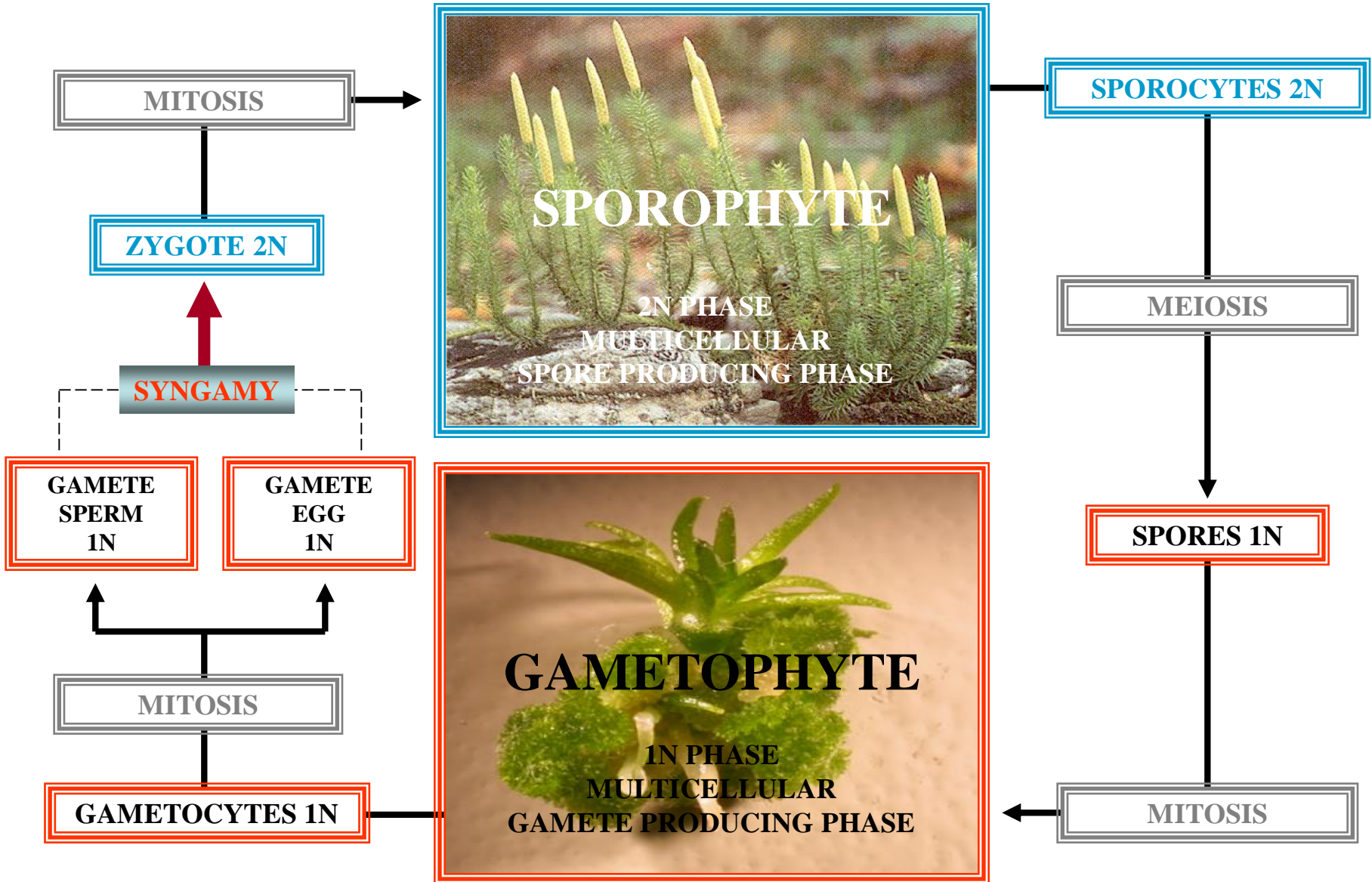


LYCOPODIALES

LIFE CYCLE

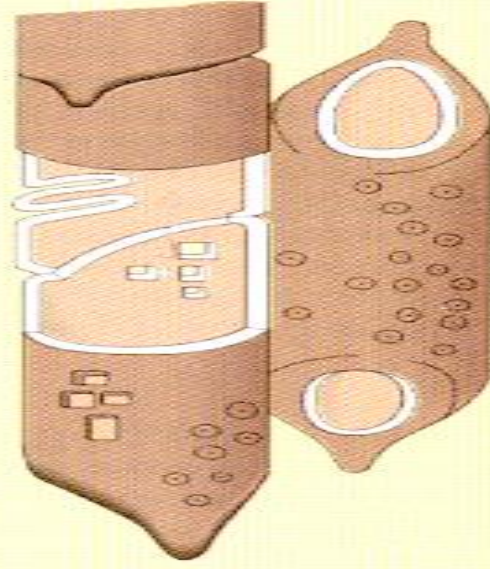
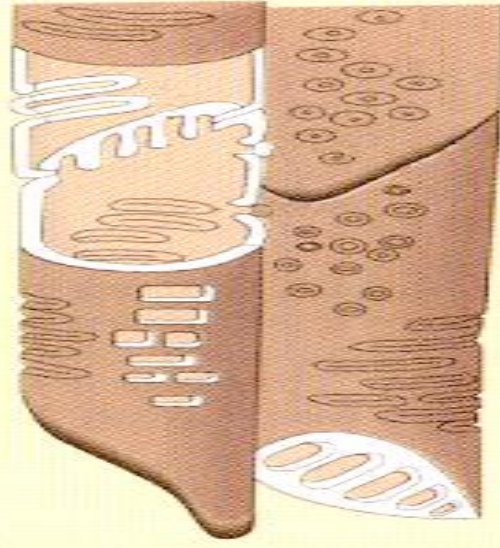
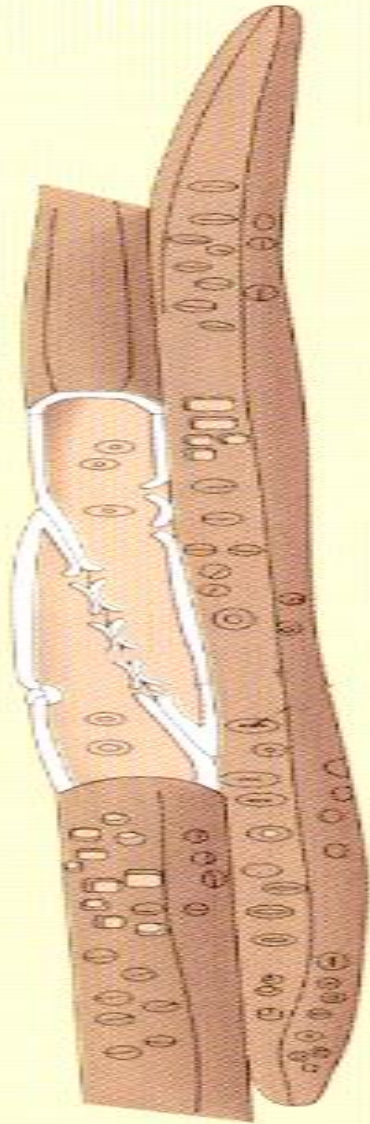




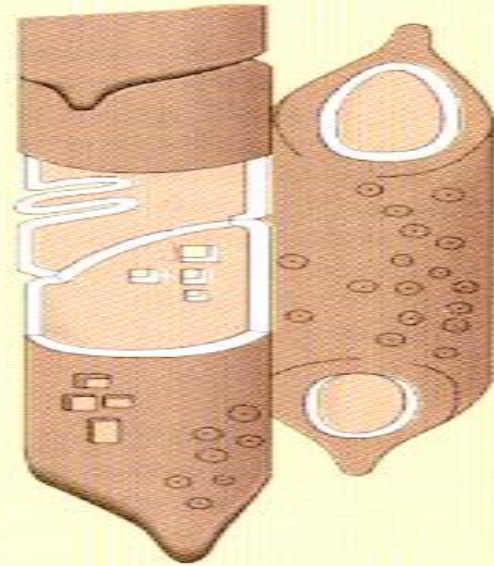
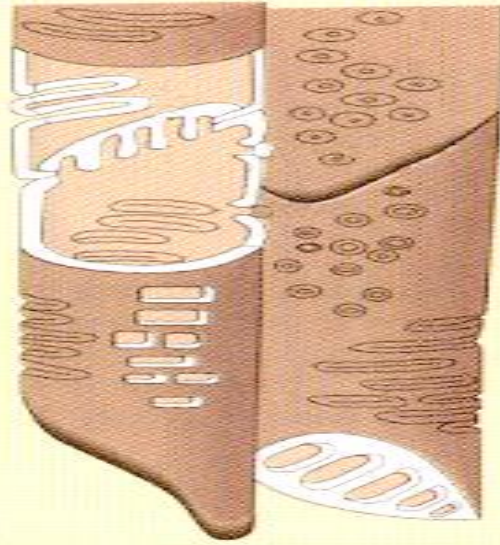
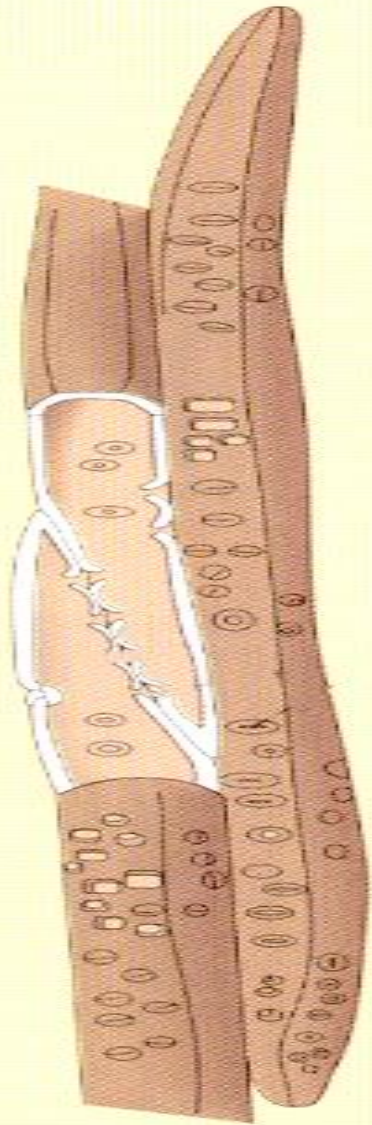
SPOROPHYTE CHARACTERS



