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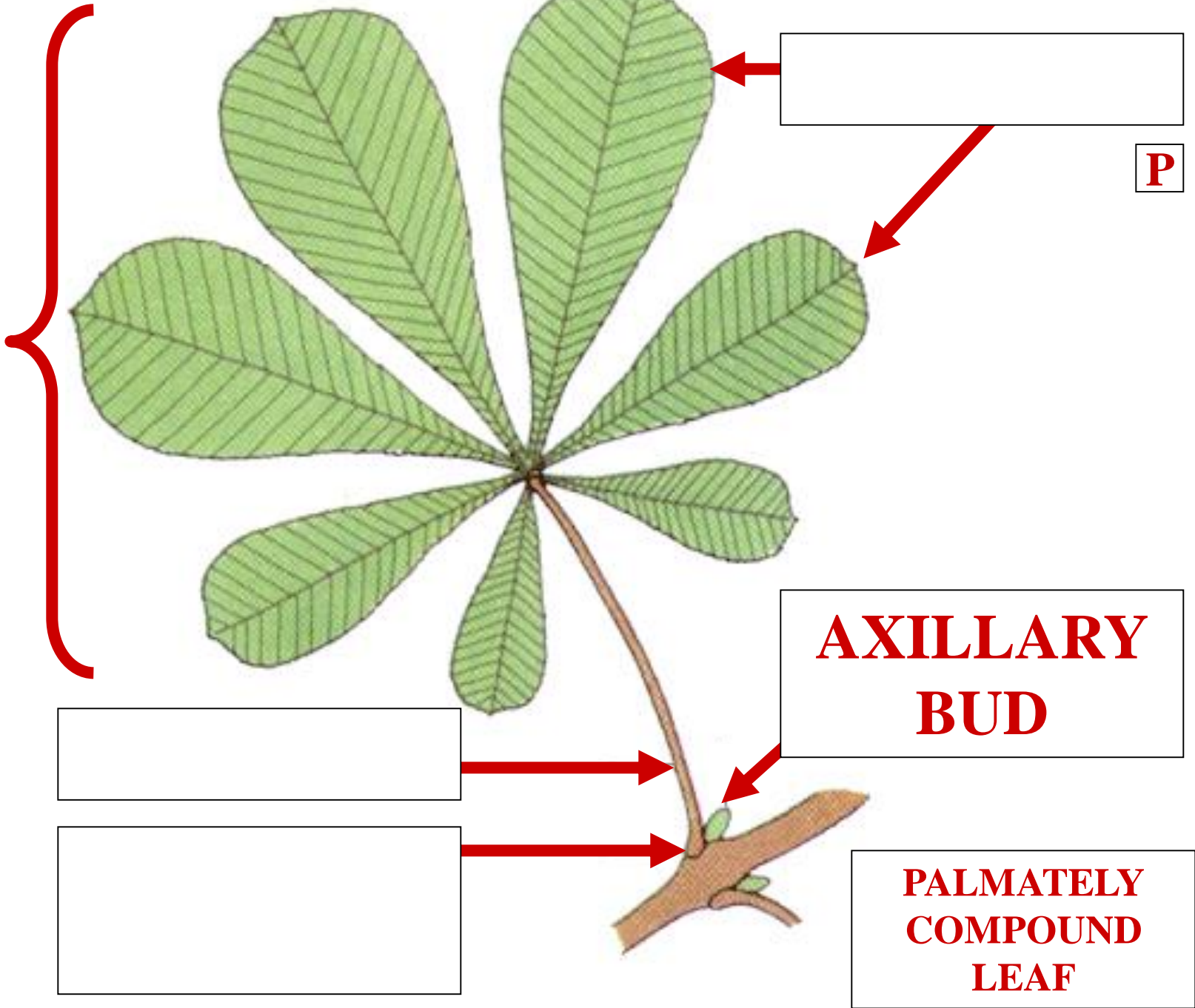
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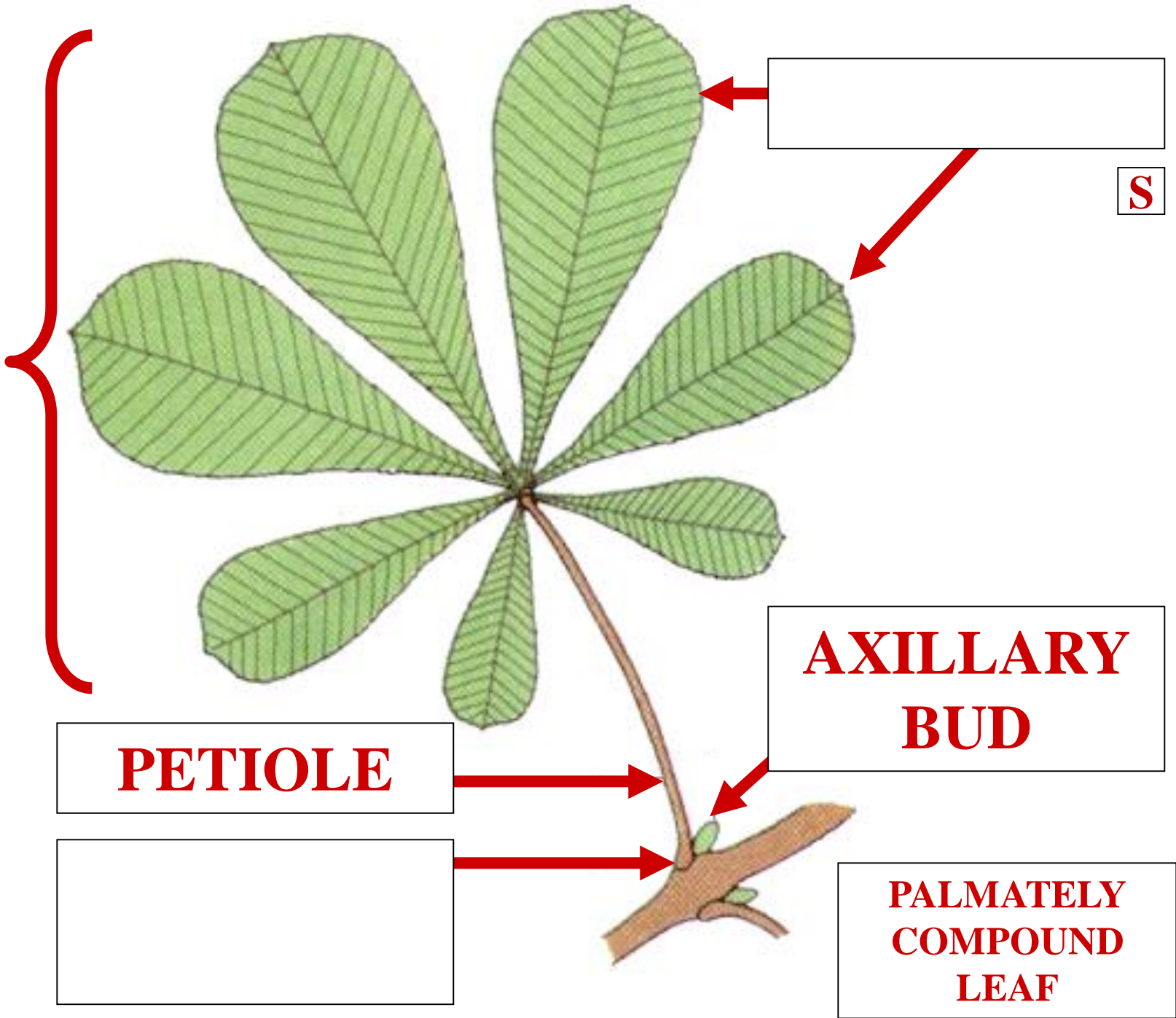


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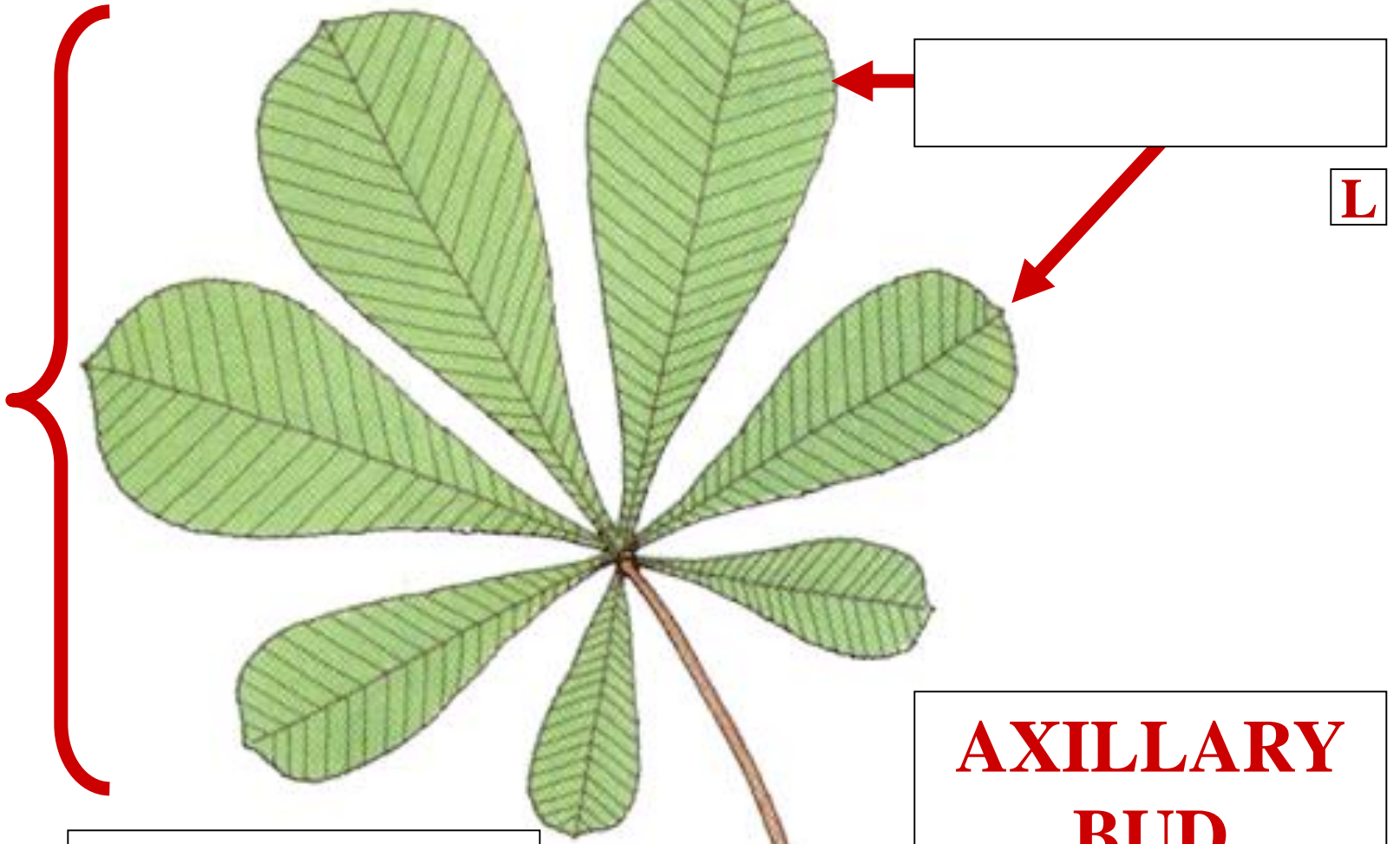
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**PETIOLE**

**AXILLARY  
BUD**

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**L**

**PETIOLE**

**AXILLARY  
BUD**

**STIPULES  
ABSENT**

**PALMATELY  
COMPOUND  
LEAF**





**LEAF**

**LAMINA**

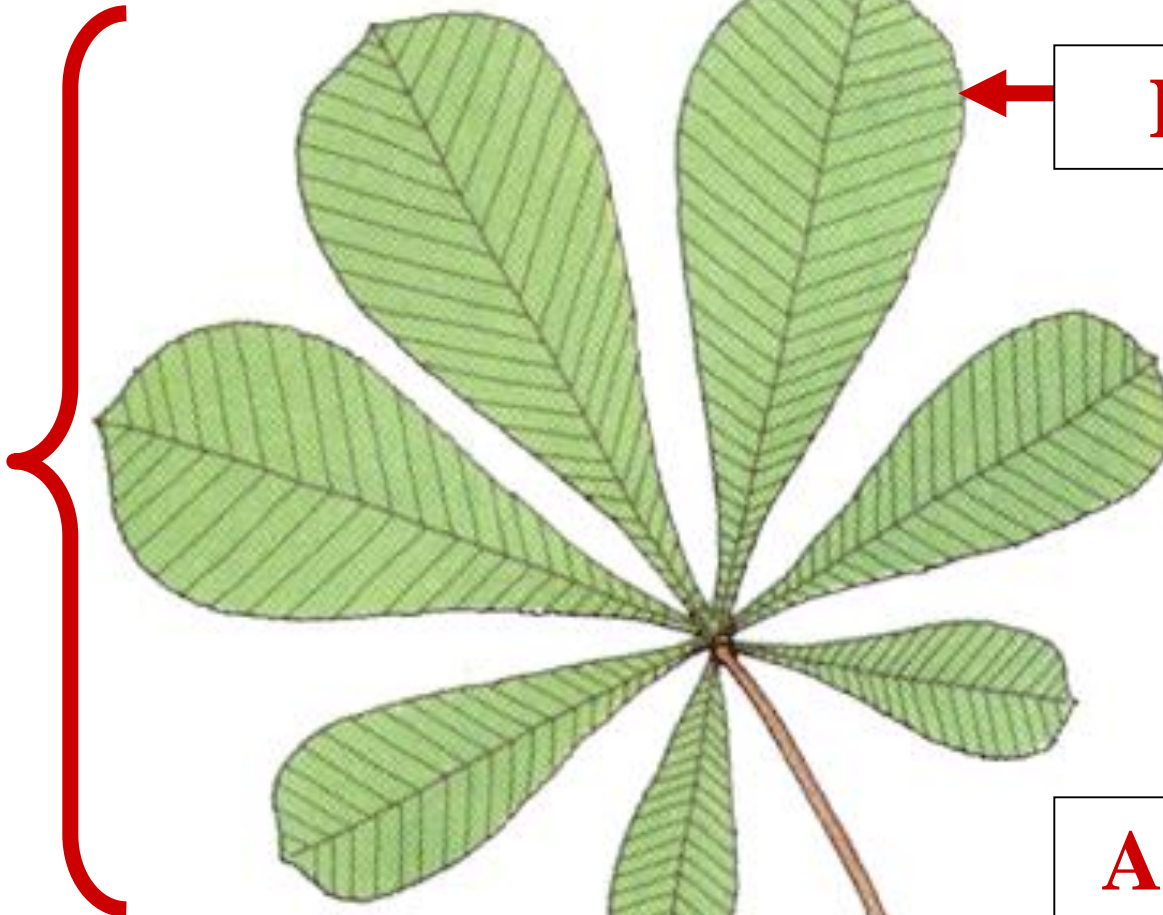
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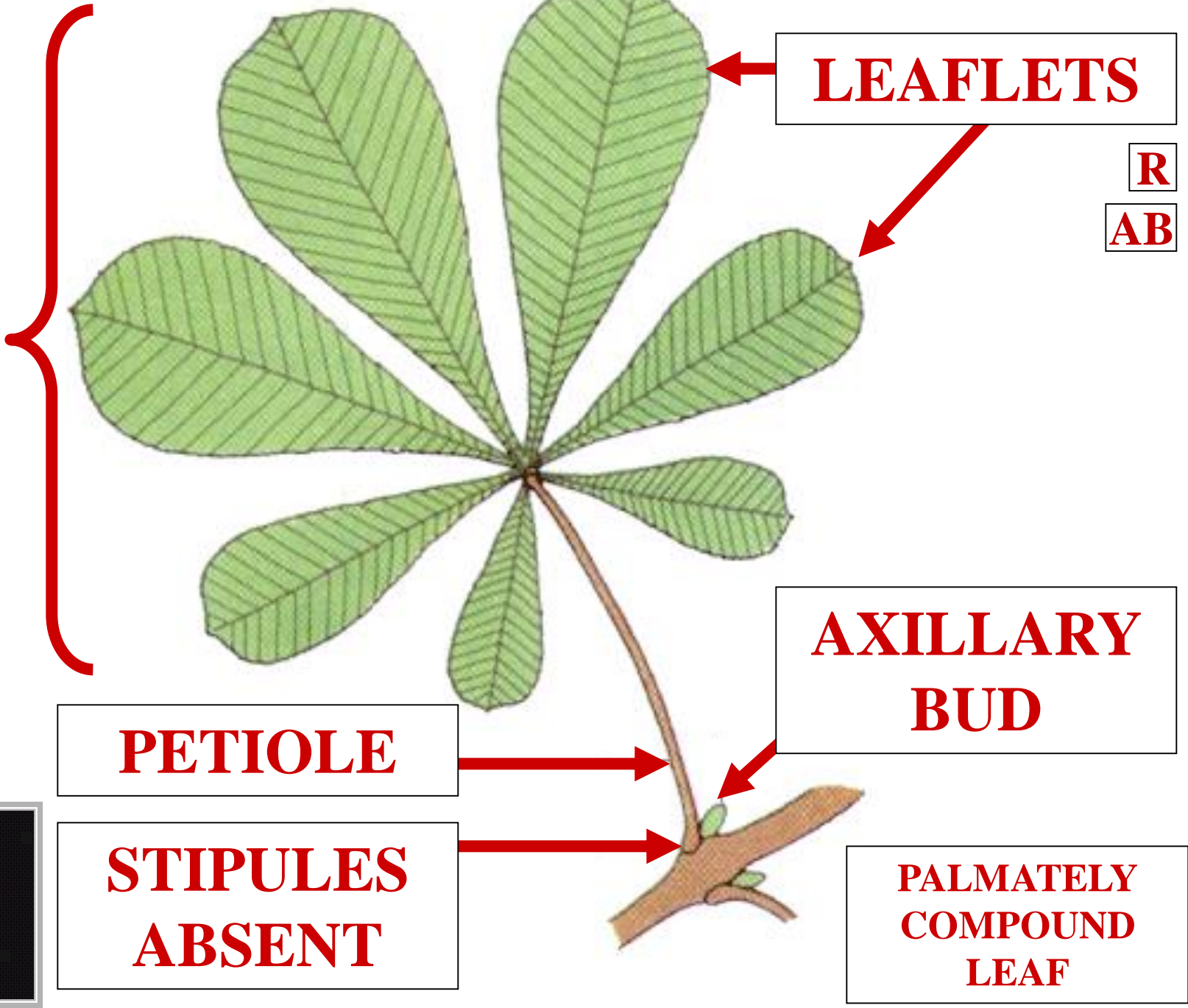
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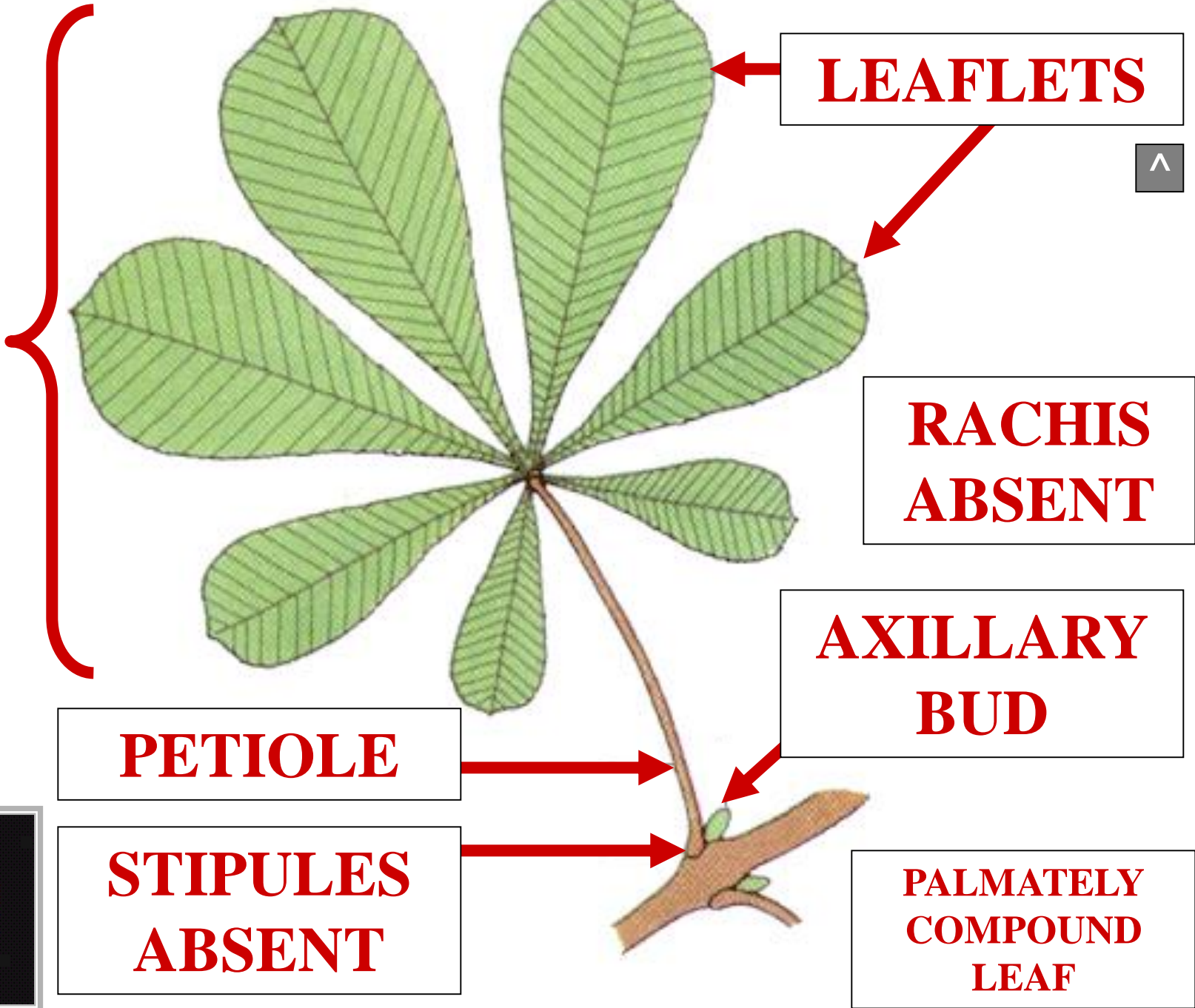


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# DICOT LEAF ANATOMY



# DICOT LEAF ANATOMY TYPES

**DICOT LEAF  
ANATOMY TYPES**

**HYDROPHYTE**

**DICOT LEAF  
ANATOMY TYPES**

**DICOT LEAF  
ANATOMY TYPES**

**HYDROPHYTE**

**MESOPHYTE**

**DICOT LEAF  
ANATOMY TYPES**



# **DICOT LEAF ANATOMY TYPES**

**HYDROPHYTE**

**MESOPHYTE**

**XEROPHYTE**

# **DICOT LEAF ANATOMY TYPES**



# **HYDROPHYTE LEAF**

# **HYDROPHYTE LEAF**

# **DICOT LEAF ANATOMY**

## **HYDROPHYTE**



**ADAPTED**  
**HIGH MOISTURE**  
**HABITAT**

# **DICOT LEAF ANATOMY**

## **HYDROPHYTE**



# AQUATIC HABITAT

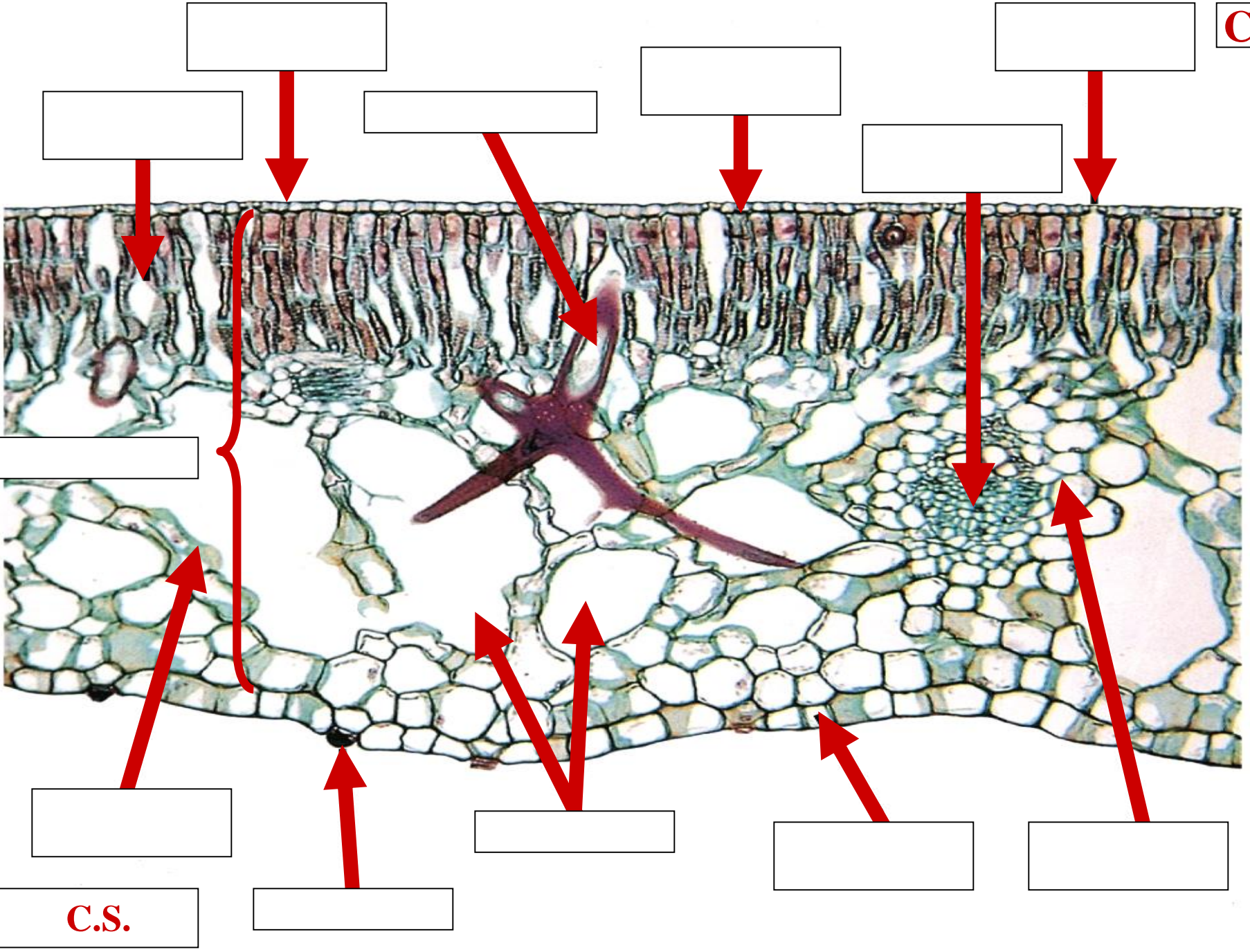




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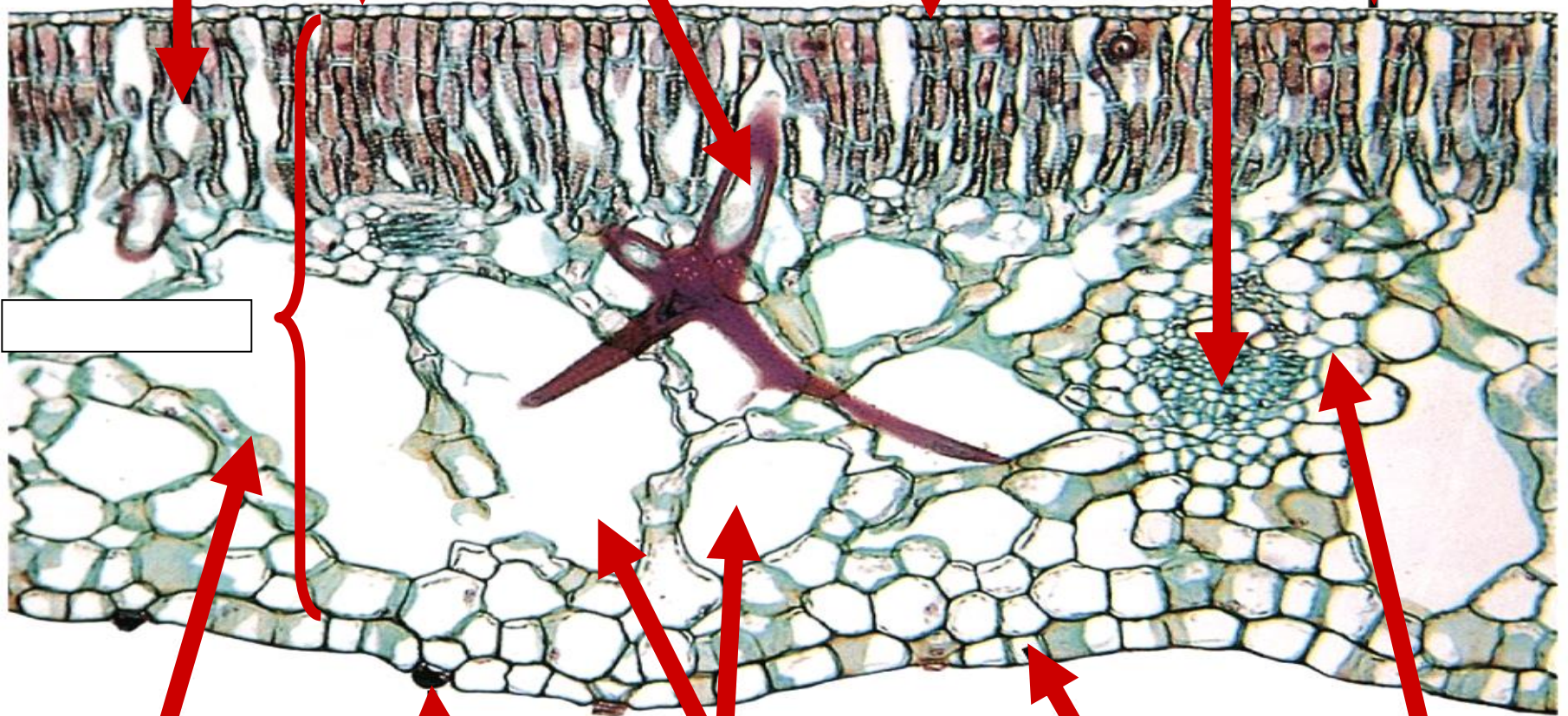
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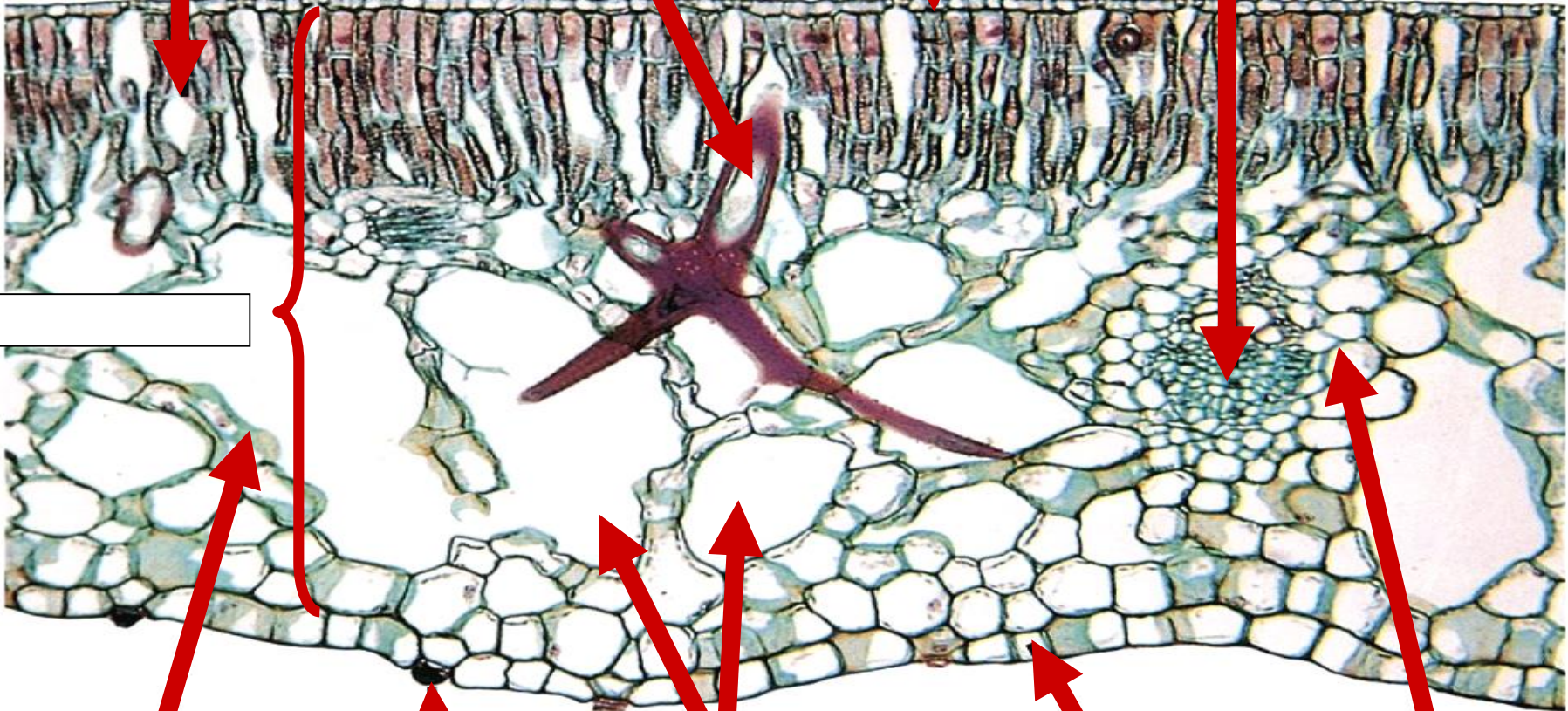
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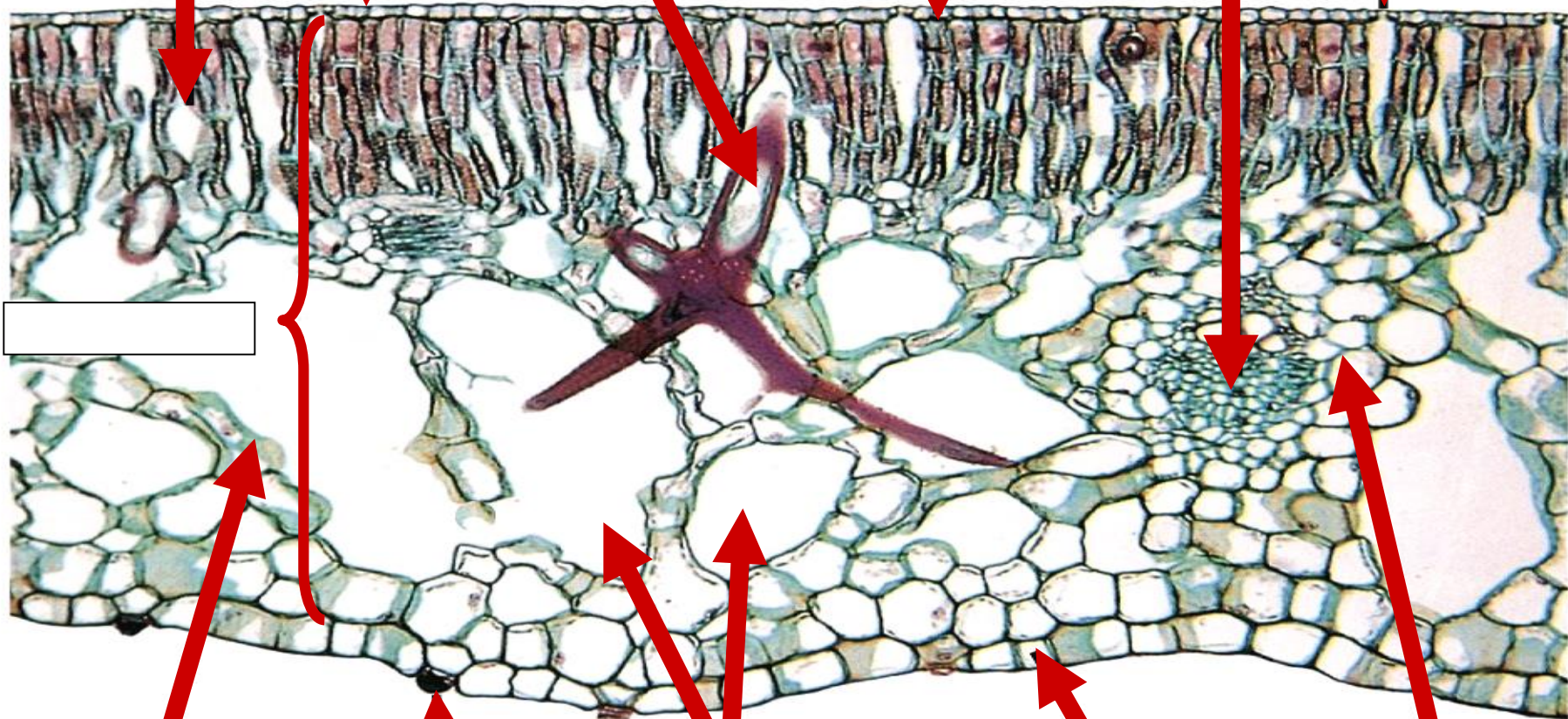
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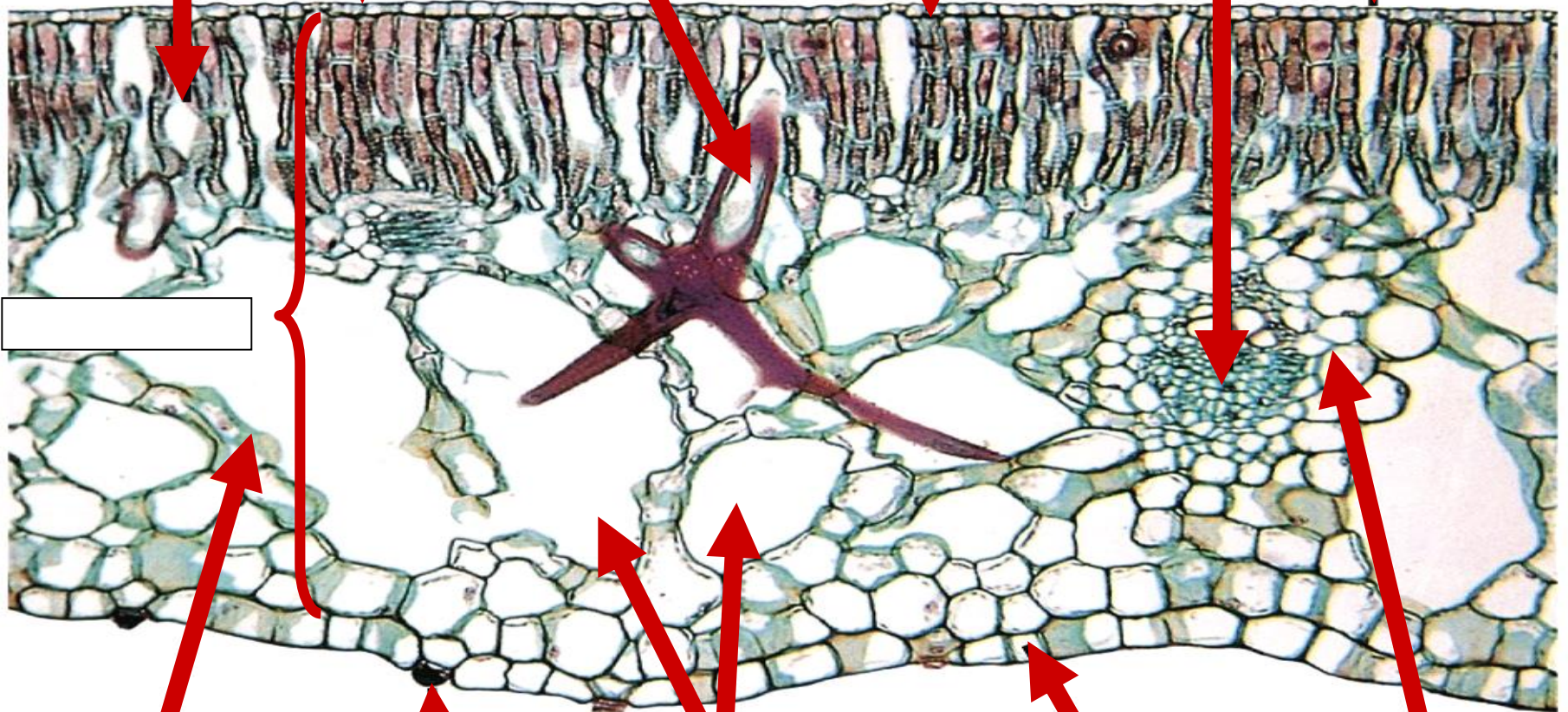


