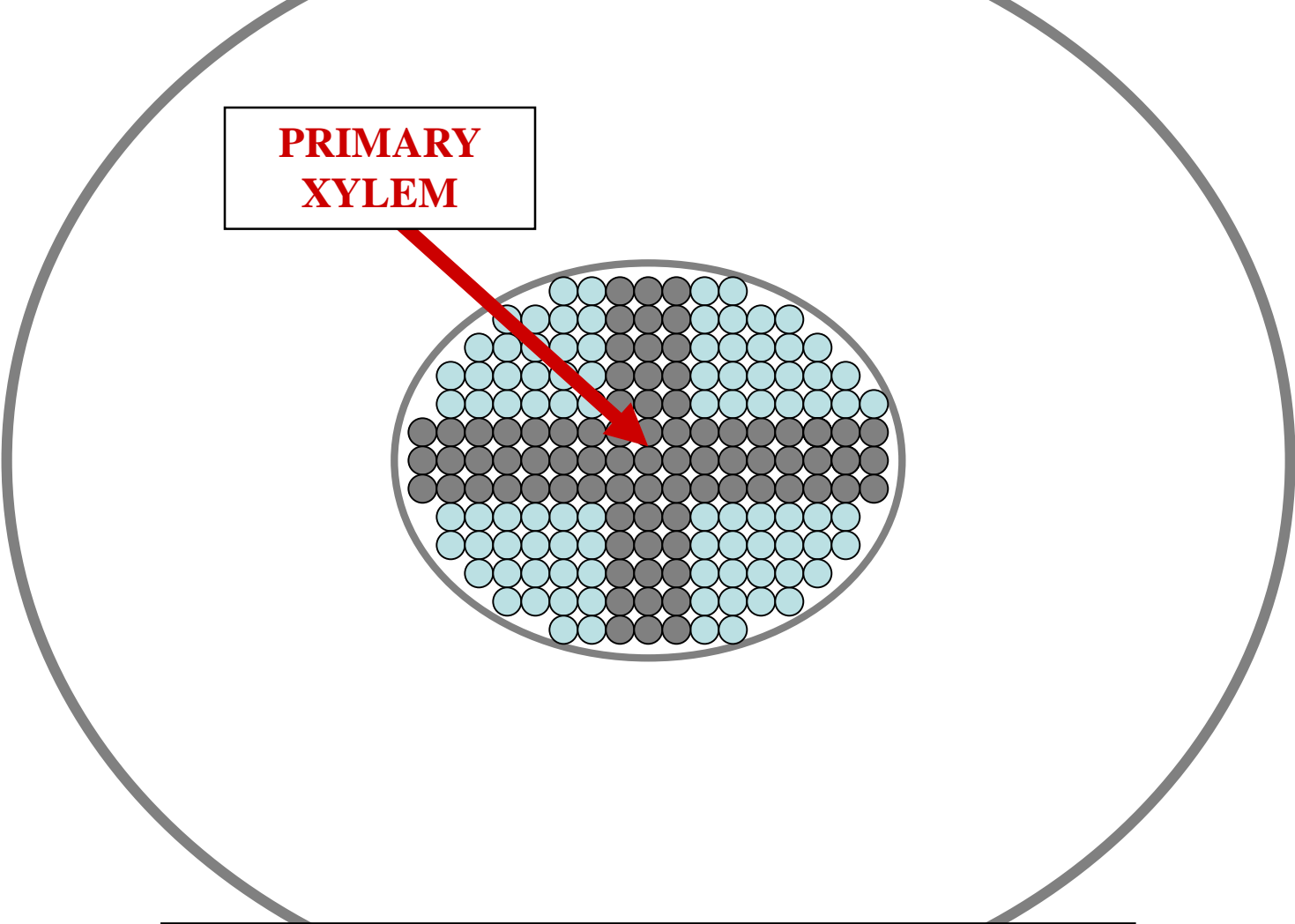
**MESARCH
MATURATION**

**PRIMARY XYLEM
MESARCH MATURATION**

**INWARD & OUTWARD
MATURATION PATTERN**

**PRIMARY XYLEM
MESARCH MATURATION**

MESARCH MATURATION



**PRIMARY
XYLEM**

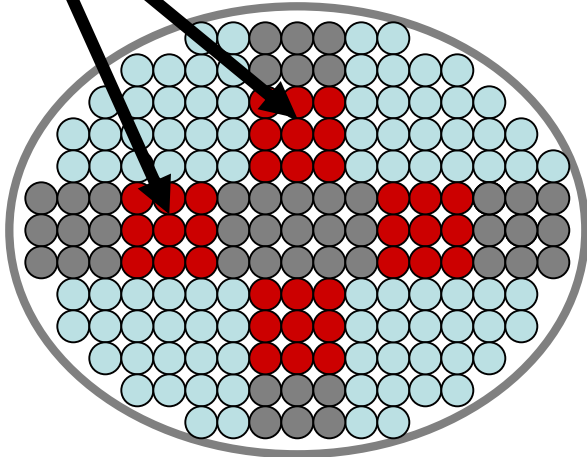
ROOT

**INWARD & OUTWARD
~1 XYLEM MATURATION**

C.S.

MESARCH MATURATION

PROTOXYLEM



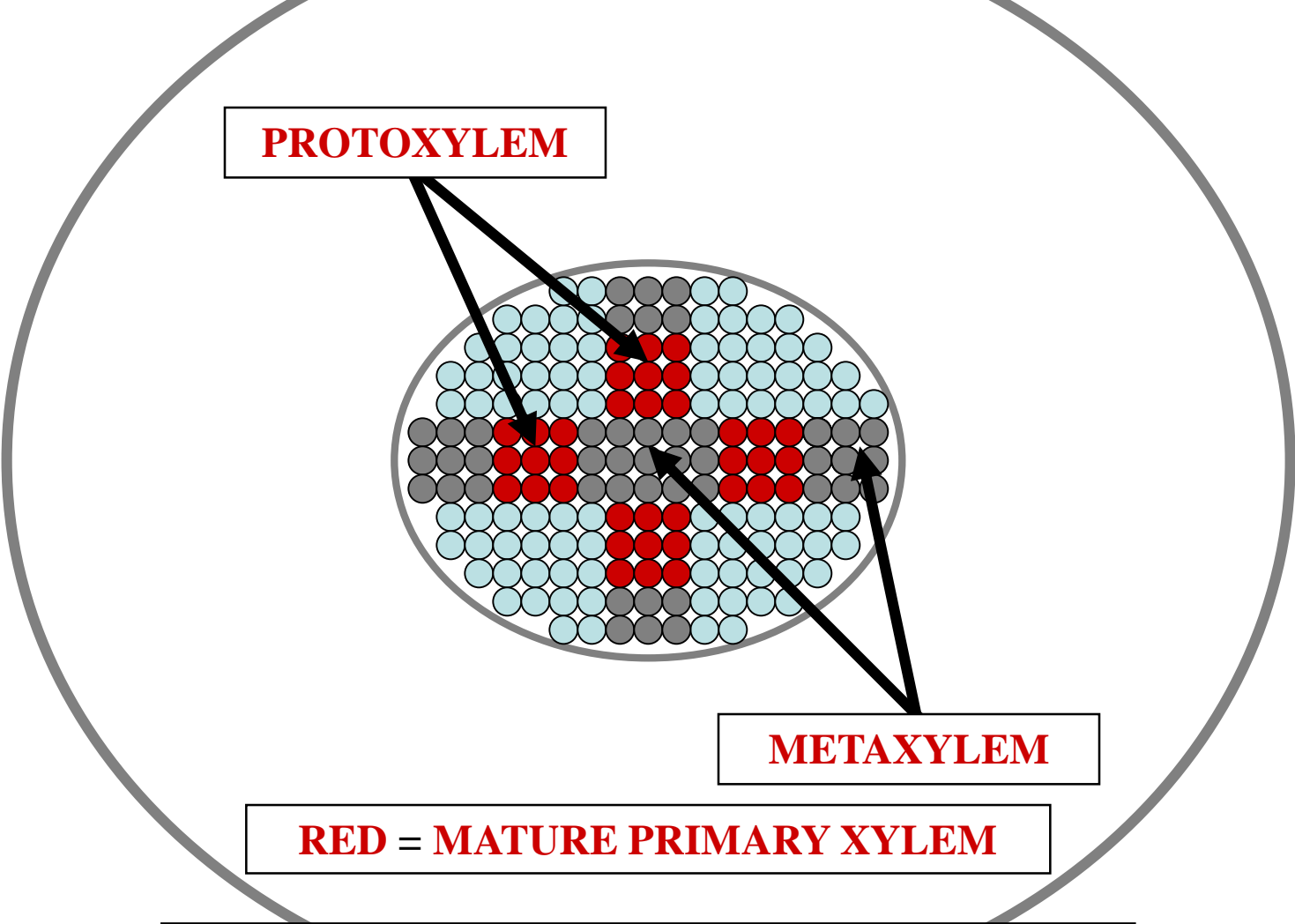
RED = MATURE PRIMARY XYLEM

INWARD & OUTWARD
~1 XYLEM MATURATION

ROOT

C.S.

MESARCH MATURATION



PROTOXYLEM

METAXYLEM

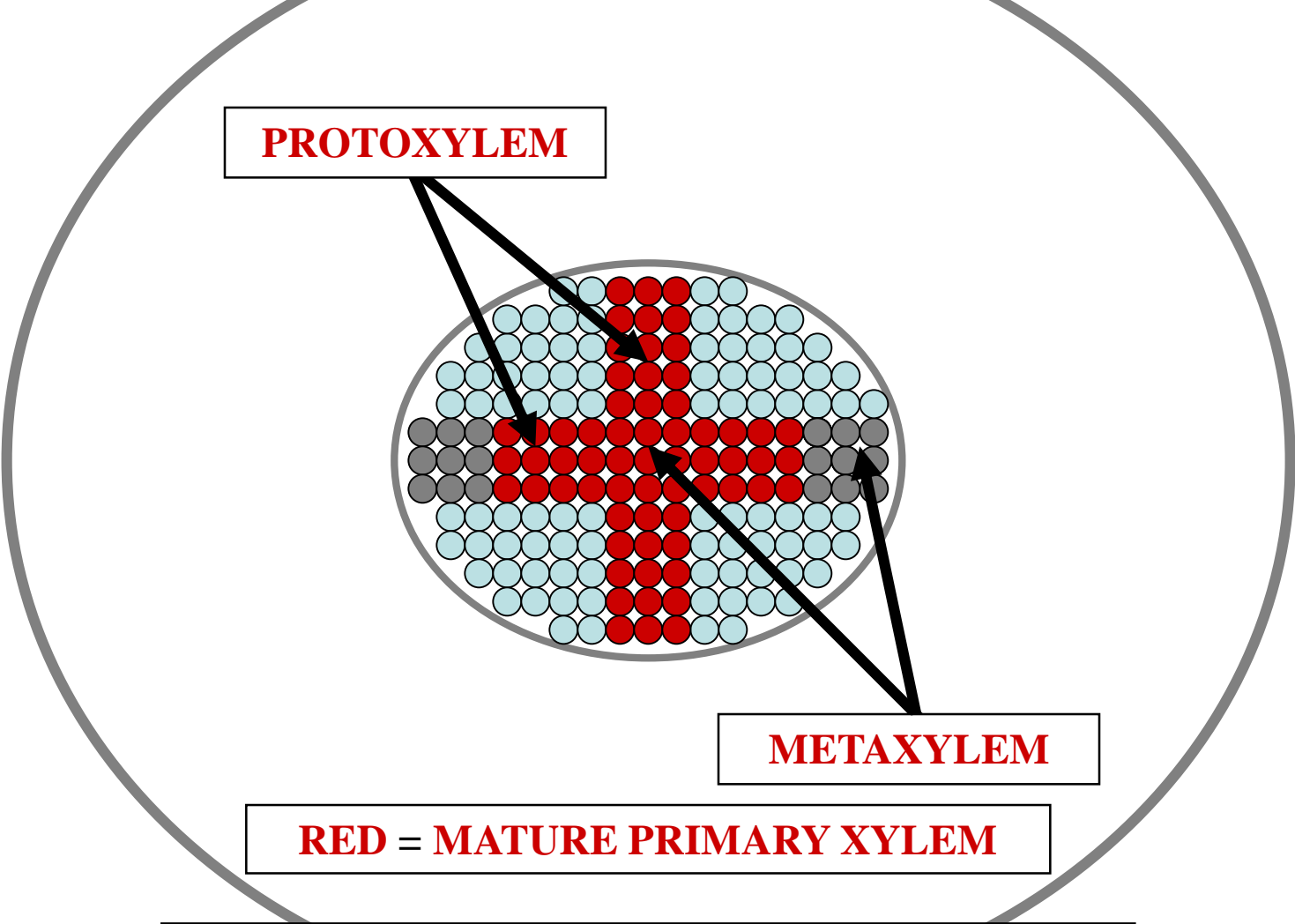
RED = MATURE PRIMARY XYLEM

ROOT

**INWARD & OUTWARD
~1 XYLEM MATURATION**

C.S.