XYLEM



XYLEM CELLS



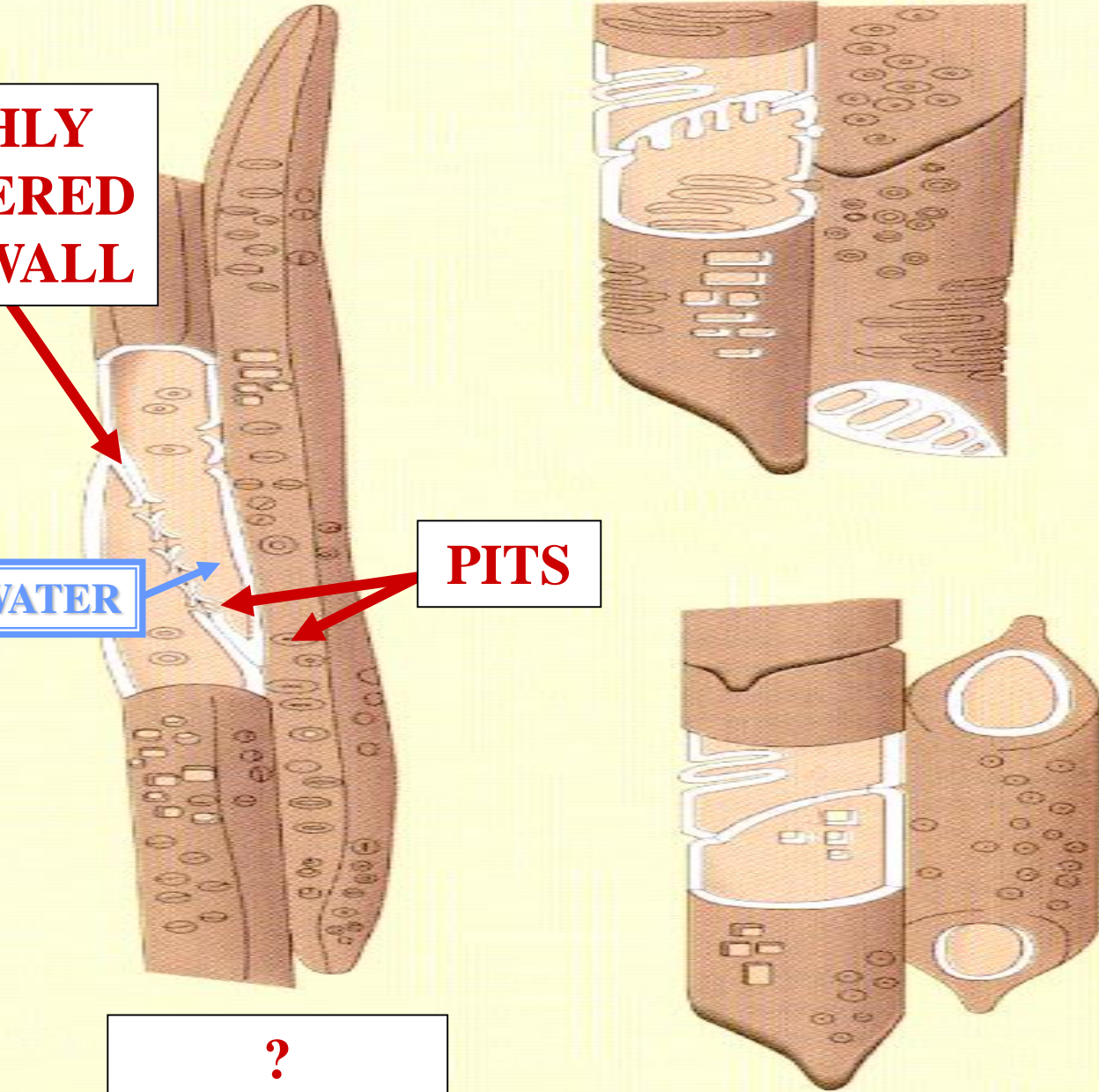
TRACHEARY ELEMENTS

**HIGHLY
TAPPED
END WALL**

WATER

PITS

?





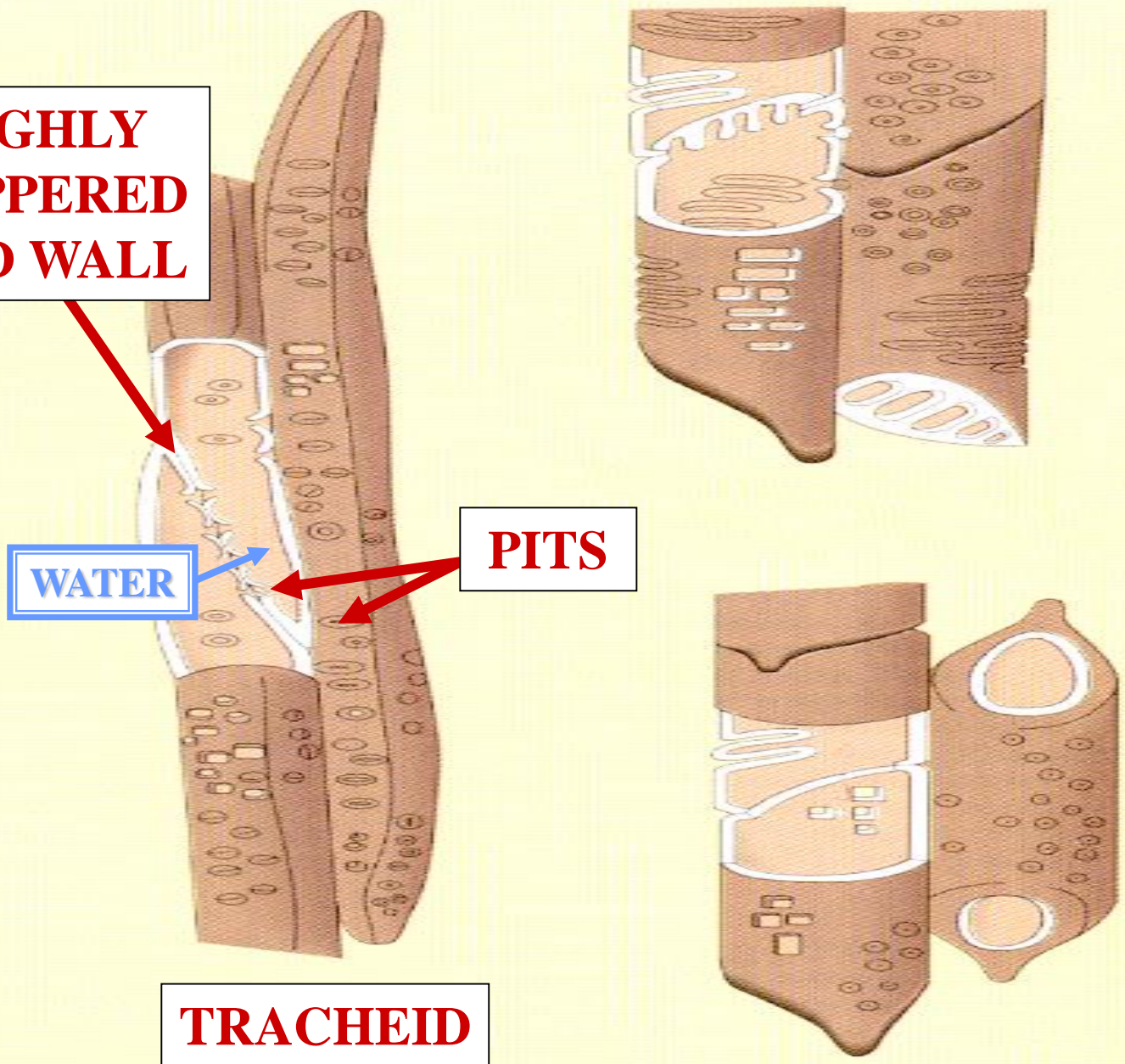
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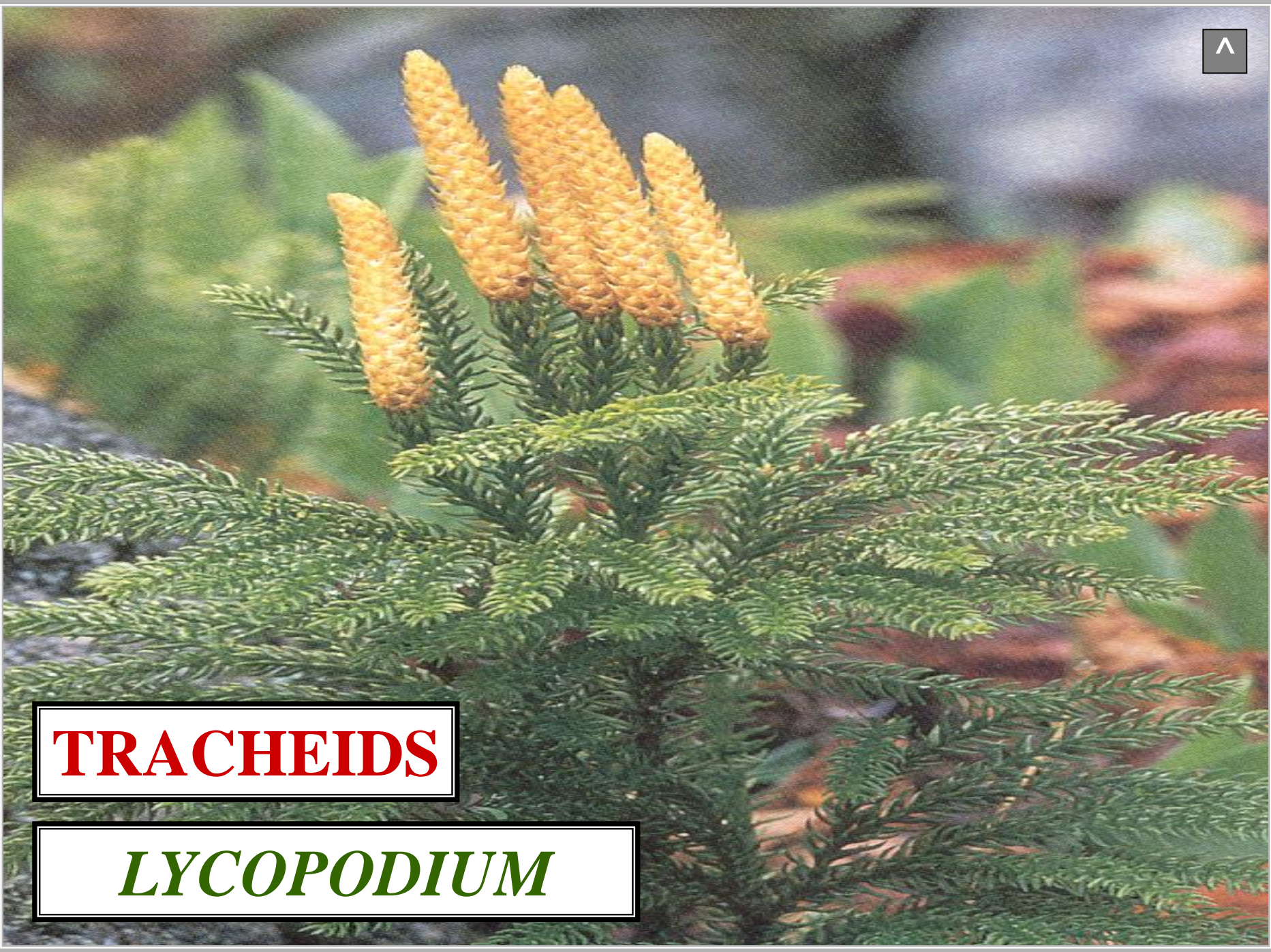
**HIGHLY
TAPPERED
END WALL**

WATER

PITS

TRACHEID





TRACHEIDS

LYCOPODIUM



STEM



STEM ANATOMY

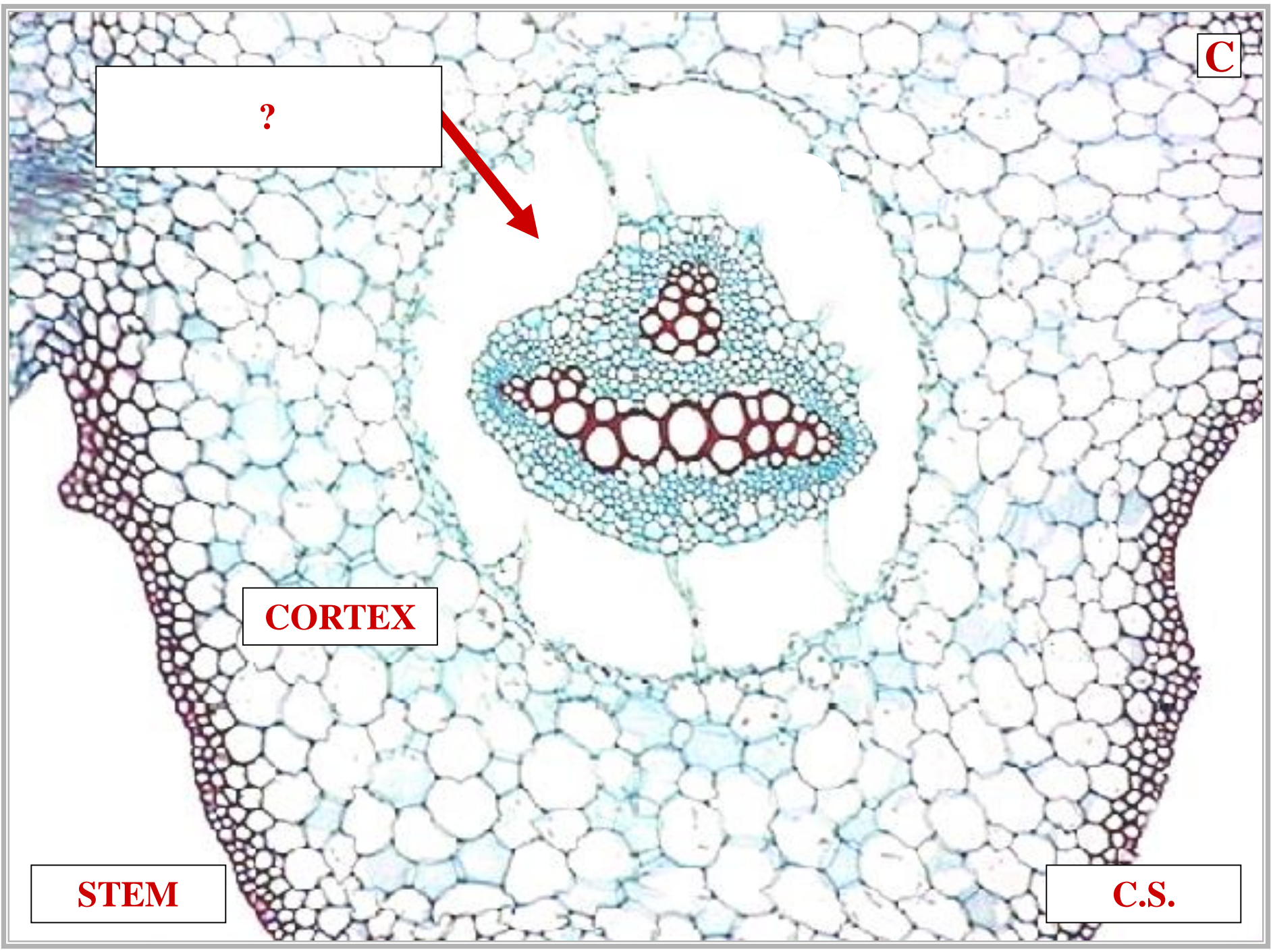
C

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CORTEX

STEM

C.S.