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EPIDERMIS**

**STOMATES  
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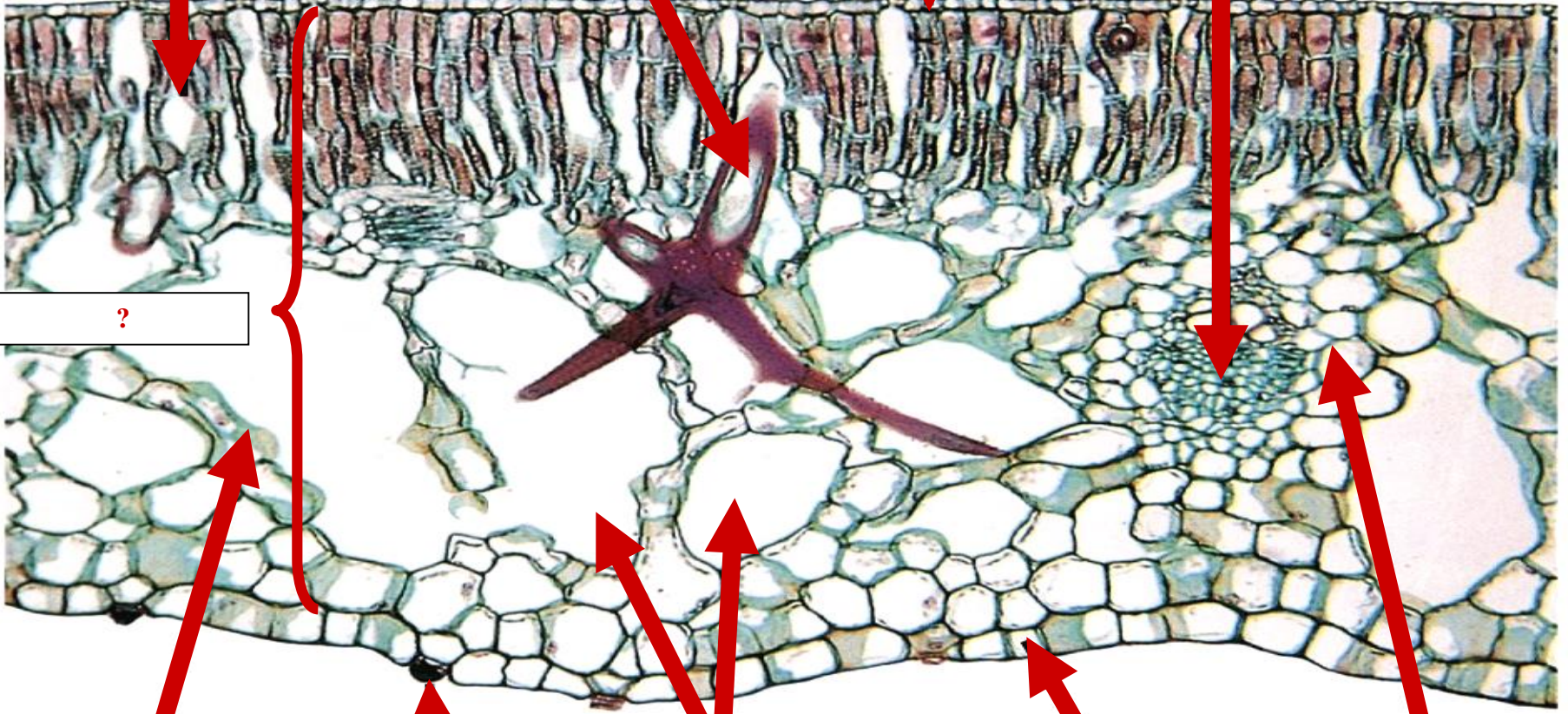
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EPIDERMIS

STOMATES  
PRESENT



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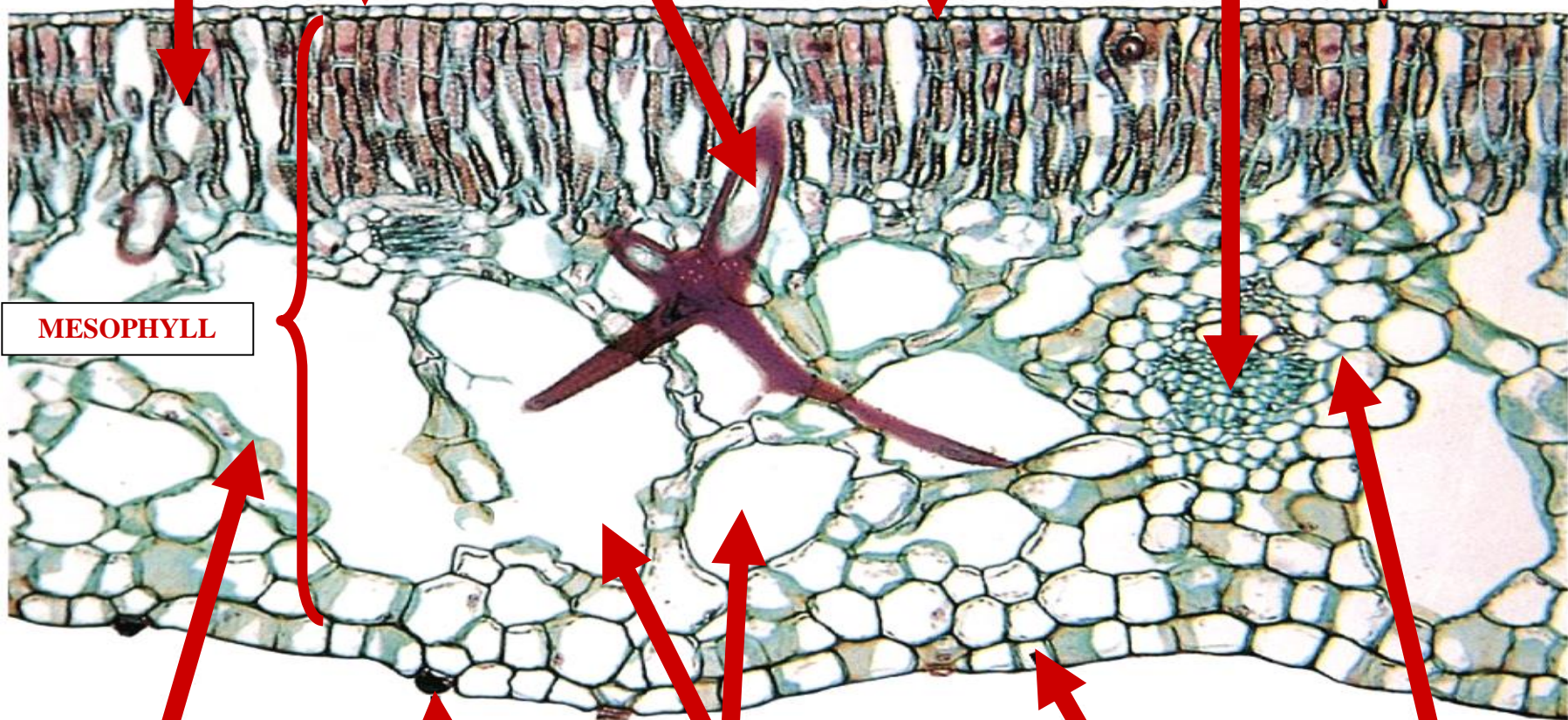


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EPIDERMIS

STOMATES  
PRESENT

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MESOPHYLL

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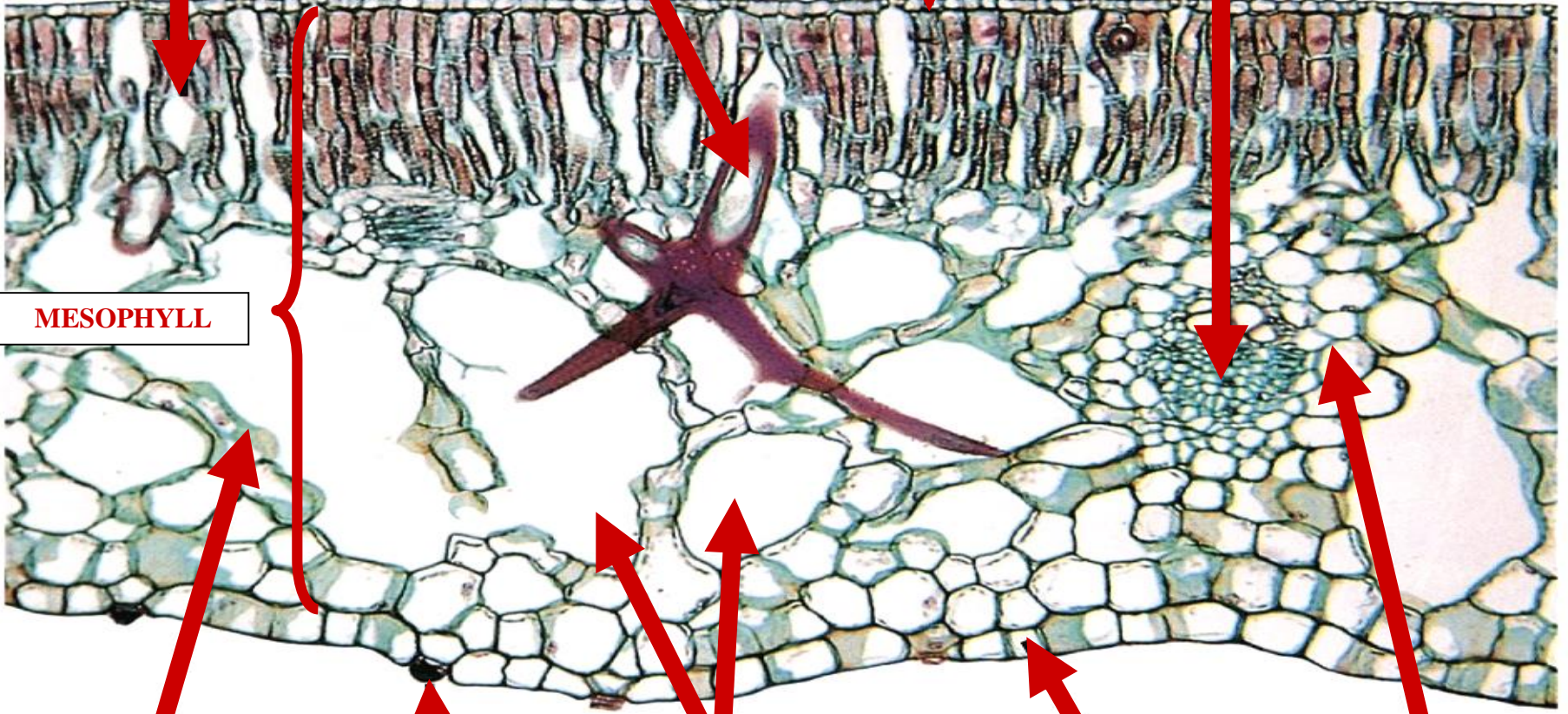


CUTICLE  
ABSENT

ADAXIAL  
EPIDERMIS

STOMATES  
PRESENT

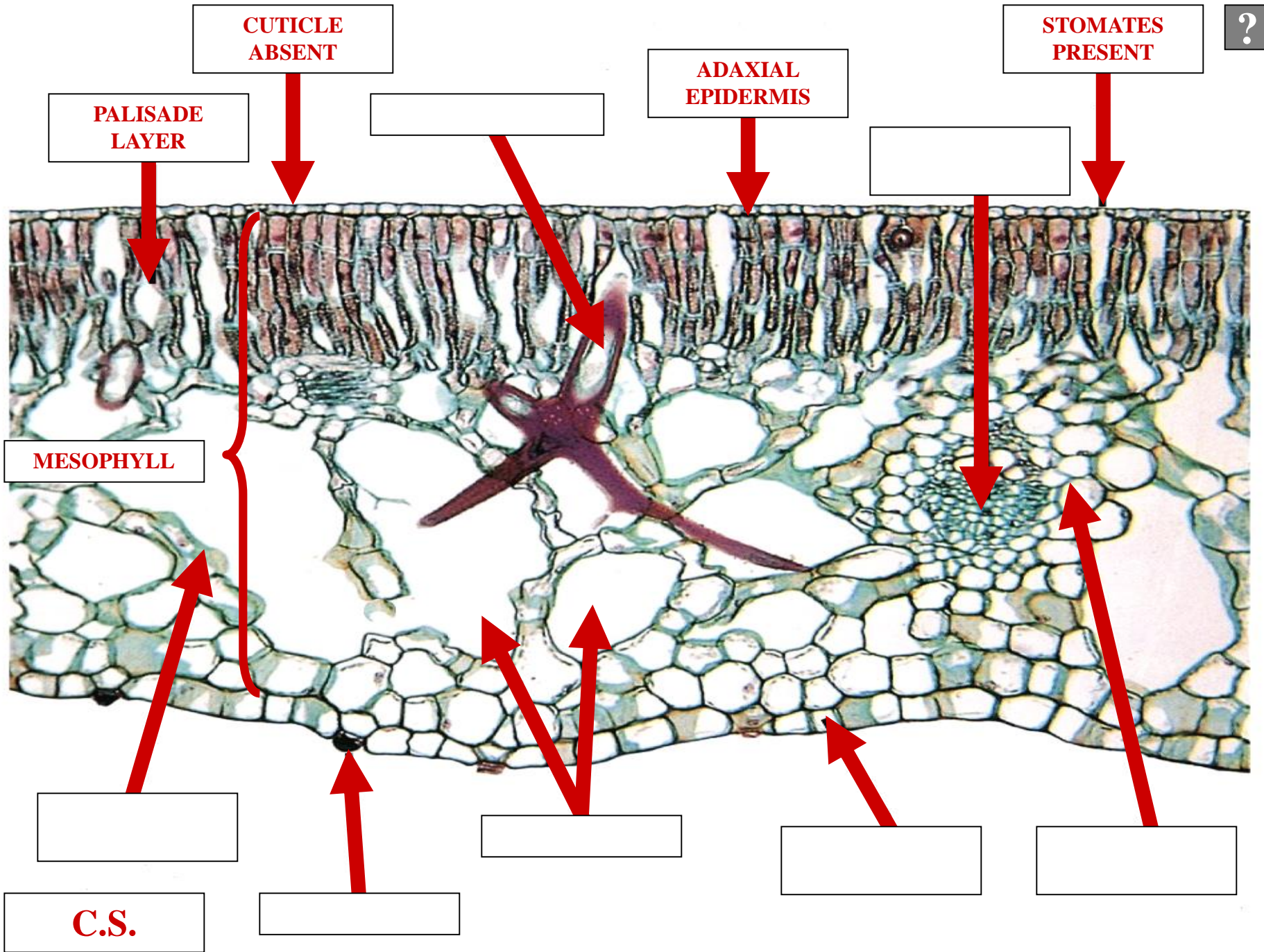
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CUTICLE  
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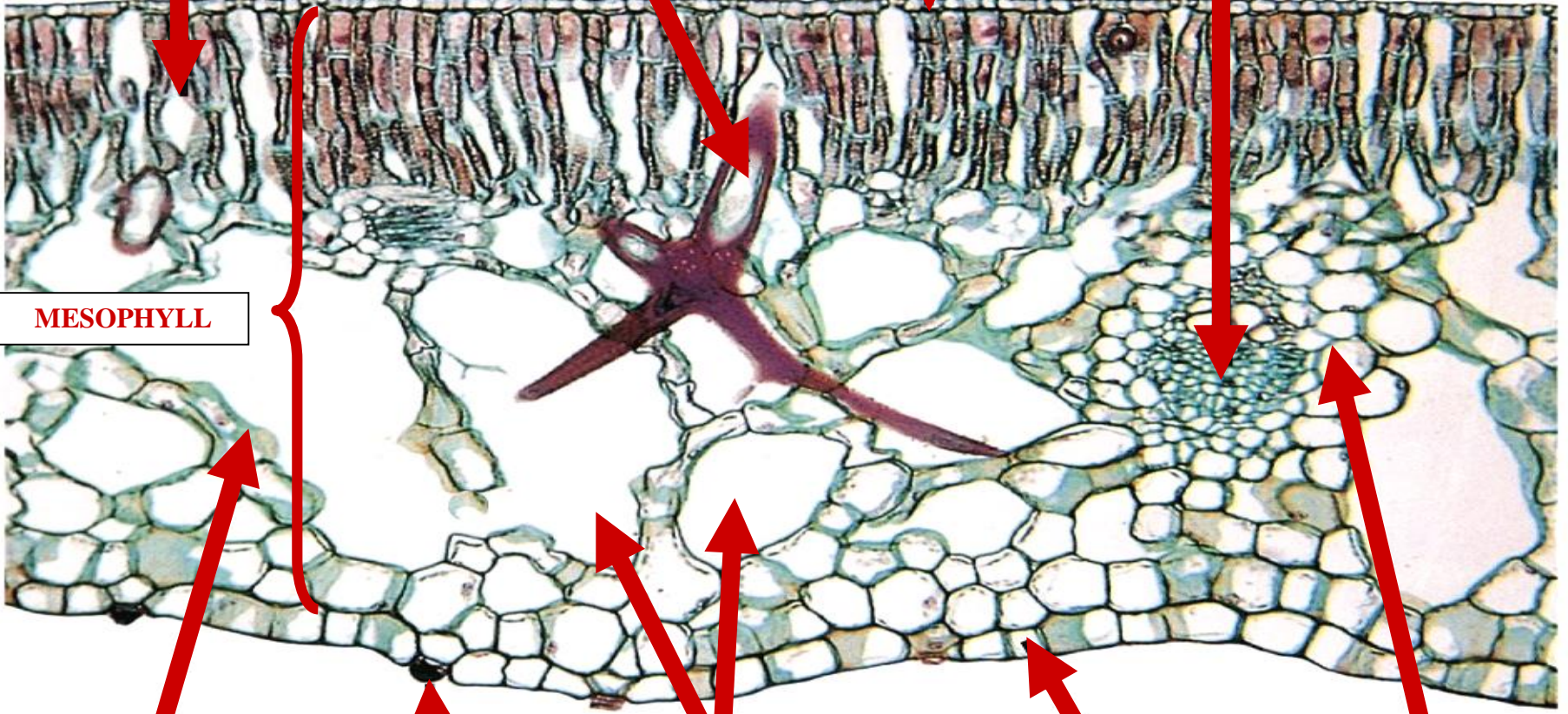
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EPIDERMIS

PALISADE  
LAYER

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**STOMATES  
PRESENT**

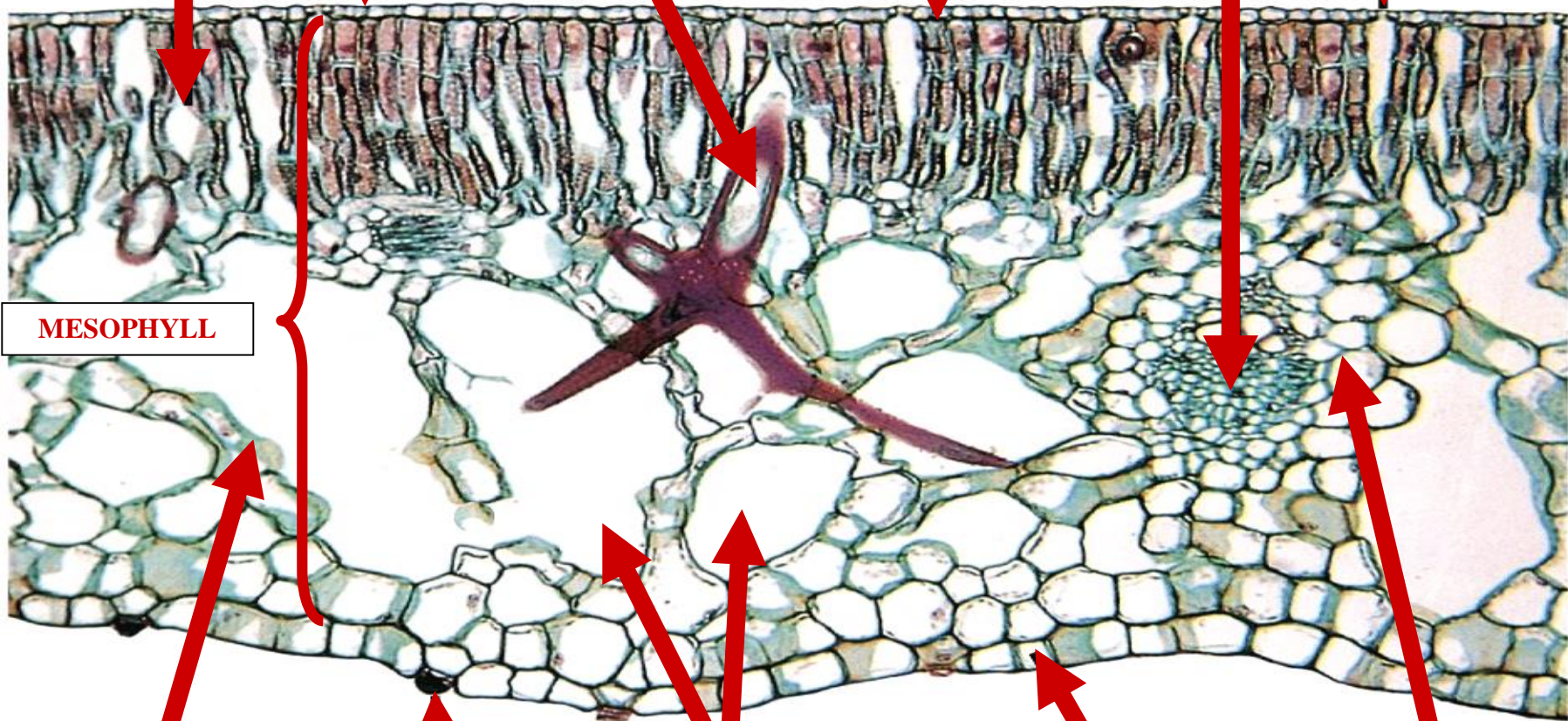
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EPIDERMIS**

**PALISADE  
LAYER**

**MESOPHYLL**

**SPONGY  
LAYER**

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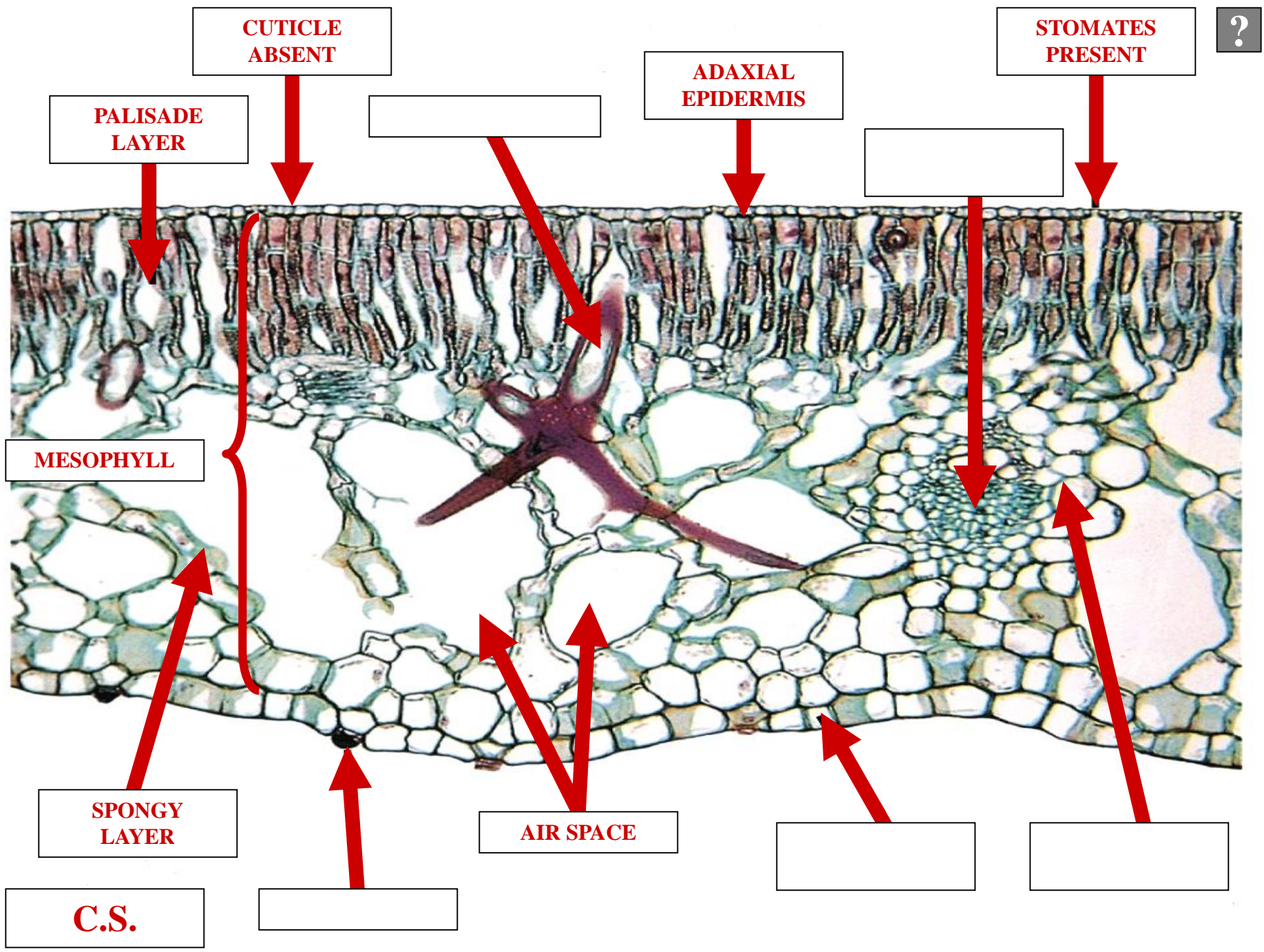
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SPONGY  
LAYER

AIR SPACE

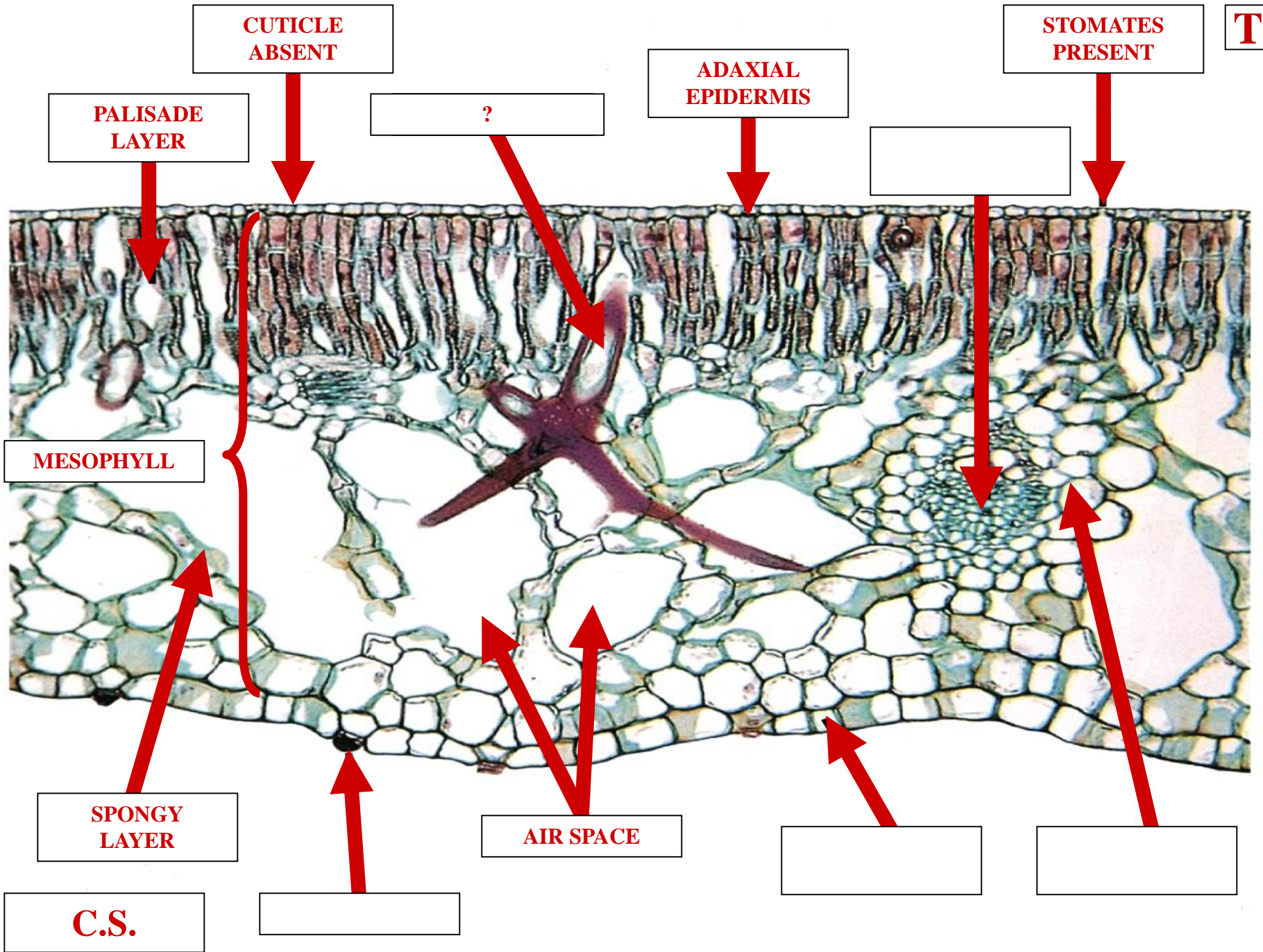
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ADAXIAL  
EPIDERMIS