MESARCH MATURATION



PROTOXYLEM

METAXYLEM

RED = MATURE PRIMARY XYLEM

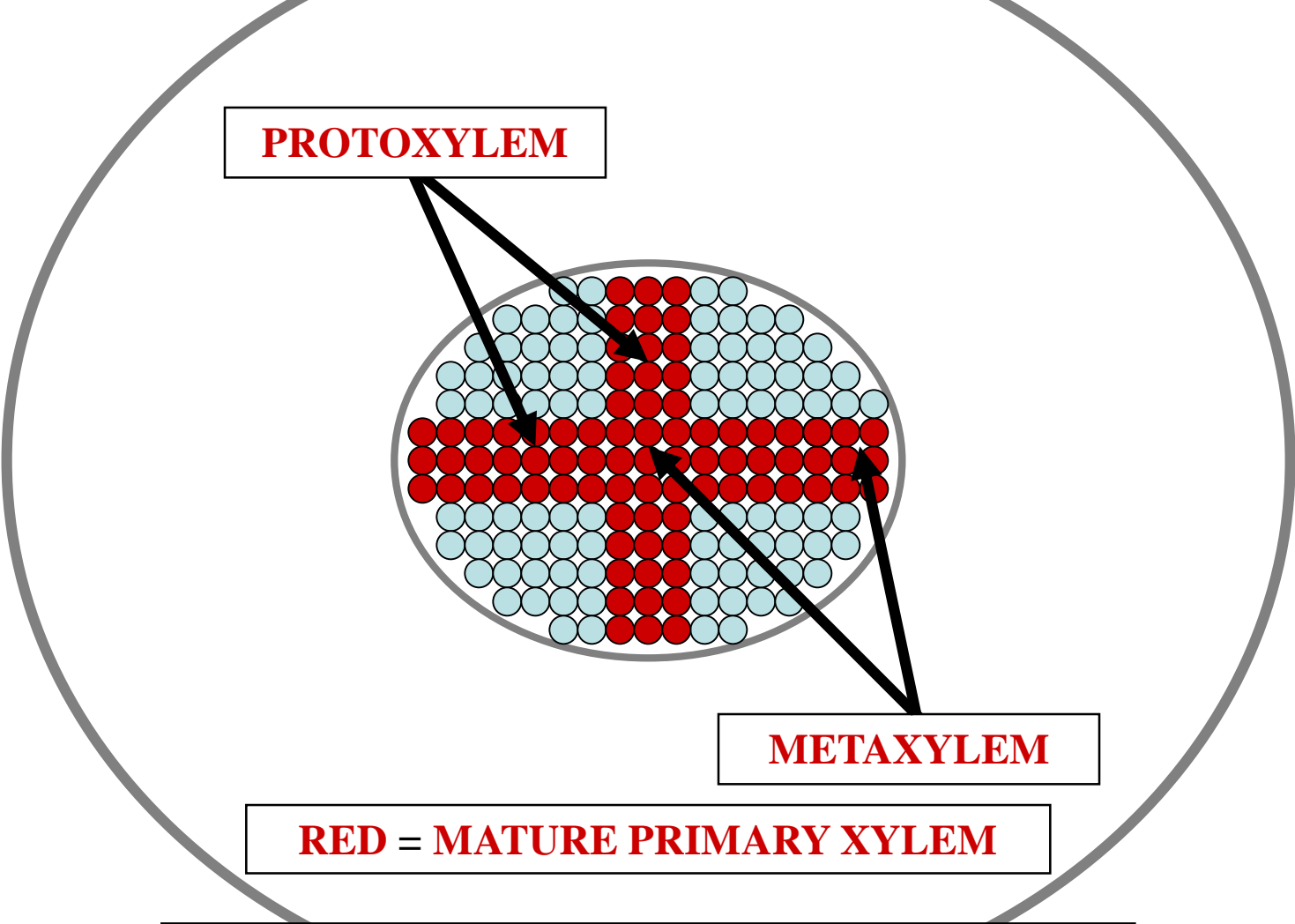
ROOT

**INWARD & OUTWARD
~1 XYLEM MATURATION**

C.S.



MESARCH MATURATION



PROTOXYLEM

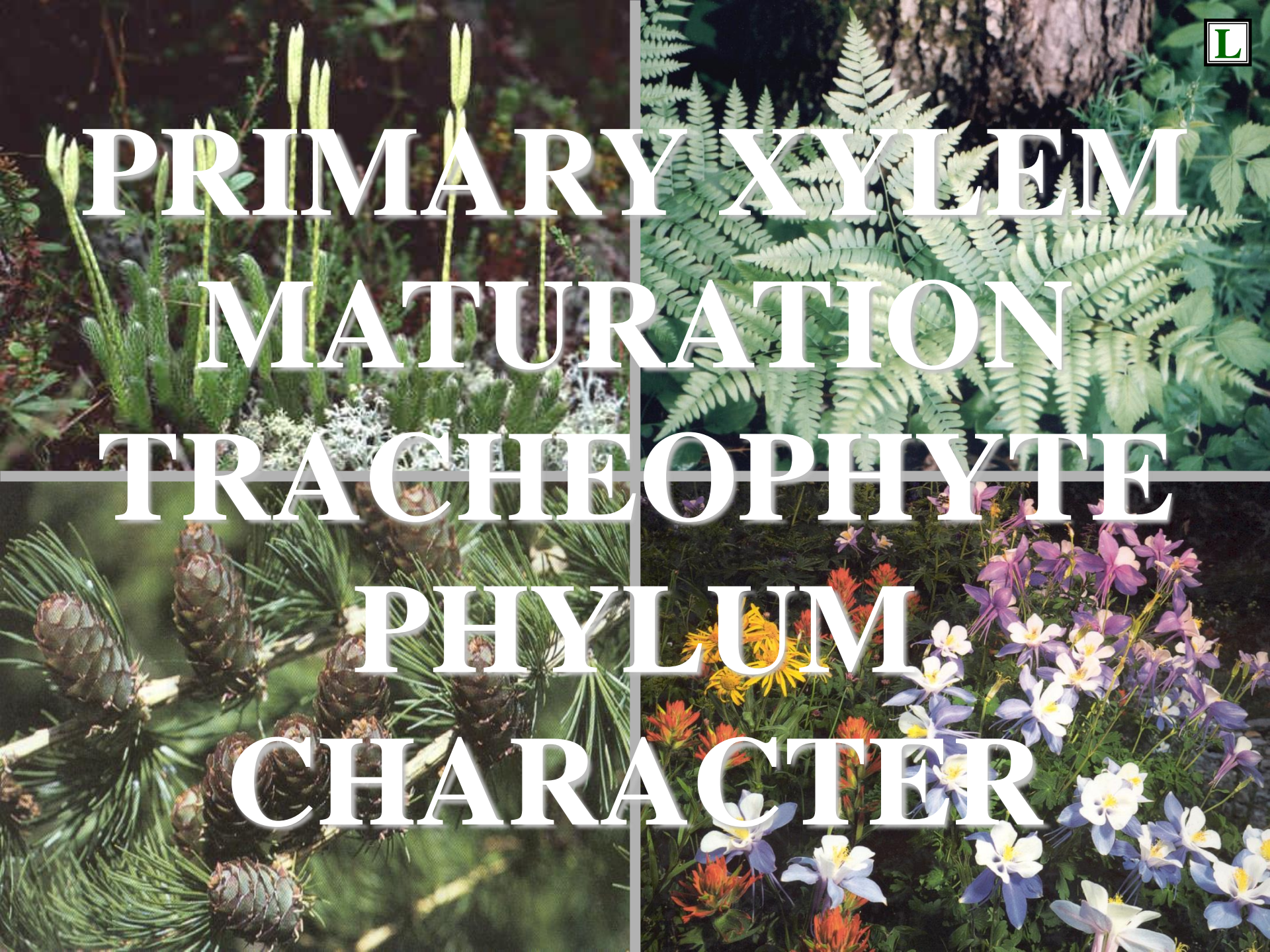
METAXYLEM

RED = MATURE PRIMARY XYLEM

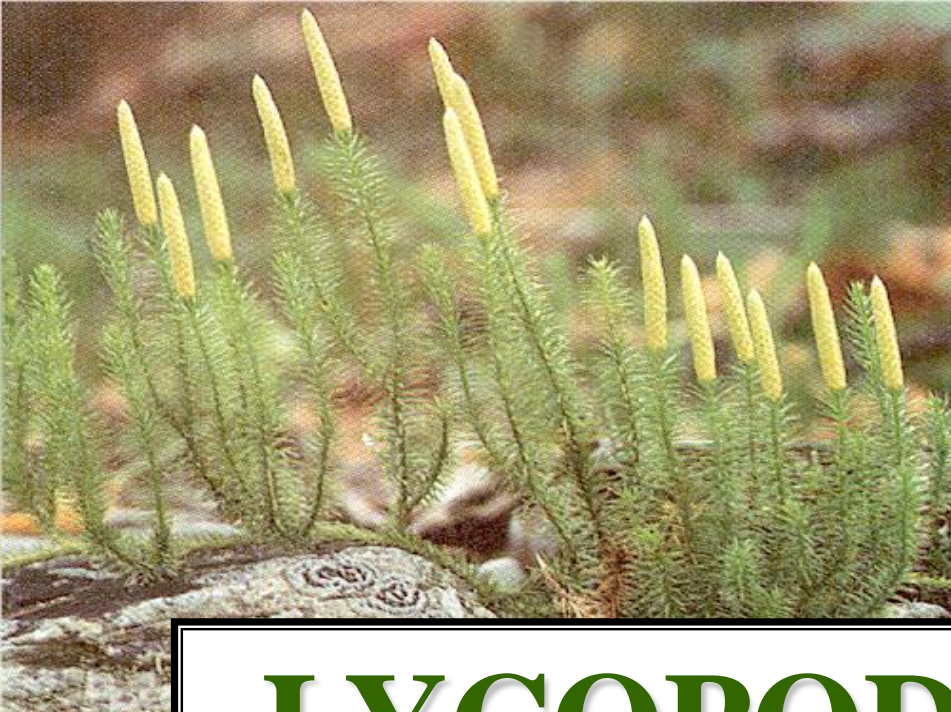
ROOT

**INWARD & OUTWARD
~1 XYLEM MATURATION**

C.S.