?

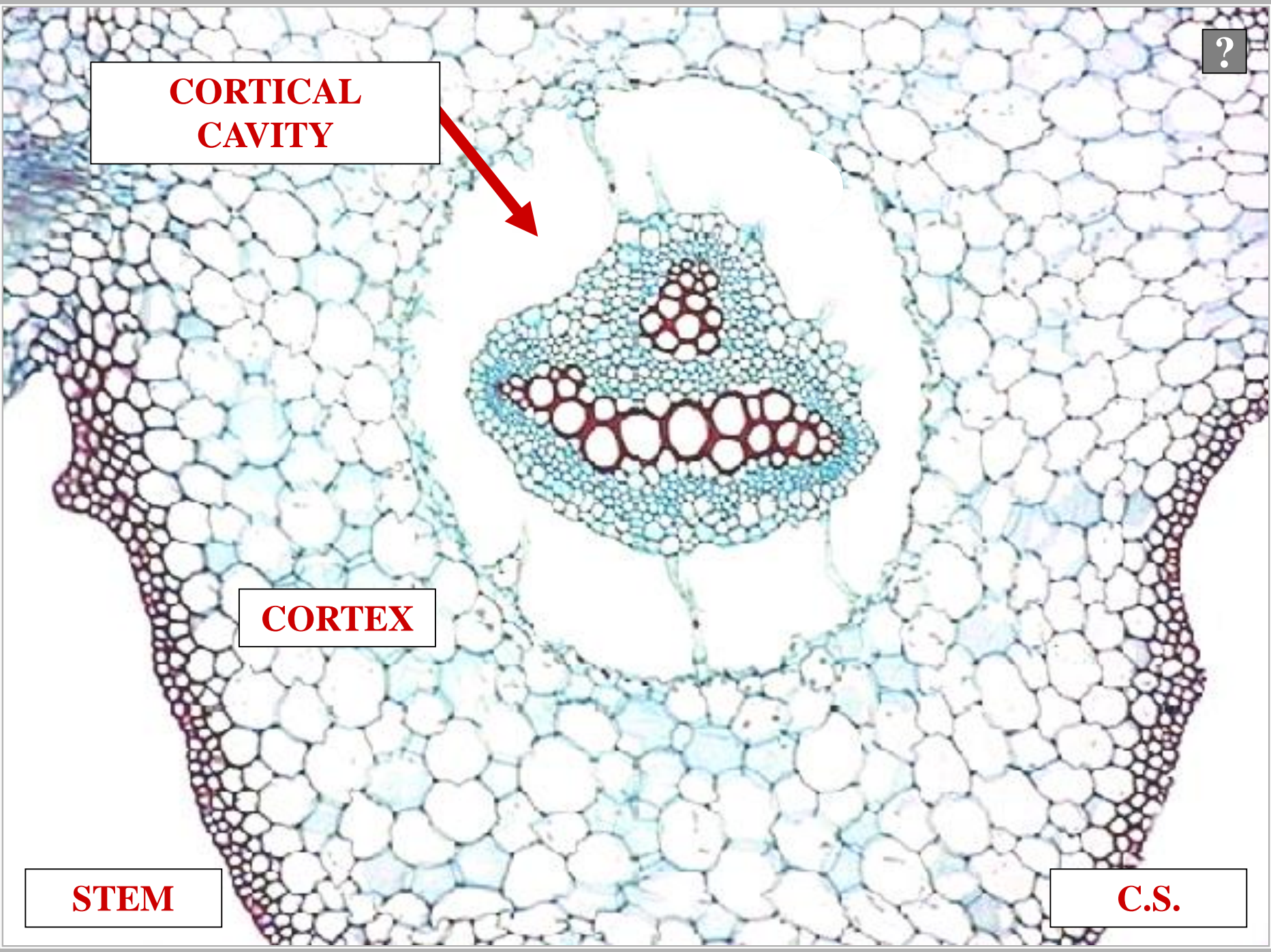
**CORTICAL
CAVITY**



CORTEX

STEM

C.S.



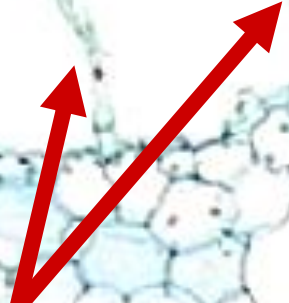
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**CORTICAL
CAVITY**



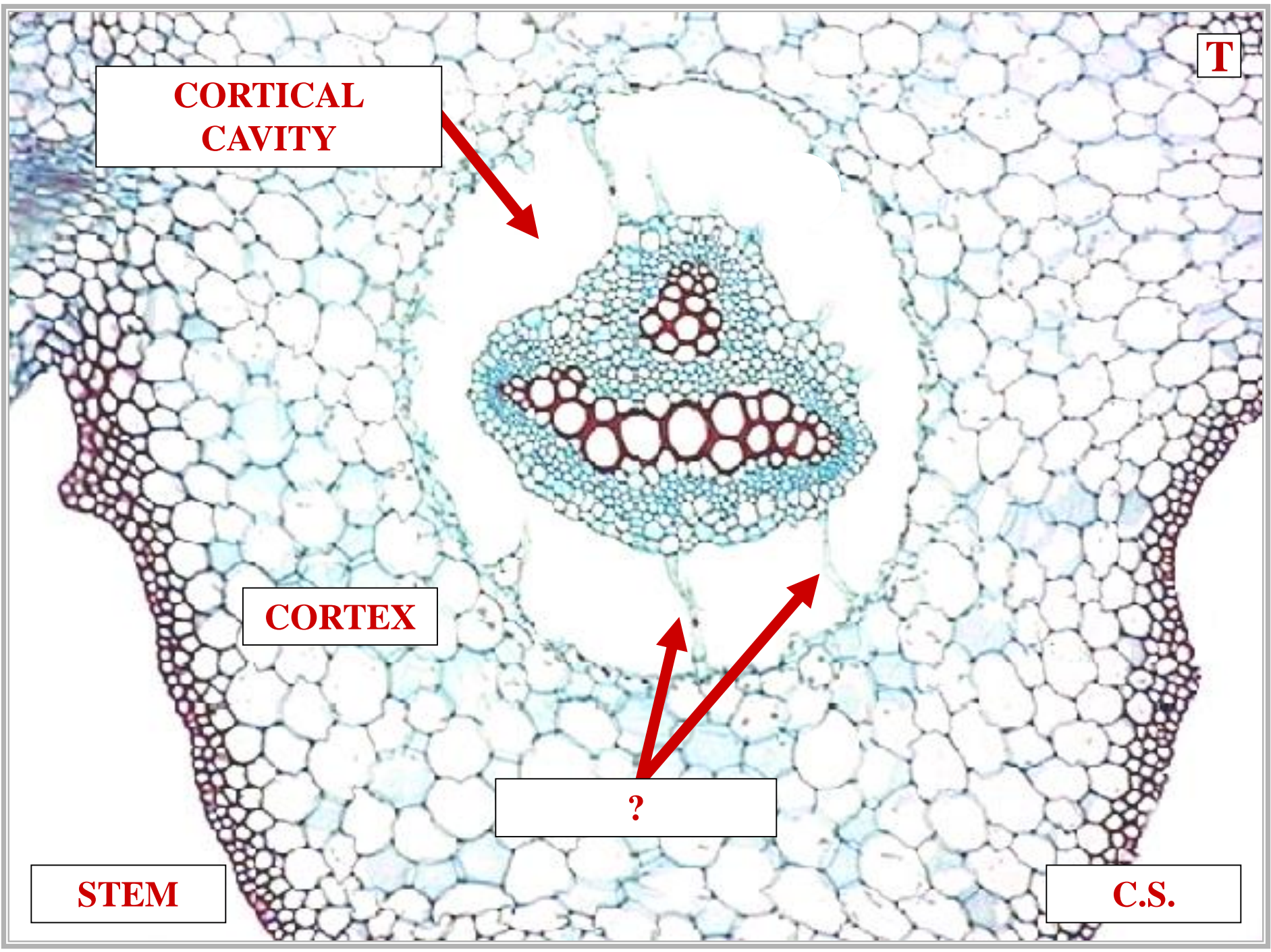
CORTEX

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STEM

C.S.



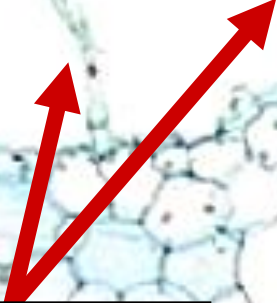
AB

**CORTICAL
CAVITY**



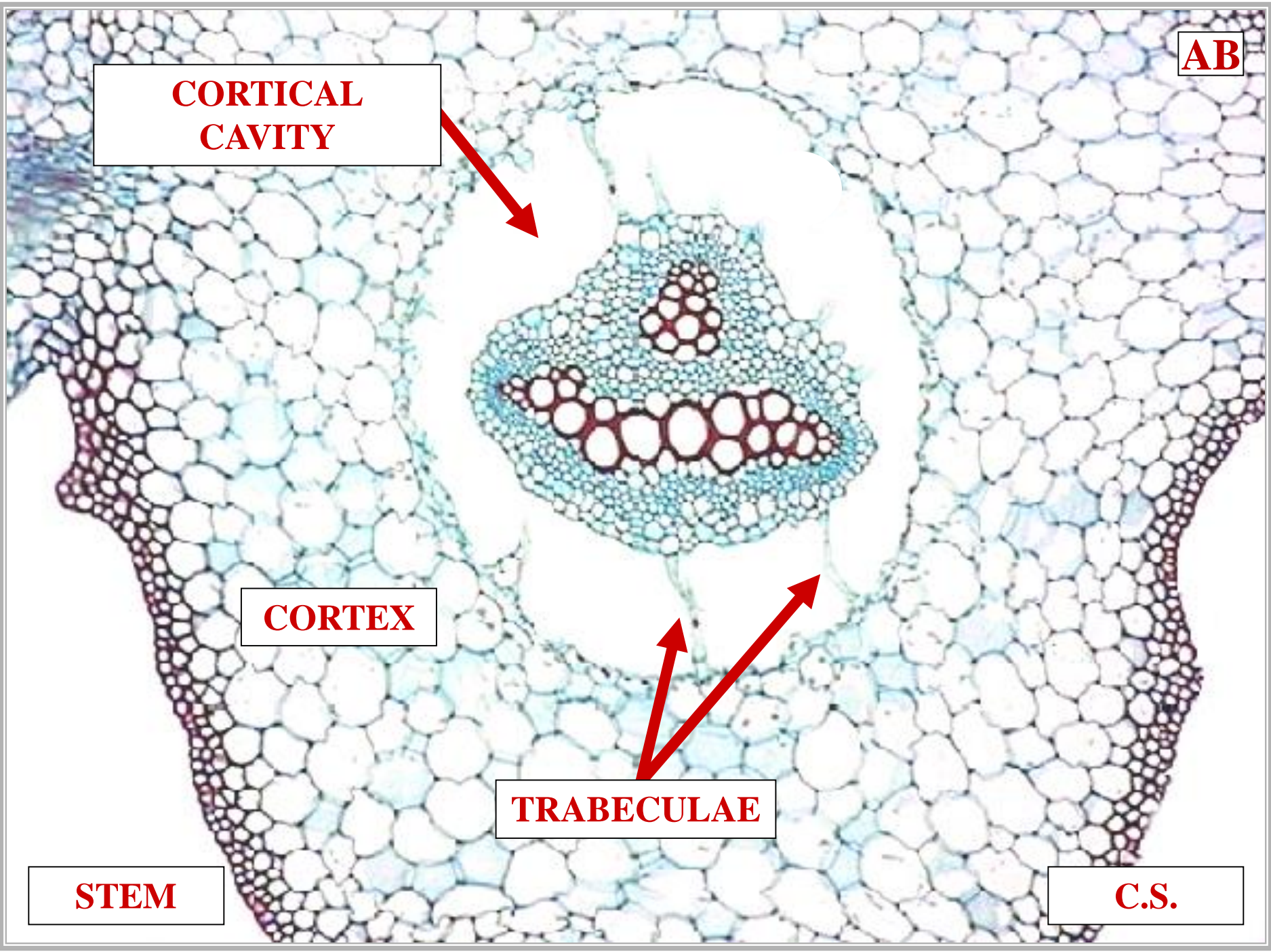
CORTEX

TRABECULAE



STEM

C.S.