MESOPHYLL

SPONGY  
LAYER

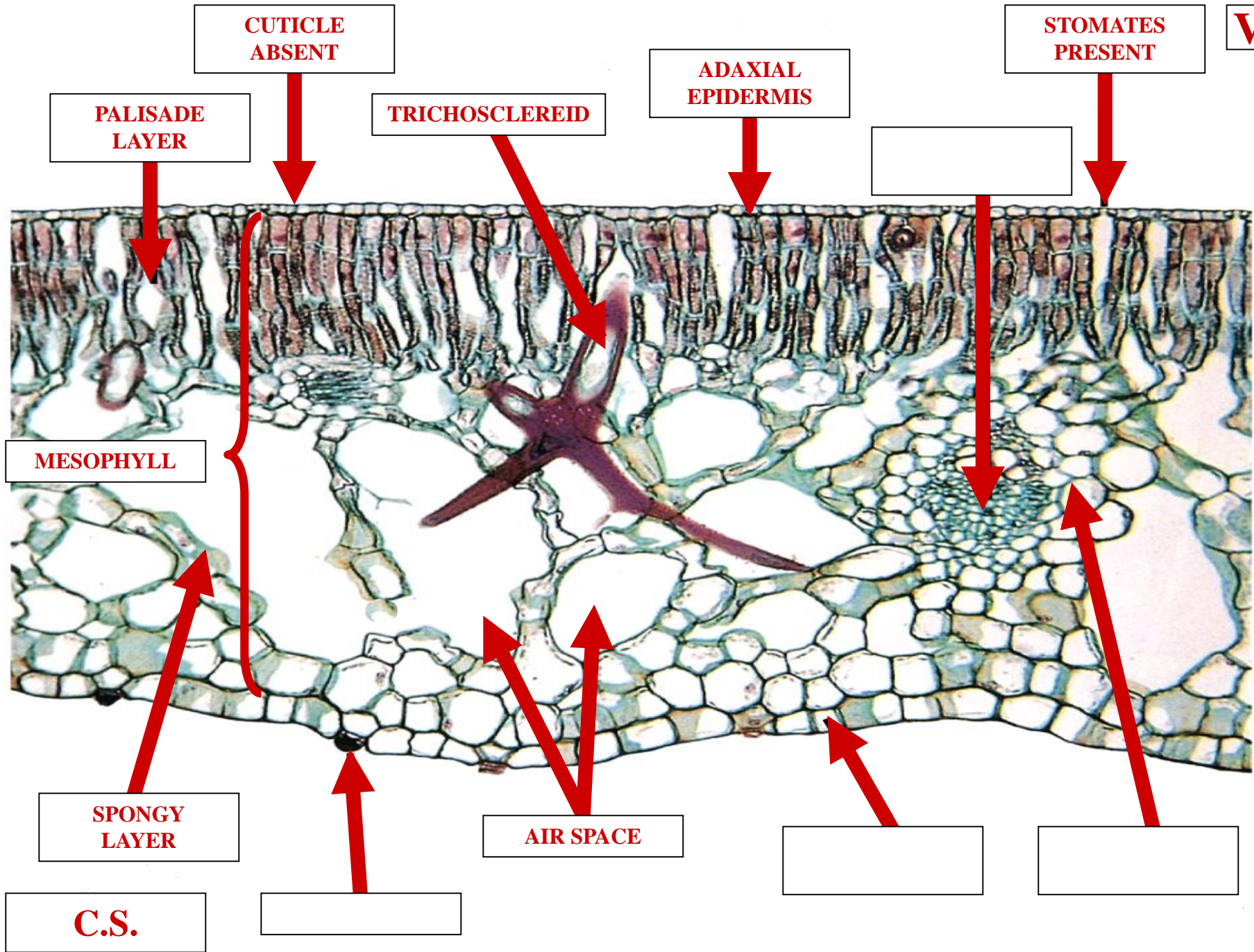
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AIR SPACE

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PALISADE  
LAYER

TRICHOSCLEREID

ADAXIAL  
EPIDERMIS

STOMATES  
PRESENT

MESOPHYLL

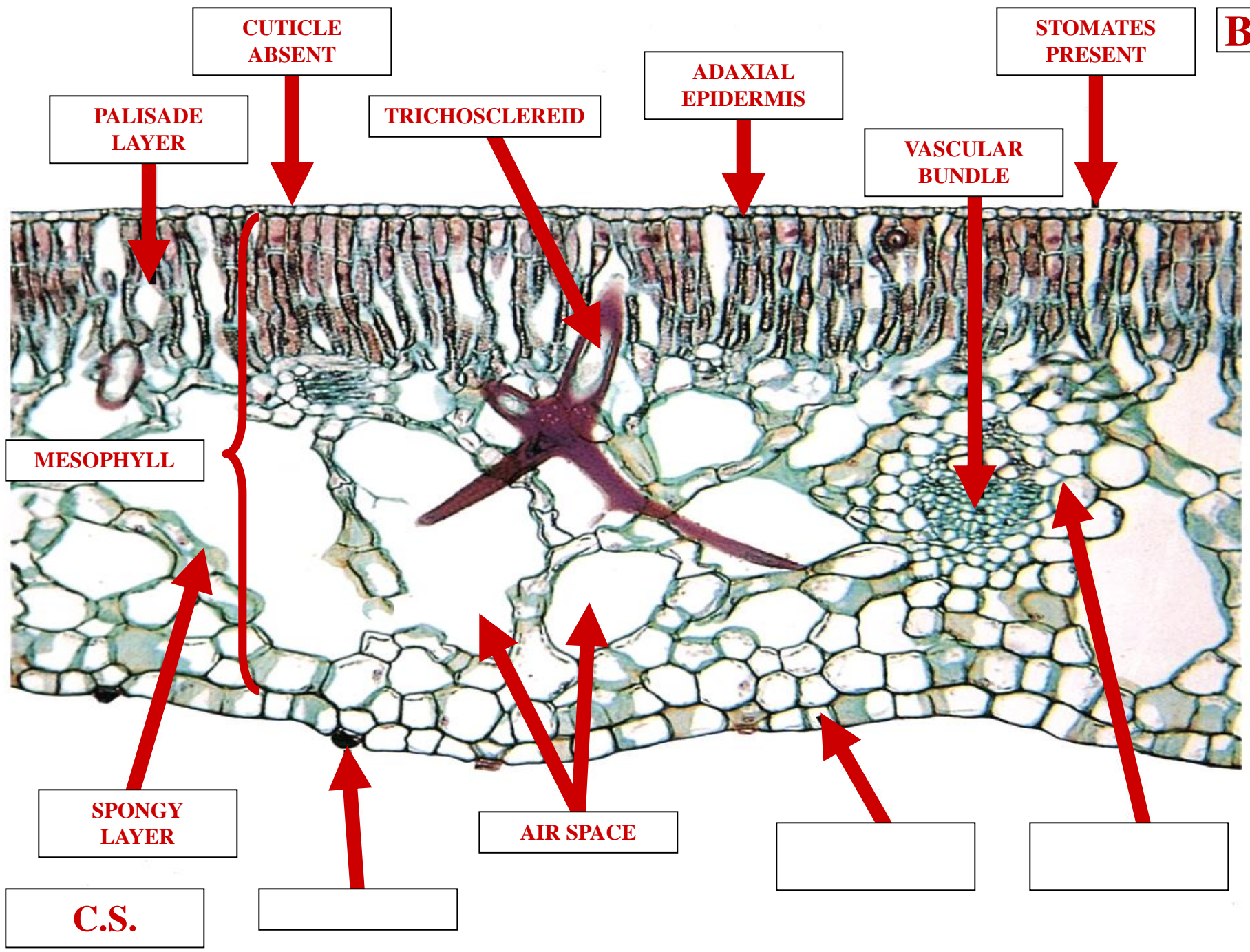
SPONGY  
LAYER

AIR SPACE

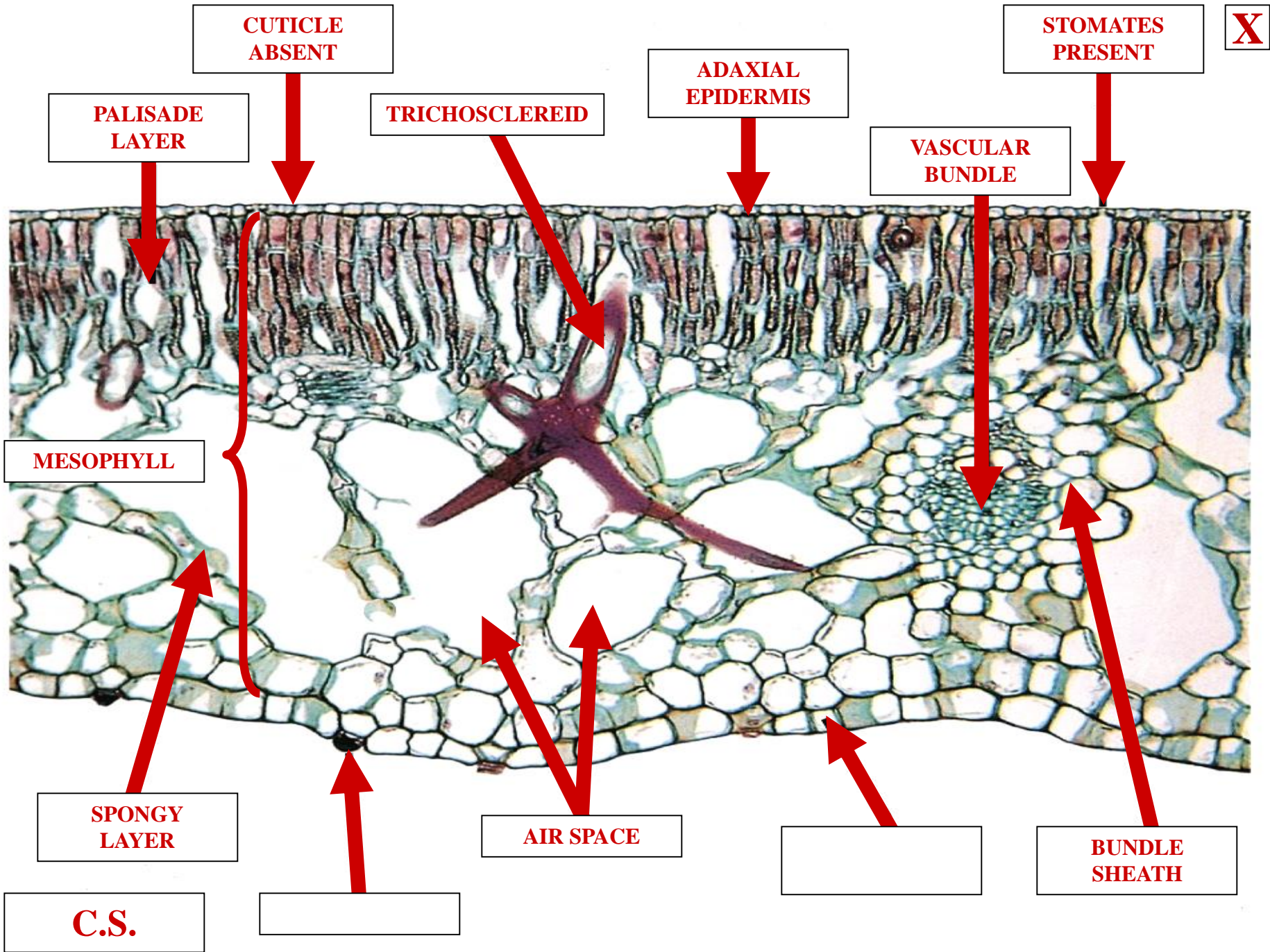
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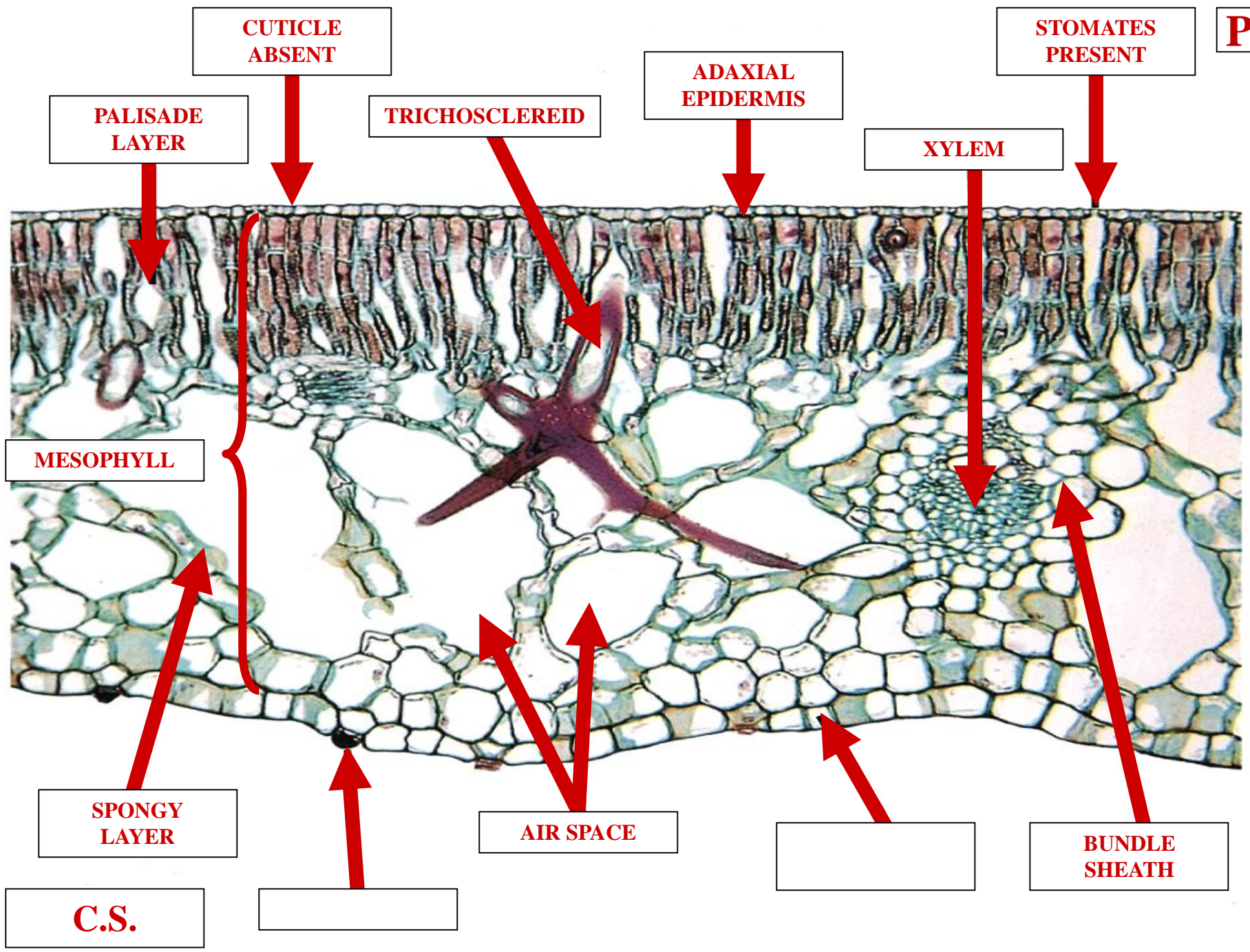
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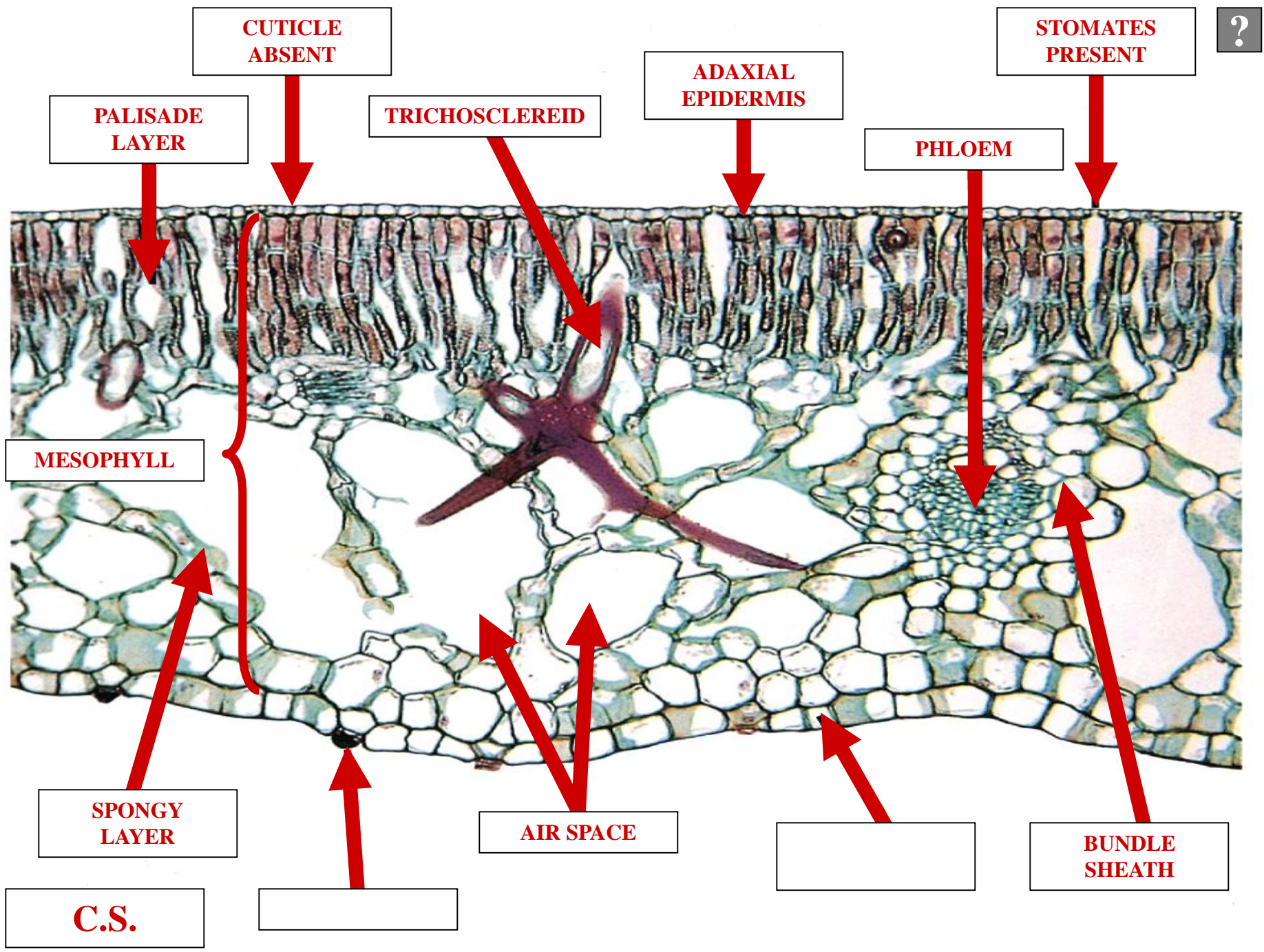












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PALISADE  
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**CUTICLE  
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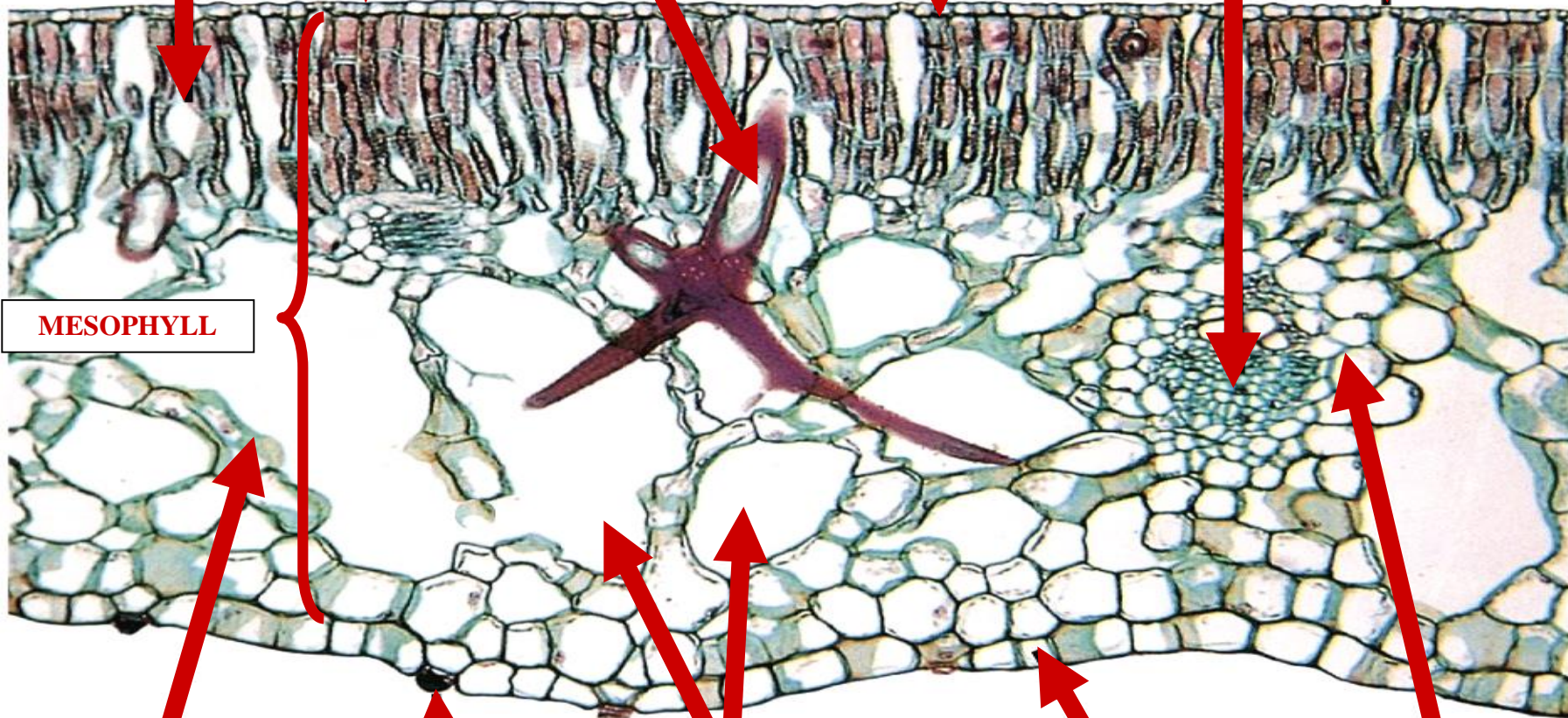
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PRESENT**

**PALISADE  
LAYER**

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**SPONGY  
LAYER**

**AIR SPACE**

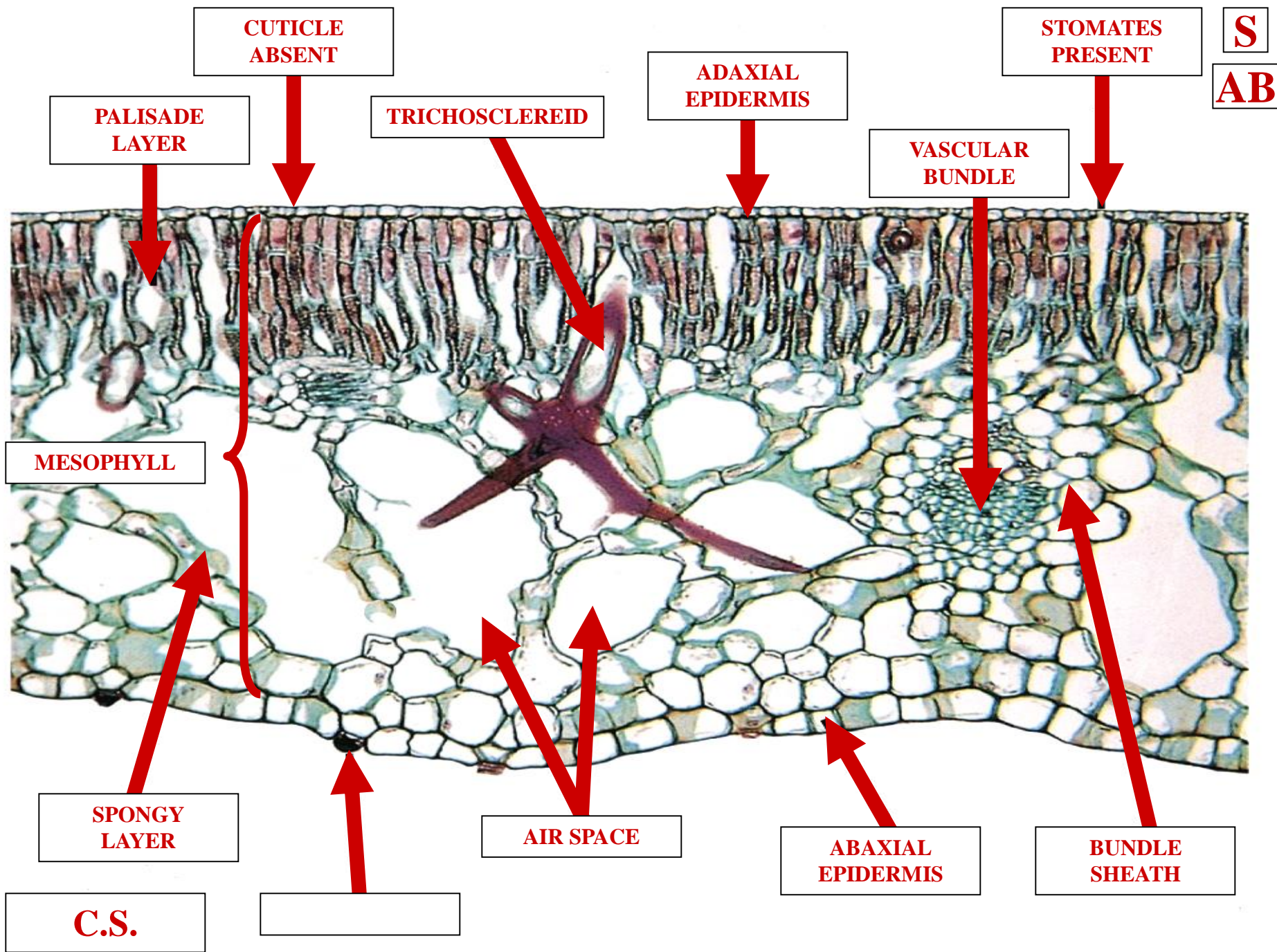
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SHEATH**

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PALISADE  
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EPIDERMIS

STOMATES  
PRESENT

VASCULAR  
BUNDLE

MESOPHYLL

SPONGY  
LAYER

AIR SPACE

ABAXIAL  
EPIDERMIS

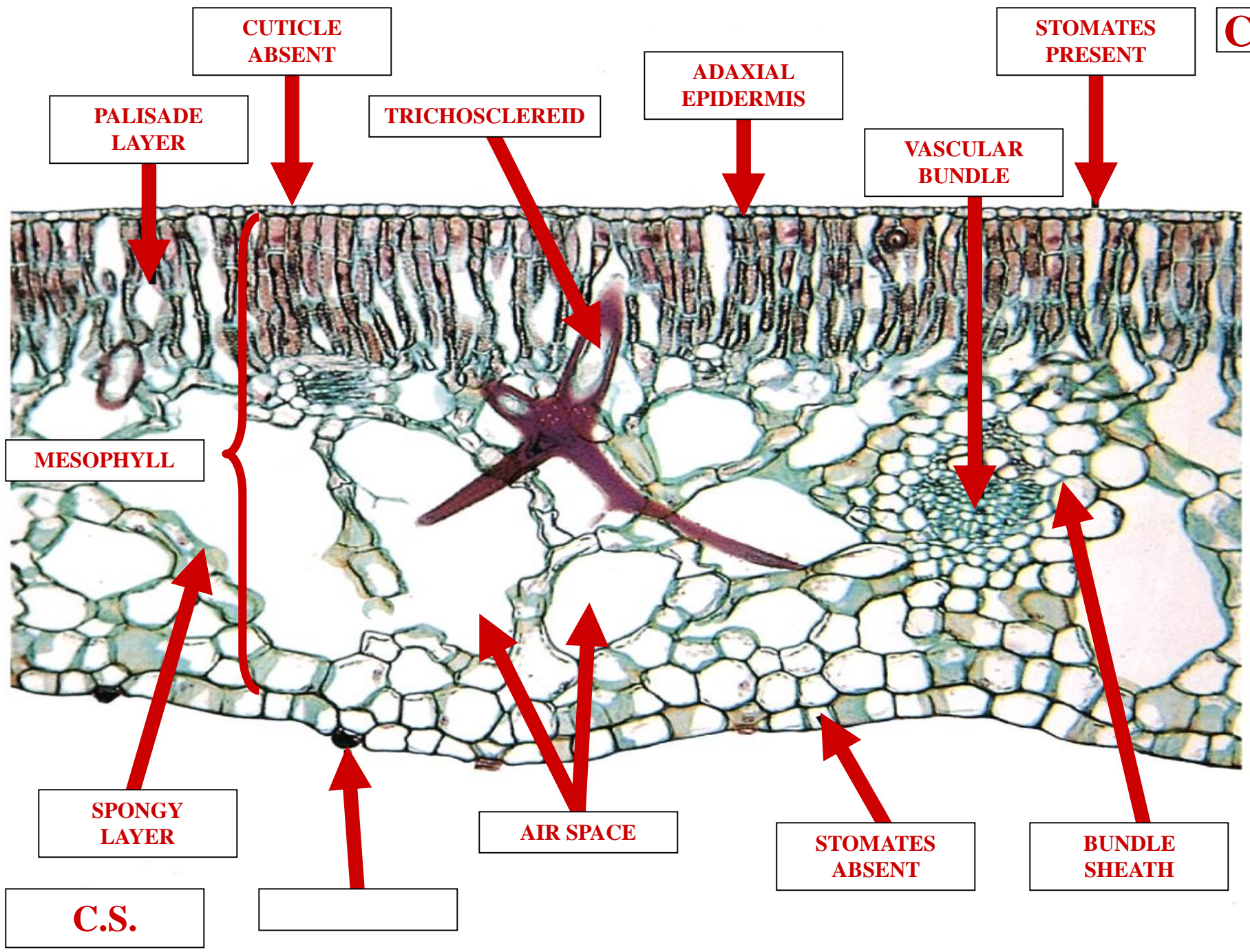
BUNDLE  
SHEATH

C.S.

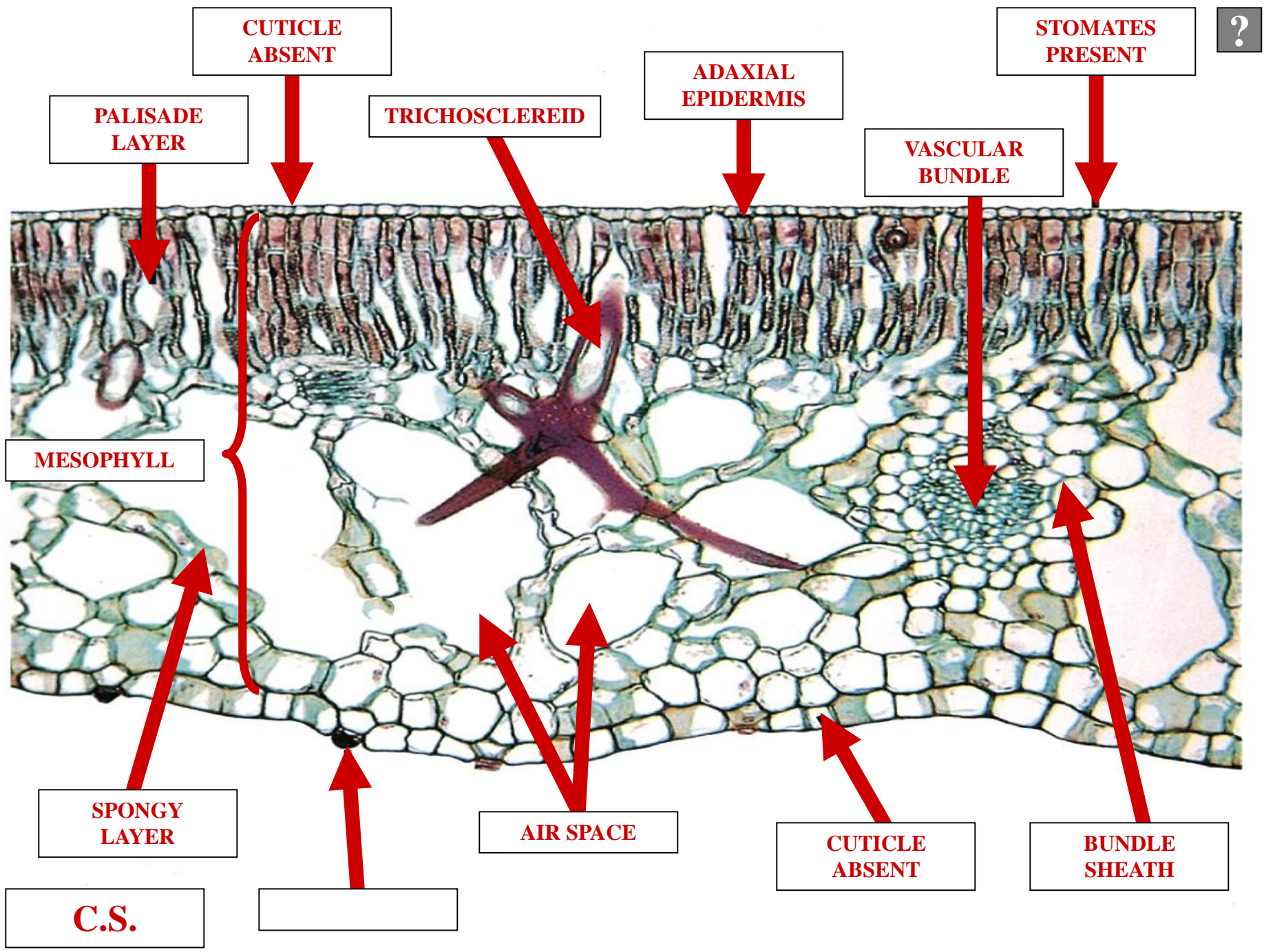
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**CUTICLE  
ABSENT**

**STOMATES  
PRESENT**

**PALISADE  
LAYER**

**TRICHOSCLEREID**

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**VASCULAR  
BUNDLE**

**MESOPHYLL**

**SPONGY  
LAYER**

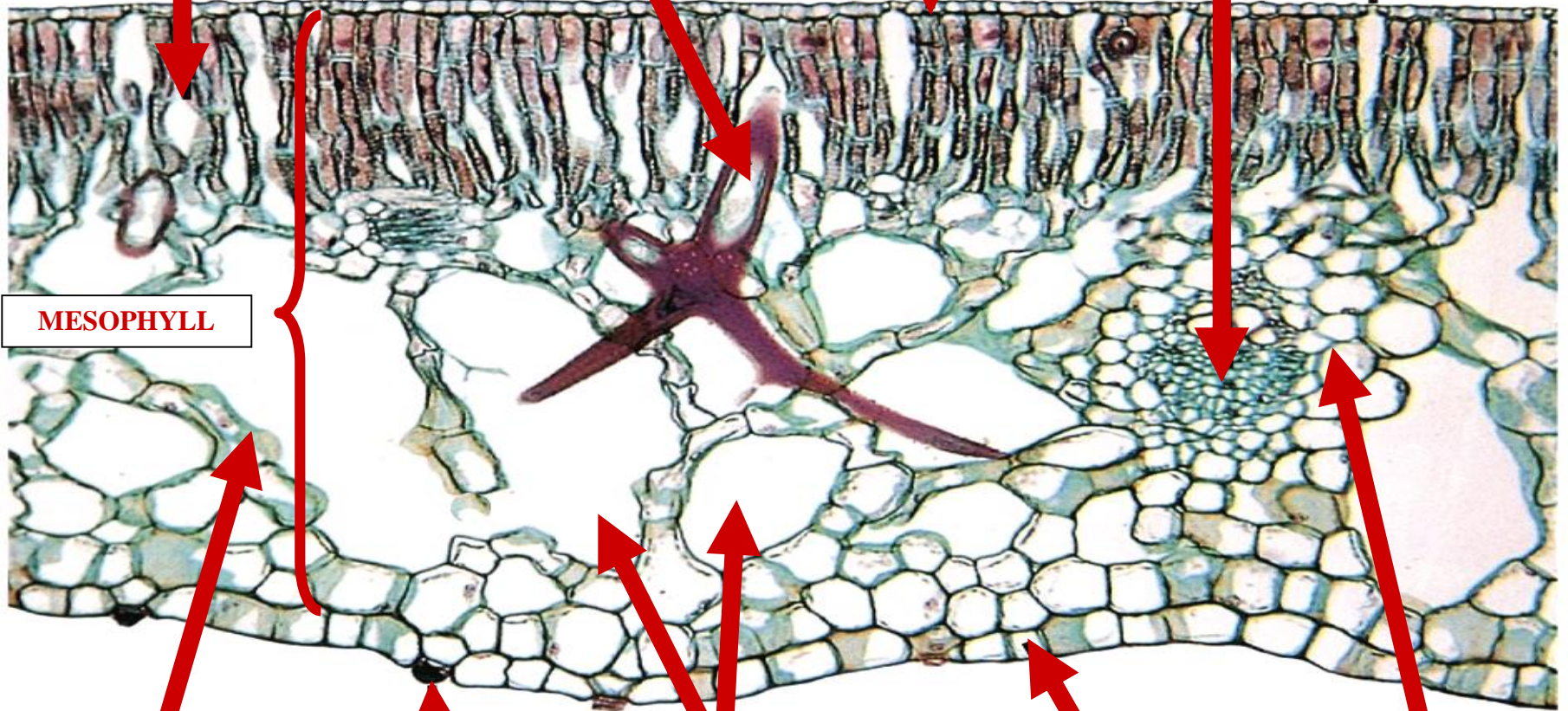
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**CUTICLE  
ABSENT**