PRIMARY XYLEM
MATURATION
TRACHEOPHYTE
PHYLUM
CHARACTER

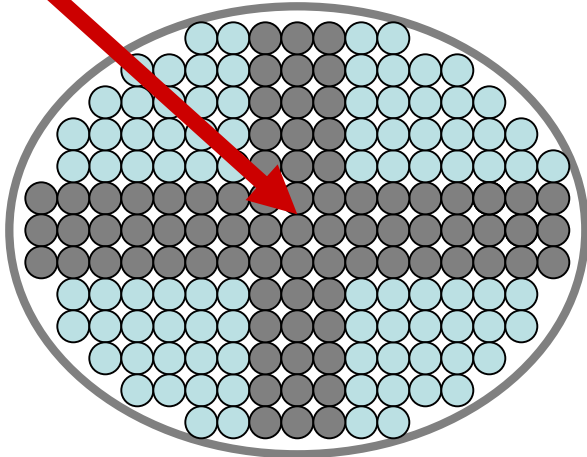


LYCOPODIOPHYTA



EXARCH MATURATION

PRIMARY
XYLEM



LYCOPODIOPHYTA

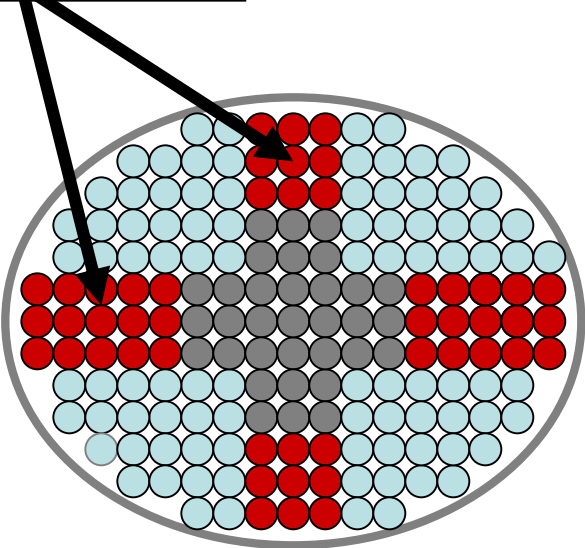
ROOT

INWARD ~1 XYLEM MATURATION

C.S.

EXARCH MATURATION

PROTOXYLEM



RED = MATURE PRIMARY XYLEM

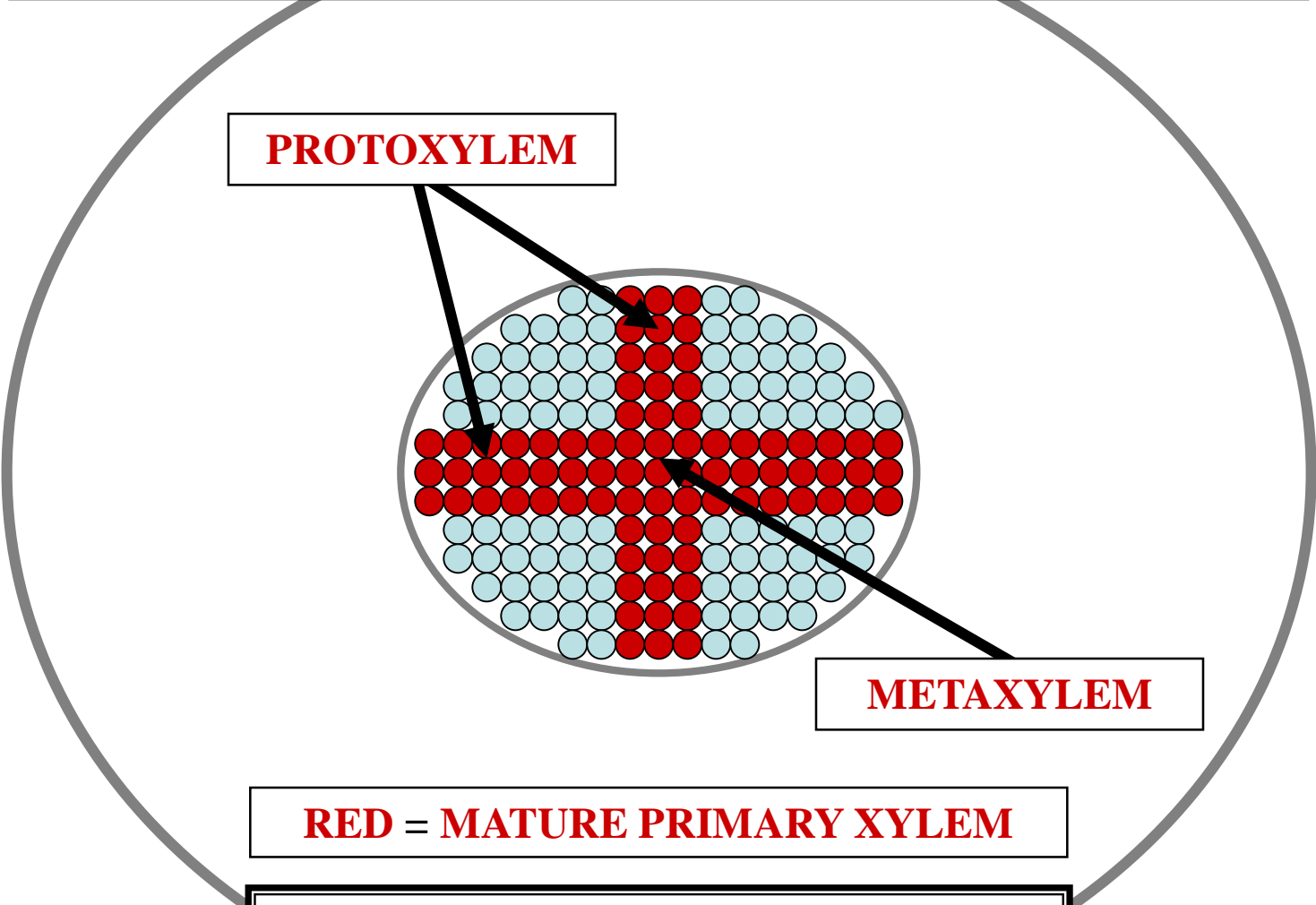
LYCOPODIOPHYTA

ROOT

INWARD ~1 XYLEM MATURATION

C.S.

EXARCH MATURATION



PROTOXYLEM

METAXYLEM

RED = MATURE PRIMARY XYLEM

LYCOPODIOPHYTA

ROOT

INWARD ~1 XYLEM MATURATION

C.S.

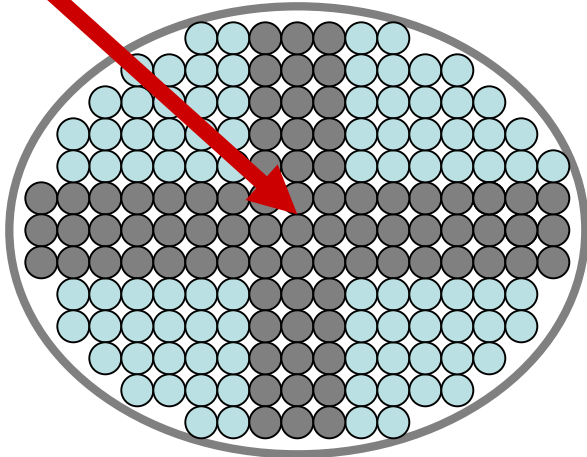


PTERIDOPHYTA



ENDARCH MATURATION

PRIMARY XYLEM



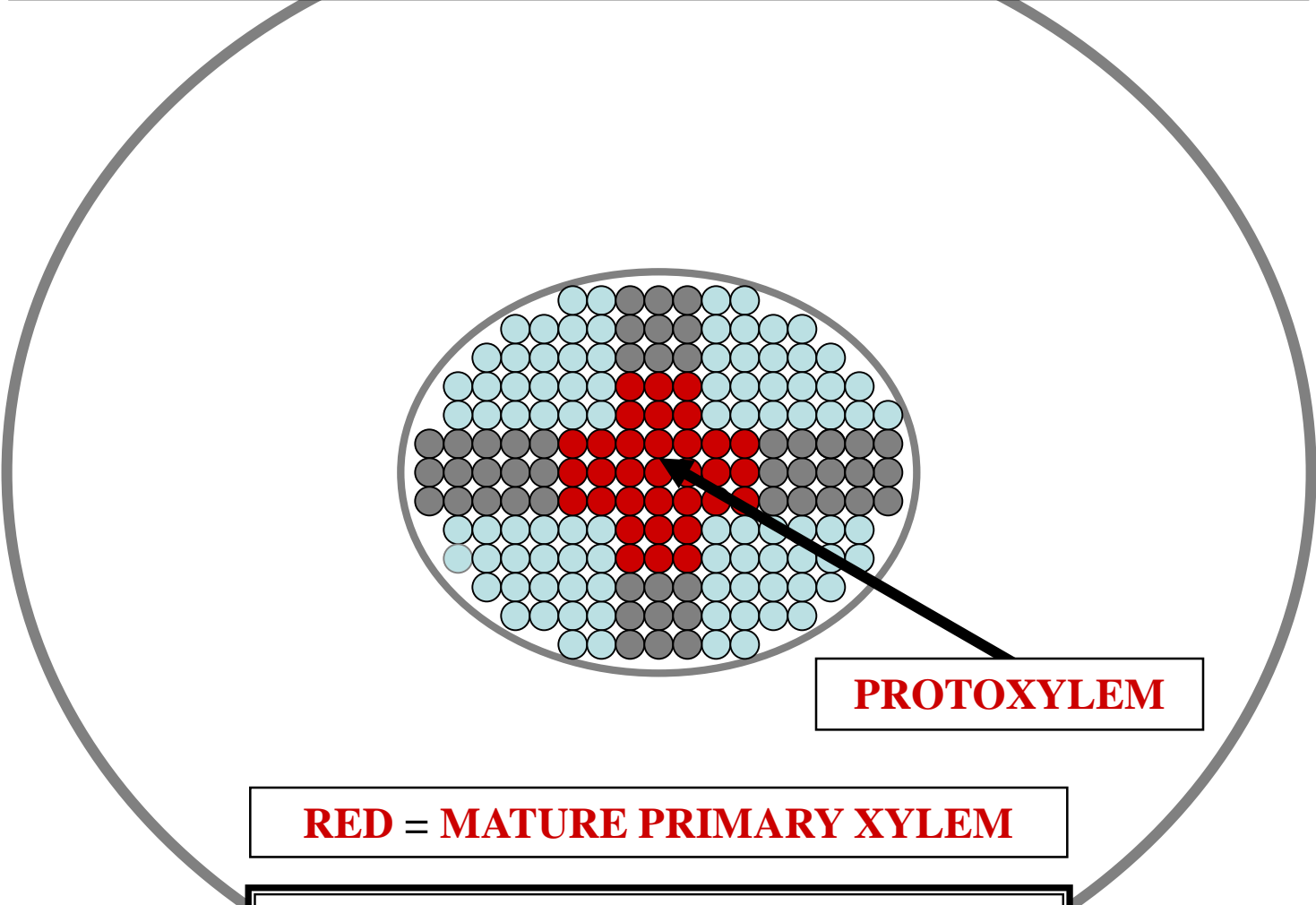
PTERIDOPHYTA

ROOT

OUTWARD ~1 XYLEM MATURATION

C.S.