LYCOPODIUM

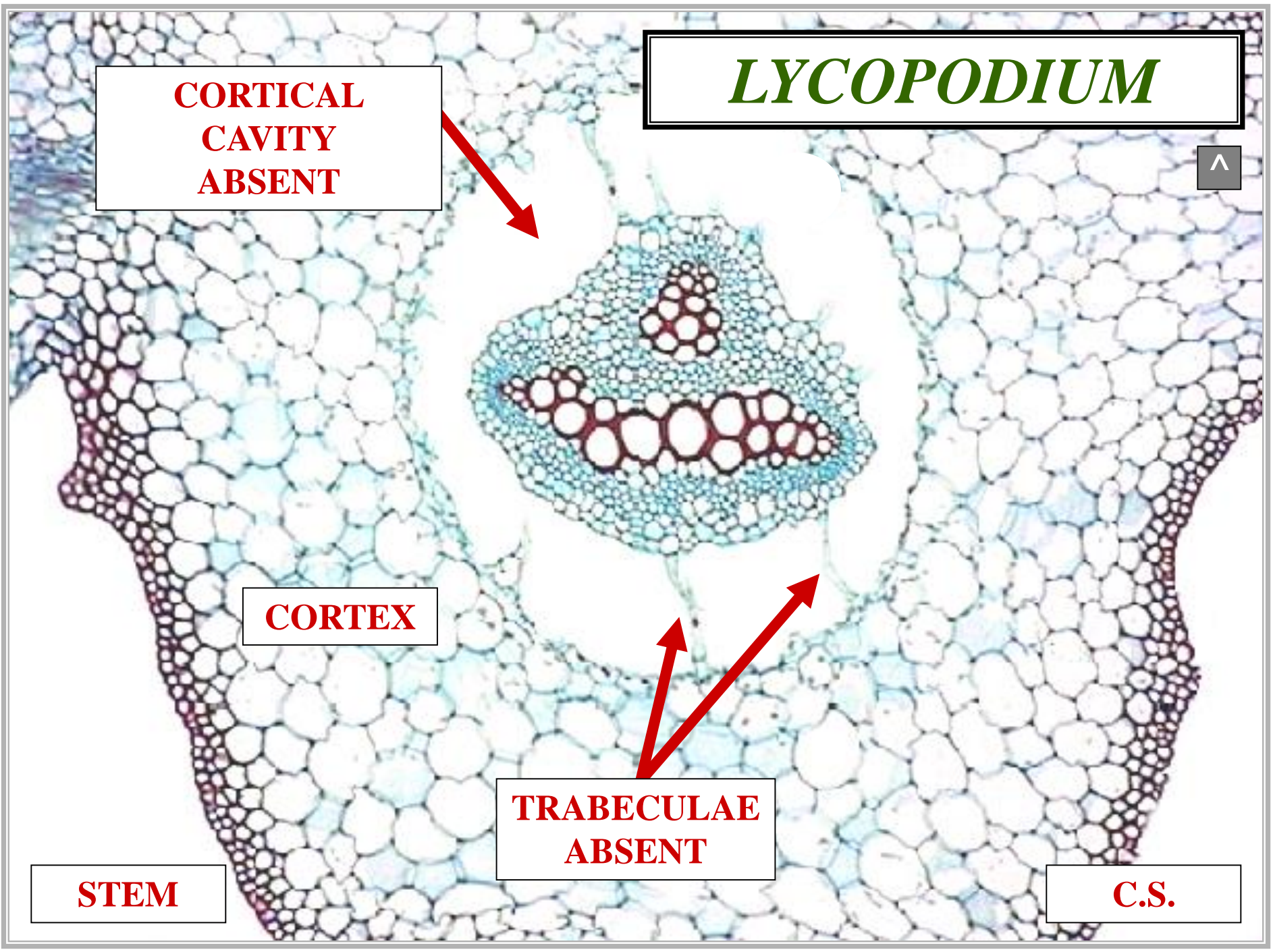
**CORTICAL
CAVITY
ABSENT**

CORTEX

**TRABECULAE
ABSENT**

STEM

C.S.