**BUNDLE  
SHEATH**

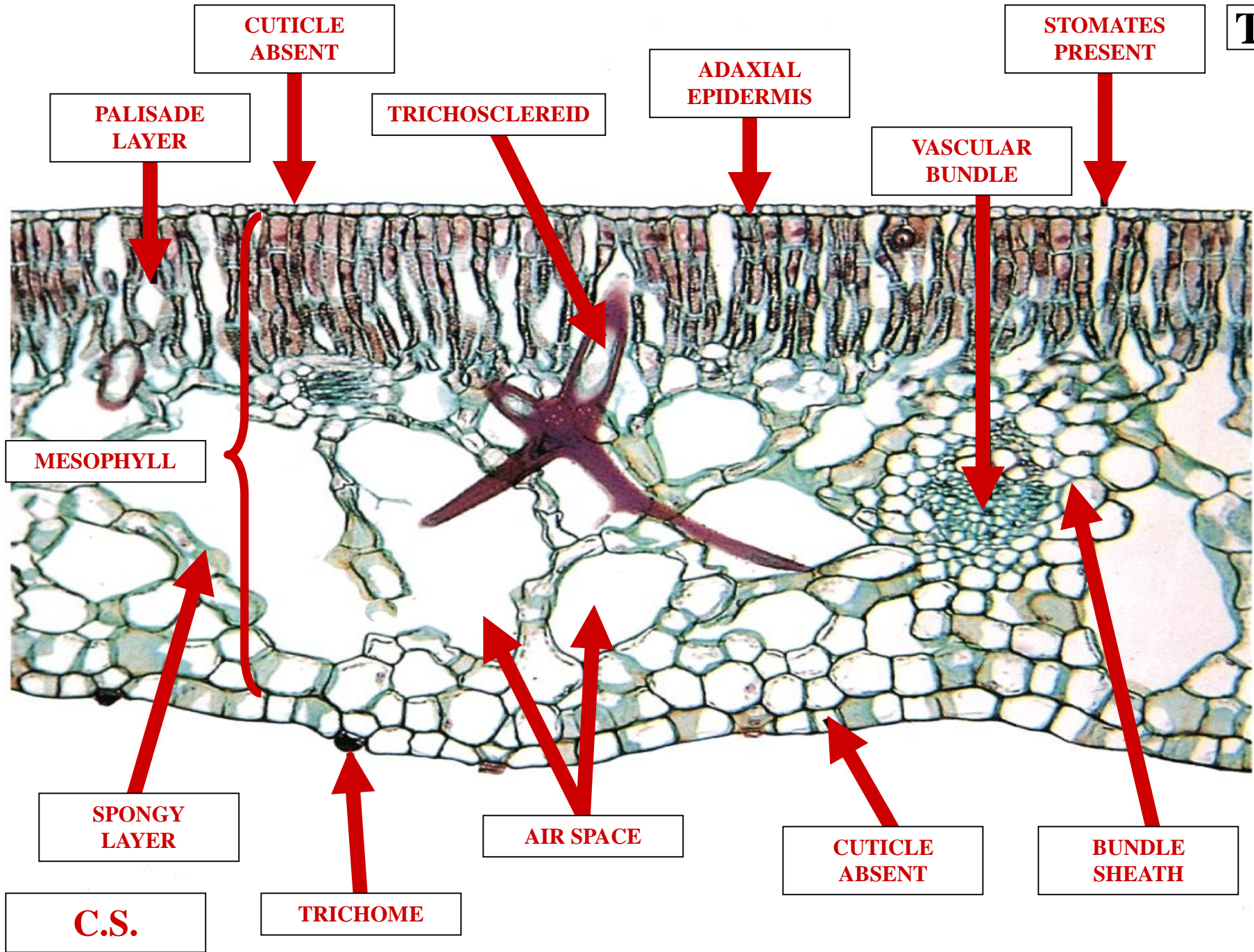
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**CUTICLE  
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**PALISADE  
LAYER**

**TRICHOSCLEREID**

**ADAXIAL  
EPIDERMIS**

**VASCULAR  
BUNDLE**

**MESOPHYLL**

**SPONGY  
LAYER**

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**CUTICLE  
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**BUNDLE  
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**C.S.**

**TRICHOME**

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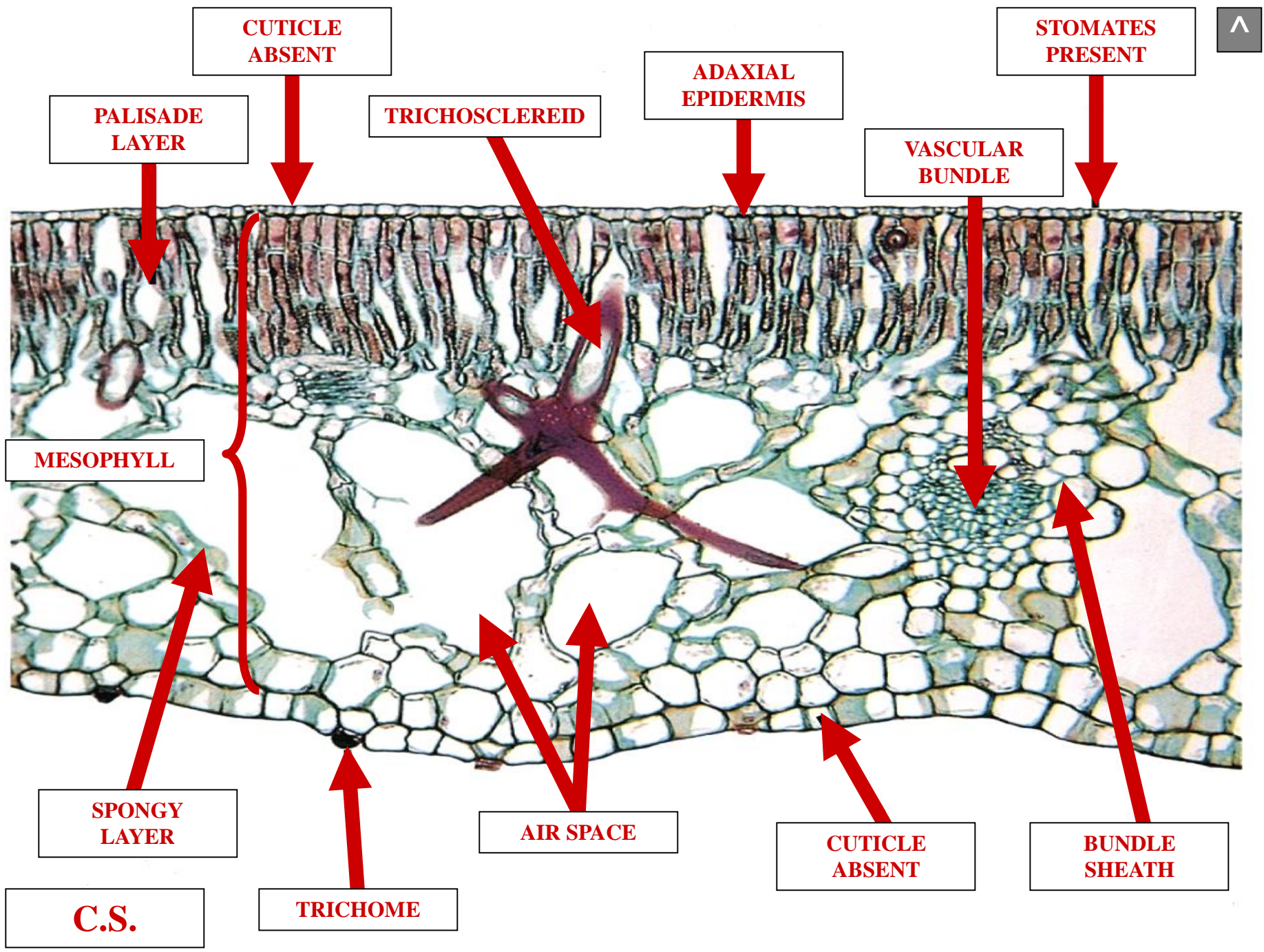


# DICOT LEAF ANATOMY TRICHOME



PLANT HAIR

# DICOT LEAF ANATOMY TRICHOME





# **MESOPHYTE LEAF**

# **MESOPHYTE LEAF**



**DICOT LEAF ANATOMY**



**MESOPHYTE**

**ADAPTED**

**MODERATE MOISTURE**

**HABITAT**

**DICOT LEAF ANATOMY**

**MESOPHYTE**



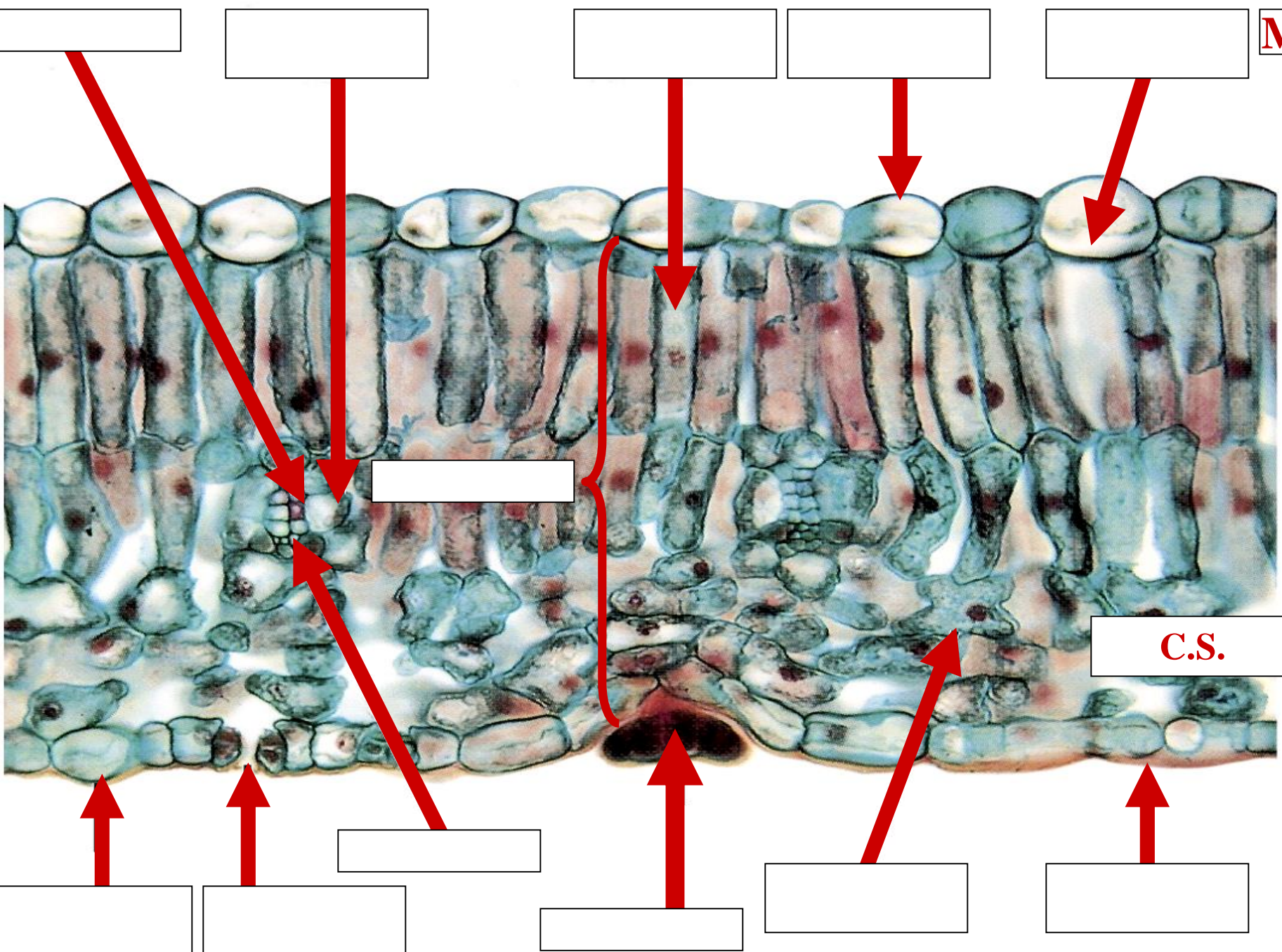
# MESIC HABITAT ALABAMA FOREST





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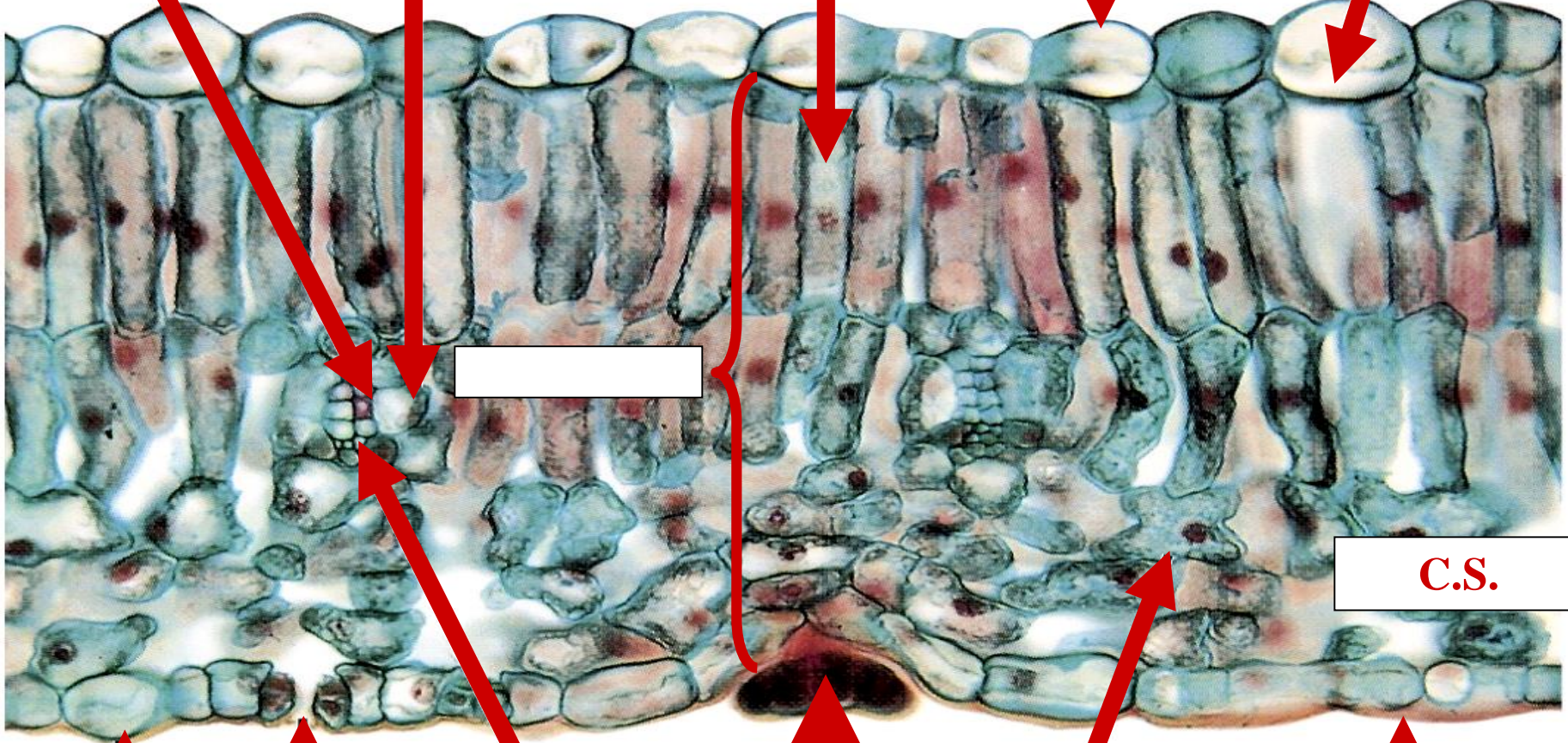
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MODERATE CUTICLE

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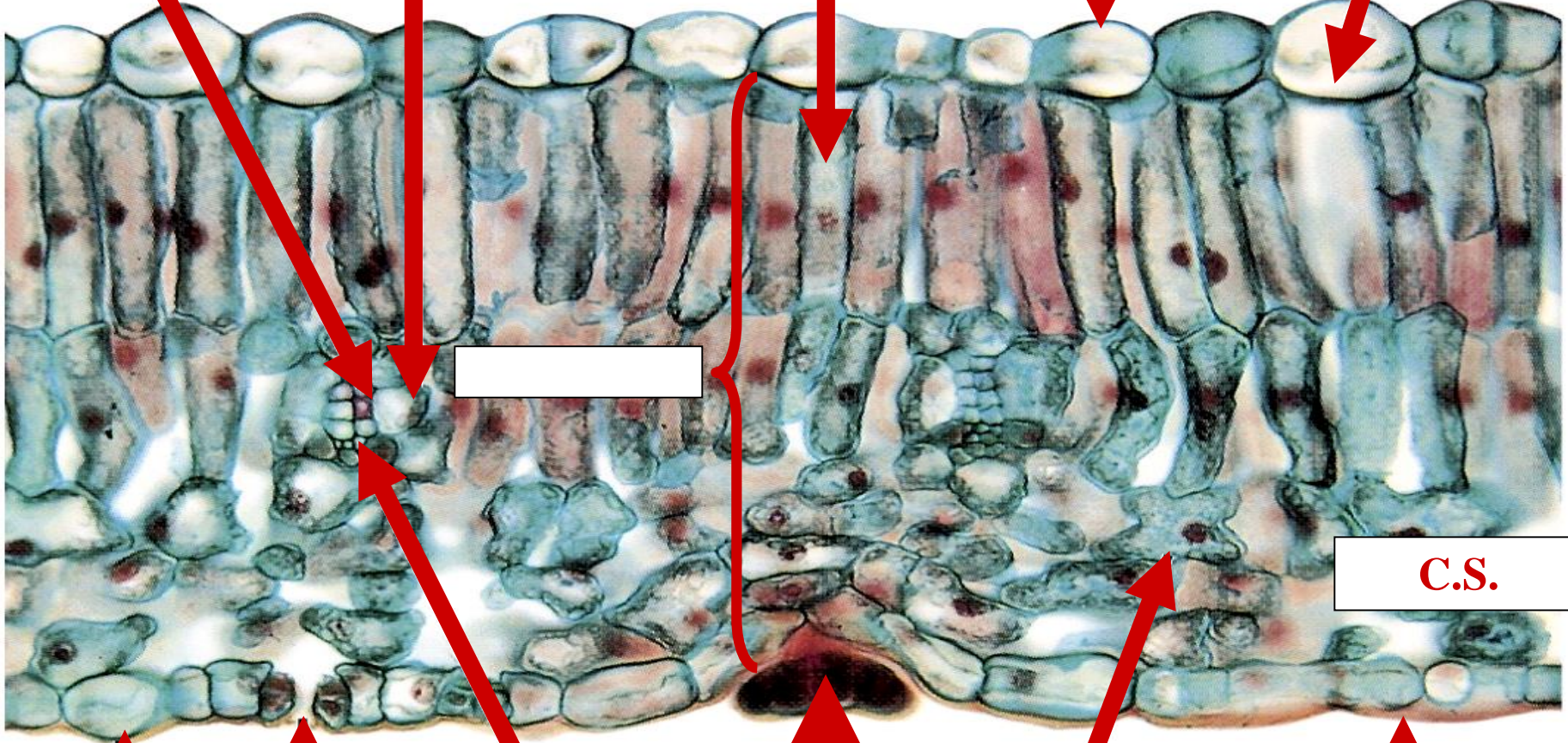
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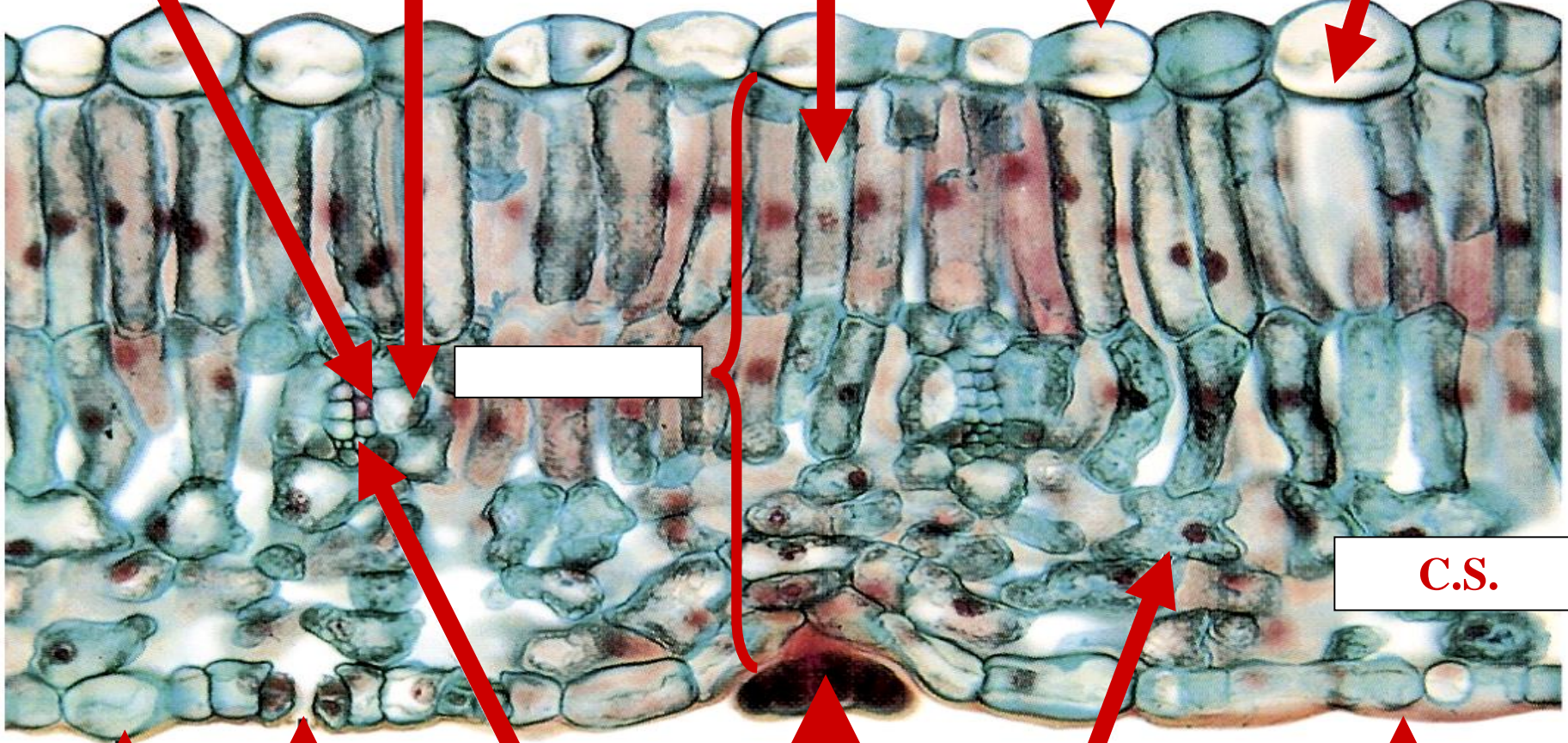
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**MODERATE CUTICLE**

**ADAXIAL EPIDERMIS**

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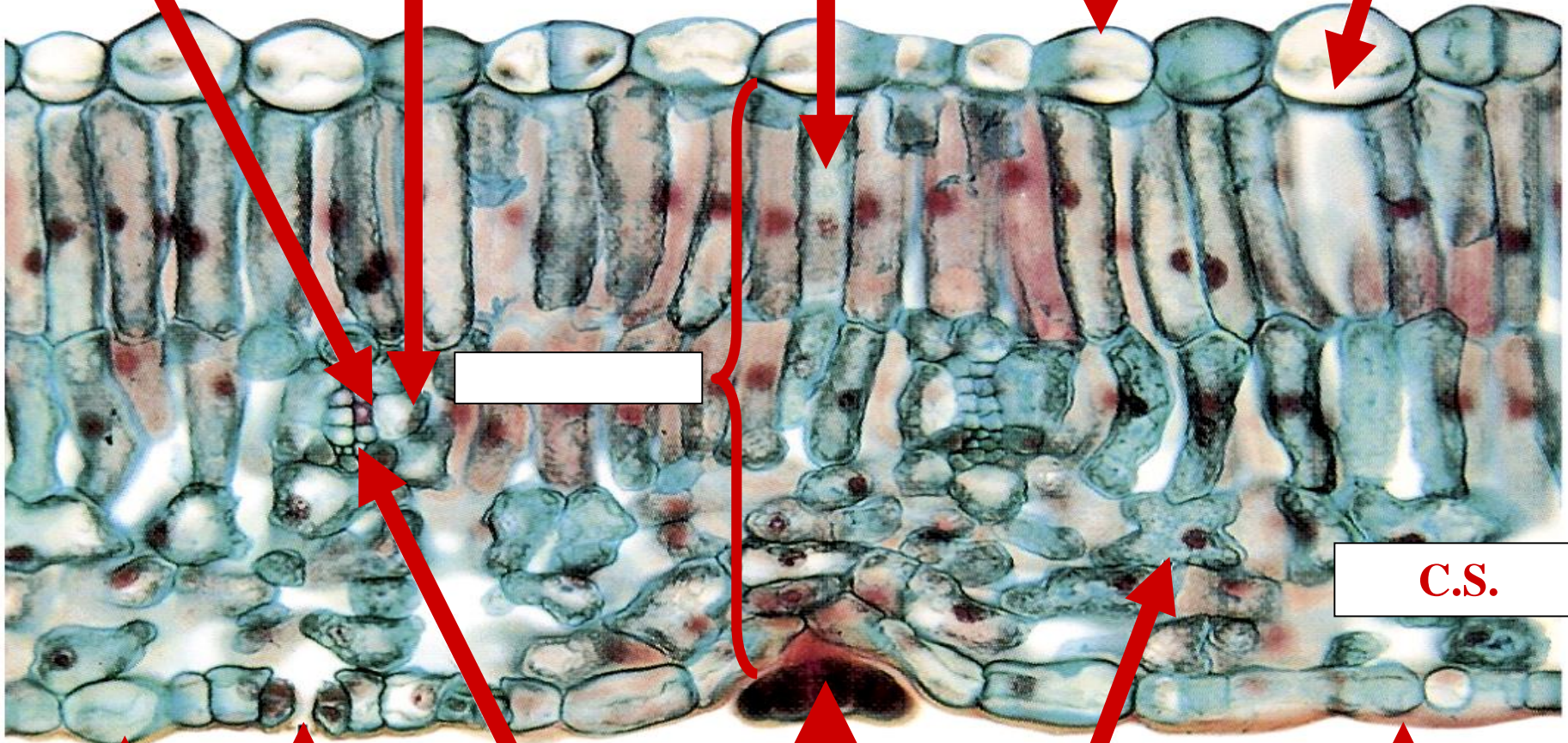
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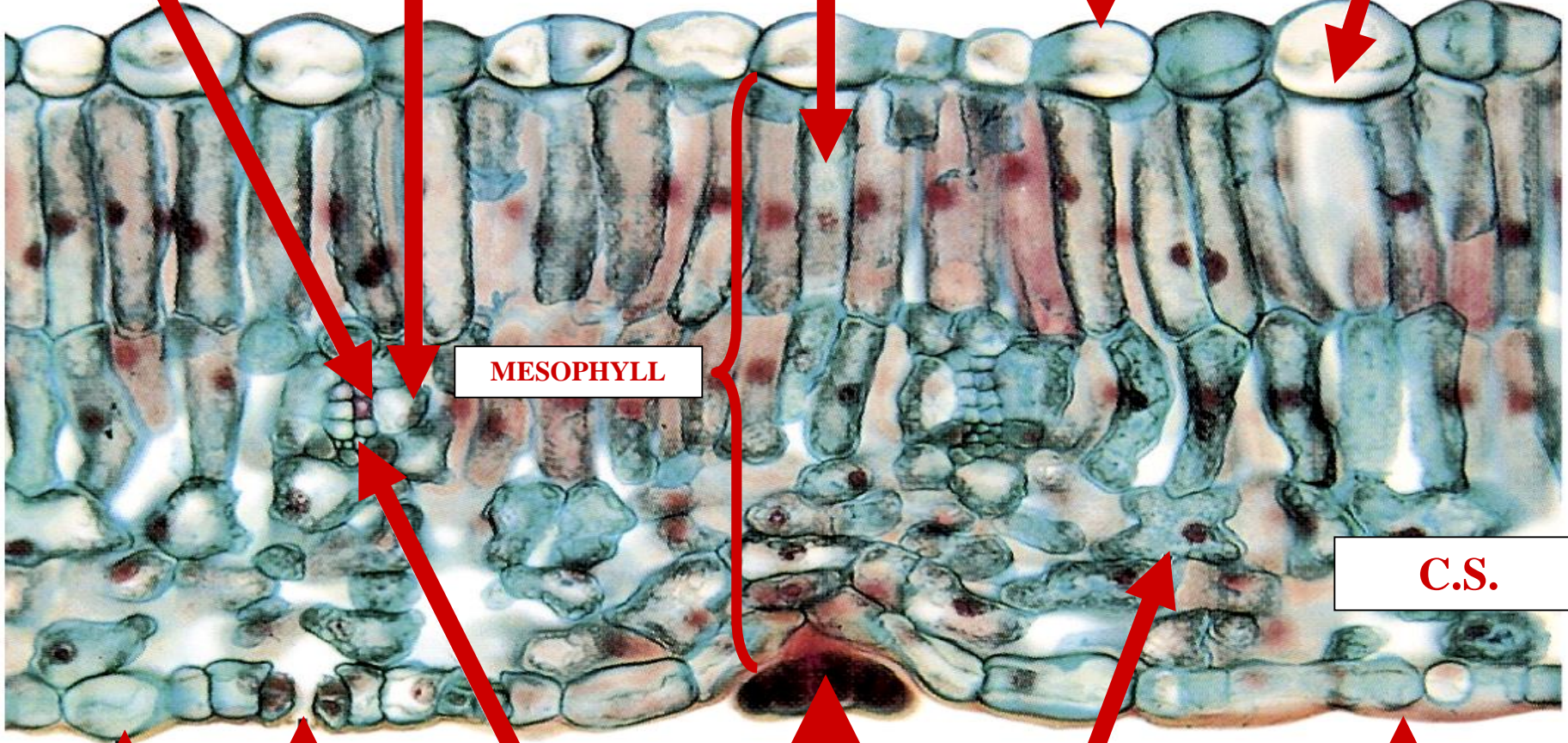


MODERATE CUTICLE

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MODERATE CUTICLE

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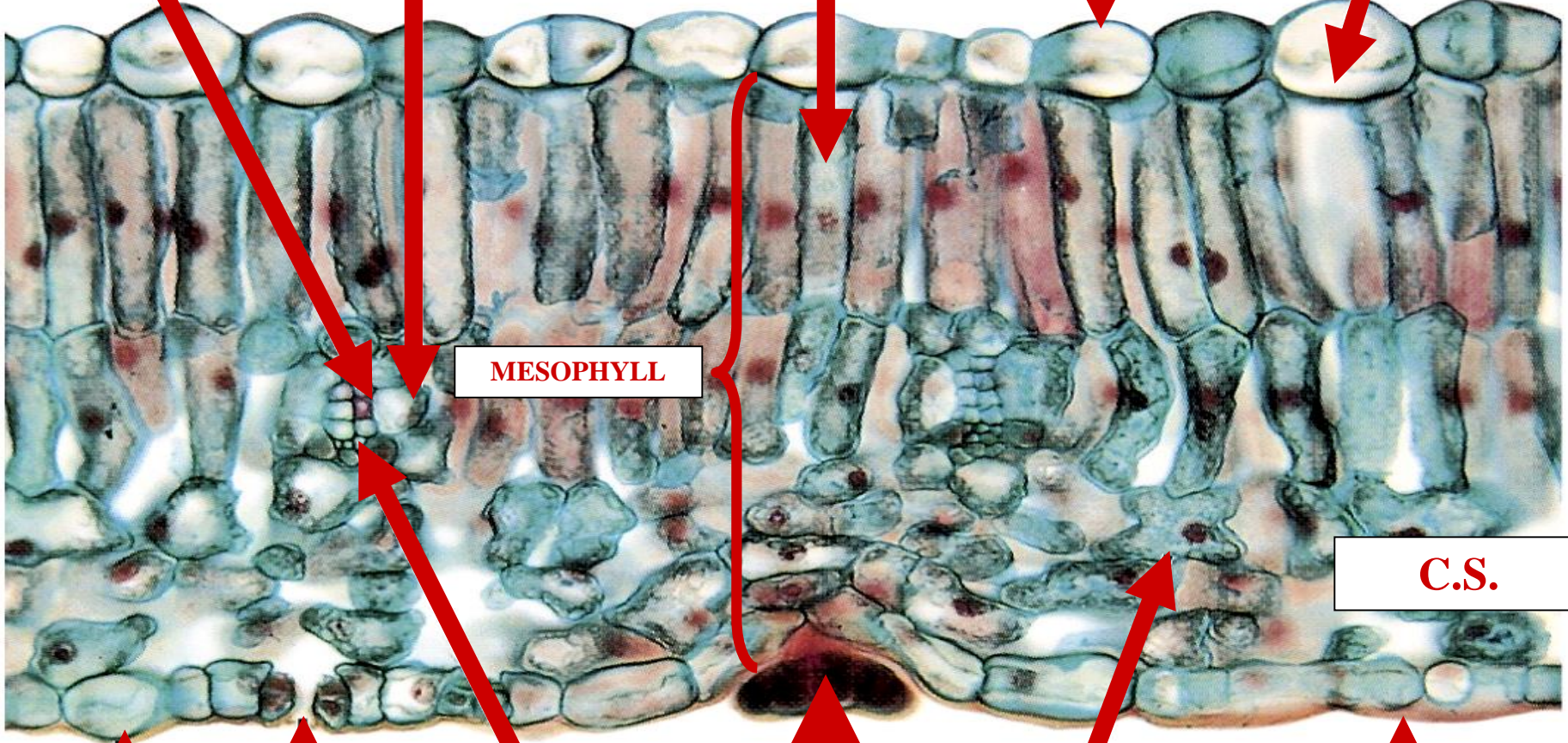
**PALISADE  
LAYER**