ENDARCH MATURATION



PROTOXYLEM

RED = MATURE PRIMARY XYLEM

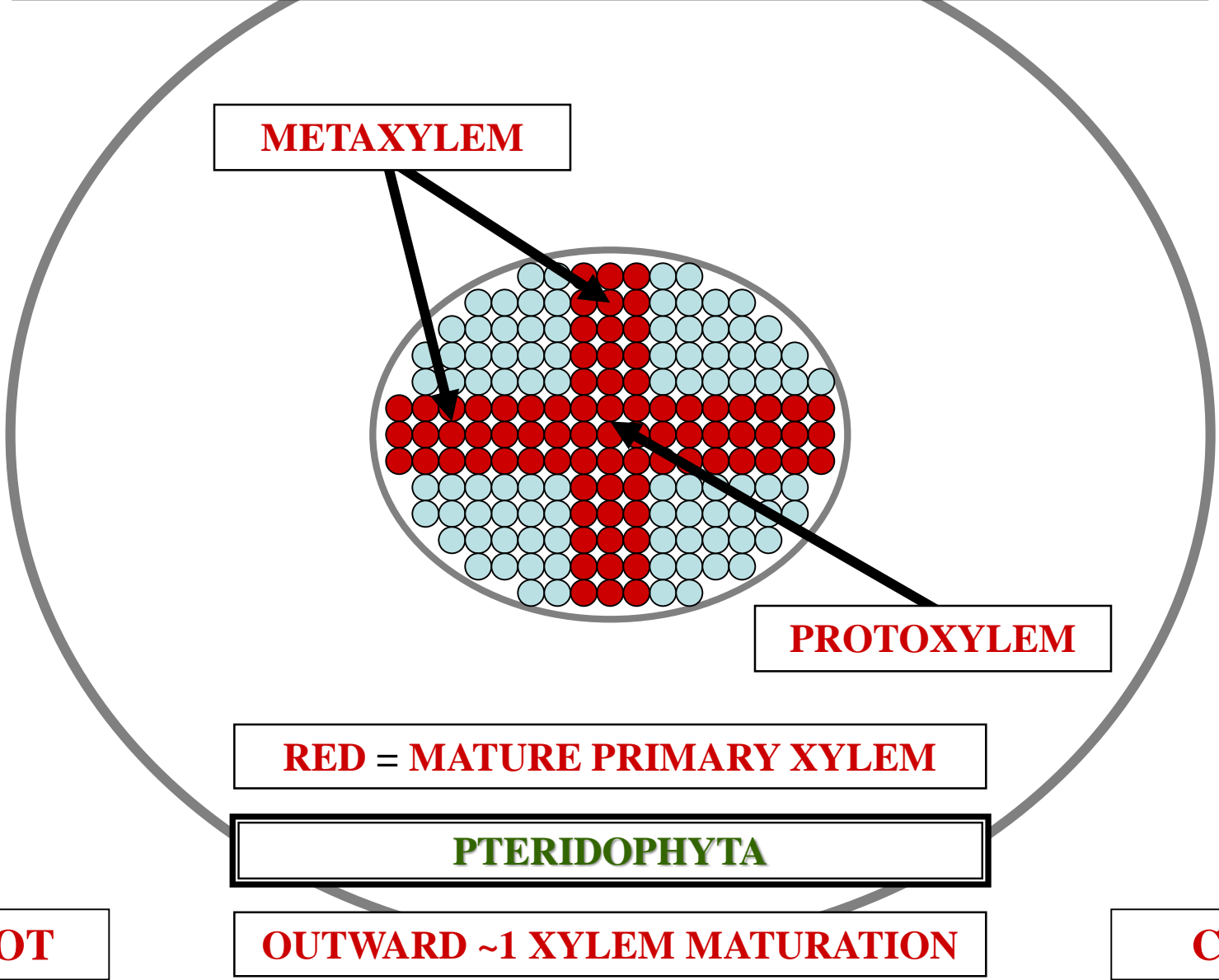
PTERIDOPHYTA

ROOT

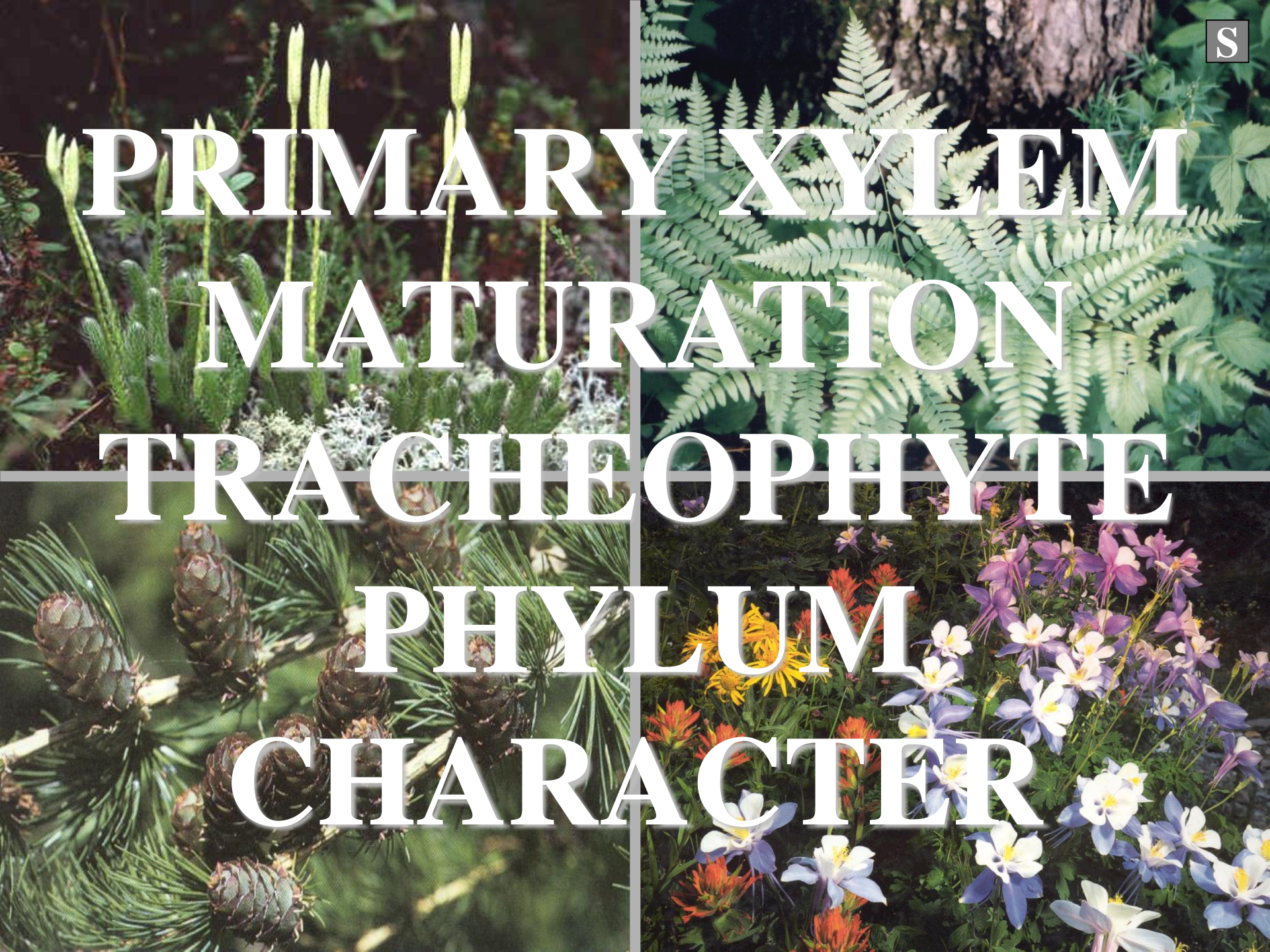
OUTWARD ~1 XYLEM MATURATION

C.S.