LEAF



LEAF MORPHOLOGY



LYCOPODIUM

LYCOPODIUM

MICROPHYLL



LYCOPODIUM

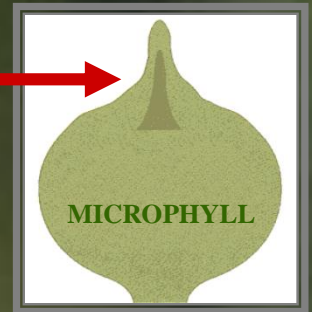
ISOPHYLLOUS

LYCOPODIUM

ISOPHYLLOUS

LIGULE

MICROPHYLL



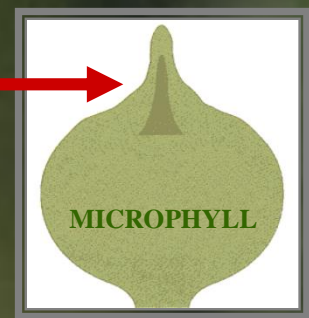


LYCOPODIUM

ISOPHYLLOUS

LIGULE ABSENT

LIGULE ABSENT





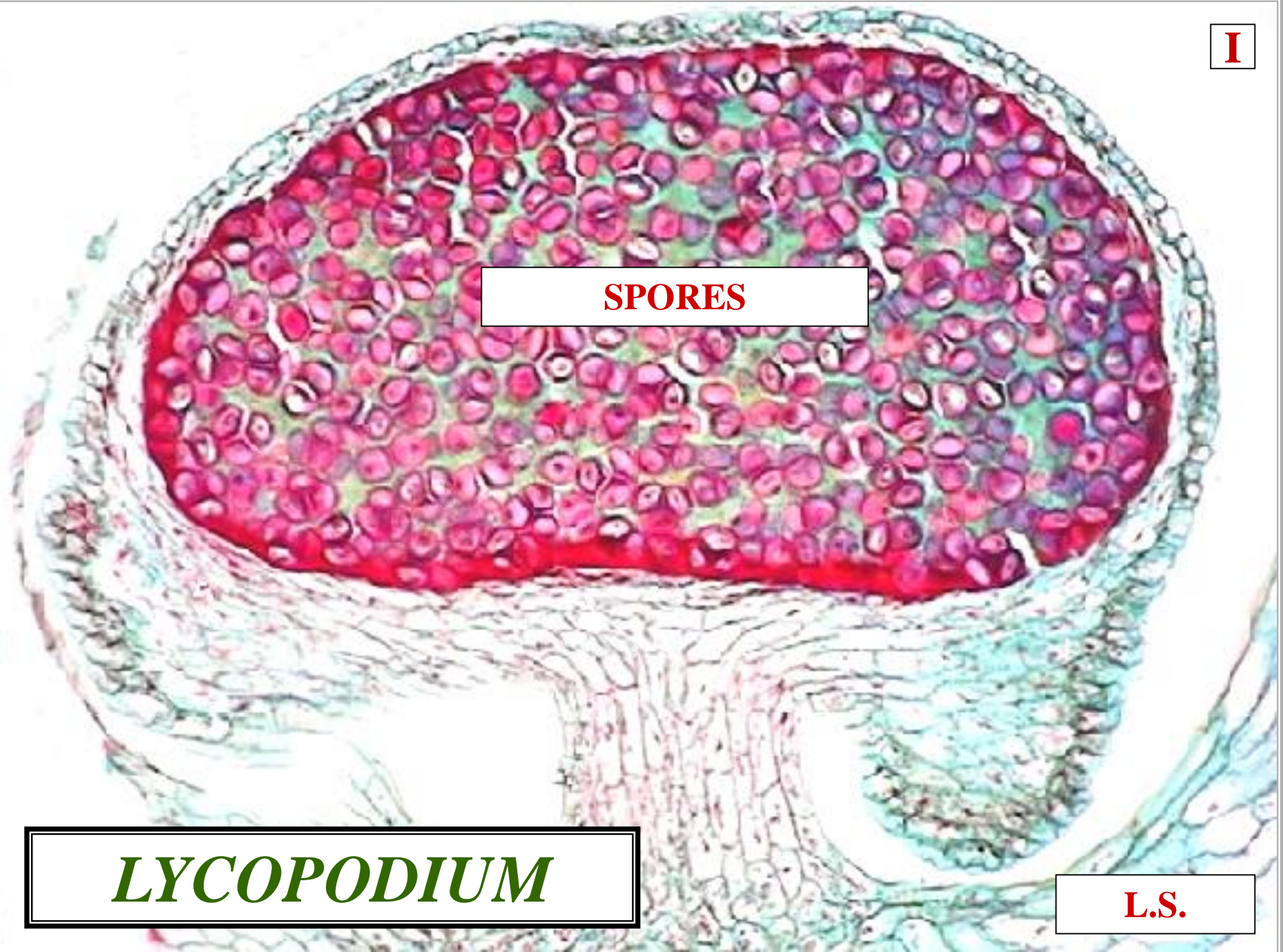
SPORE HABIT

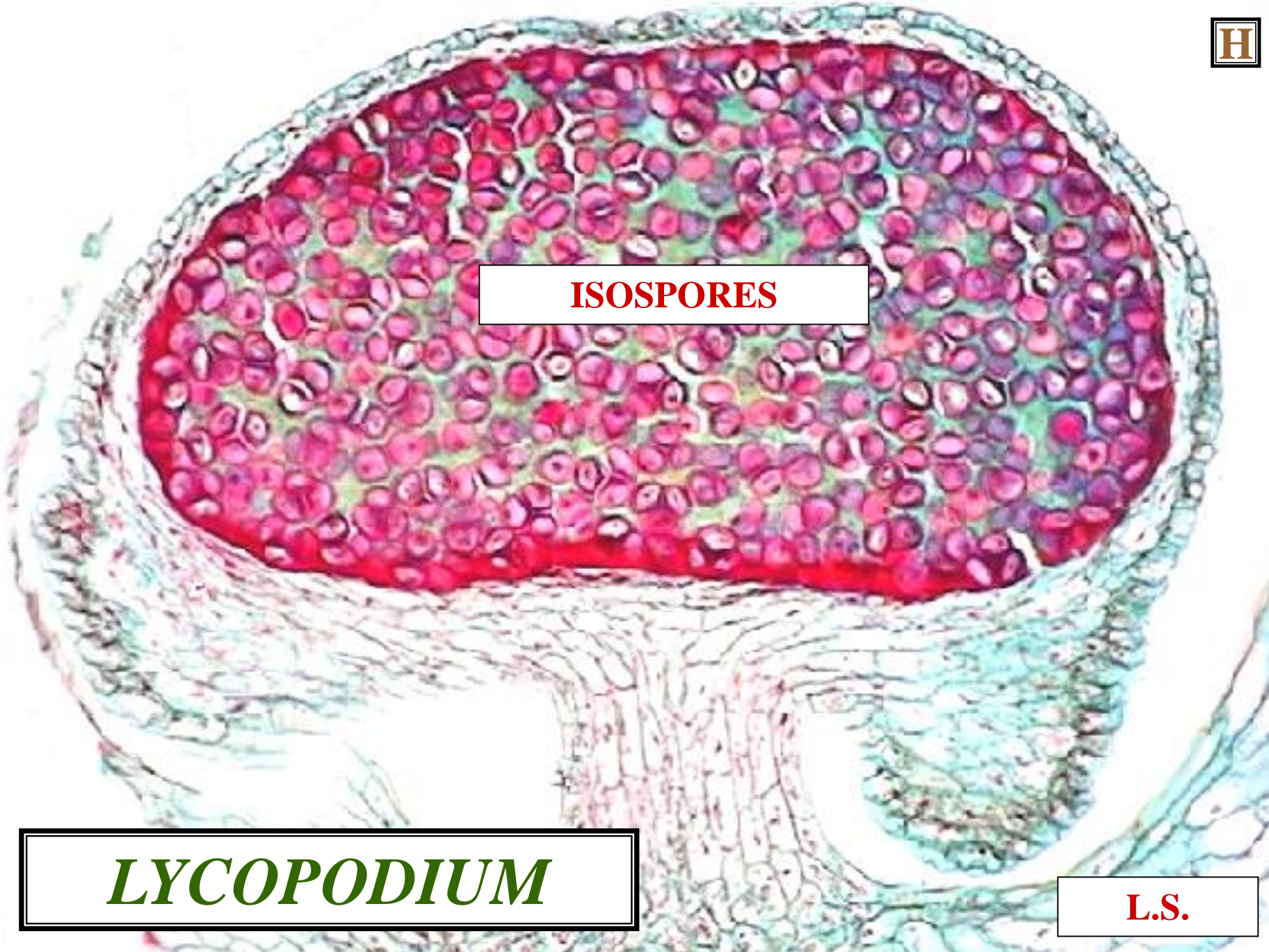
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SPORES

LYCOPODIUM

L.S.





ISOSPORES

LYCOPODIUM

L.S.

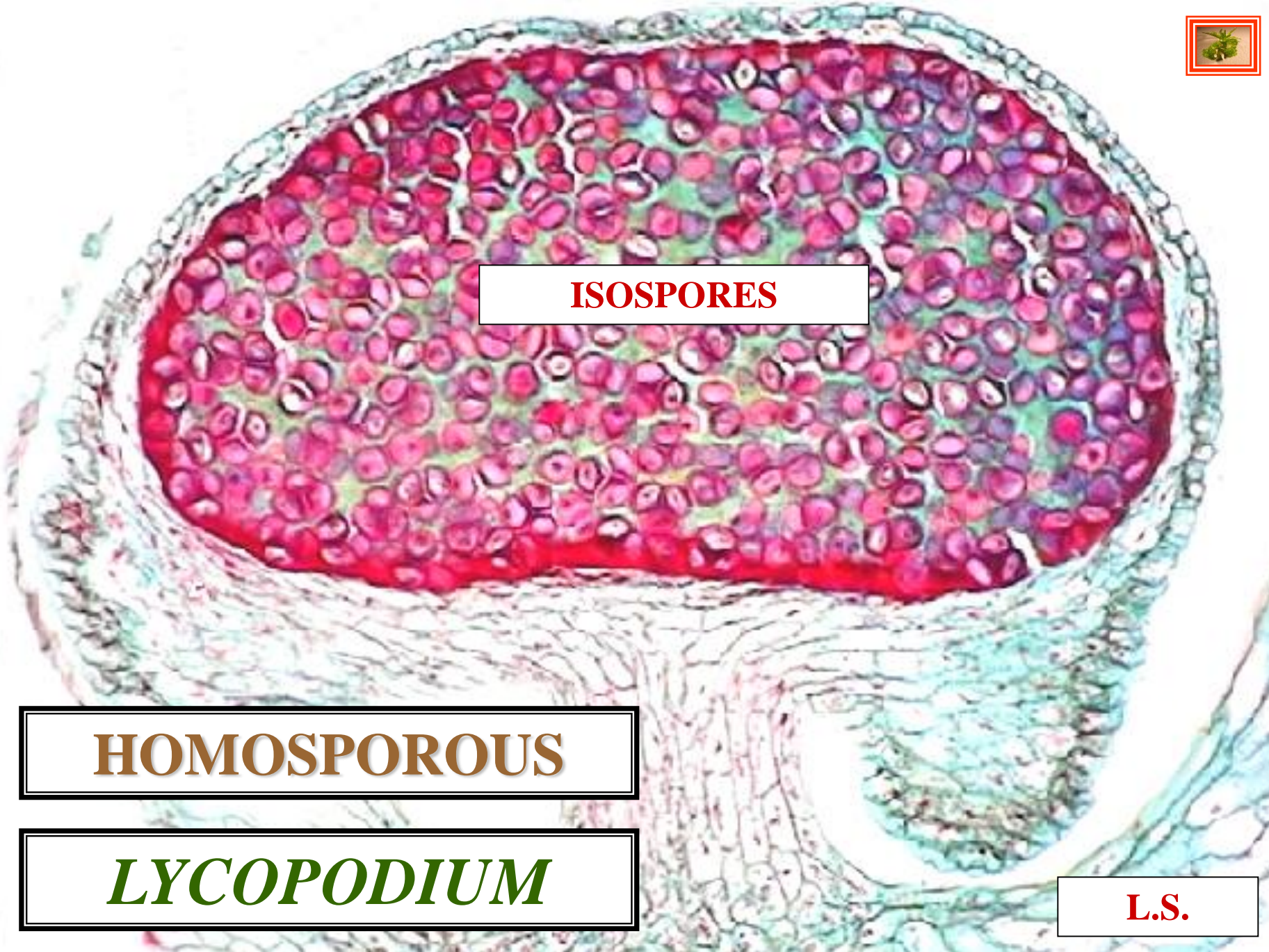


ISOSPORES

HOMOSPOROUS

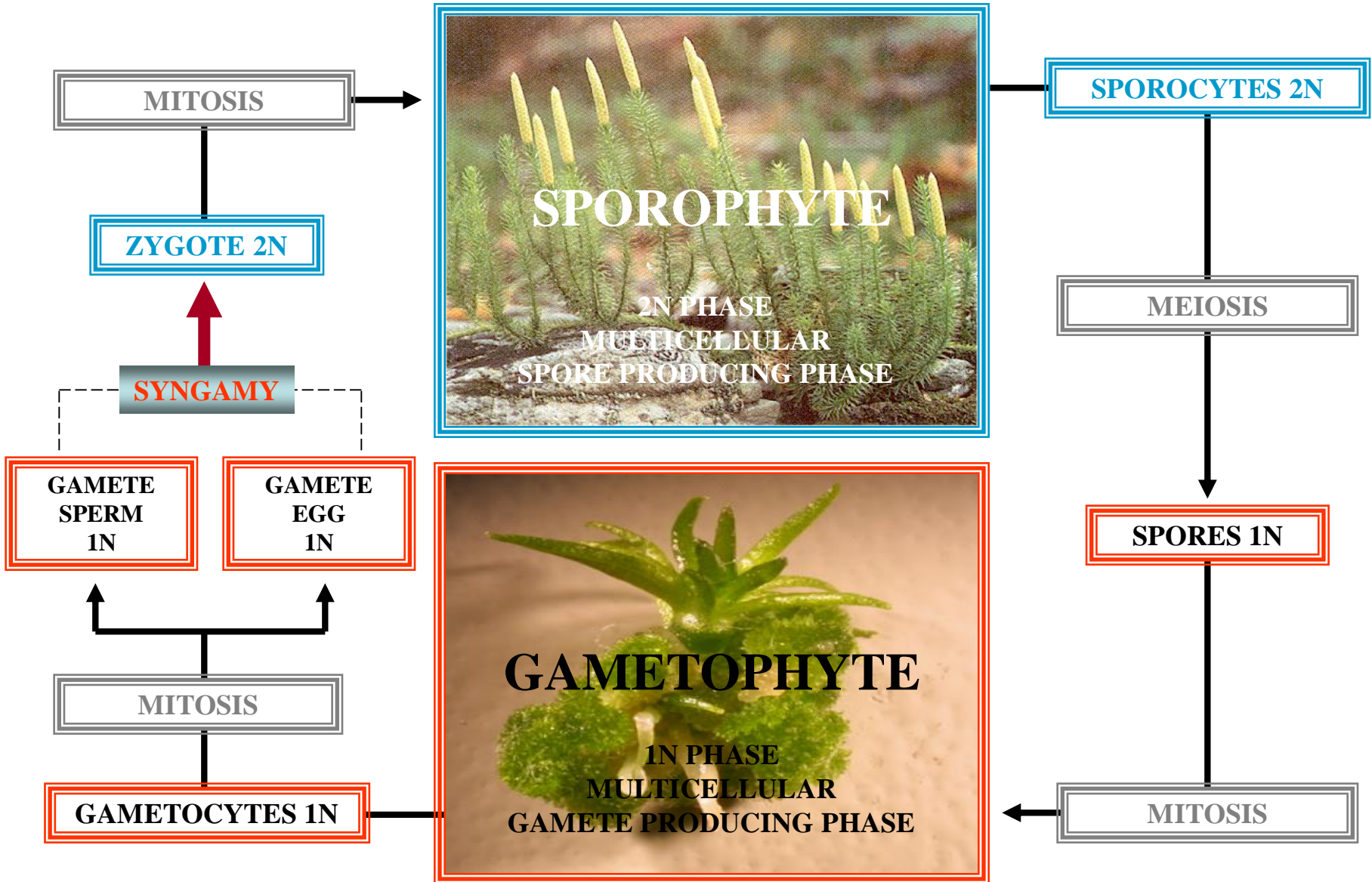
LYCOPODIUM

L.S.