**MODERATE  
CUTICLE**

**STOMATES  
ABSENT**

**MESOPHYLL**

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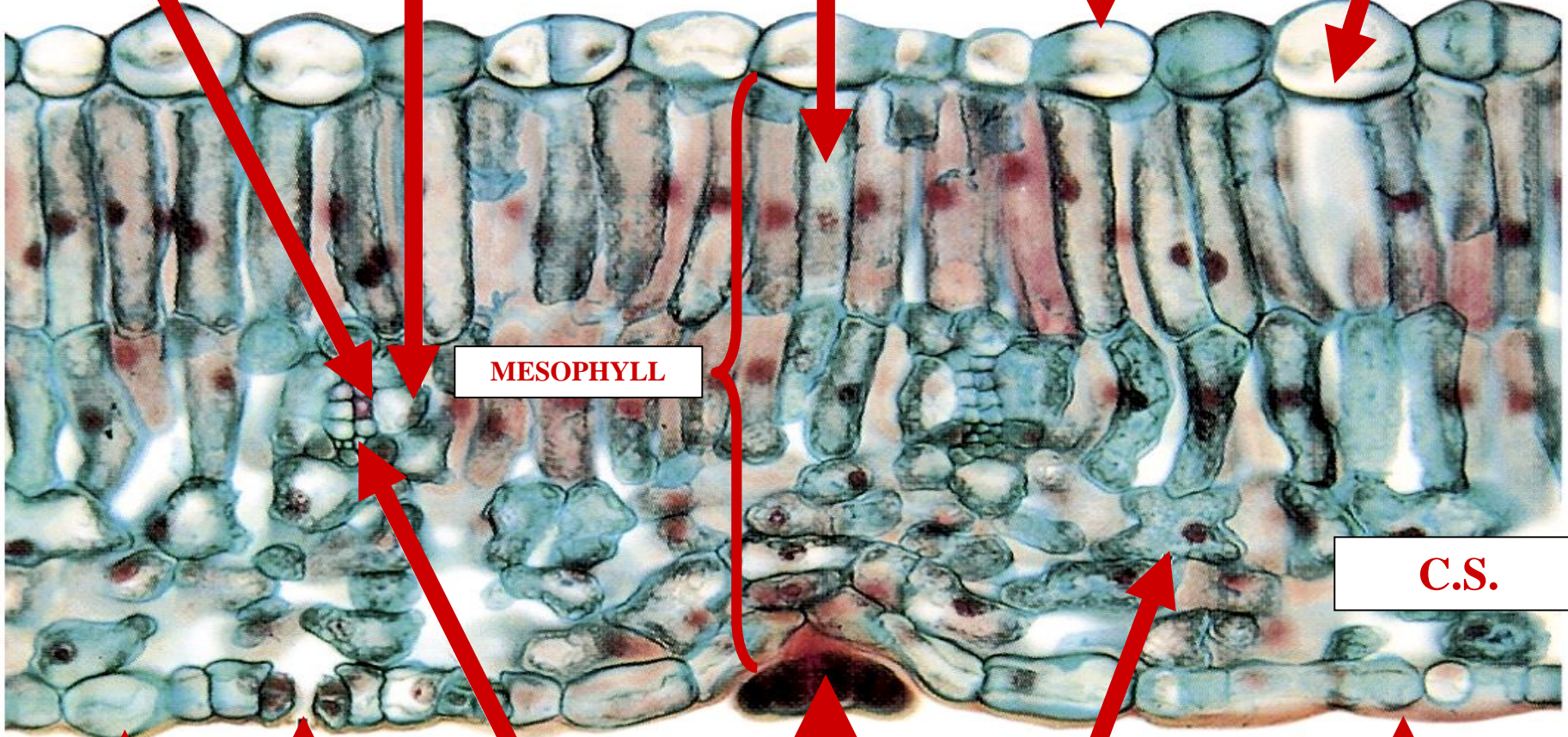
MODERATE  
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STOMATES  
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MESOPHYLL

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SPONGY  
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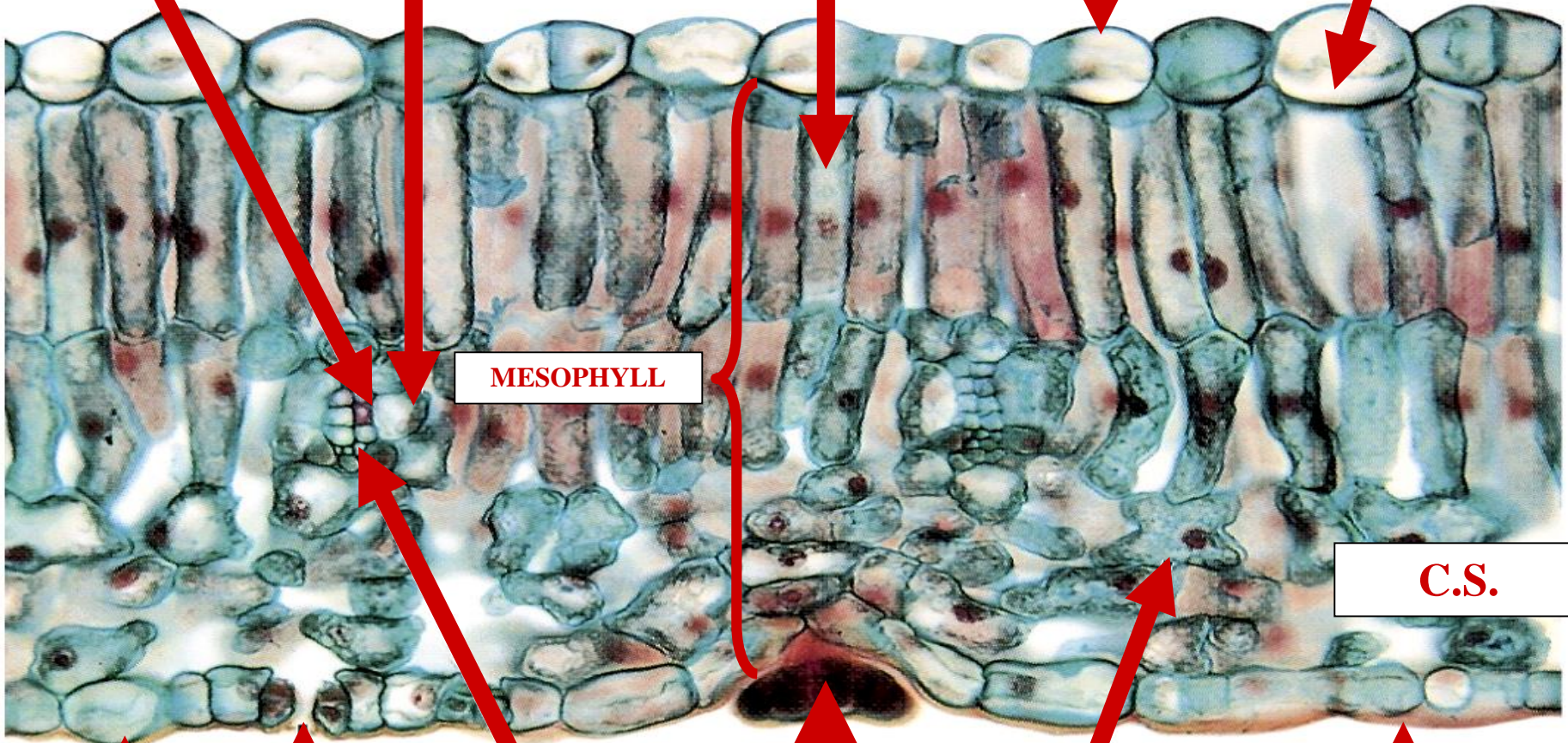
VASCULAR BUNDLE

PALISADE LAYER

MODERATE CUTICLE

STOMATES ABSENT

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MESOPHYLL

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SPONGY LAYER

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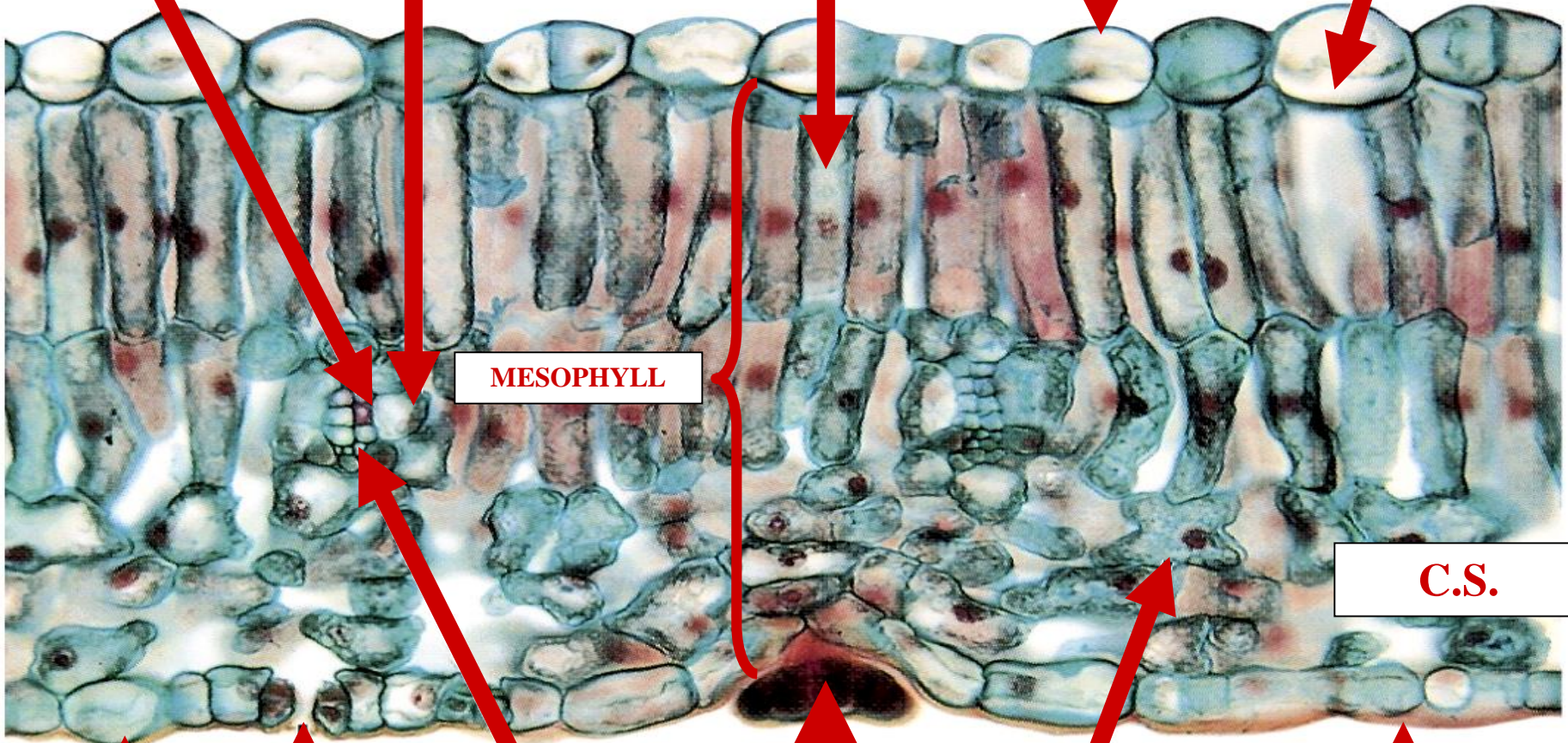
XYLEM

VASCULAR BUNDLE

PALISADE LAYER

MODERATE CUTICLE

STOMATES ABSENT



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SPONGY LAYER

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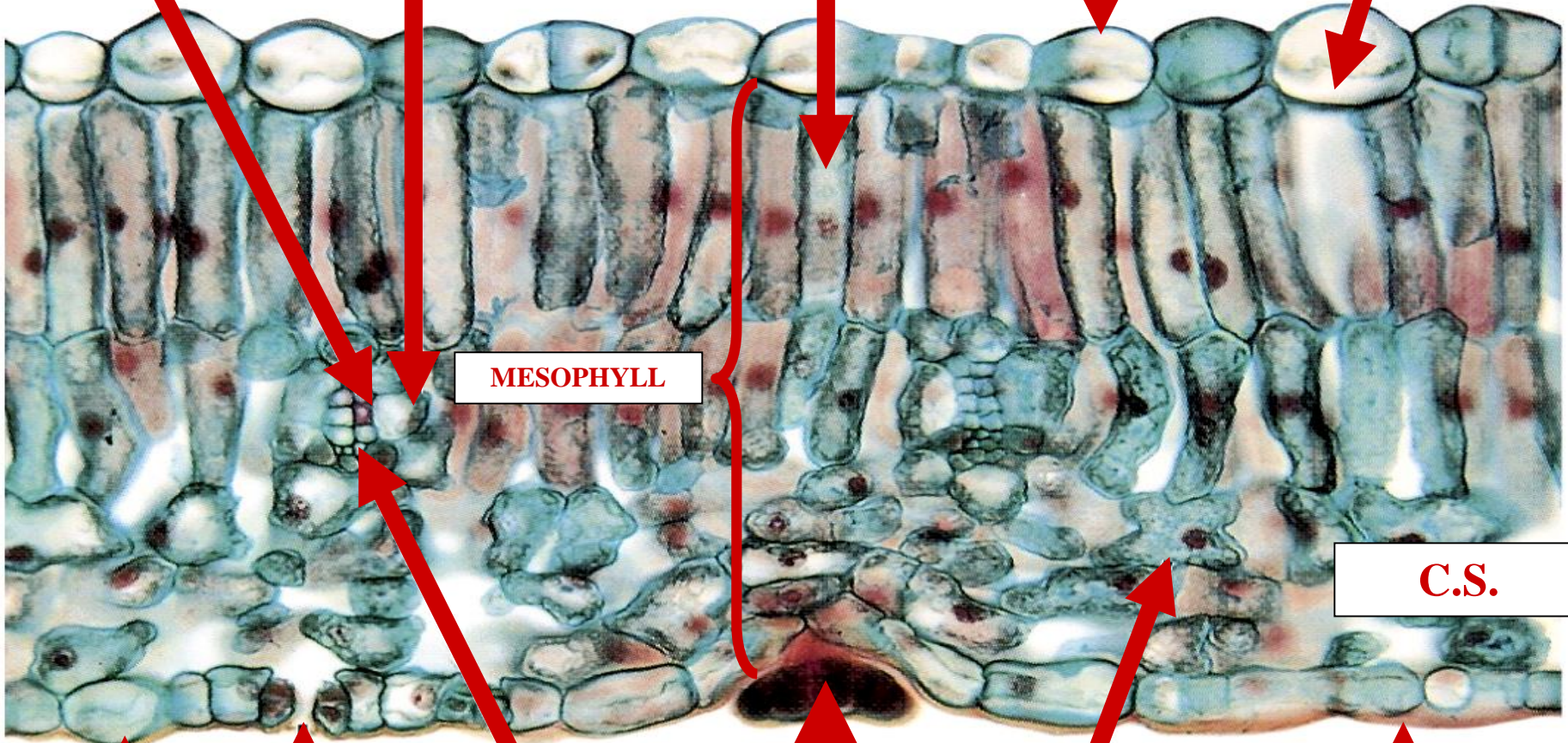
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**VASCULAR BUNDLE**

**PALISADE LAYER**

**MODERATE CUTICLE**

**STOMATES ABSENT**

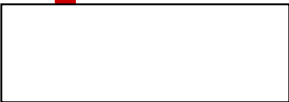


**MESOPHYLL**

**C.S.**

**PHLOEM**

**SPONGY LAYER**





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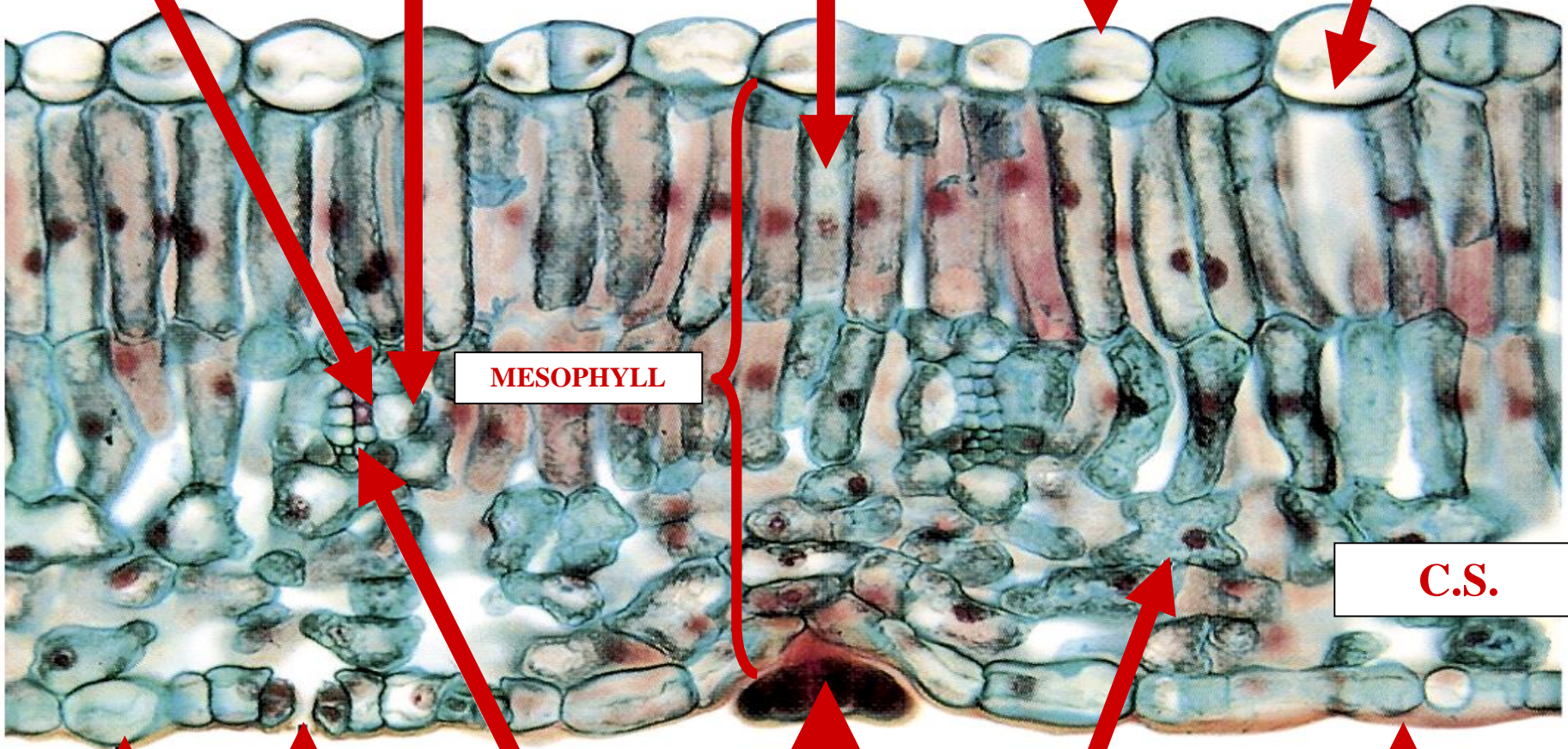
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BUNDLE**

**PALISADE  
LAYER**

**MODERATE  
CUTICLE**

**STOMATES  
ABSENT**



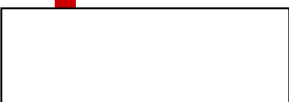
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**C.S.**

**PHLOEM**

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**XYLEM**

**VASCULAR BUNDLE**

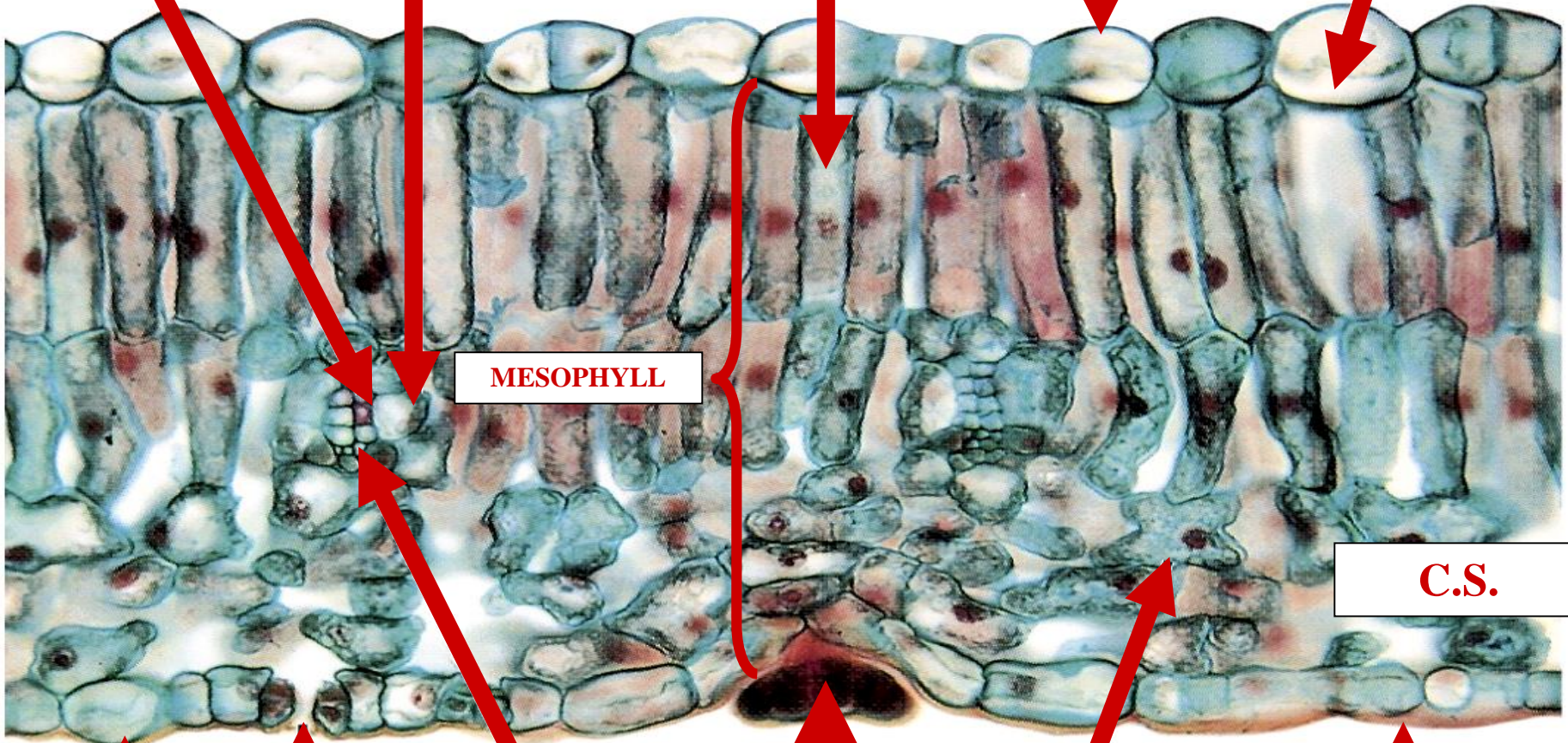
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**MODERATE CUTICLE**

**STOMATES ABSENT**

**S**

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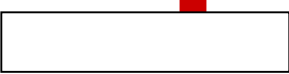
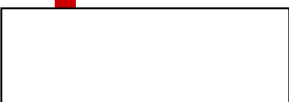
**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL EPIDERMIS**

**SPONGY LAYER**





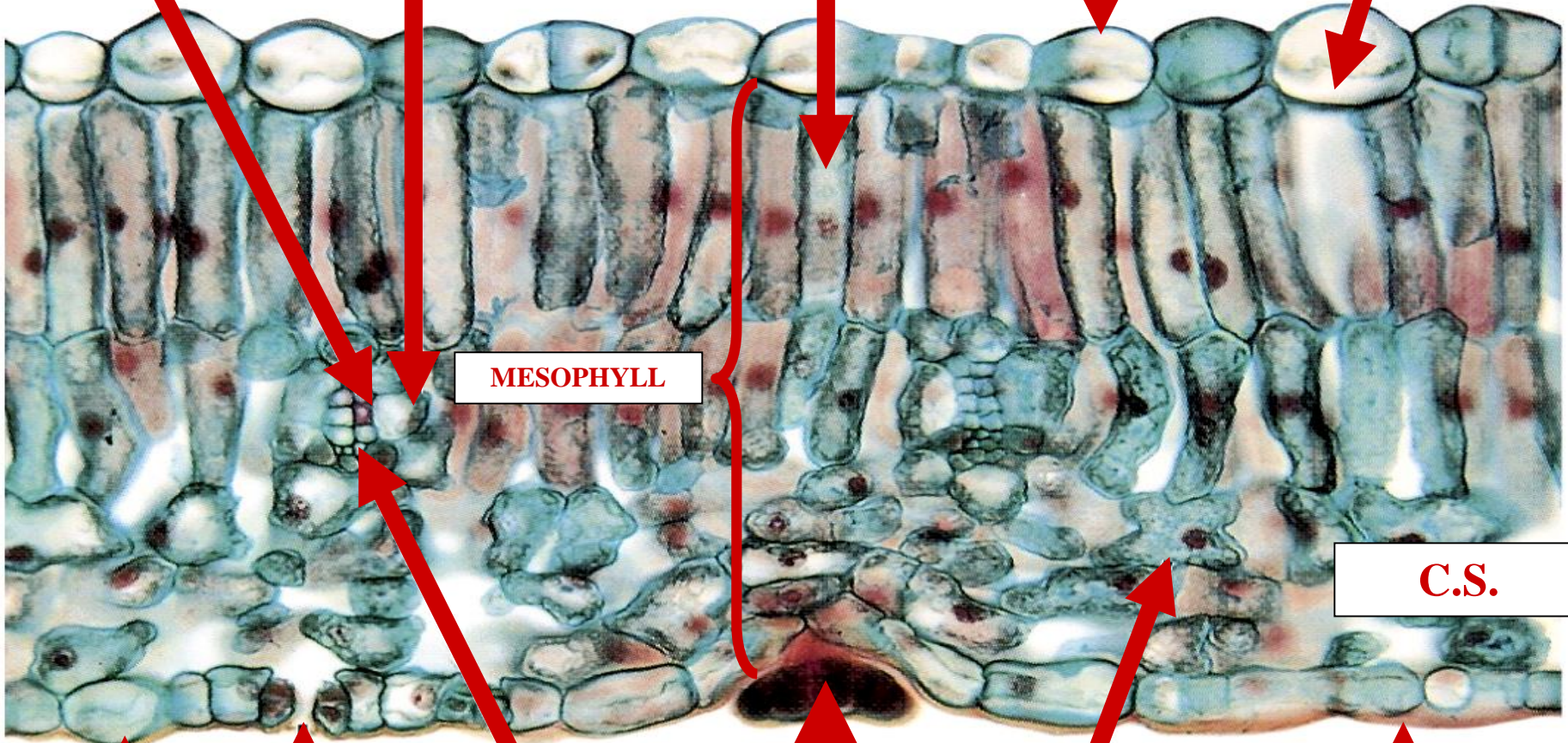
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**VASCULAR BUNDLE**

**PALISADE LAYER**

**MODERATE CUTICLE**

**STOMATES ABSENT**



**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL EPIDERMIS**

**STOMATES PRESENT**

**SPONGY LAYER**

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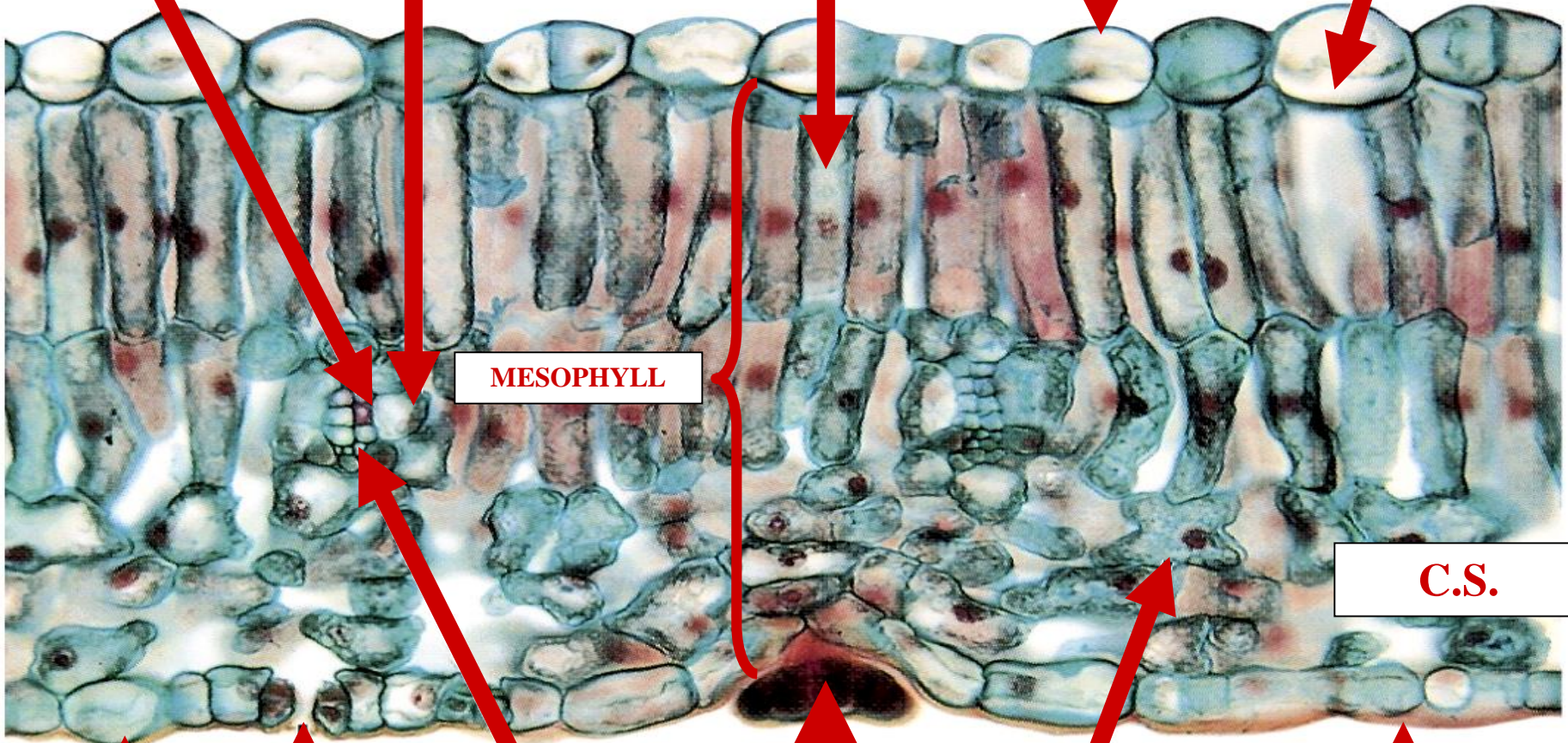
**XYLEM**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MODERATE CUTICLE**

**STOMATES ABSENT**



**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL EPIDERMIS**

**STOMATES PRESENT**

**SPONGY LAYER**

**MODERATE CUTICLE**



**T**

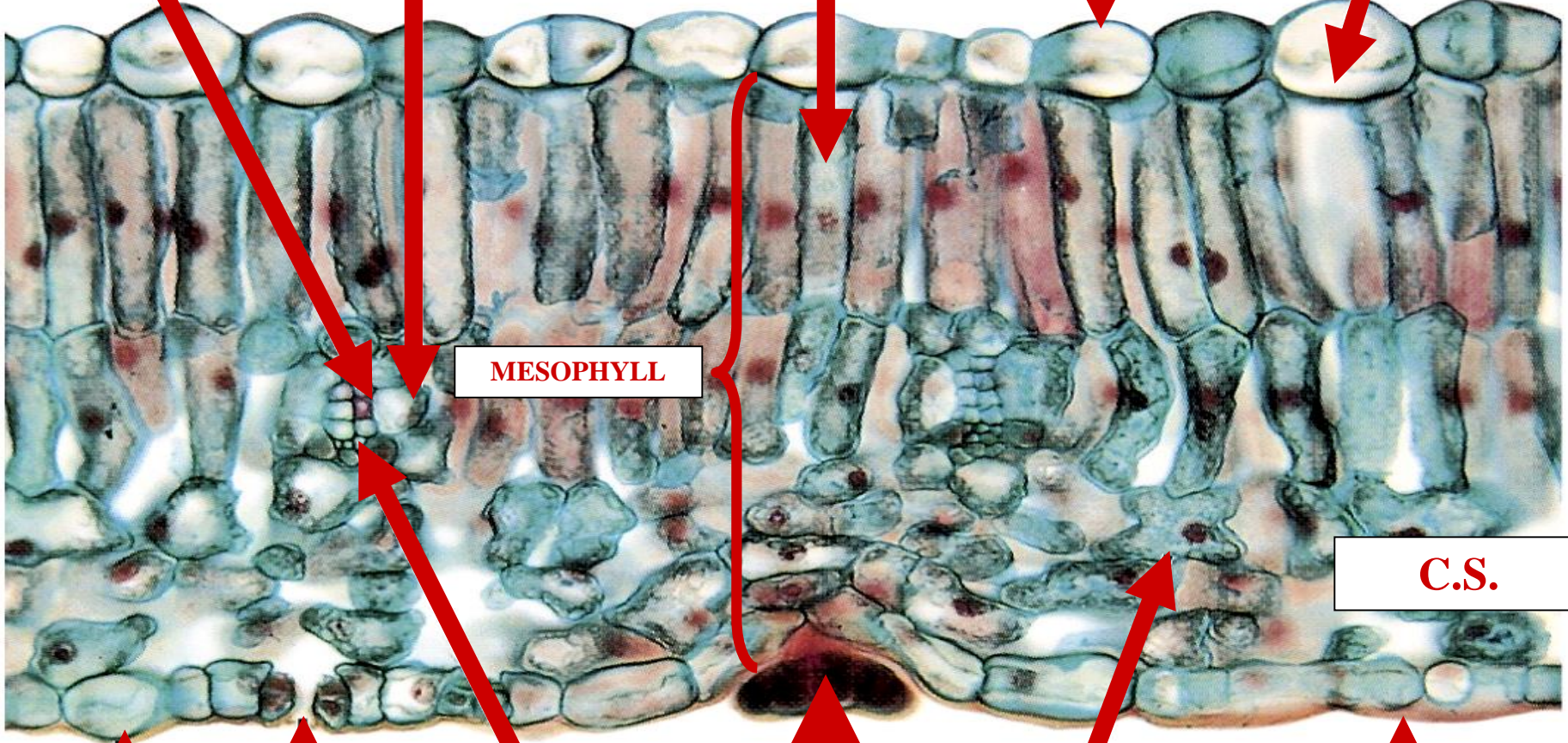
**XYLEM**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MODERATE CUTICLE**

**STOMATES ABSENT**



**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL EPIDERMIS**

**STOMATES PRESENT**

**?**

**SPONGY LAYER**

**MODERATE CUTICLE**





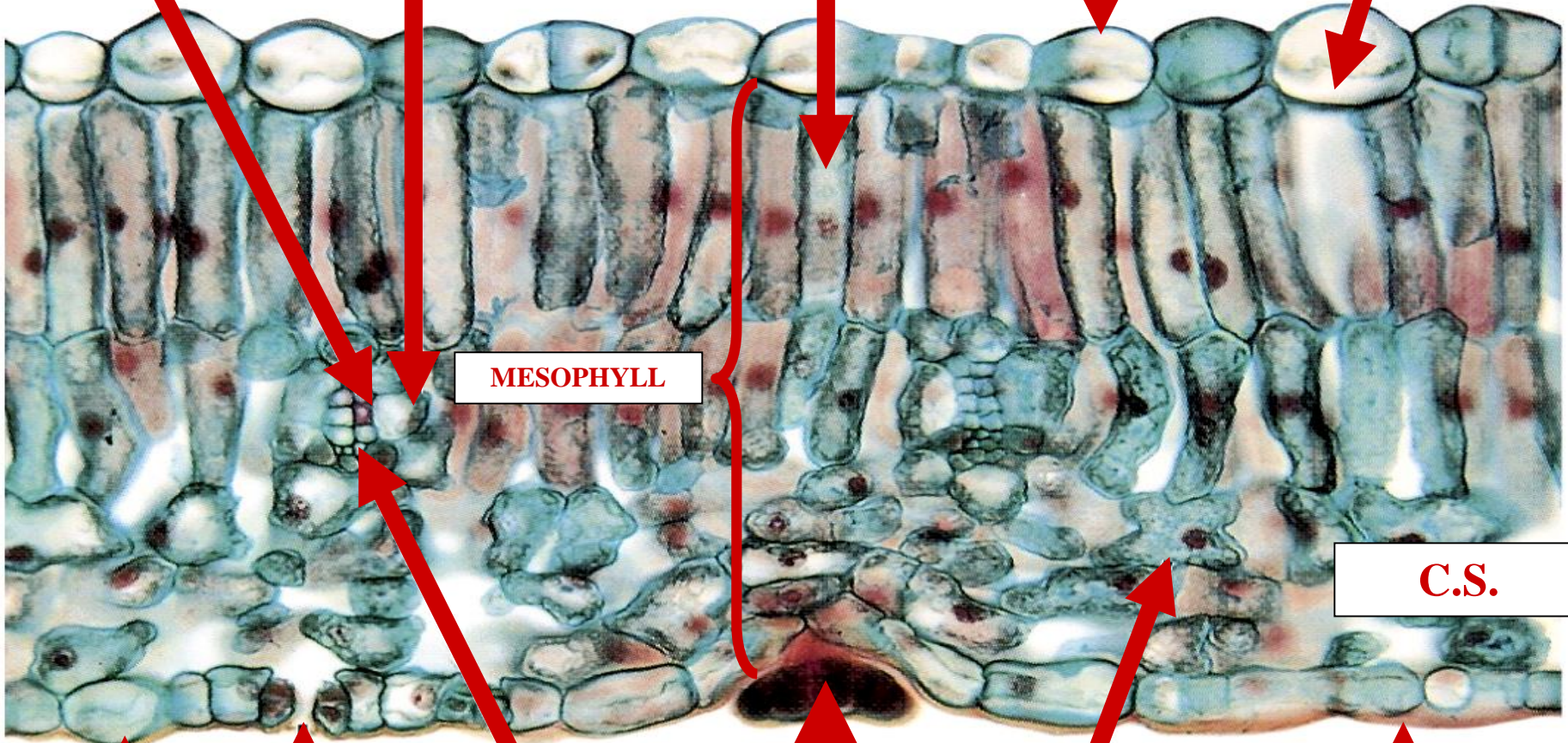
**XYLEM**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MODERATE CUTICLE**