ENDARCH MATURATION



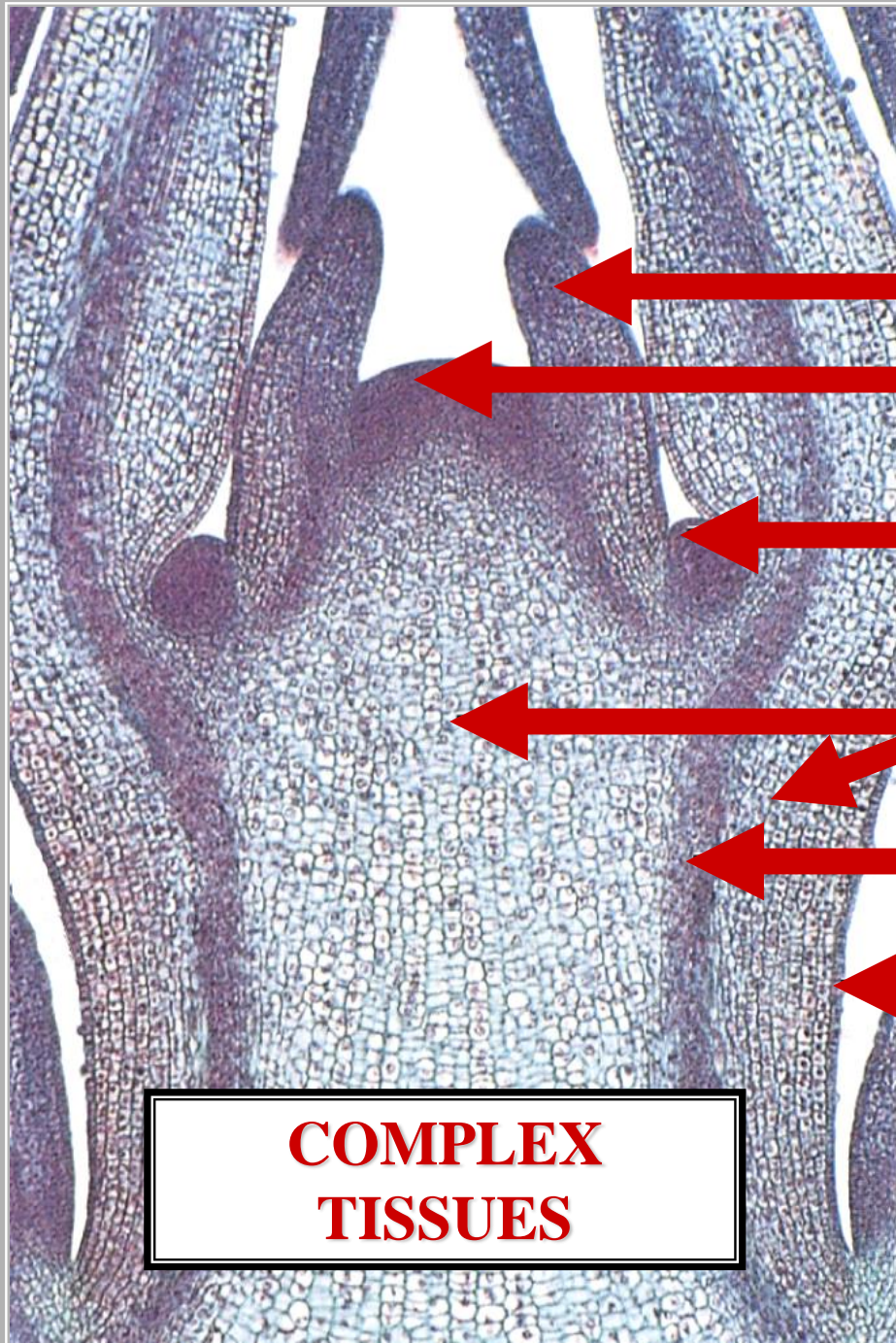
PRIMARY XYLEM
MATURATION
TRACHEOPHYTE
PHYLUM
CHARACTER





TRACHEOPHYTE COMPLEX TISSUES SUMMARY

TRACHEOPHYTE G COMPLEX TISSUES



**APICAL
MERISTEM**

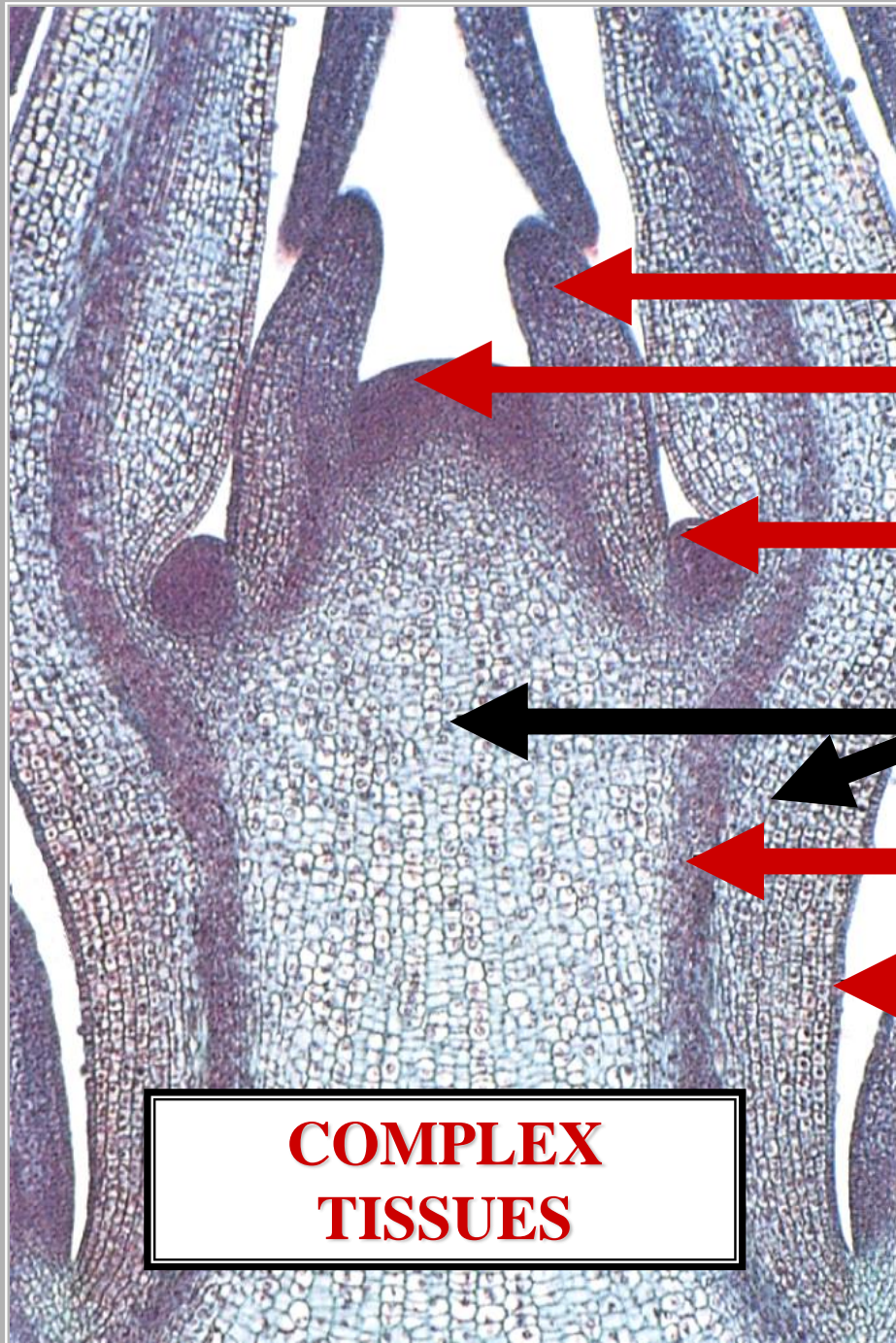
**COMPLEX
TISSUES**

STEM

L.S.

TRACHEOPHYTE COMPLEX TISSUES

V



[Empty box]

**APICAL
MERISTEM**

[Empty box]

GROUND TISSUE

[Empty box]

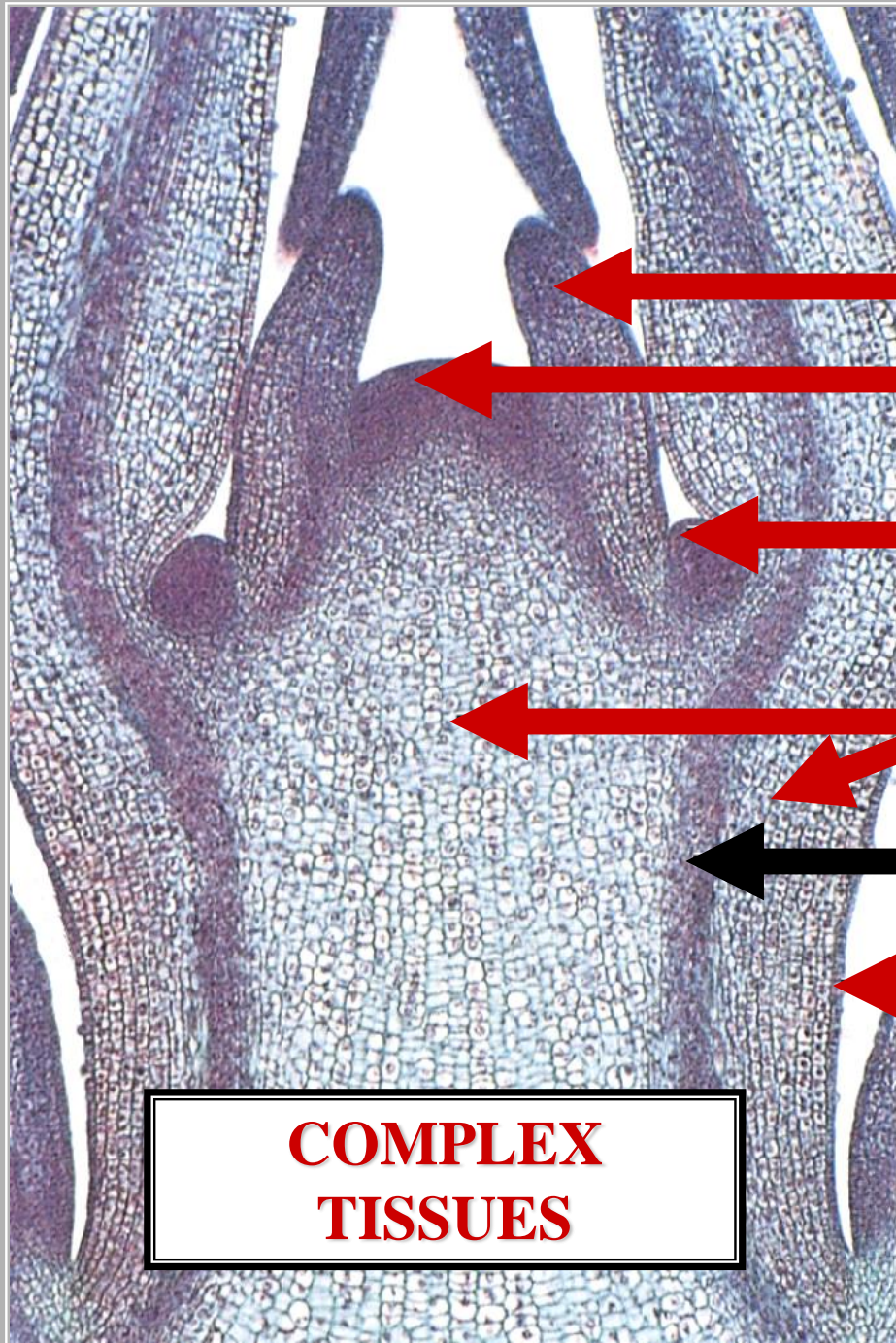
[Empty box]

**COMPLEX
TISSUES**

STEM

L.S.

TRACHEOPHYTE D COMPLEX TISSUES



[Empty box]

**APICAL
MERISTEM**

[Empty box]

GROUND TISSUE

VASCULAR TISSUE

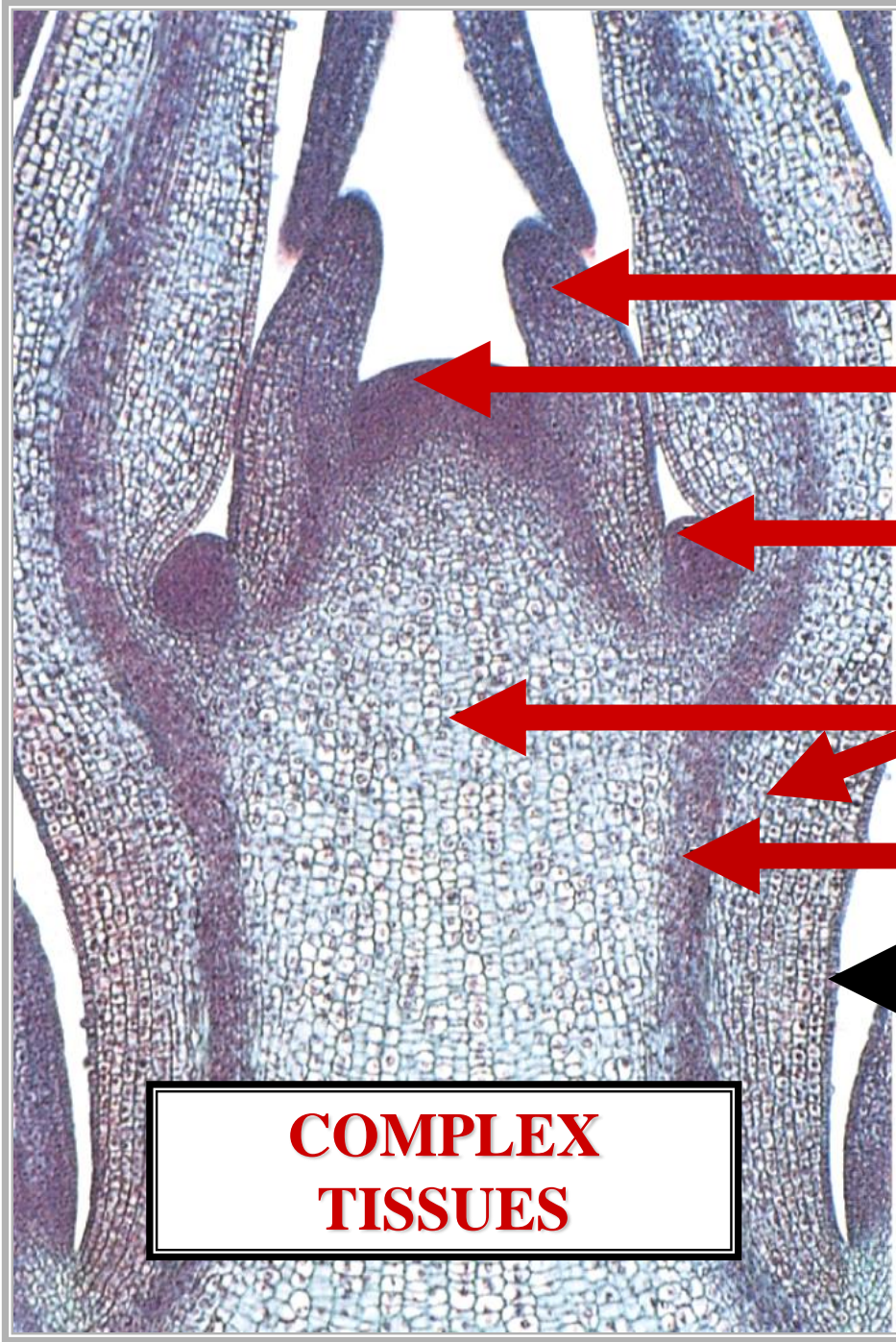
[Empty box]

STEM

L.S.