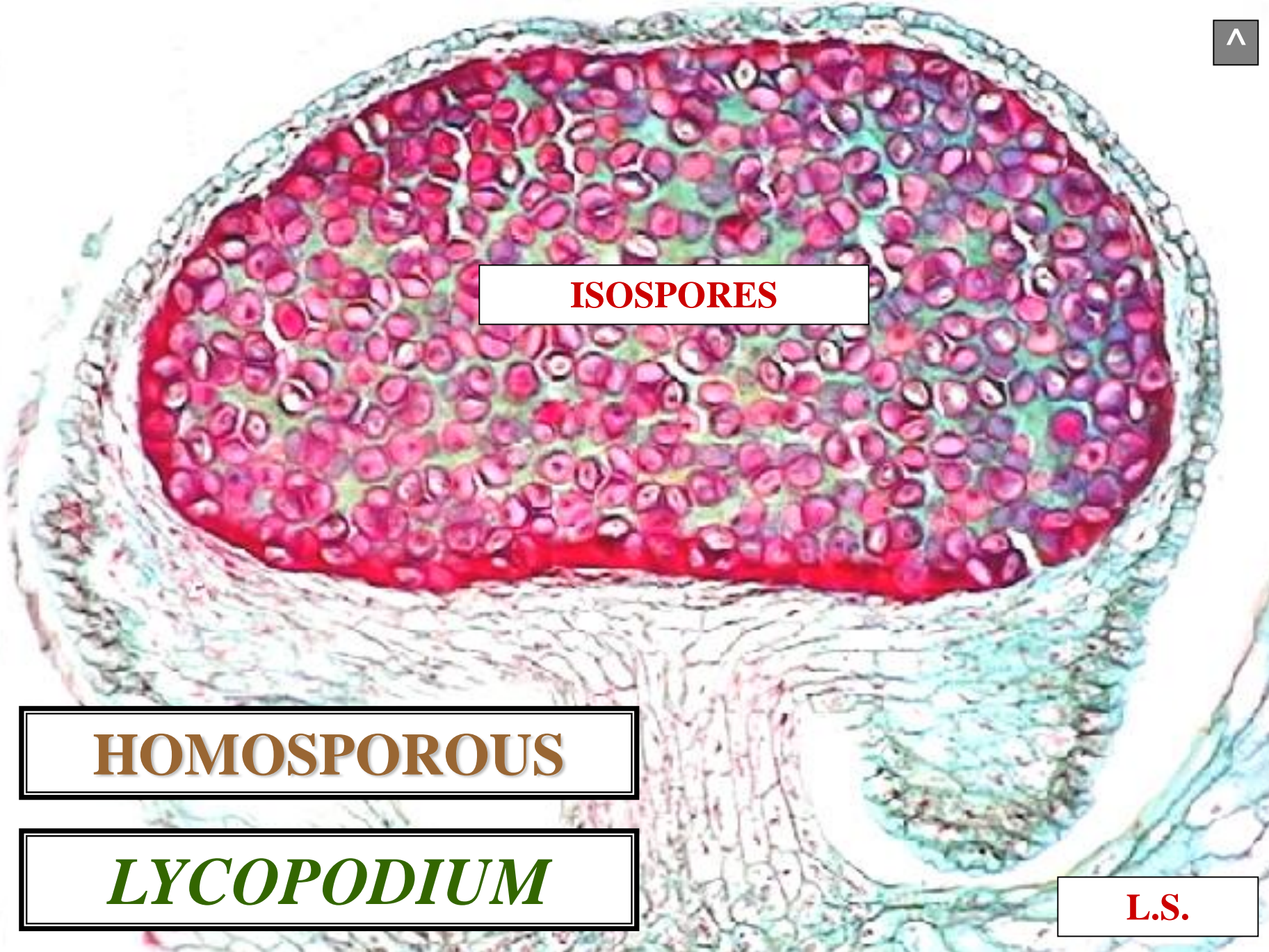
LYCOPODIALES

LIFE CYCLE





GAMETOPHYTE CHARACTERS



ISOSPORES

HOMOSPOROUS

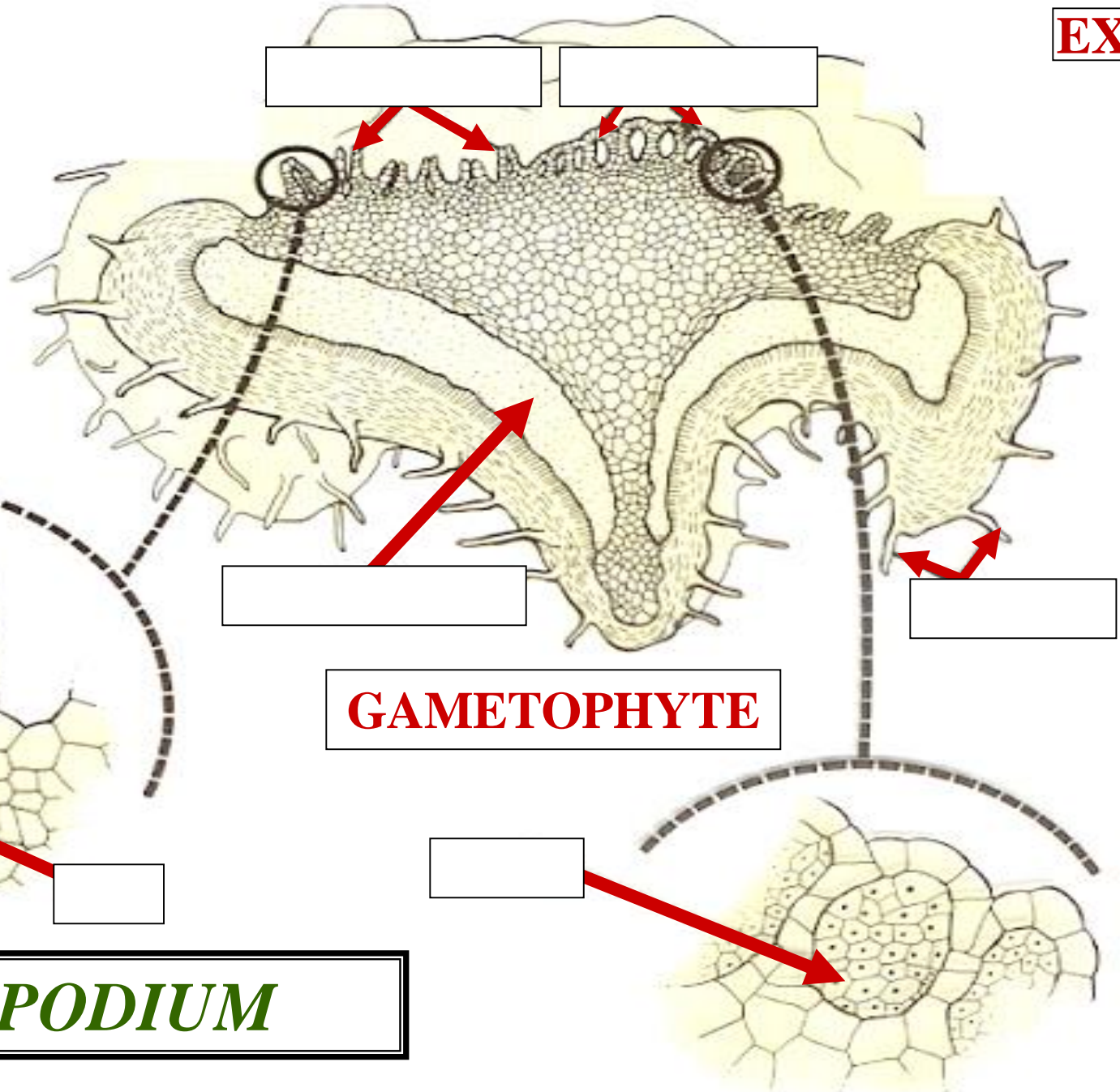
LYCOPODIUM

L.S.