**STOMATES ABSENT**



**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL EPIDERMIS**

**STOMATES PRESENT**

**TRICHOME**

**SPONGY LAYER**

**MODERATE CUTICLE**



# XEROPHYTE LEAF

# **XEROPHYTE LEAF**



# **DICOT LEAF ANATOMY**

## **XEROPHYTE**

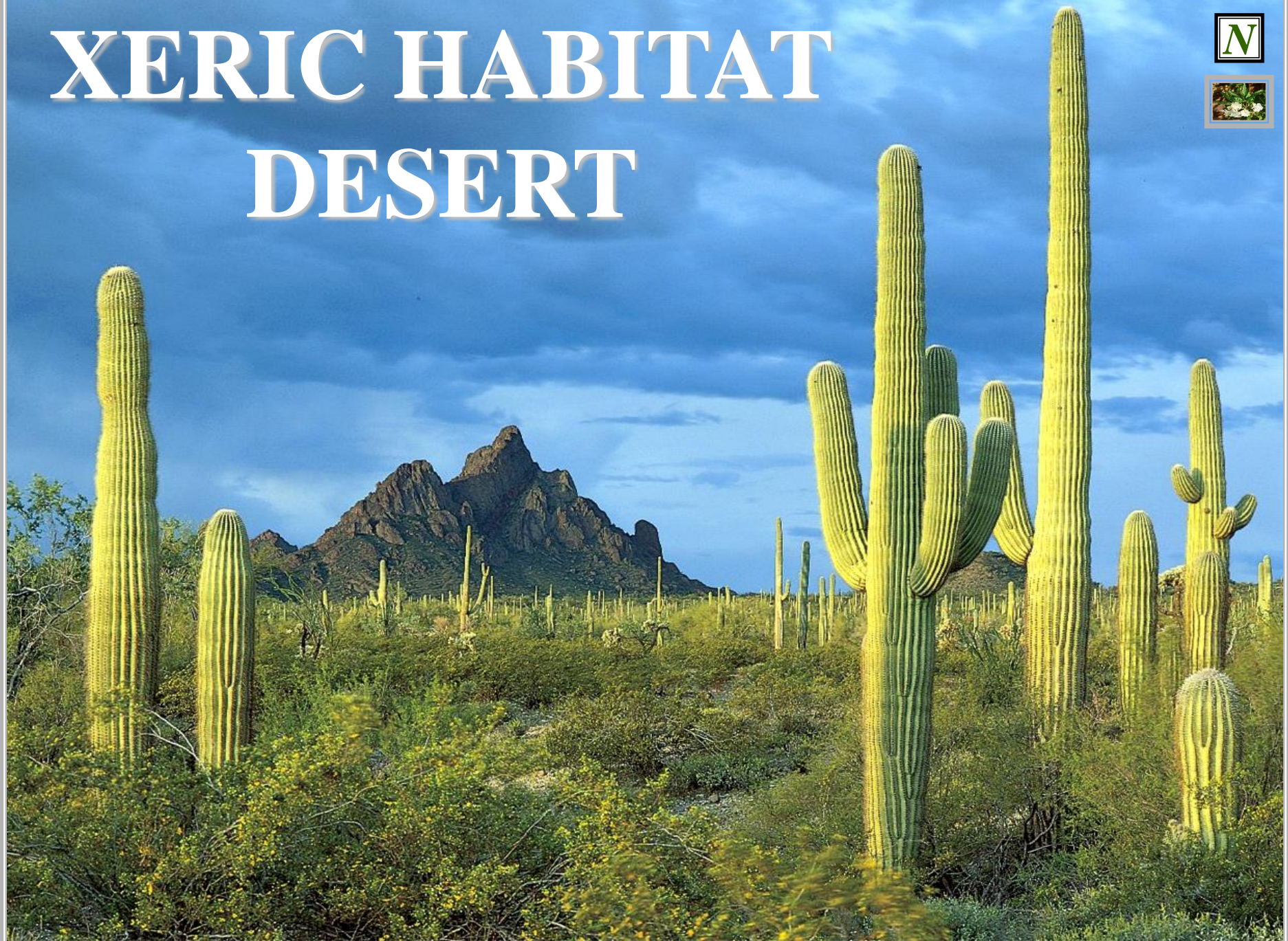


**ADAPTED**  
**LOW MOISTURE**  
**HABITAT**

# **DICOT LEAF ANATOMY**

## **XEROPHYTE**

# XERIC HABITAT DESERT

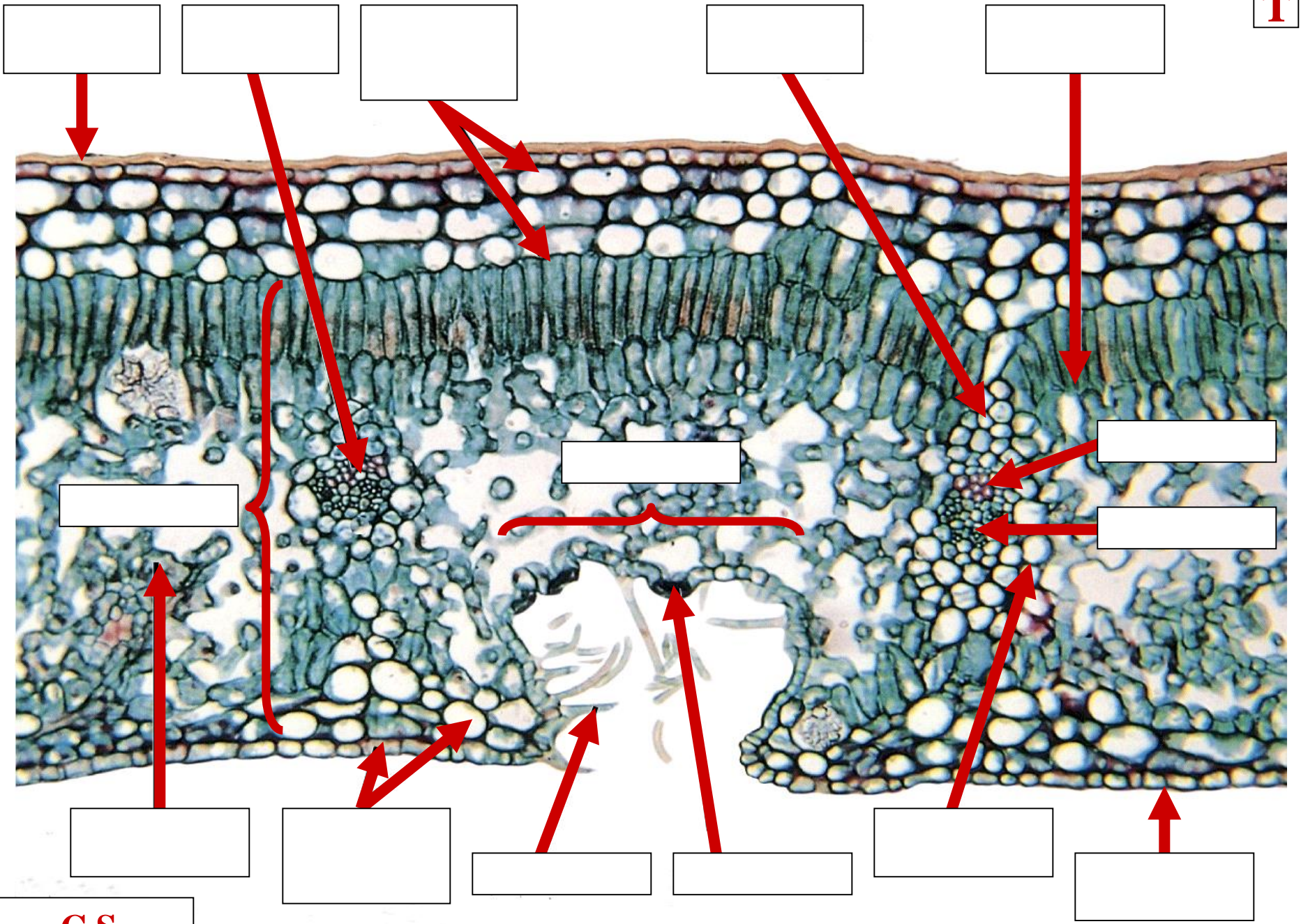




*NERIUM*







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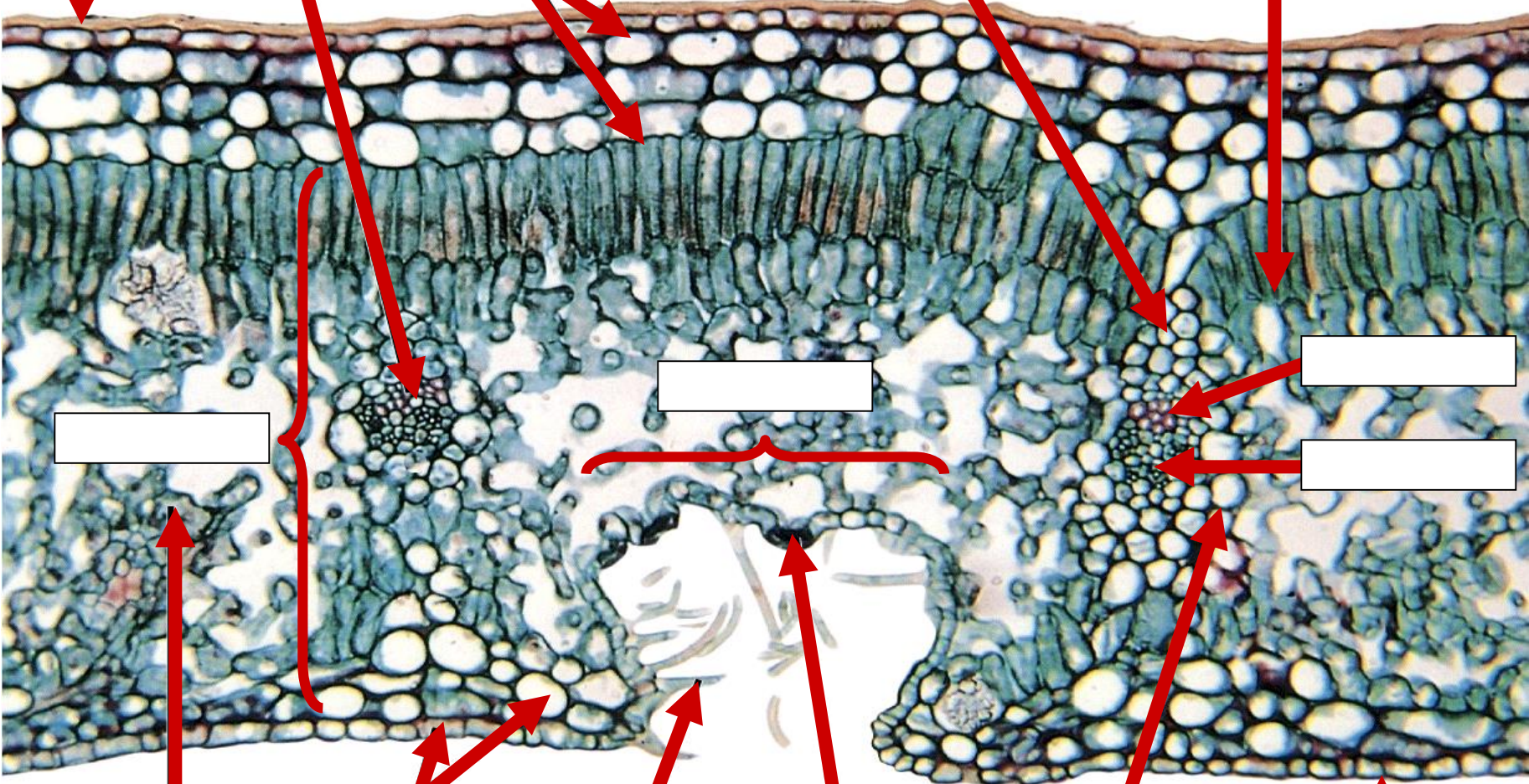
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C.S.



A

THICK CUTICLE



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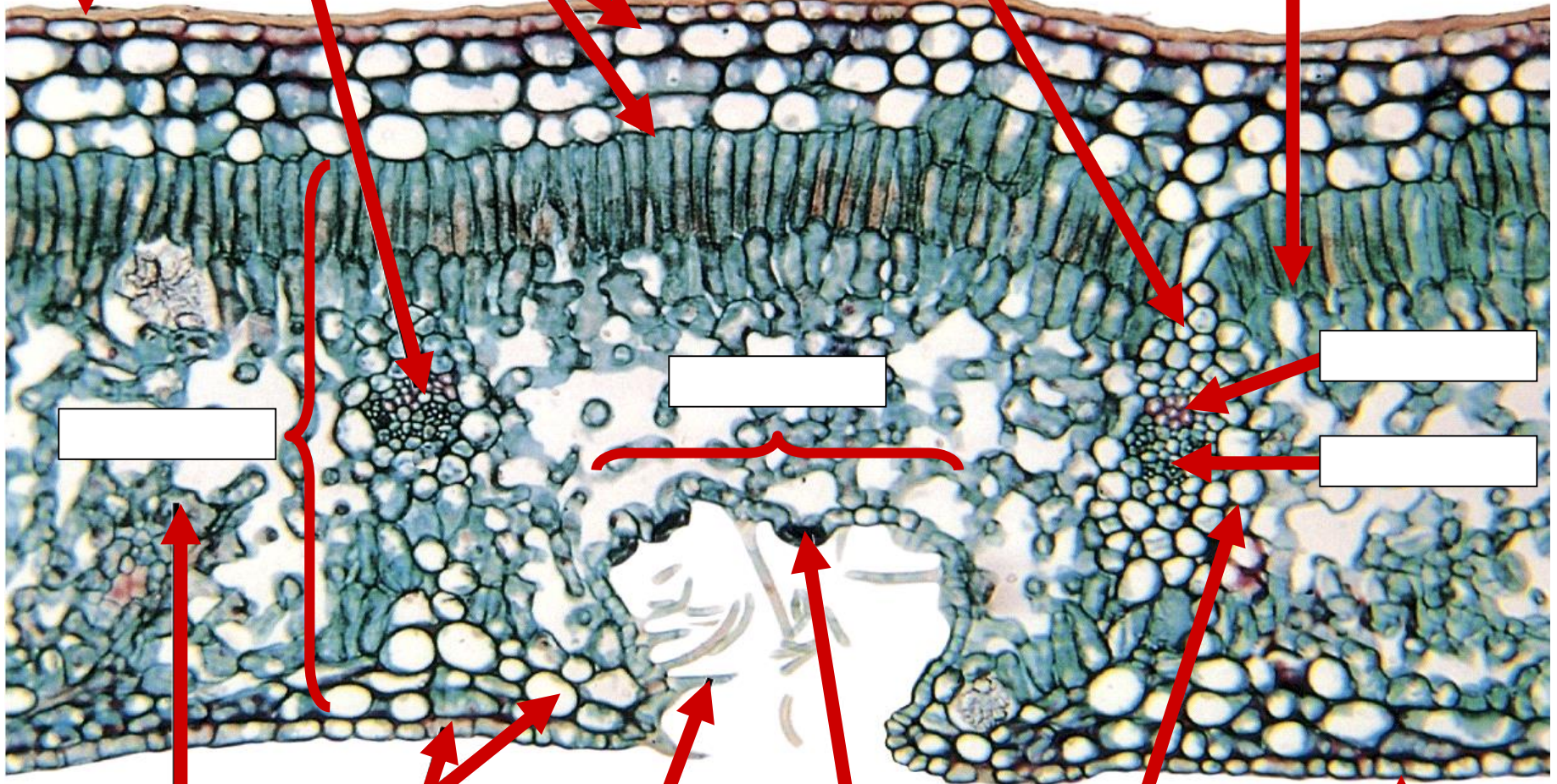


S

AB

THICK CUTICLE

ADAXIAL MULTIPLE EPIDERMIS

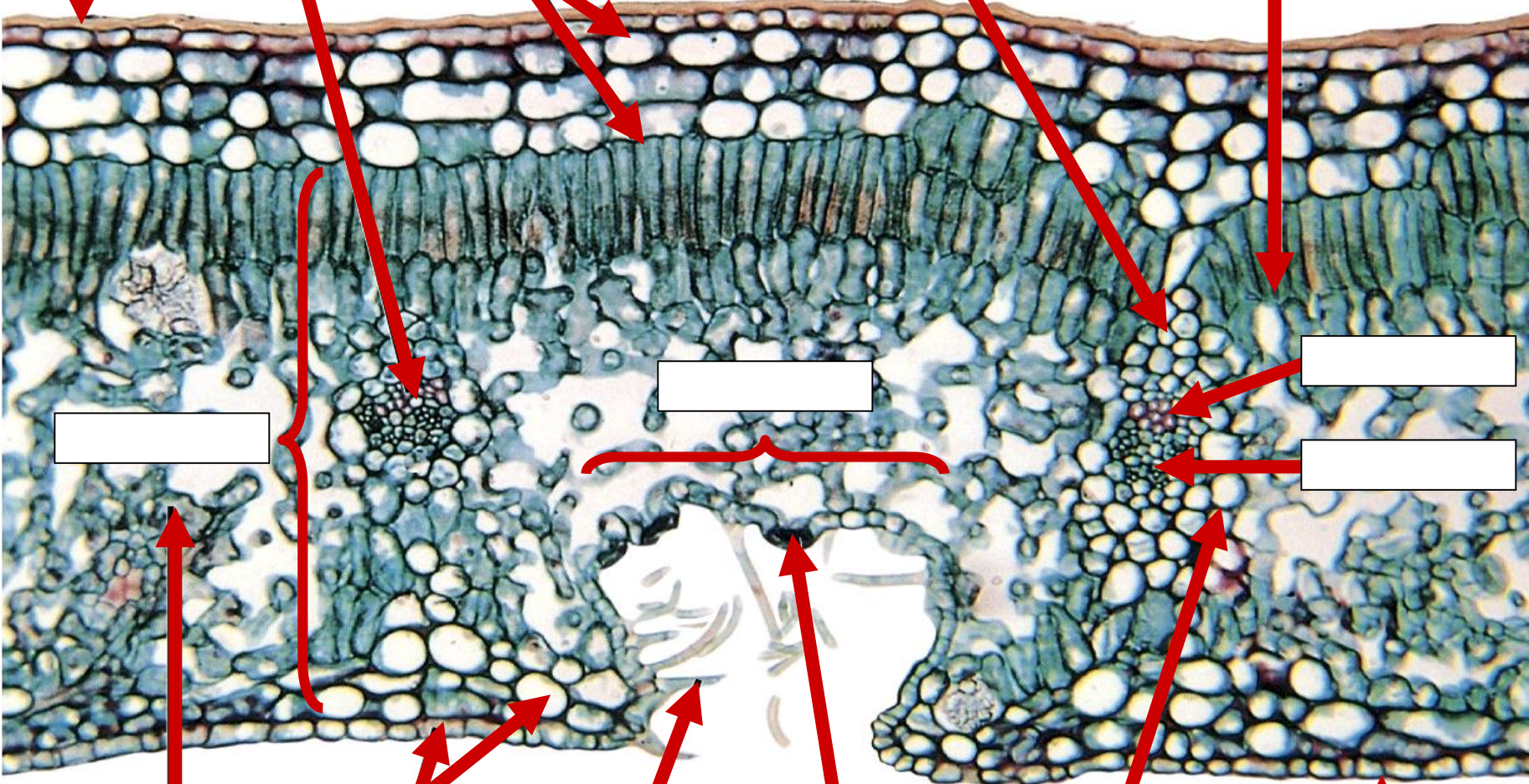


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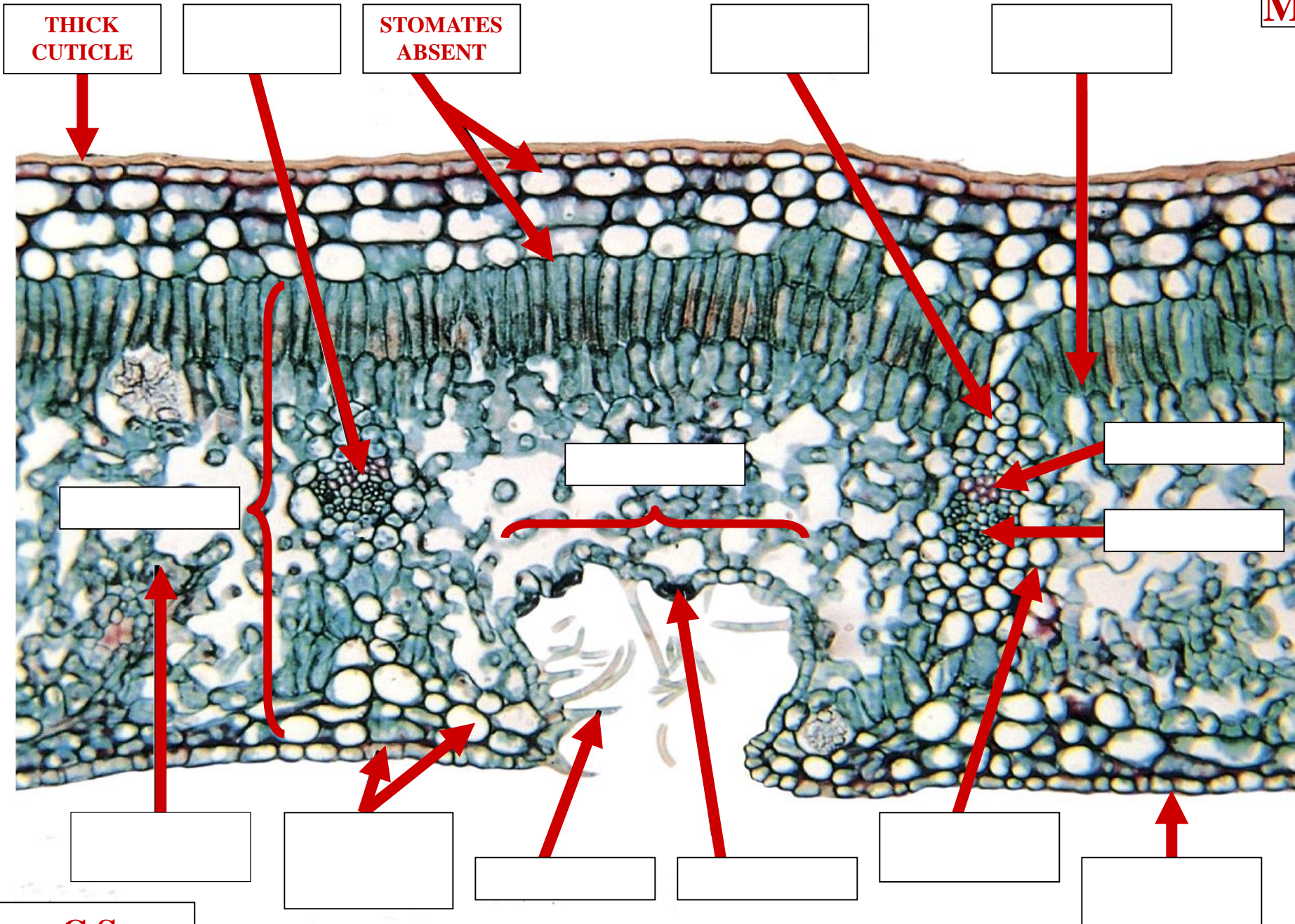


THICK CUTICLE

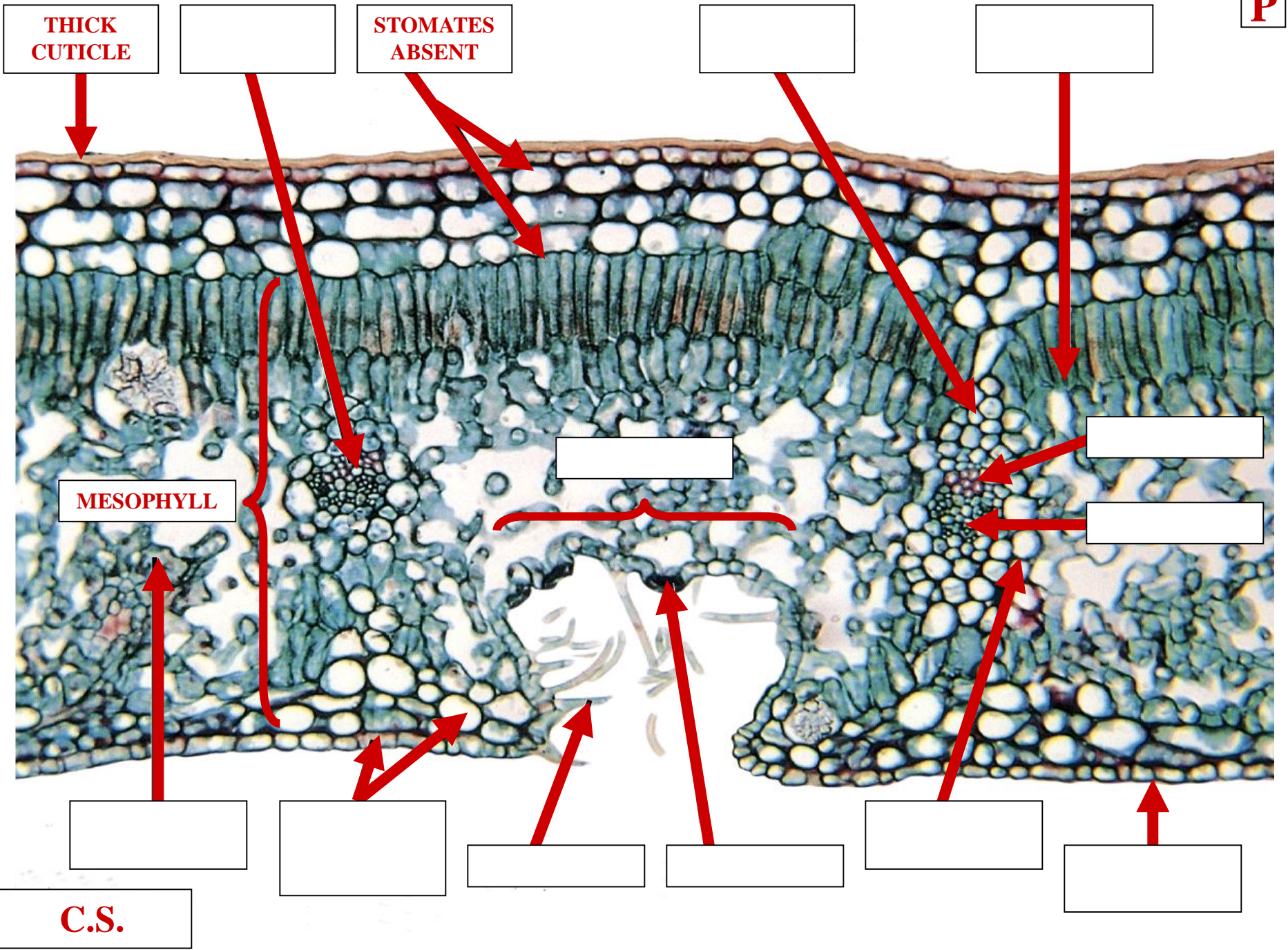
STOMATES ABSENT



C.S.







**THICK CUTICLE**

**STOMATES ABSENT**

**MESOPHYLL**

**C.S.**

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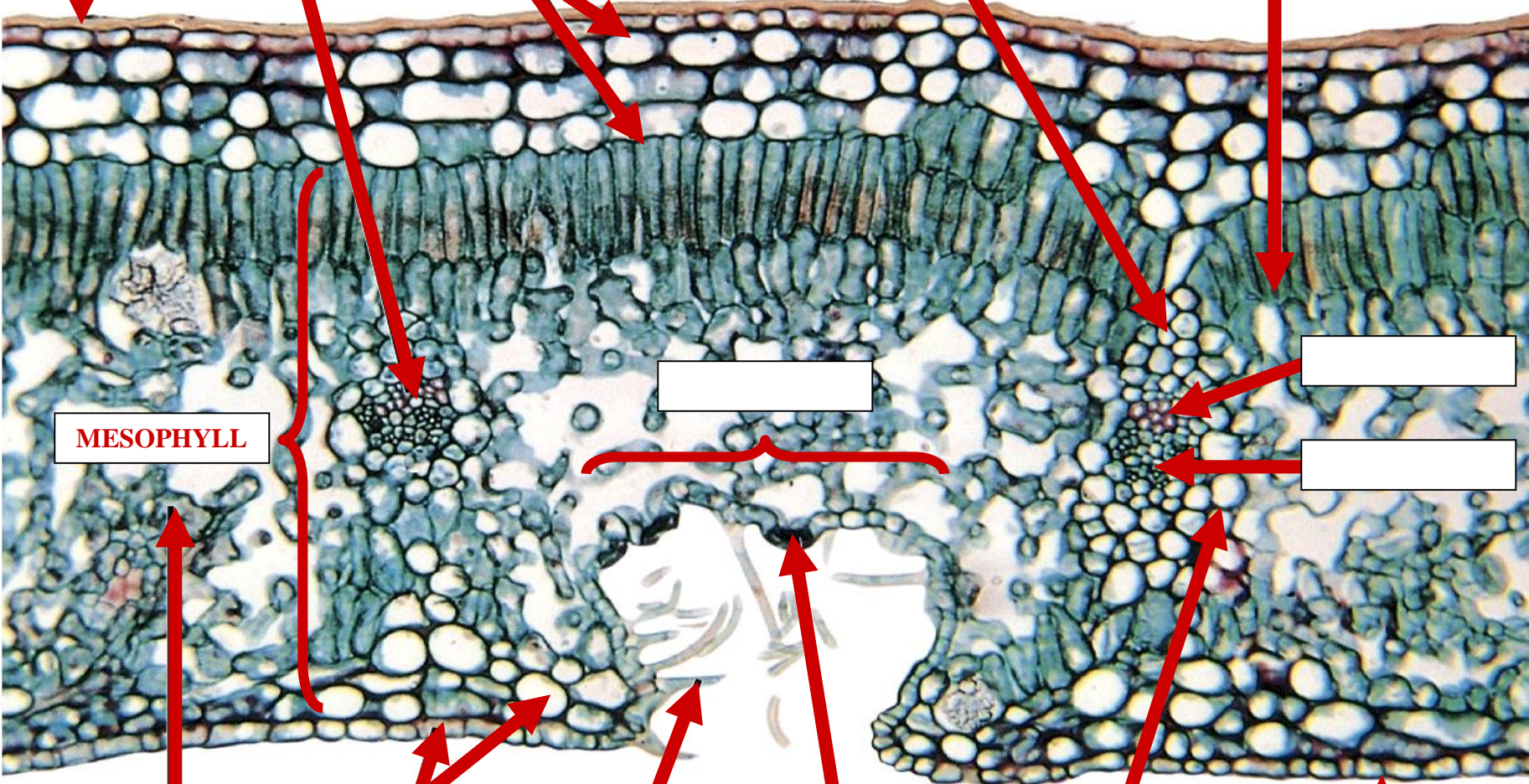
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THICK CUTICLE

STOMATES ABSENT

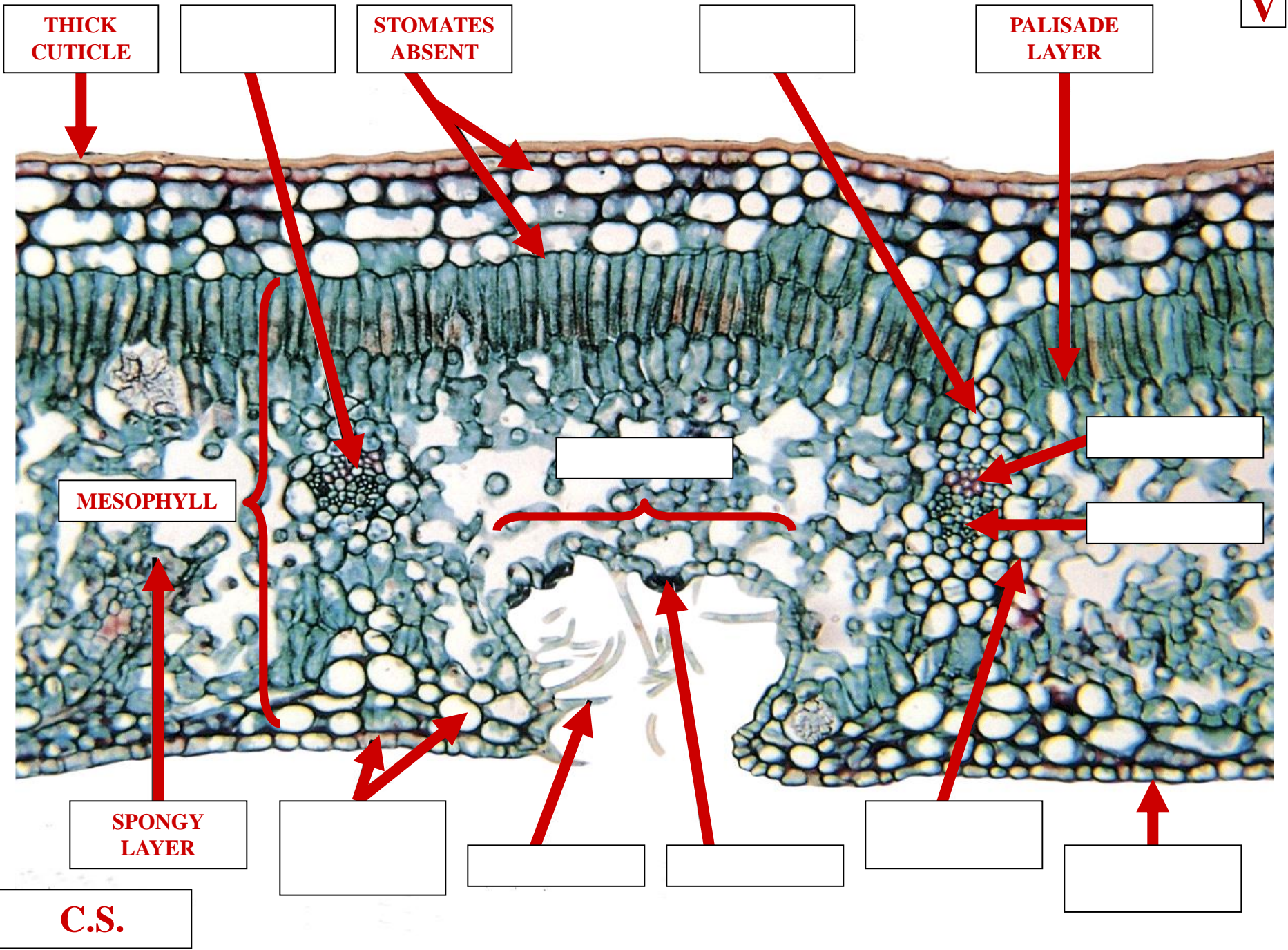
PALISADE LAYER



MESOPHYLL

C.S.