**COMPLEX
TISSUES**

TRACHEOPHYTE COMPLEX TISSUES



[Empty box]

**APICAL
MERISTEM**

[Empty box]

GROUND TISSUE

VASCULAR TISSUE

DERMAL TISSUE

**COMPLEX
TISSUES**

STEM

L.S.

DERMAL TISSUE

DERMAL TISSUE



DERMAL TISSUE

**OUTERMOST
PROTECTIVE TISSUE**

DERMAL TISSUE

DERMAL TISSUE TYPES

DERMAL TISSUE TYPES

EPIDERMIS

DERMAL TISSUE TYPES

DERMAL TISSUE TYPES

EPIDERMIS
PERIDERM

**DERMAL TISSUE
TYPES**

EPIDERMIS

DERMAL TISSUE

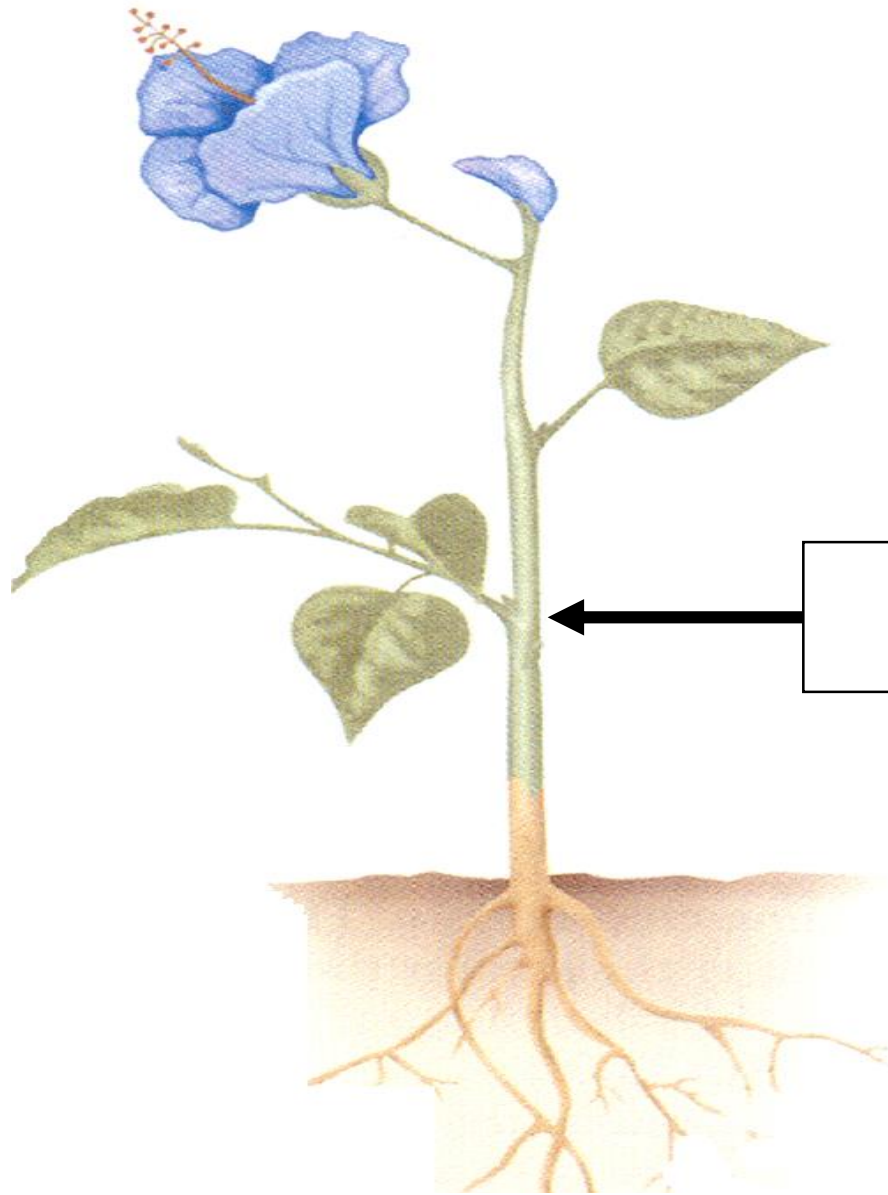
EPIDERMIS



HERBACEOUS TISSUES

DERMAL TISSUE

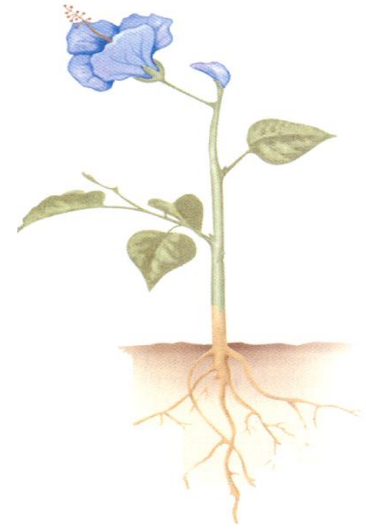
EPIDERMIS



STEM

HERBACEOUS TISSUE

TRACHEOPHYTE

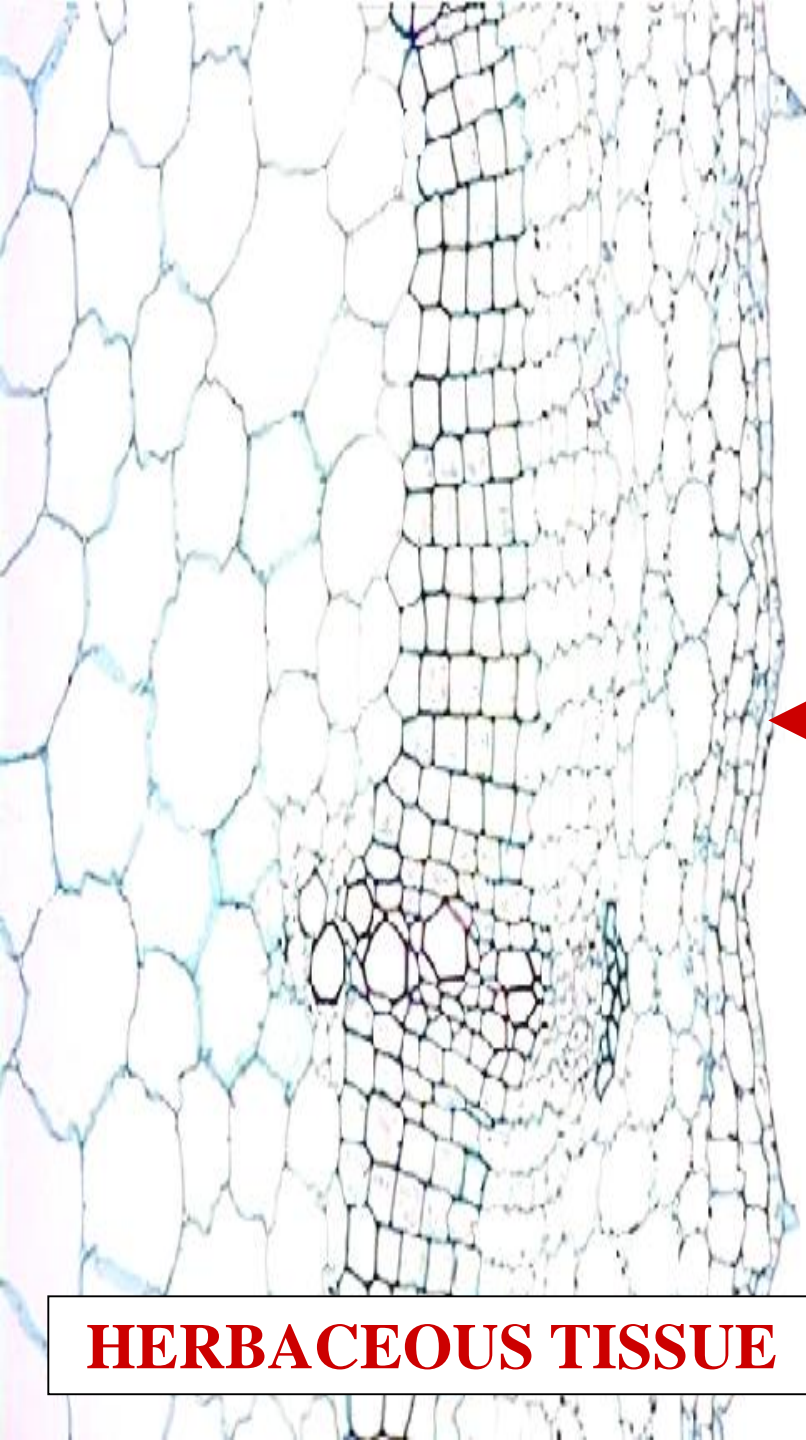


EPIDERMIS

STEM

C.S.