EXOSPORIC GAMETOPHYTE

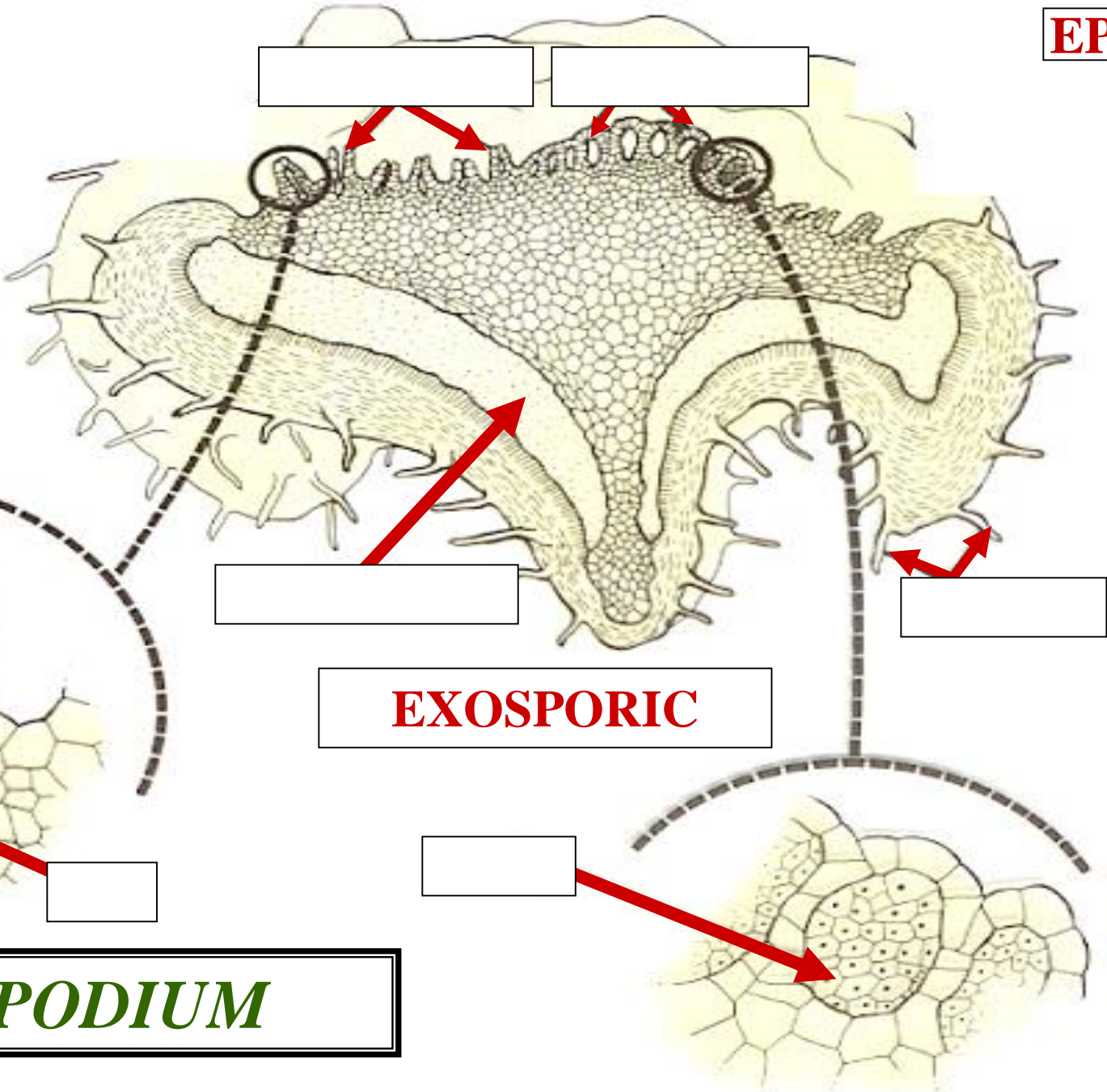
EX



GAMETOPHYTE

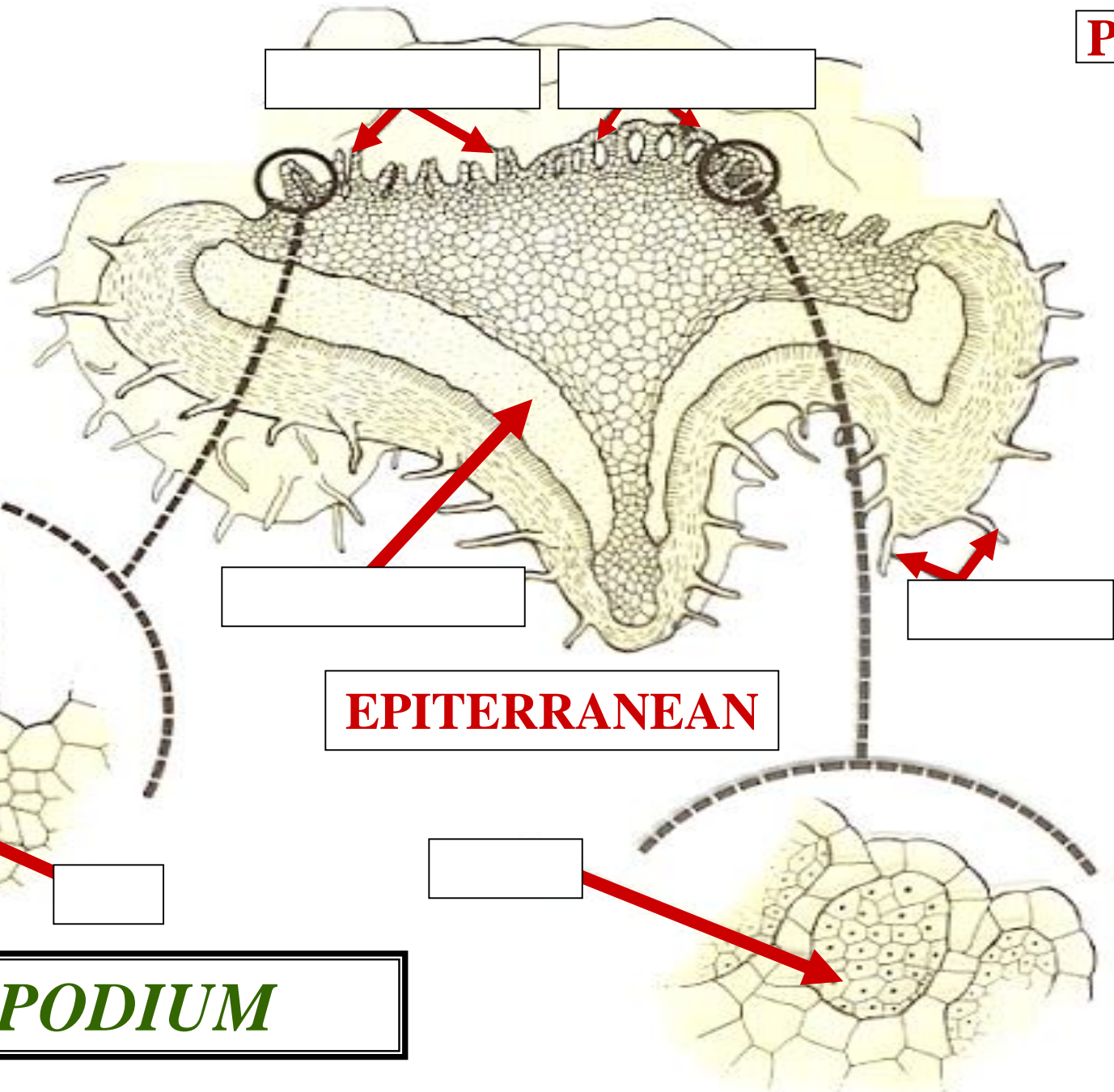
LYCOPODIUM

EP



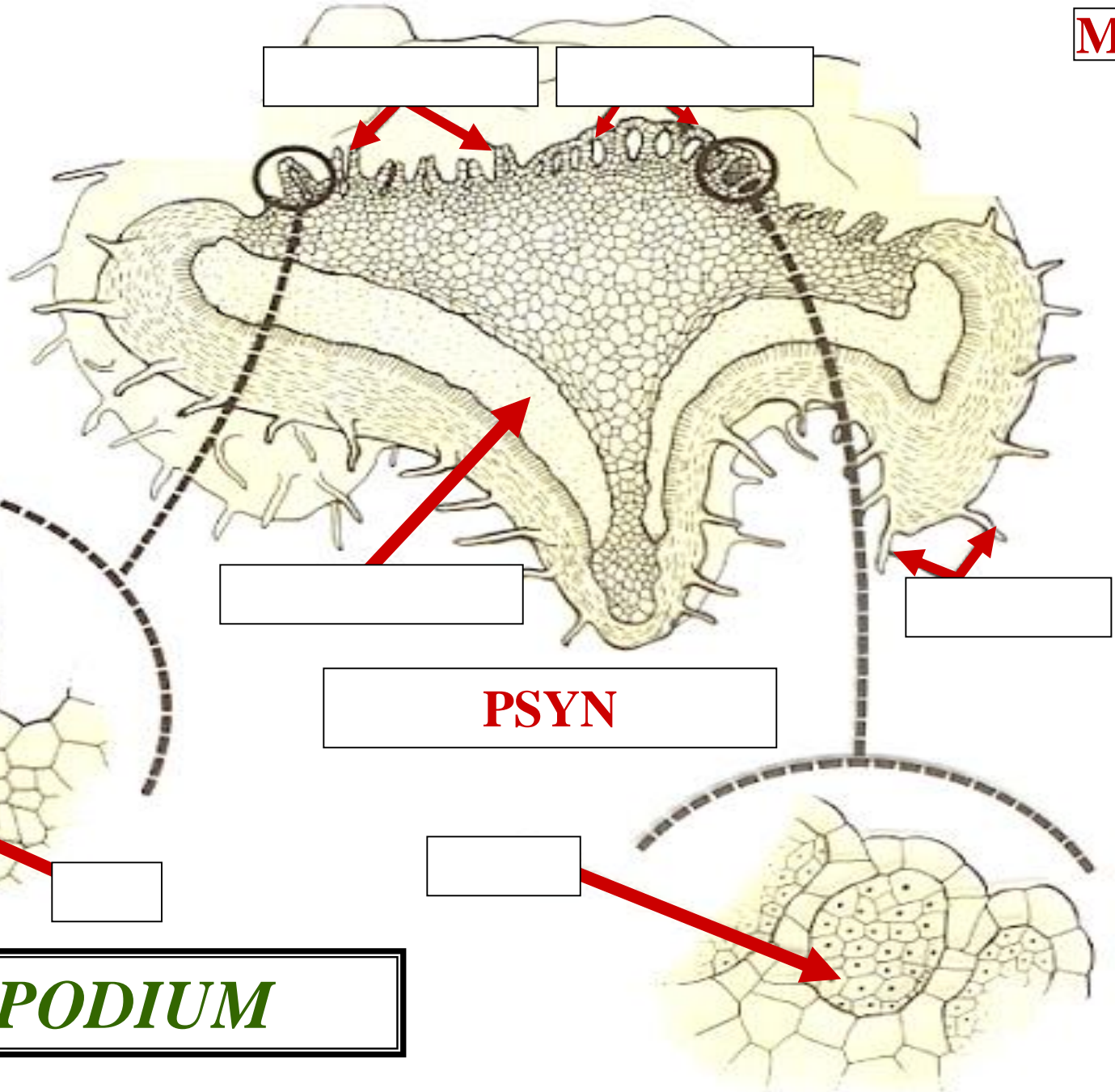
EXOSPORIC

LYCOPODIUM



EPITERRANEAN

LYCOPODIUM

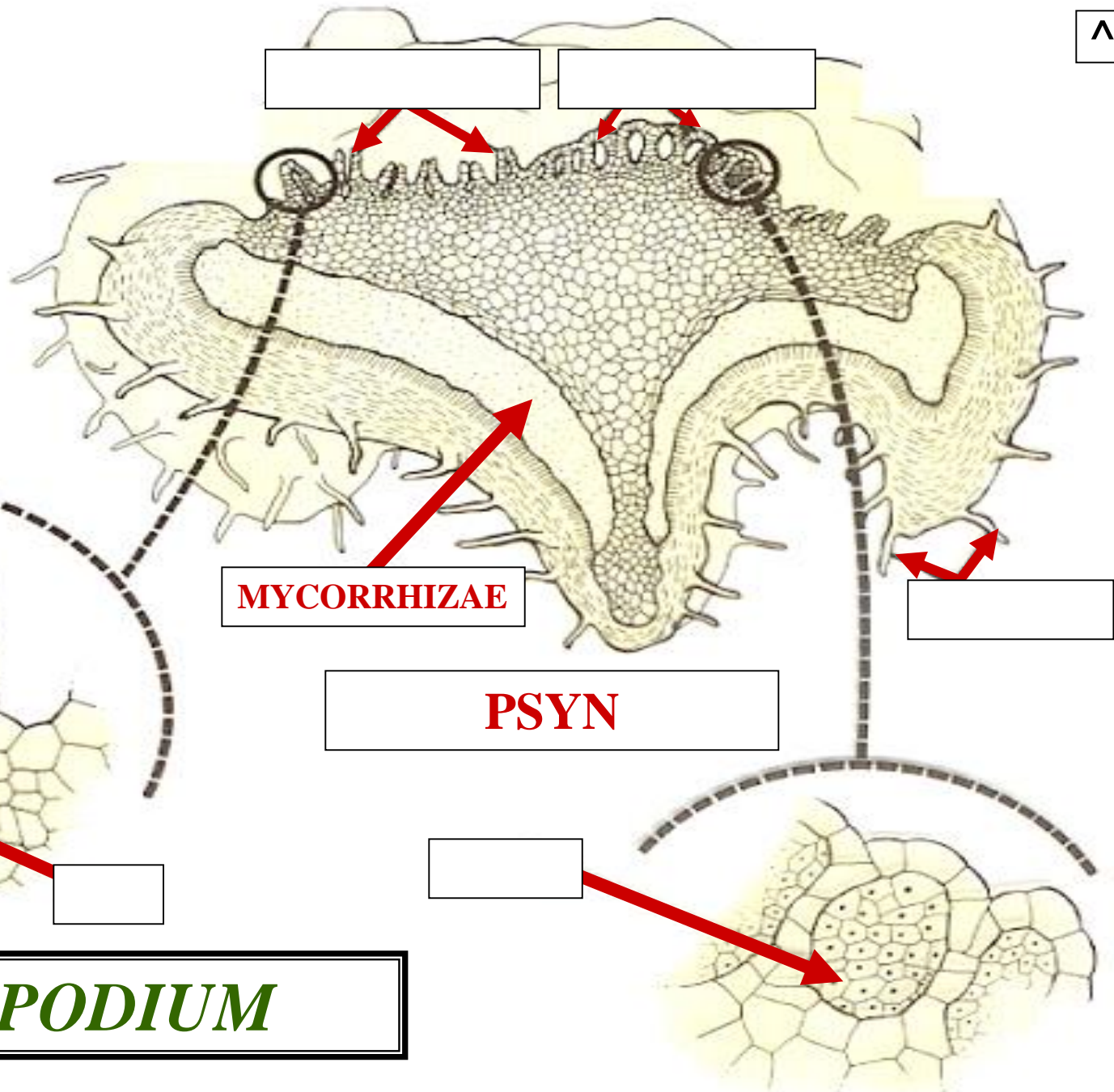


PSYN

LYCOPODIUM

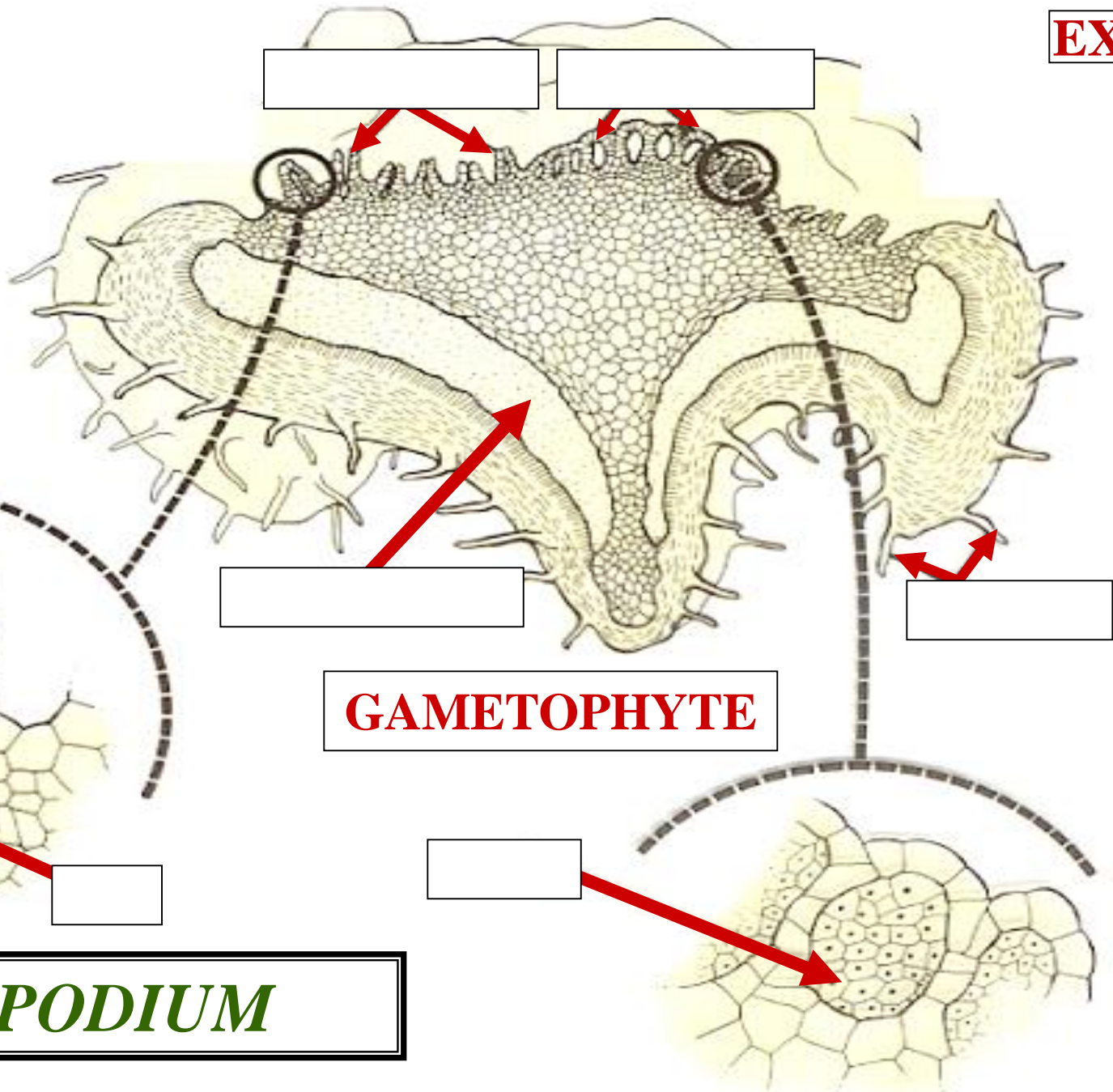
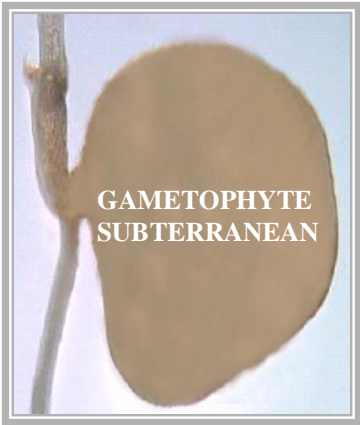