**B**

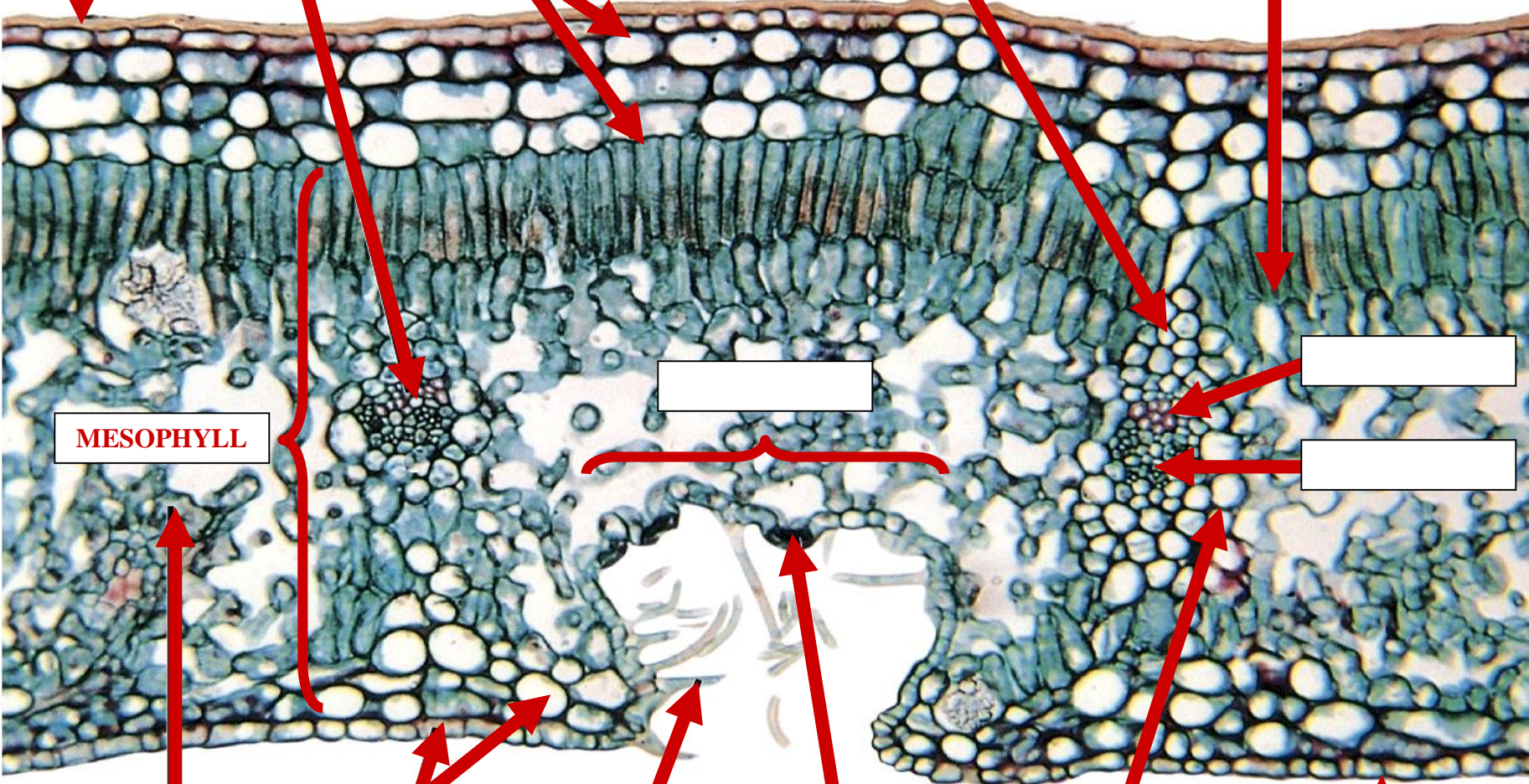
**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**



**MESOPHYLL**

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**SPONGY LAYER**

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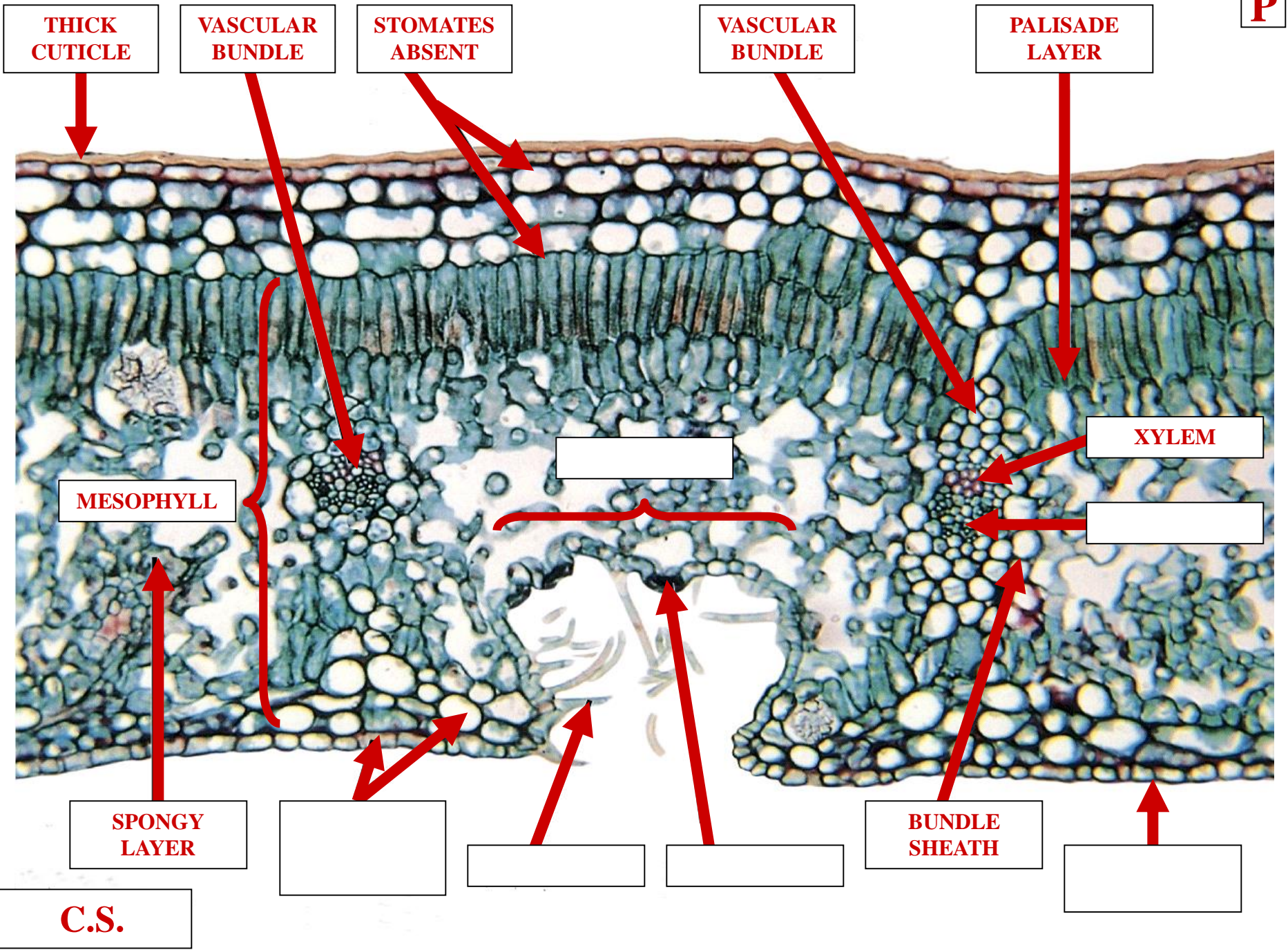
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**C.S.**









**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MESOPHYLL**

**XYLEM**

**SONGY LAYER**

**BUNDLE SHEATH**

**C.S.**

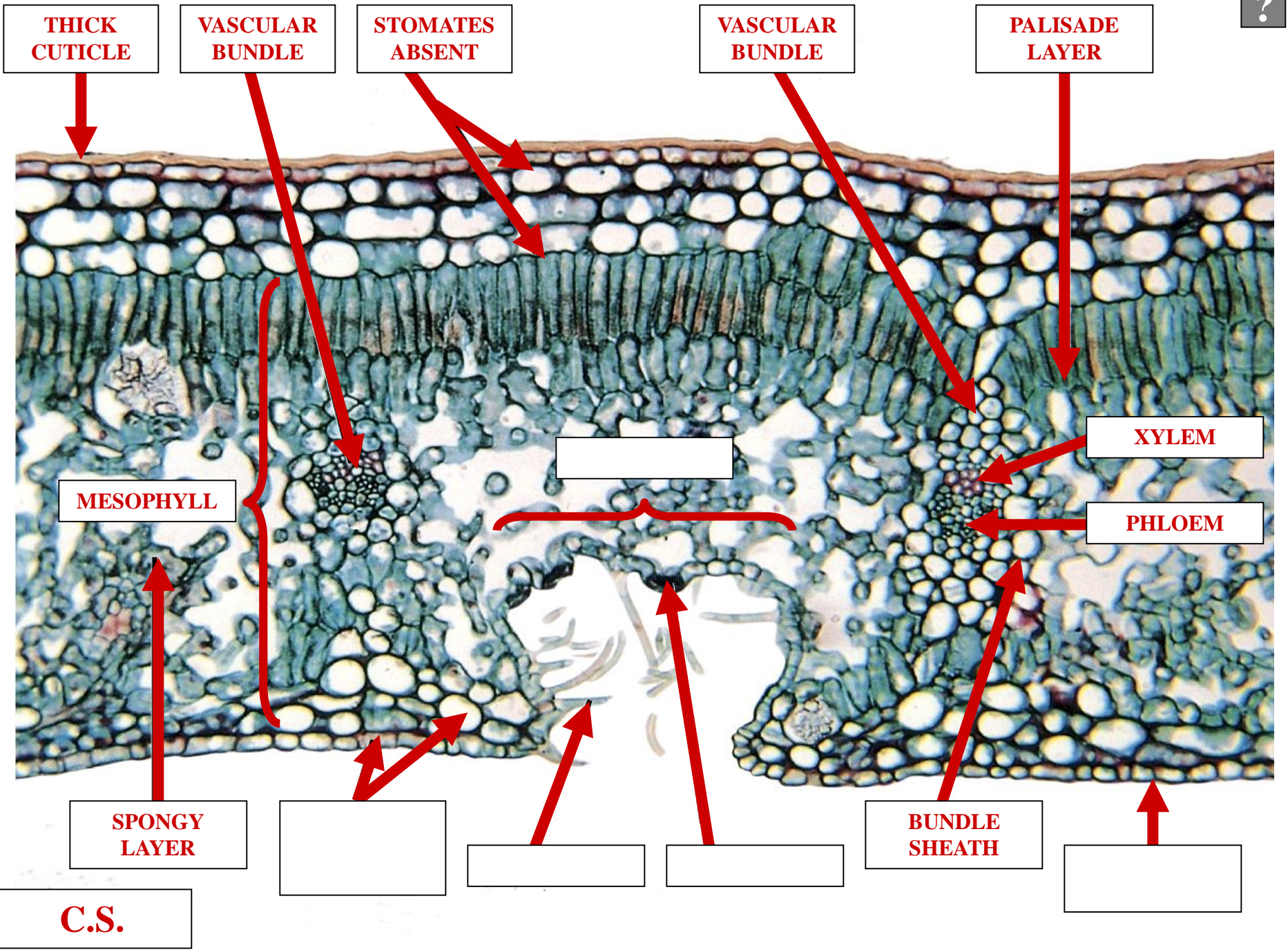
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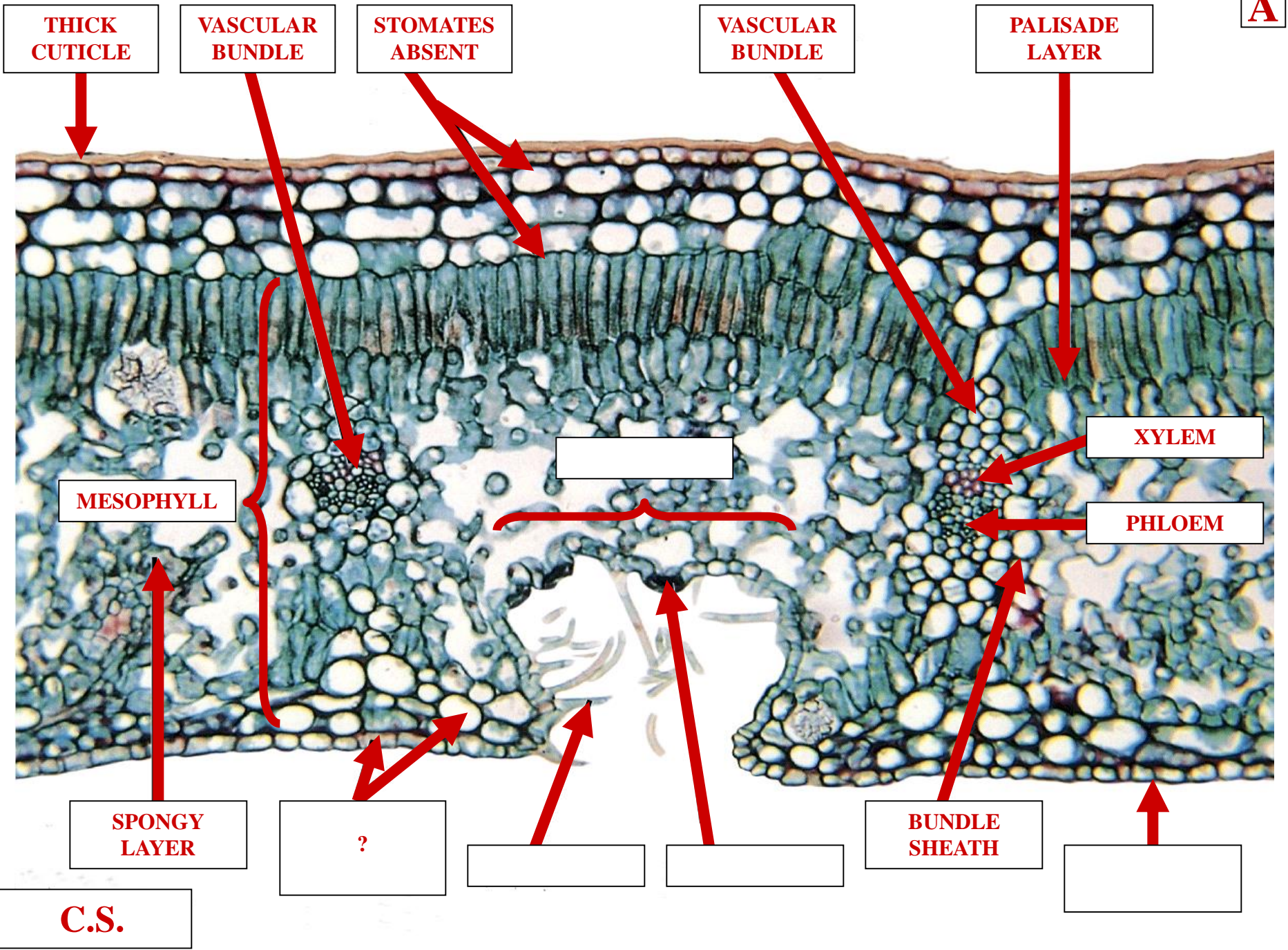
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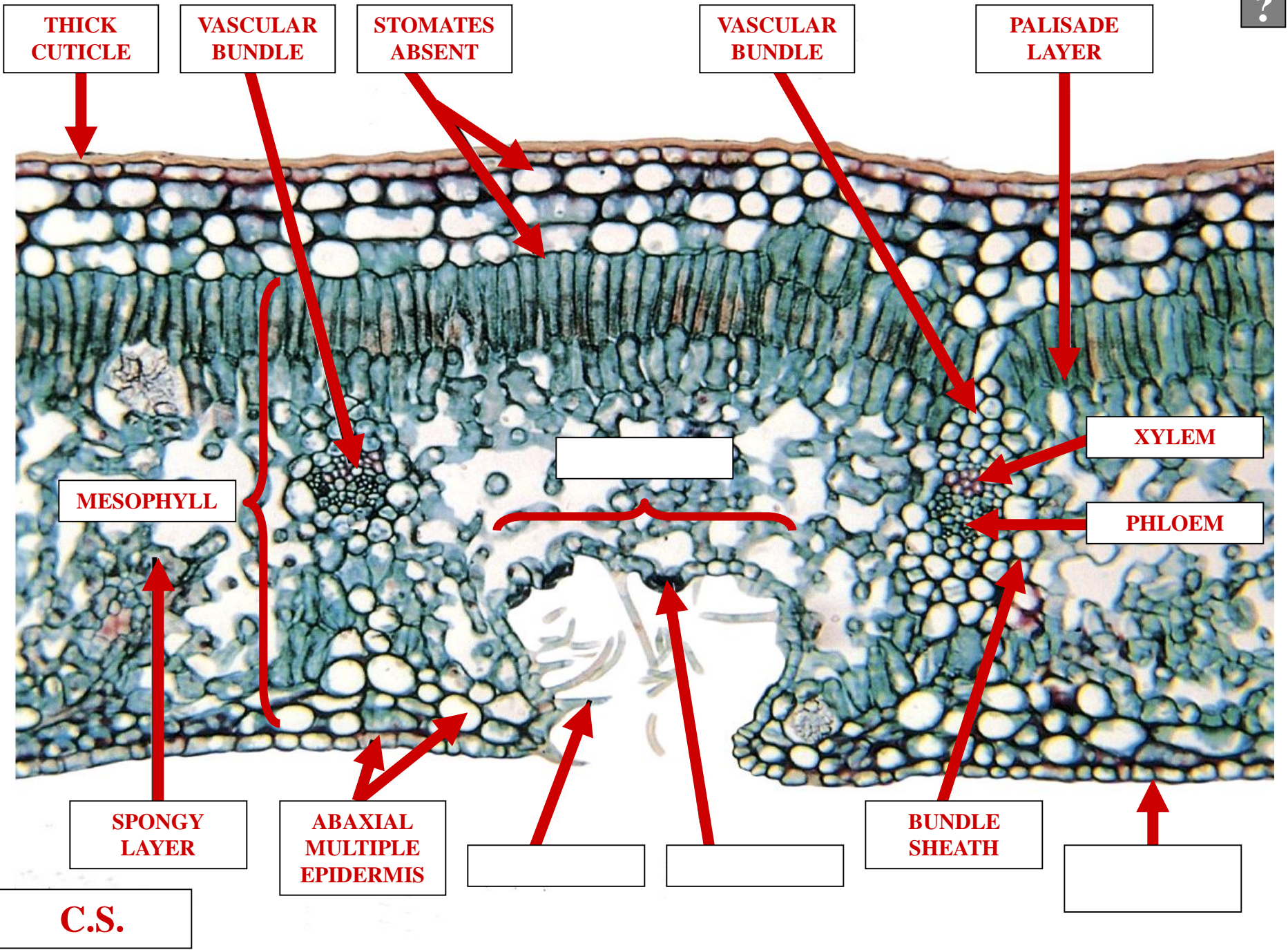




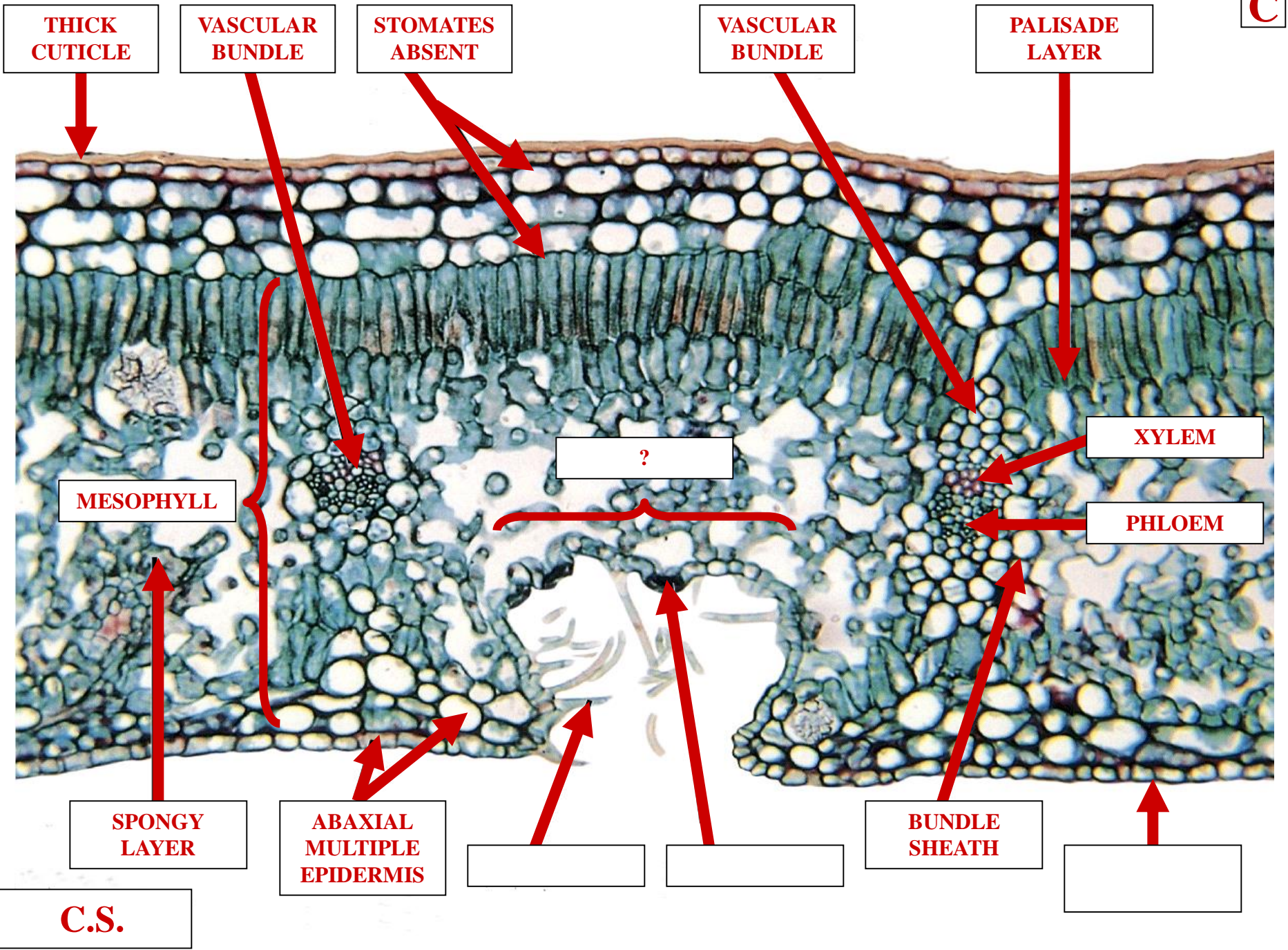
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**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MESOPHYLL**

**?**

**XYLEM**

**PHLOEM**

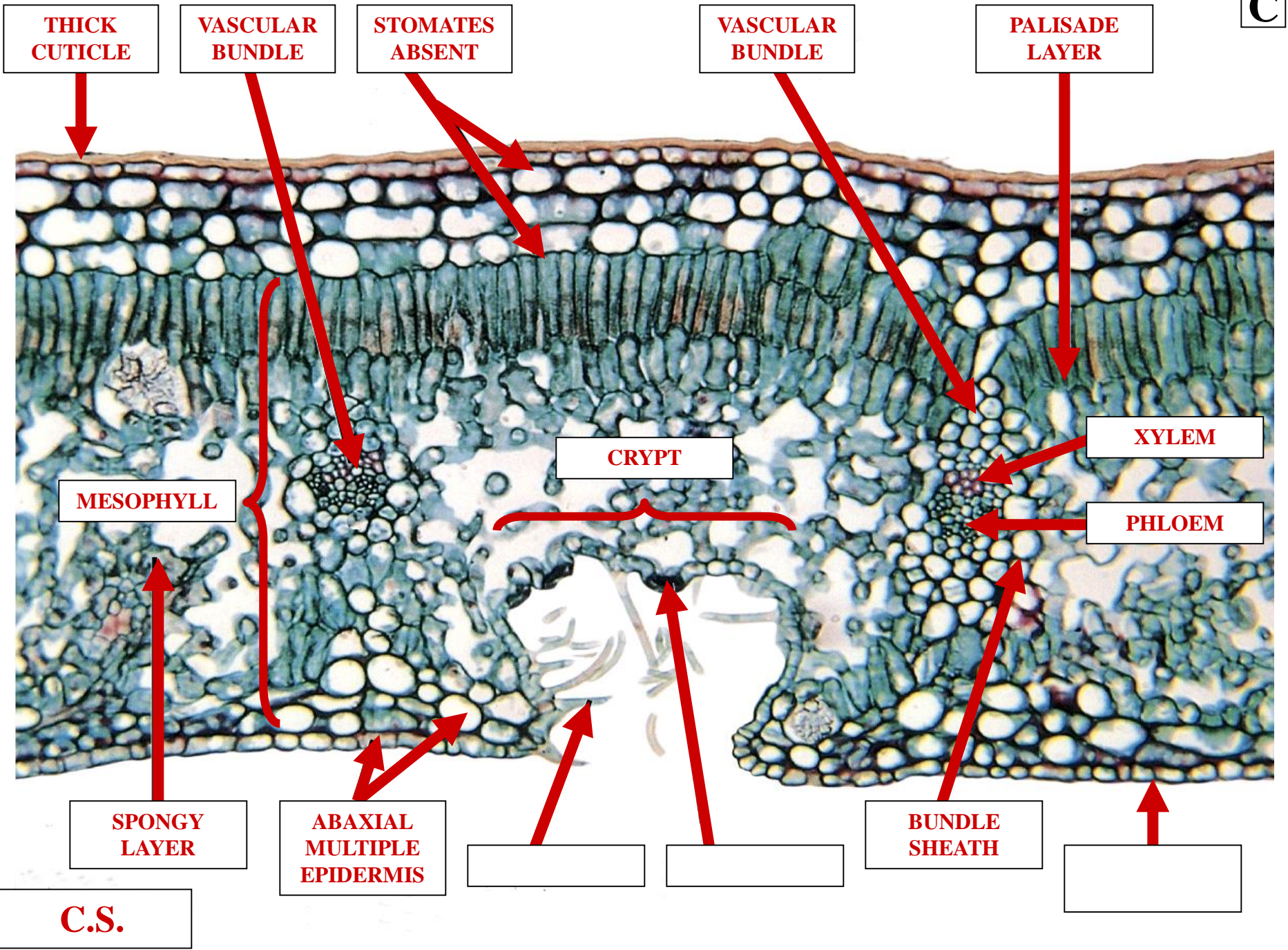
**SPONGY LAYER**

**ABAXIAL MULTIPLE EPIDERMIS**

**BUNDLE SHEATH**

**C.S.**





**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MESOPHYLL**

**CRYPT**

**XYLEM**

**PHLOEM**

**Spongy Layer**

**ABAXIAL MULTIPLE EPIDERMIS**

**BUNDLE SHEATH**

**C.S.**



**CRYPT**

# DICOT LEAF ANATOMY

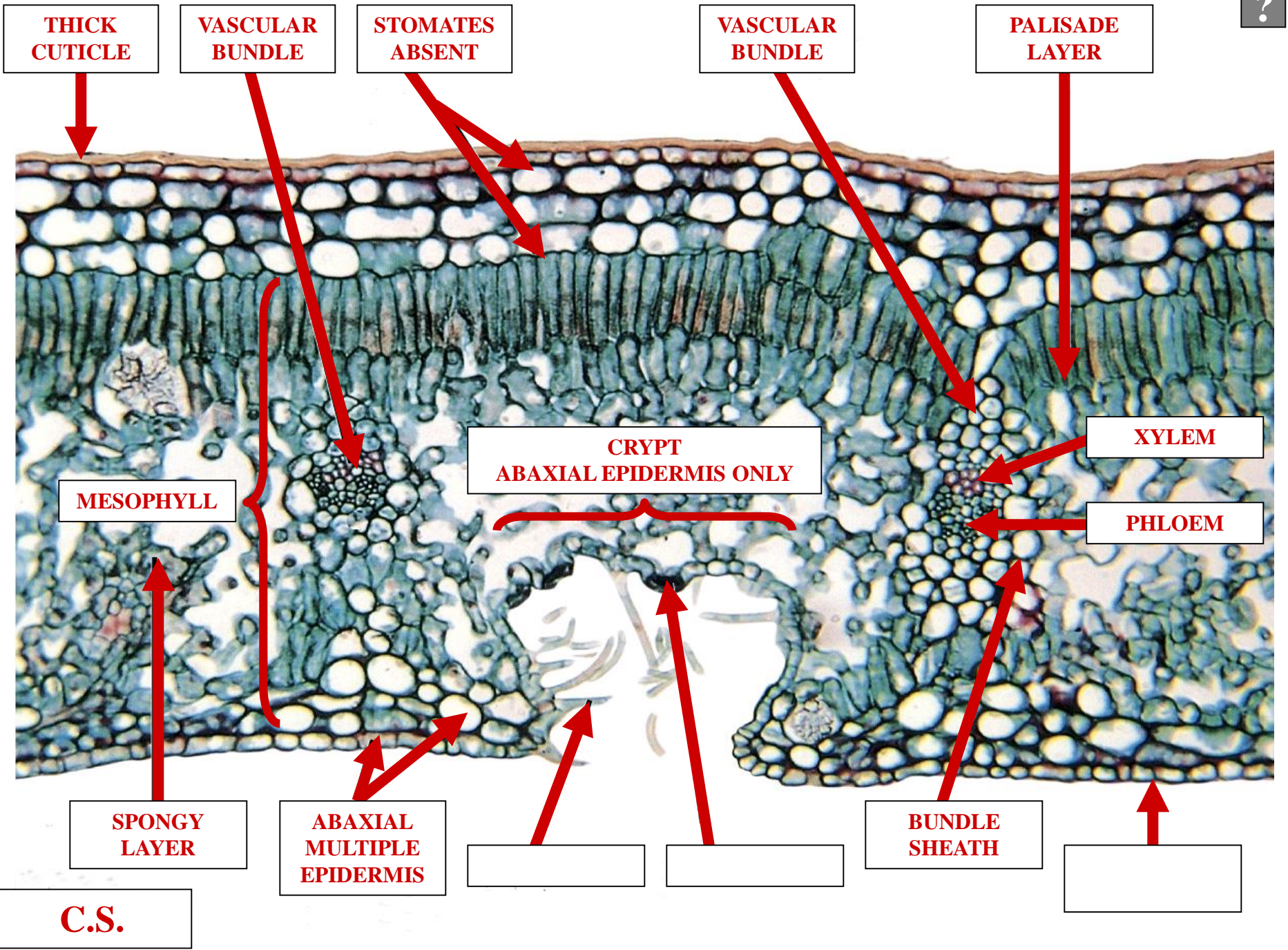
## XEROPHYTE CRYPT



ABAXIAL EPIDERMIS  
CAVITY

DICOT LEAF ANATOMY  
XEROPHYTE CRYPT





**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MESOPHYLL**

**CRYPT  
ABAXIAL EPIDERMIS ONLY**

**XYLEM**

**PHLOEM**

**SPONGY LAYER**

**ABAXIAL  
MULTIPLE  
EPIDERMIS**

**BUNDLE SHEATH**

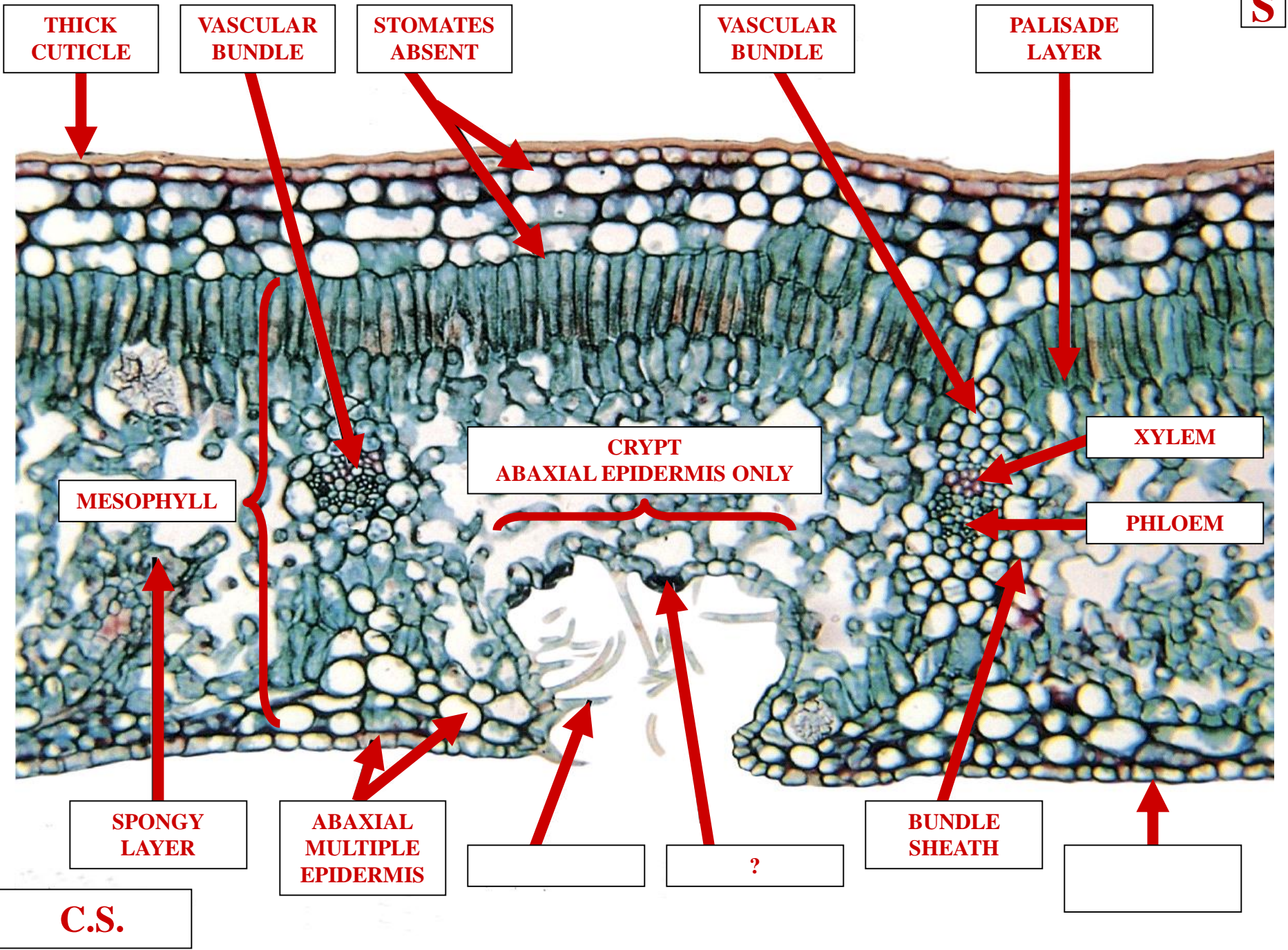
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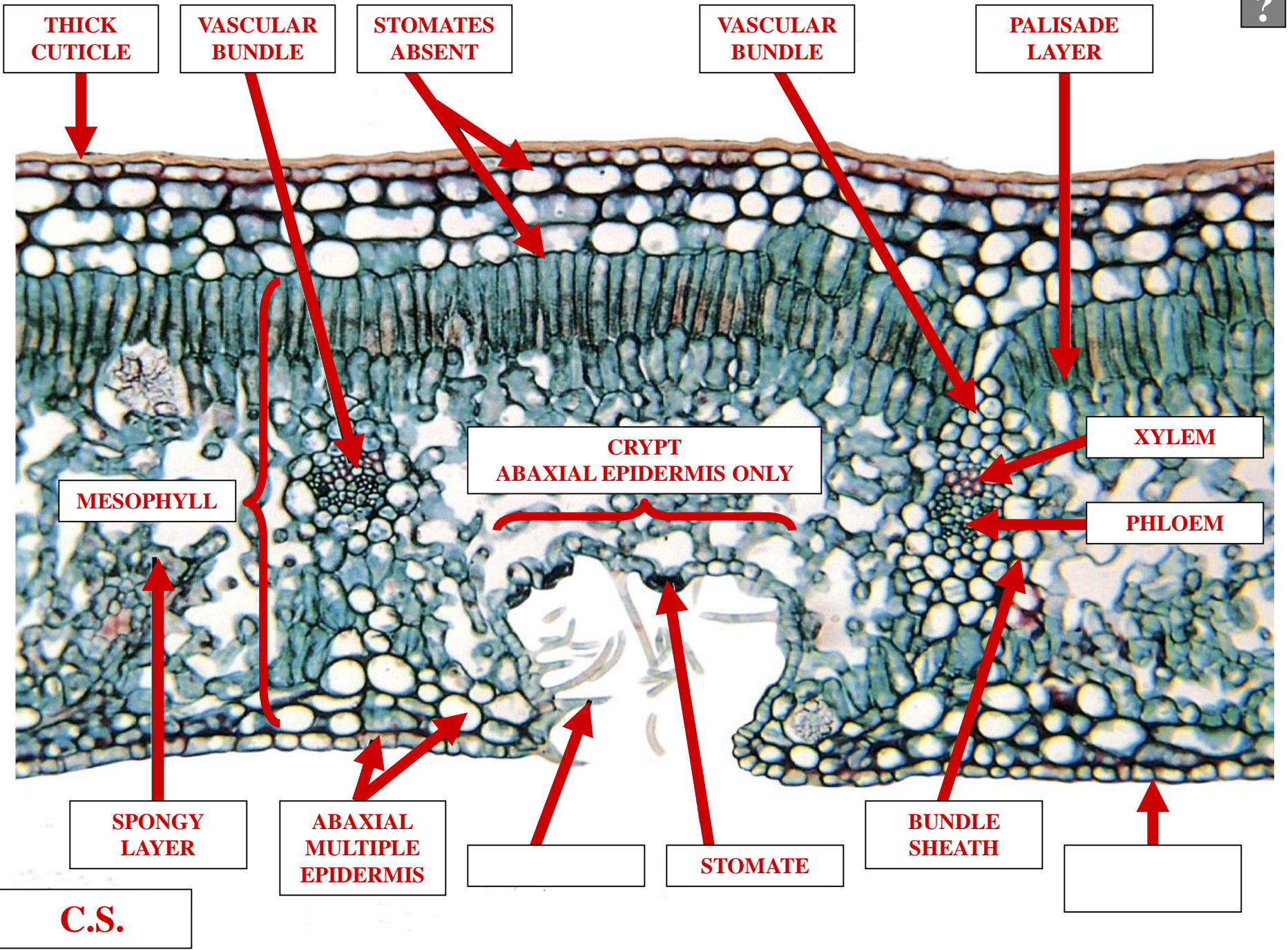
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THICK CUTICLE