HERBACEOUS TISSUE



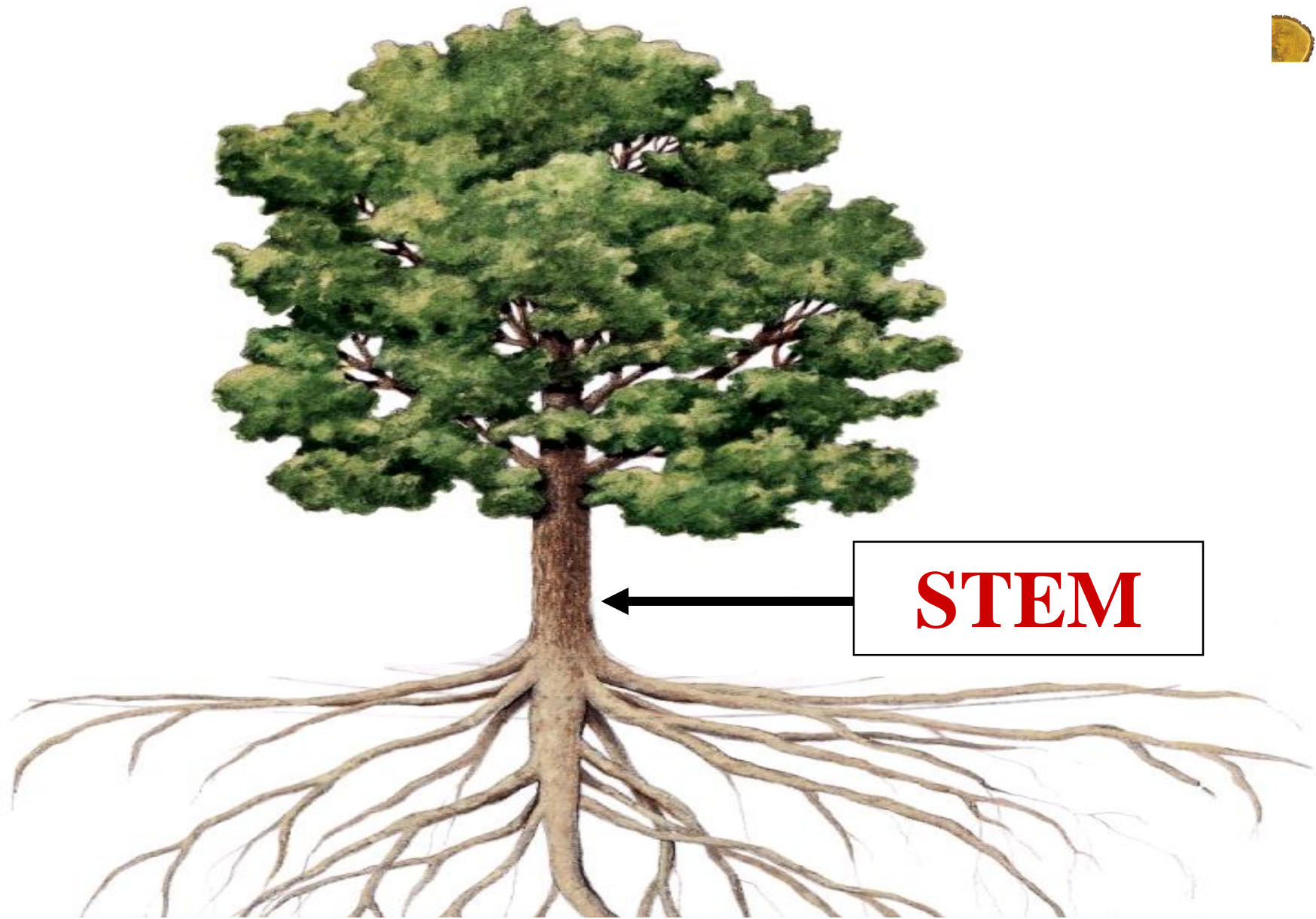
PERIDERM

DERMAL TISSUE PERIDERM



WOODY TISSUES

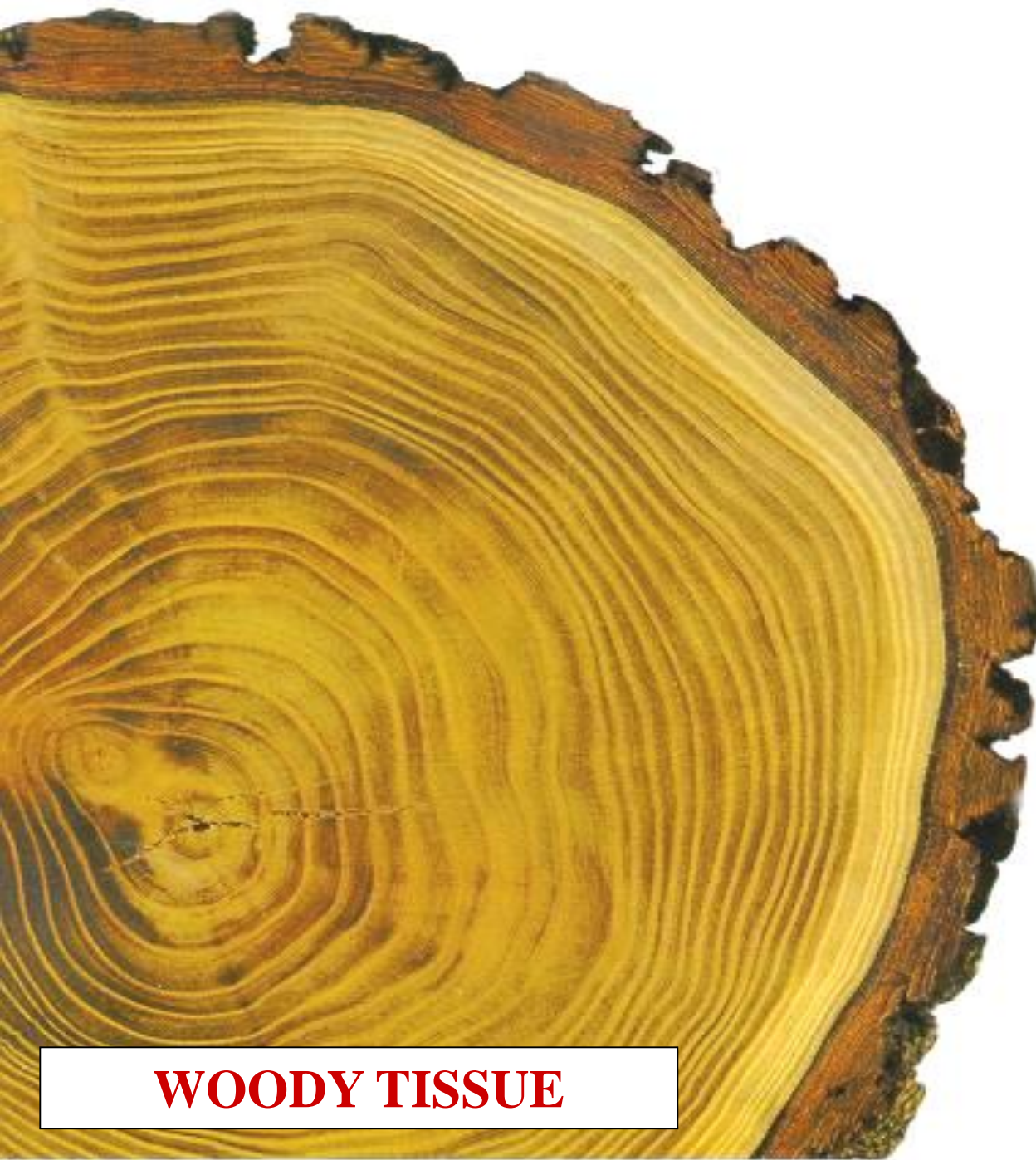
DERMAL TISSUE PERIDERM



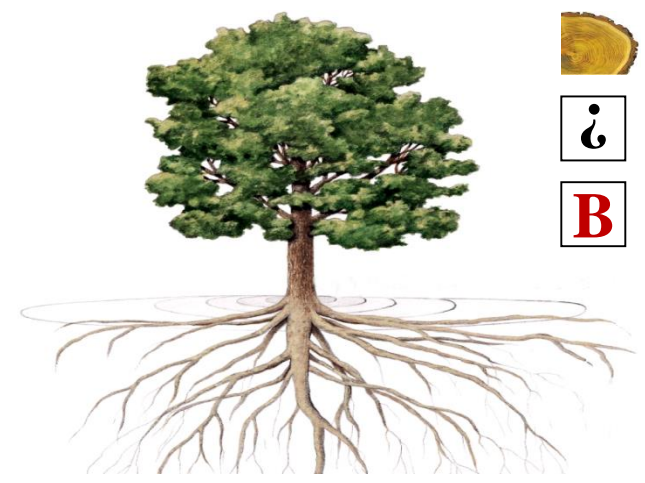
STEM

WOODY TISSUE

TRACHEOPHYTE



WOODY TISSUE

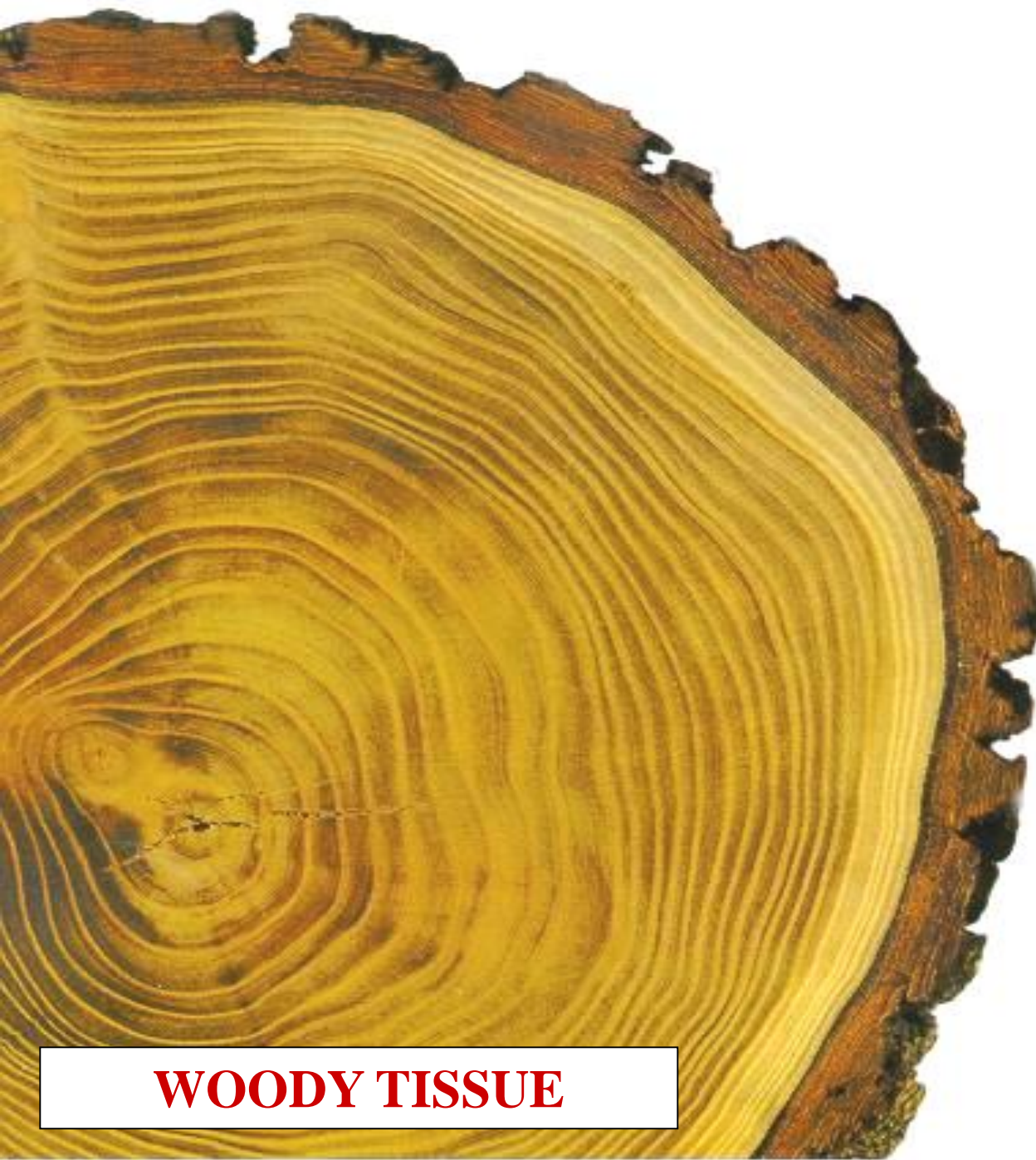
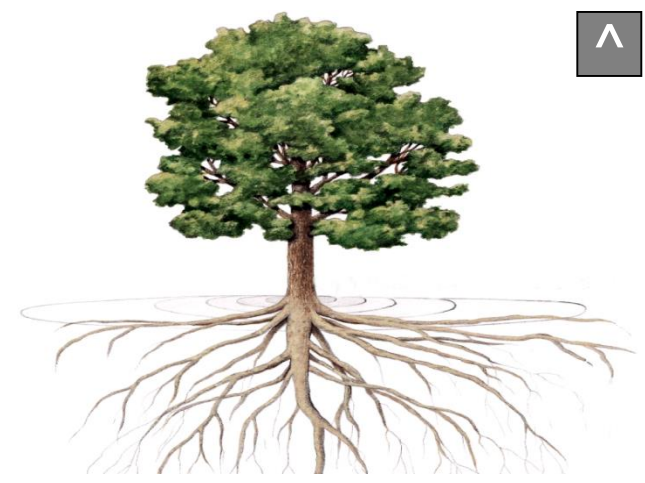


PERIDERM



STEM

C.S.



BARK



STEM

C.S.

WOODY TISSUE

DERMAL TISSUE PROTECTION AGAINST

DESICCATION

DERMAL TISSUE



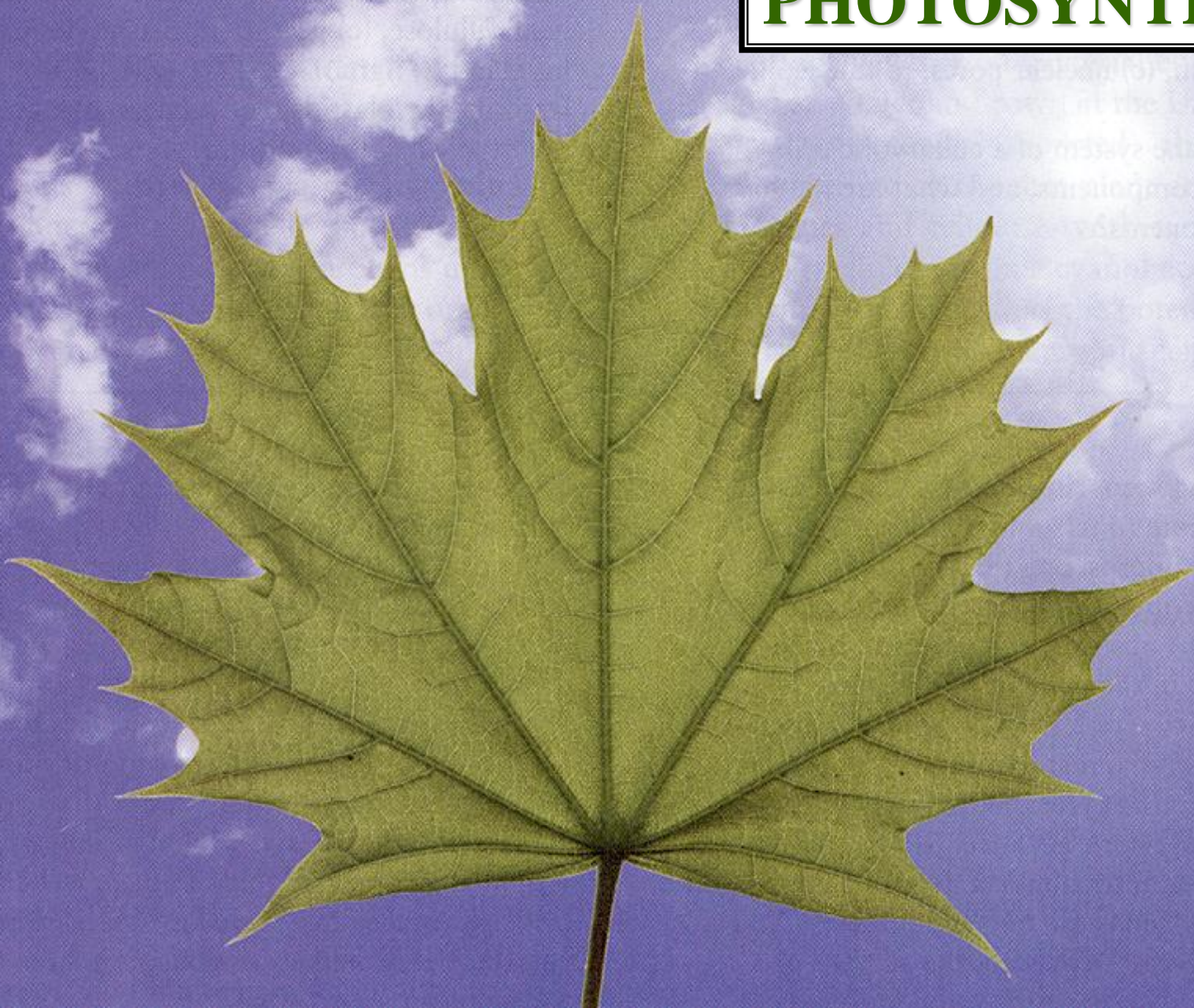
PROTECTION / DESICCATION

WATER LOSS

DERMAL TISSUE

PROTECTION / DESICCATION

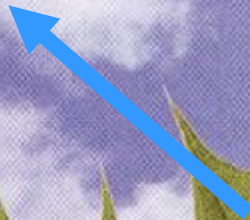
PHOTOSYNTHESIS



PHOTOSYNTHESIS



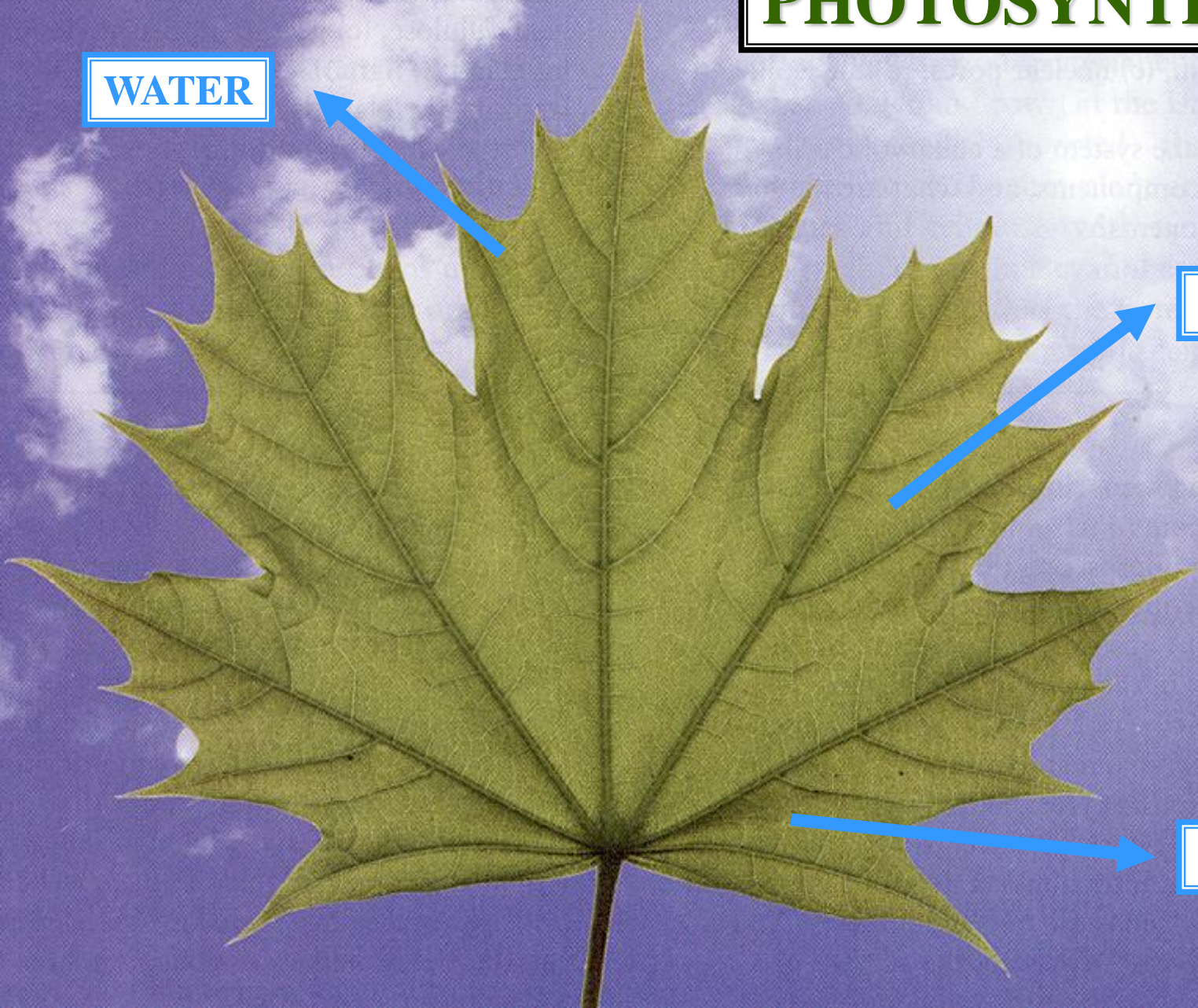
WATER



WATER



WATER



ATMOSPHERE

?

EPIDERMIS



LEAF

C.S.

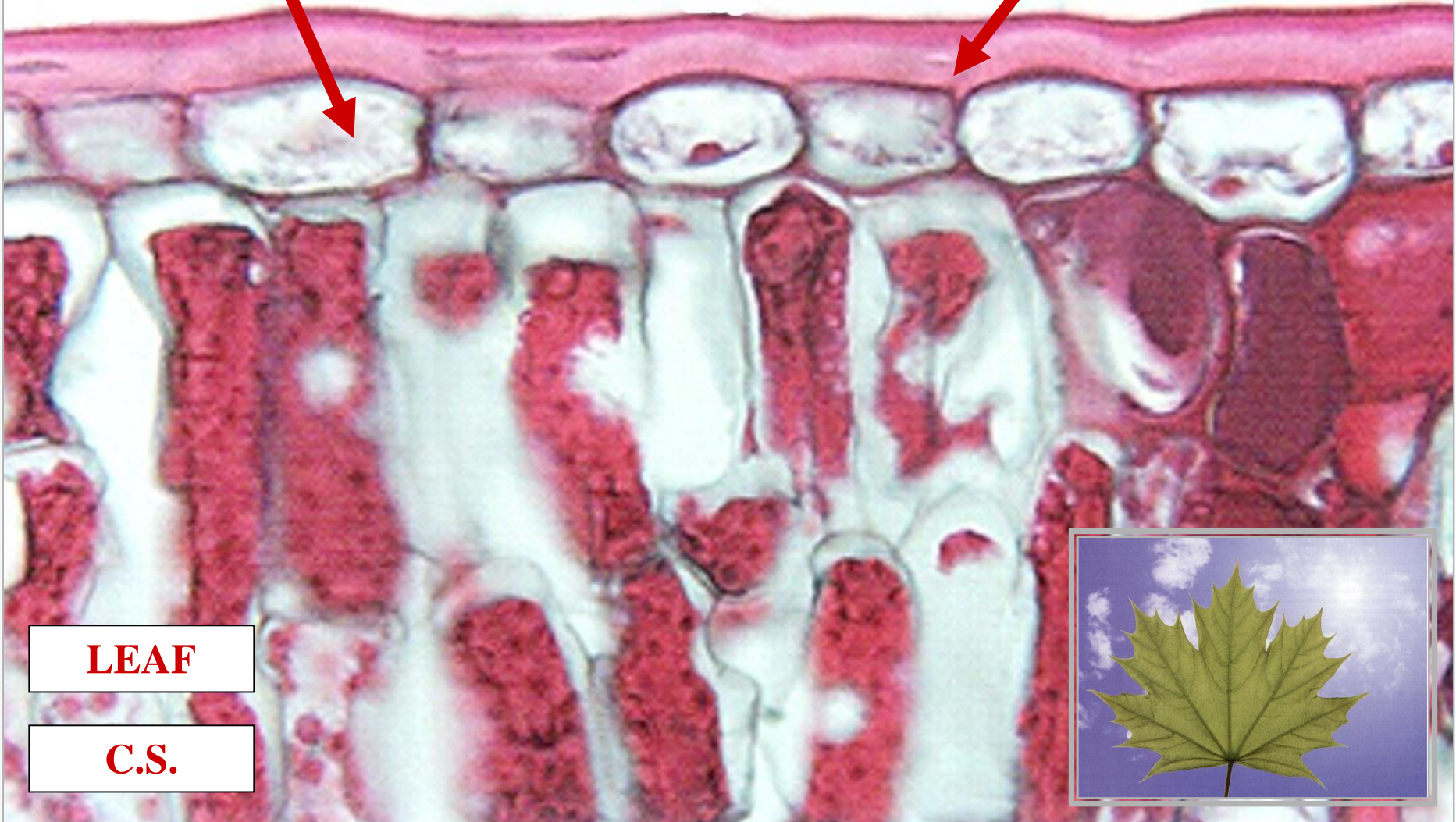


ATMOSPHERE

C

EPIDERMIS

?



LEAF

C.S.





ATMOSPHERE

EPIDERMIS

CUTICLE

HYDROPHOBIC



LEAF

C.S.