VASCULAR BUNDLE

STOMATES ABSENT

VASCULAR BUNDLE

PALISADE LAYER

MESOPHYLL

CRYPT  
ABAXIAL EPIDERMIS ONLY

XYLEM

PHLOEM

SPONGY LAYER

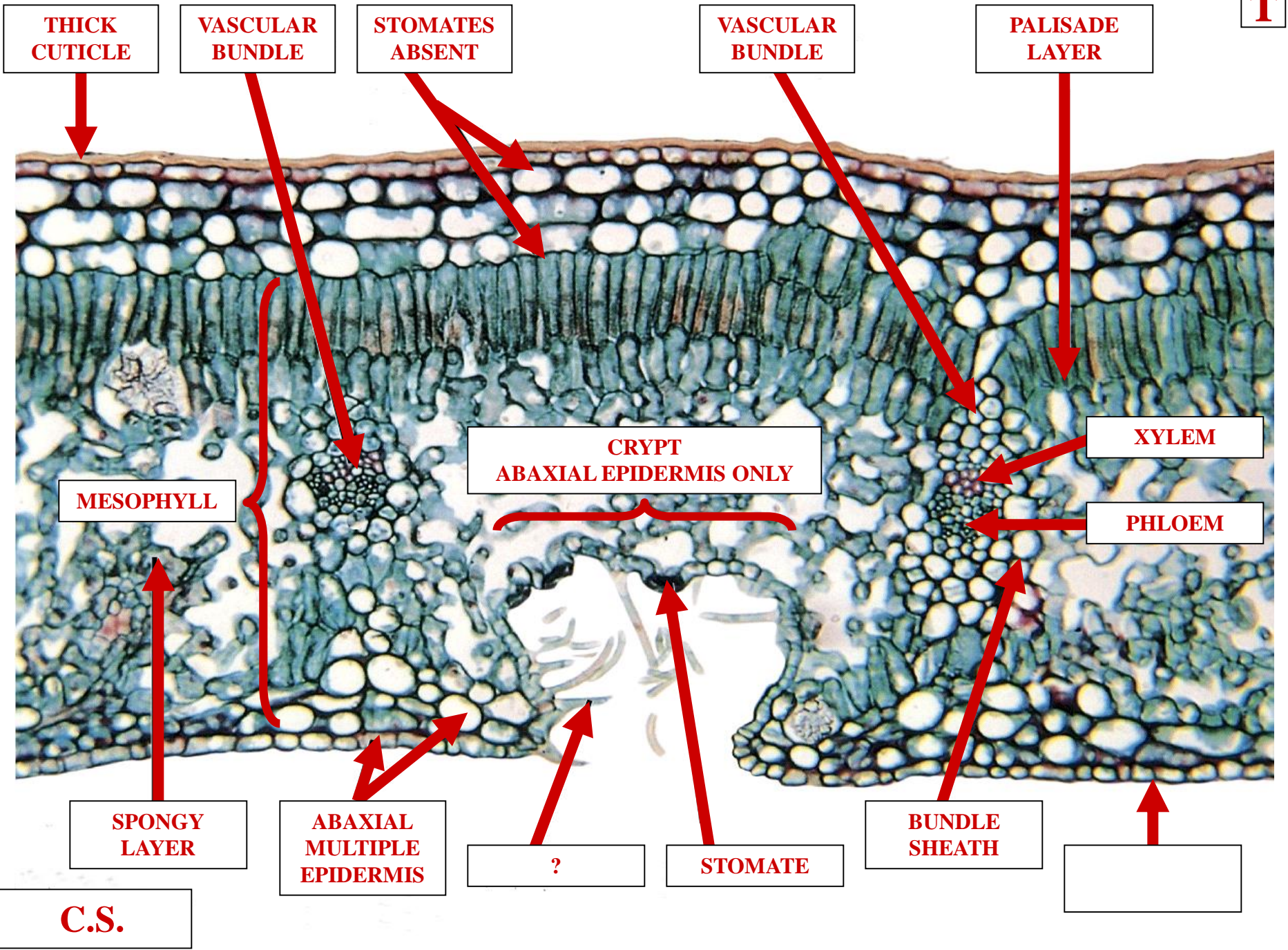
ABAXIAL MULTIPLE EPIDERMIS

STOMATE

BUNDLE SHEATH

C.S.





THICK CUTICLE

VASCULAR BUNDLE

STOMATES ABSENT

VASCULAR BUNDLE

PALISADE LAYER

MESOPHYLL

CRYPT ABAXIAL EPIDERMIS ONLY

XYLEM

PHLOEM

SPONGY LAYER

ABAXIAL MULTIPLE EPIDERMIS

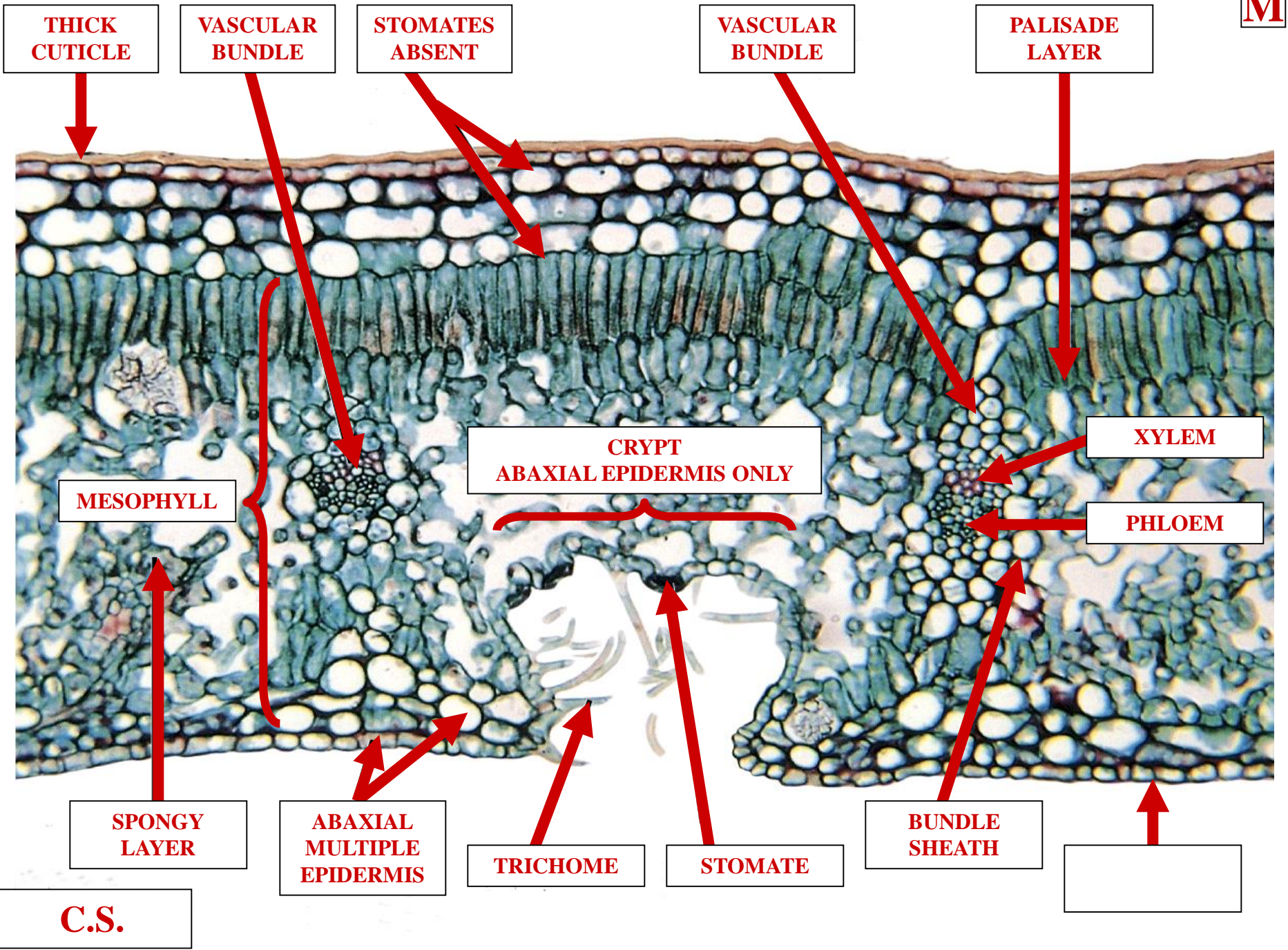
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STOMATE

BUNDLE SHEATH

C.S.





THICK CUTICLE

VASCULAR BUNDLE

STOMATES ABSENT

VASCULAR BUNDLE

PALISADE LAYER

MESOPHYLL

CRYPT  
ABAXIAL EPIDERMIS ONLY

XYLEM

PHLOEM

SPONGY LAYER

ABAXIAL MULTIPLE EPIDERMIS

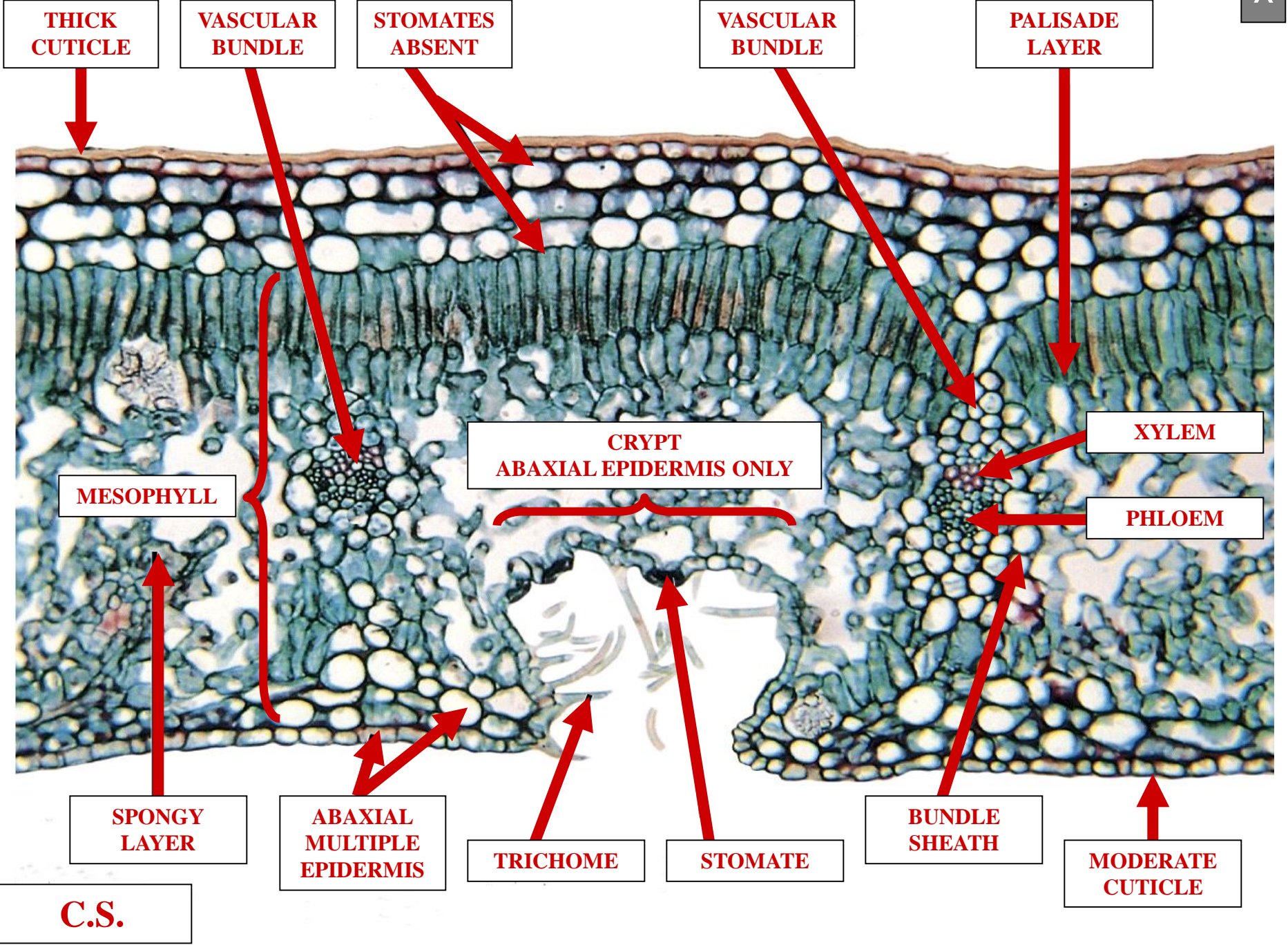
TRICHOME

STOMATE

BUNDLE SHEATH

C.S.





**THICK CUTICLE**

**VASCULAR BUNDLE**

**STOMATES ABSENT**

**VASCULAR BUNDLE**

**PALISADE LAYER**

**MESOPHYLL**

**CRYPT  
ABAXIAL EPIDERMIS ONLY**

**XYLEM**

**PHLOEM**

**SPONGY LAYER**

**ABAXIAL MULTIPLE EPIDERMIS**

**TRICHOME**

**STOMATE**

**BUNDLE SHEATH**

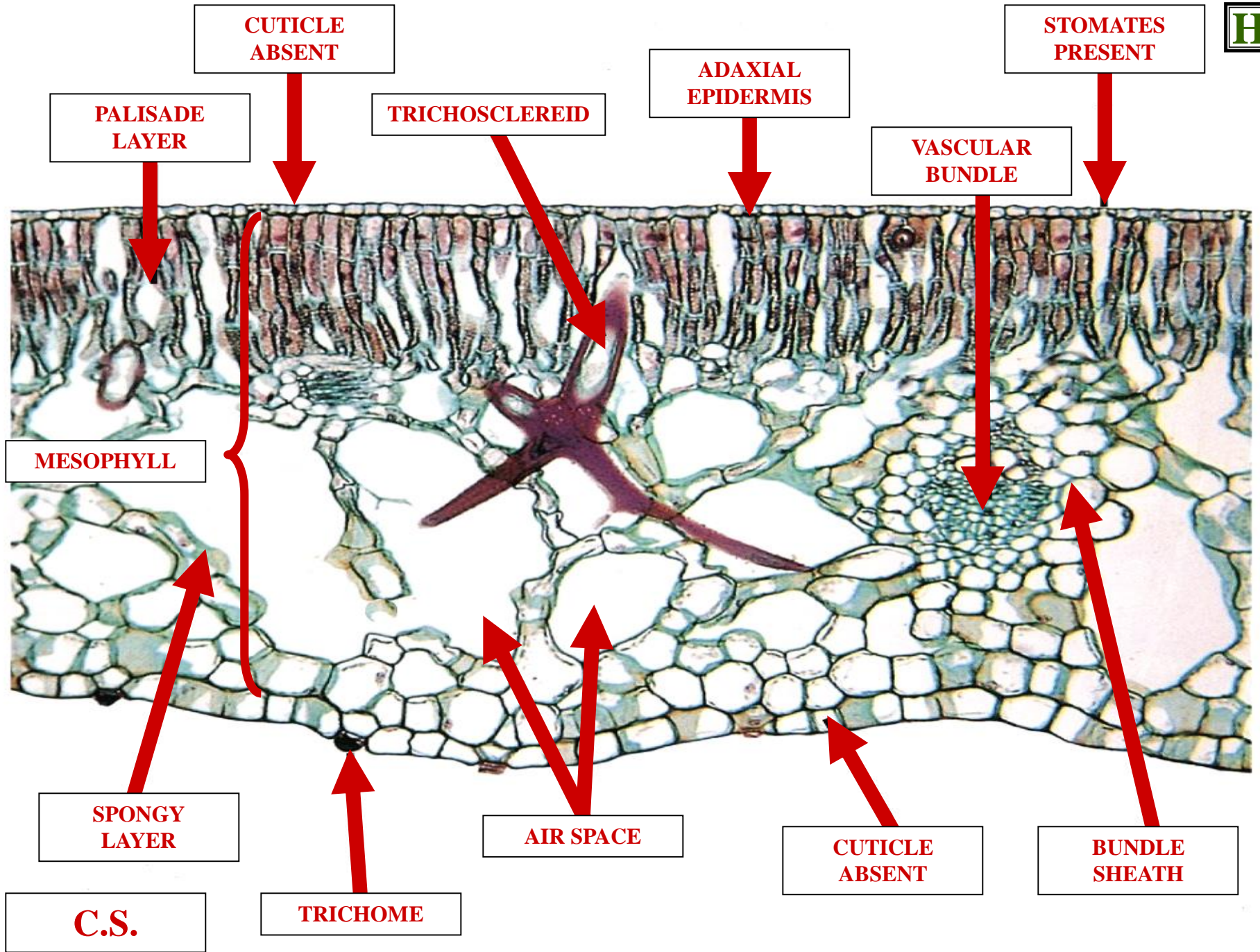
**MODERATE CUTICLE**

**C.S.**

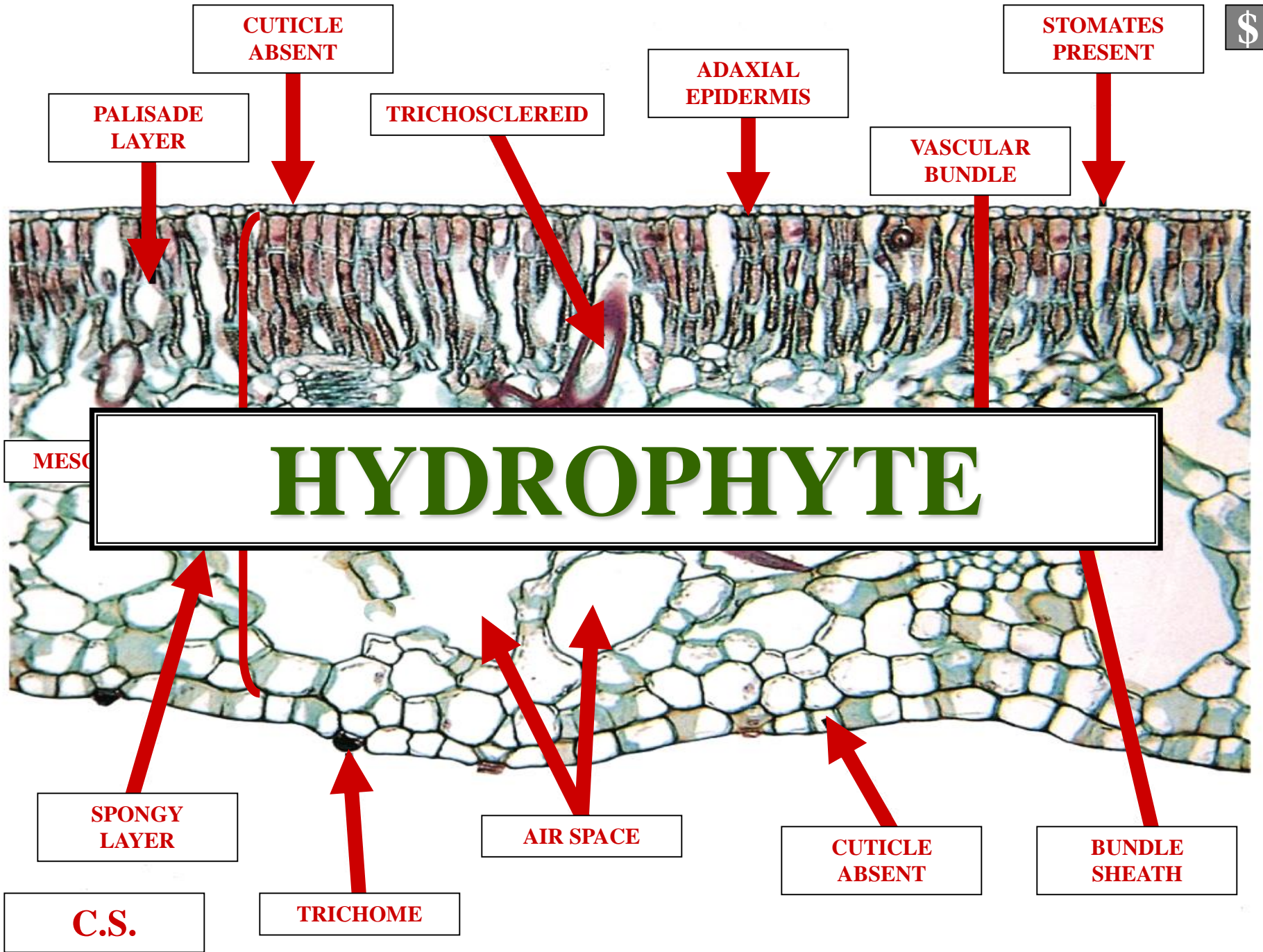




# **DICOT LEAF ANATOMY SUMMARY**







CUTICLE  
ABSENT

STOMATES  
PRESENT

PALISADE  
LAYER

TRICHOSCLEREID

ADAXIAL  
EPIDERMIS

VASCULAR  
BUNDLE

MESO

**HYDROPHYTE**

SPONGY  
LAYER

AIR SPACE

CUTICLE  
ABSENT

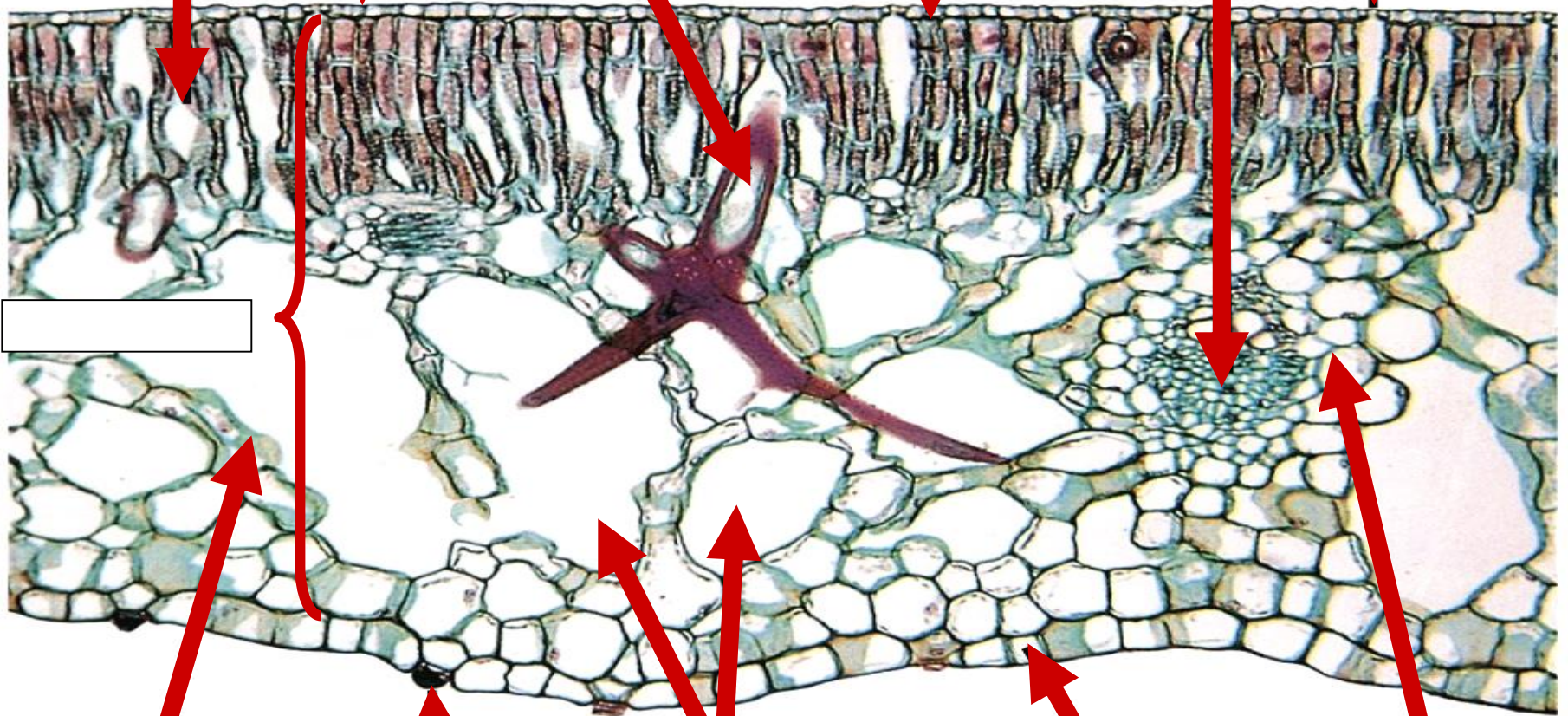
BUNDLE  
SHEATH

C.S.

TRICHOME

CUTICLE  
ABSENT

ADAXIAL  
STOMATES



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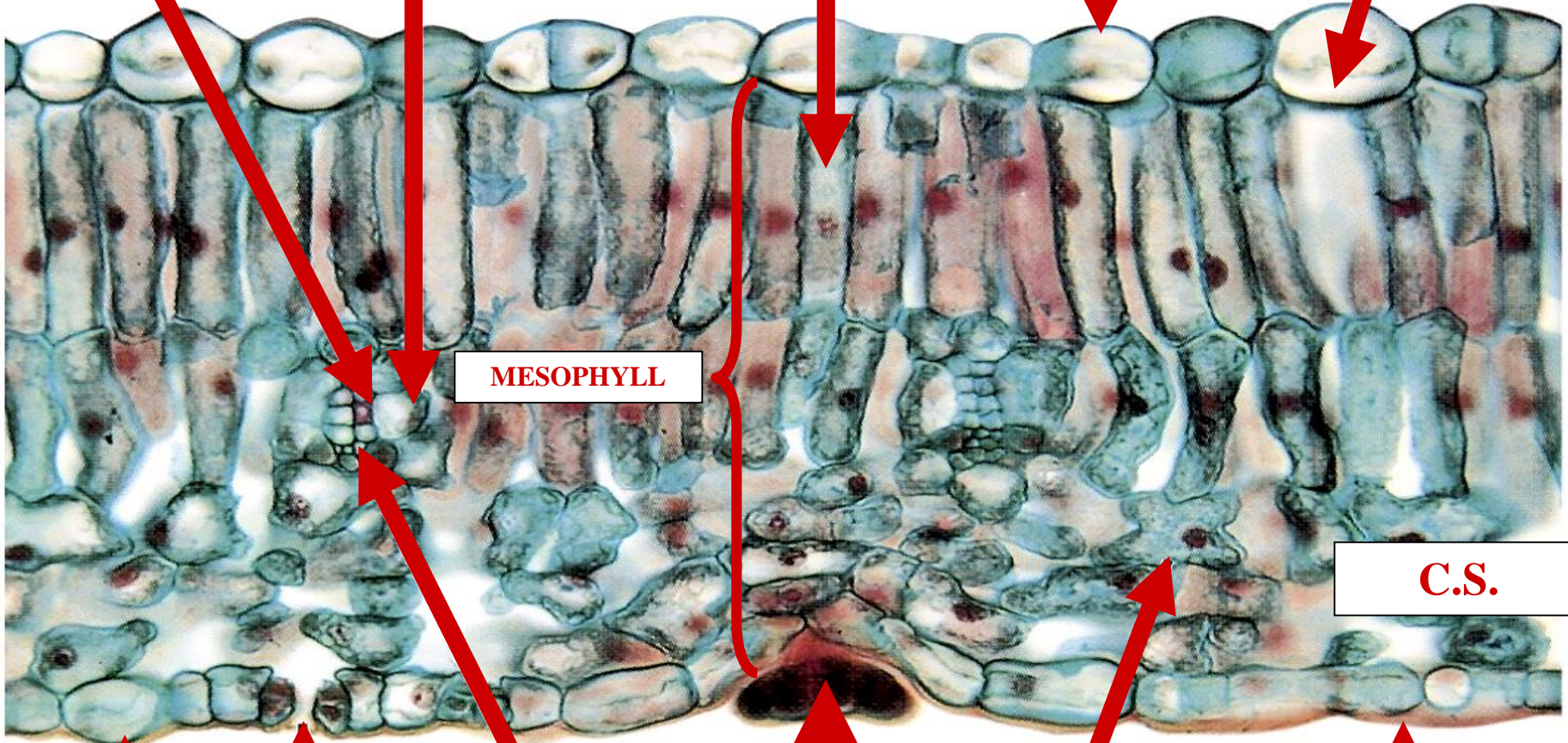
**XYLEM**

**VASCULAR  
BUNDLE**

**PALISADE  
LAYER**

**MODERATE  
CUTICLE**

**STOMATES  
ABSENT**



**MESOPHYLL**

**C.S.**

**PHLOEM**

**ABAXIAL  
EPIDERMIS**

**STOMATES  
PRESENT**

**TRICHOME**

**SPONGY  
LAYER**

**MODERATE  
CUTICLE**





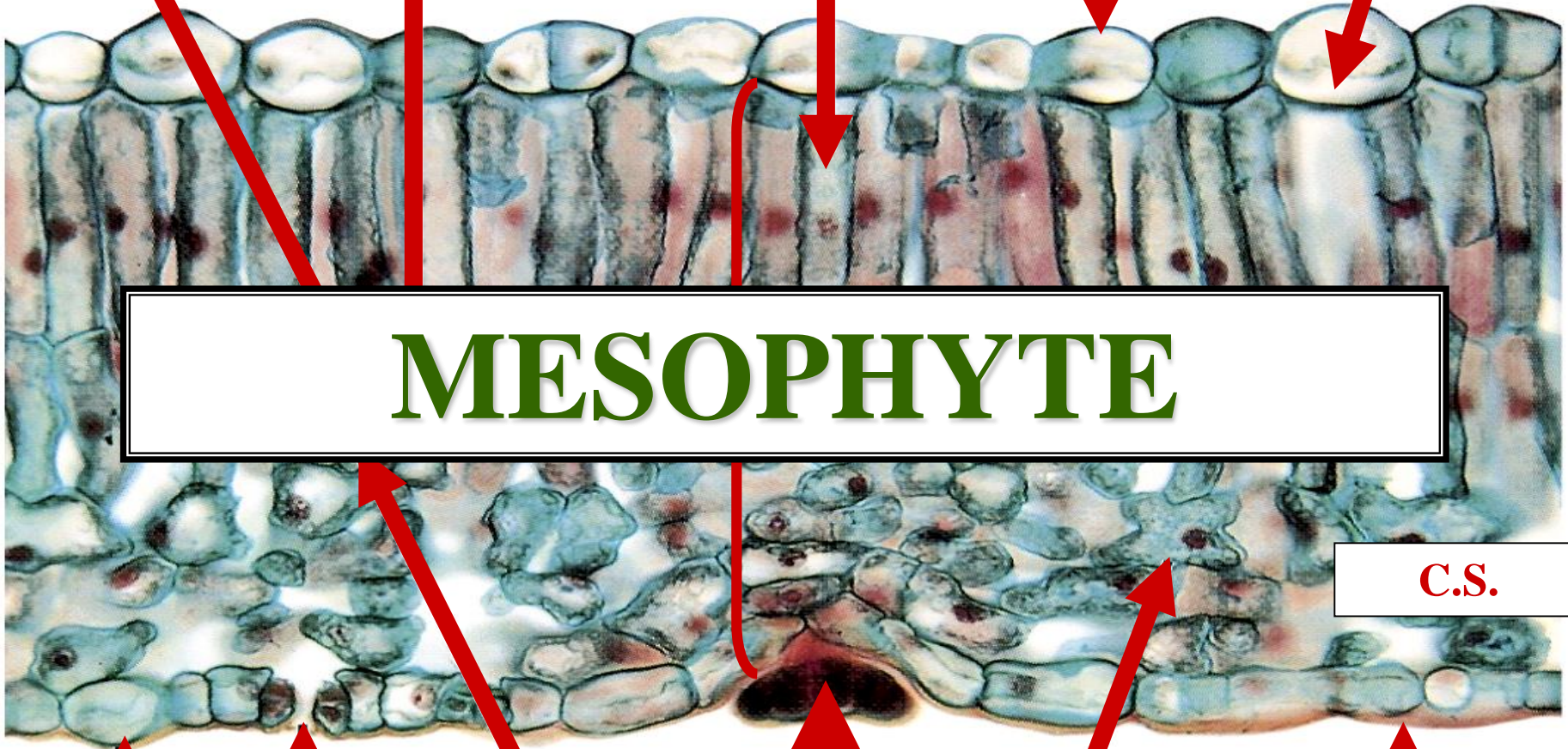
**XYLEM**

**VASCULAR  
BUNDLE**

**PALISADE  
LAYER**

**MODERATE  
CUTICLE**

**STOMATES  
ABSENT**



# MESOPHYTE

**C.S.**

**PHLOEM**

**ABAXIAL  
EPIDERMIS**

**STOMATES  
PRESENT**

**TRICHOME**

**SPONGY  
LAYER**

**MODERATE  
CUTICLE**