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LYCOPODIUM

EX

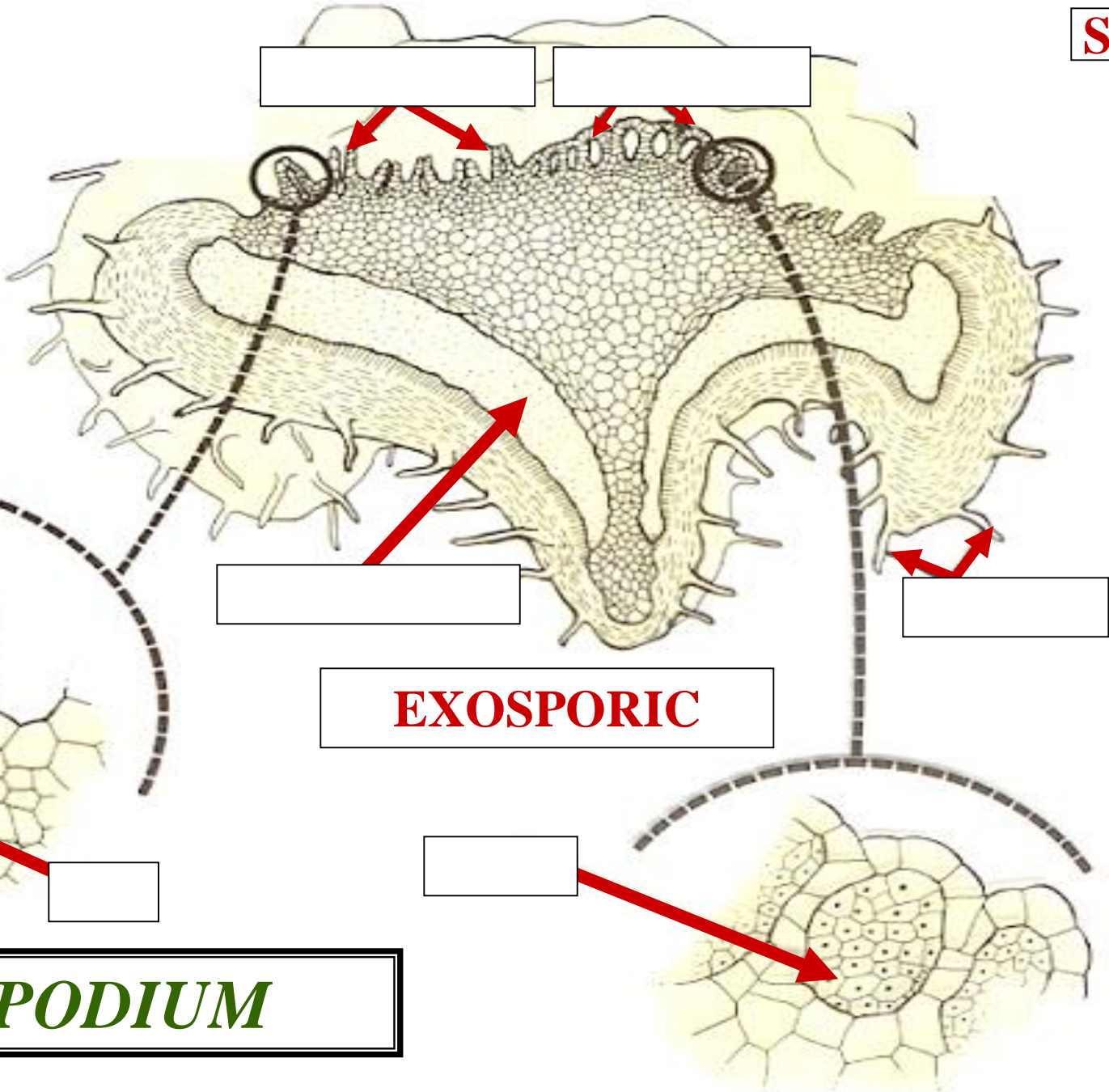


GAMETOPHYTE

LYCOPODIUM



GAMETOPHYTE
SUBTERRANEAN

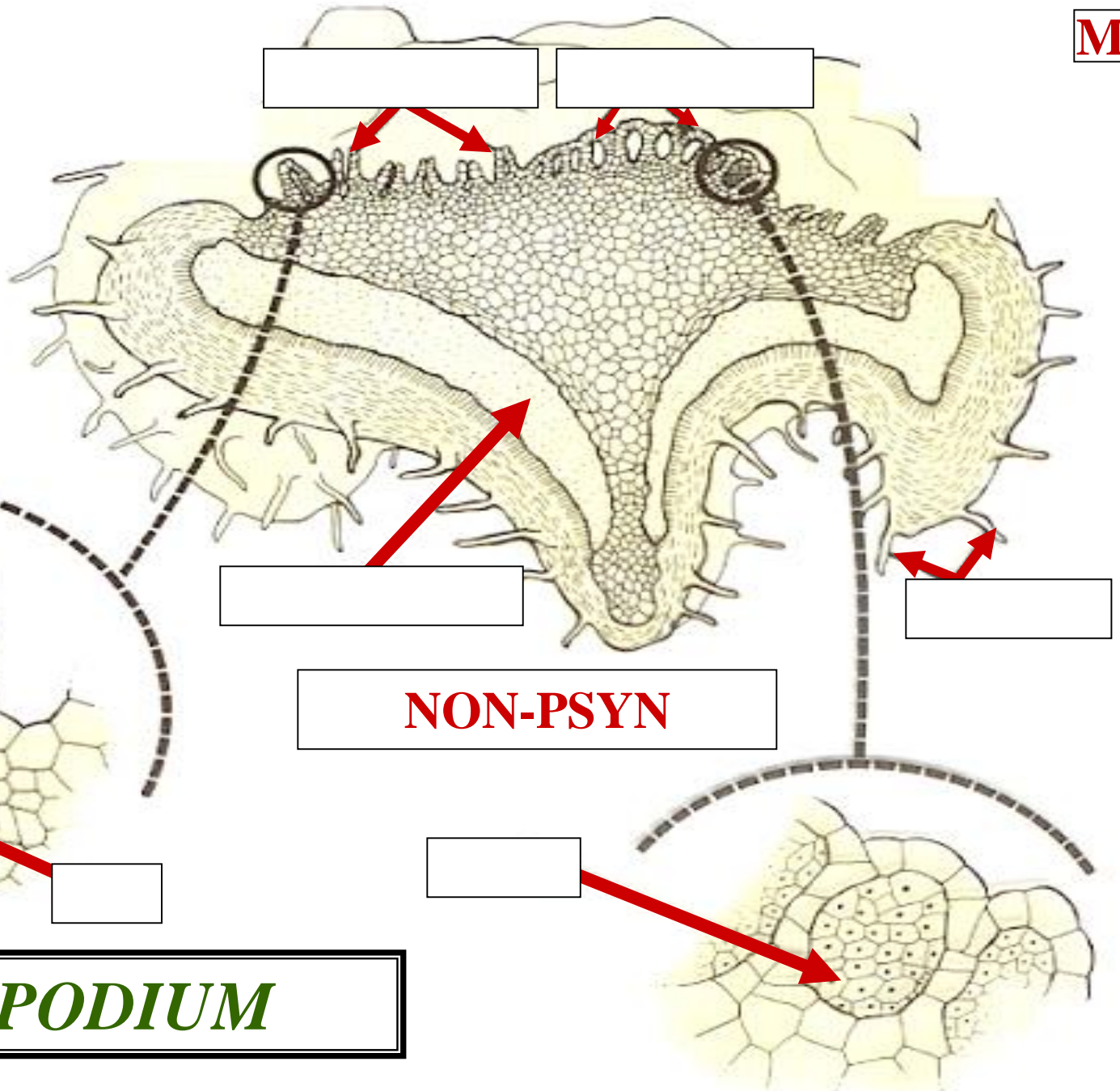


EXOSPORIC

LYCOPODIUM



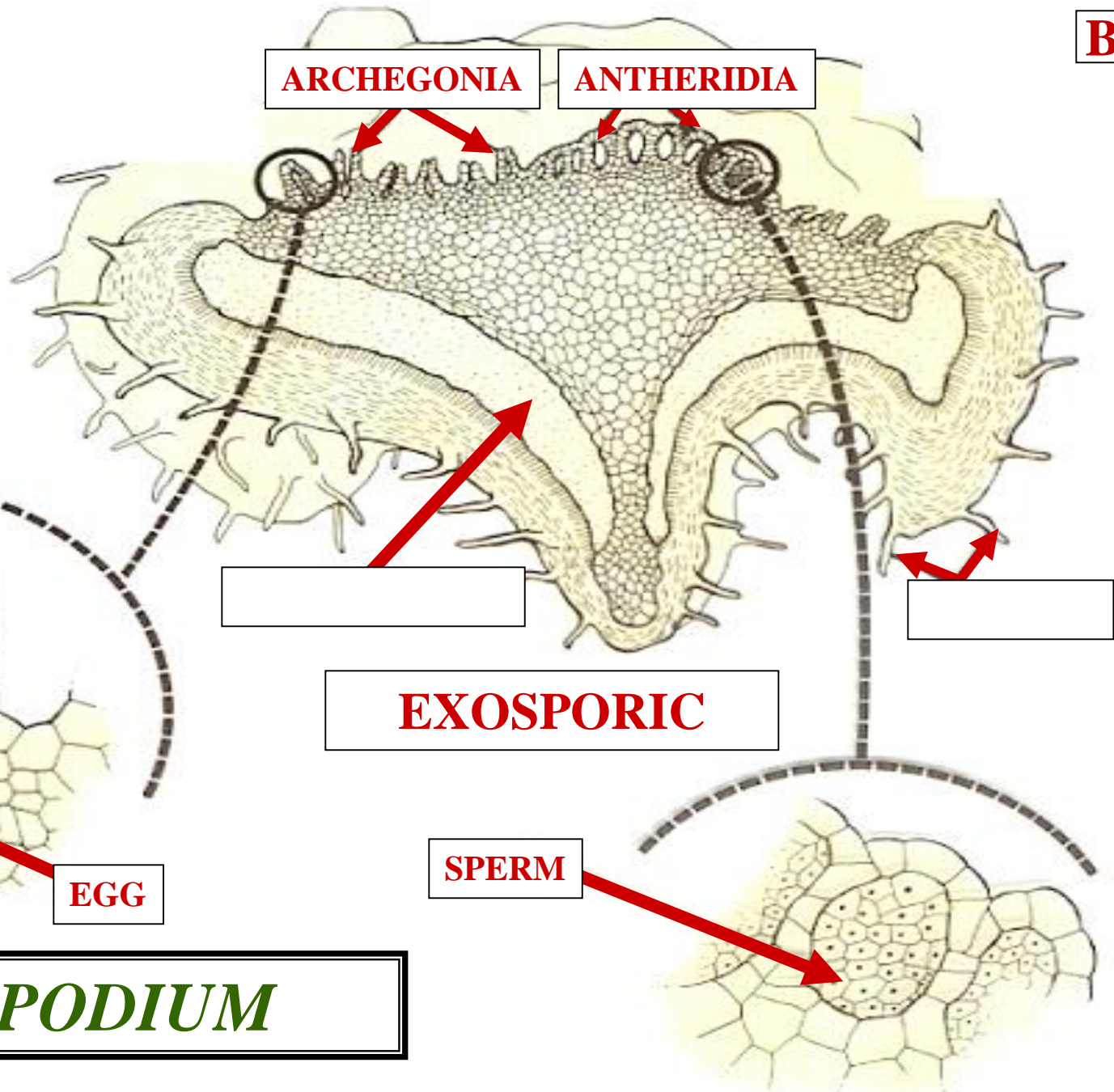
GAMETOPHYTE
SUBTERRANEAN



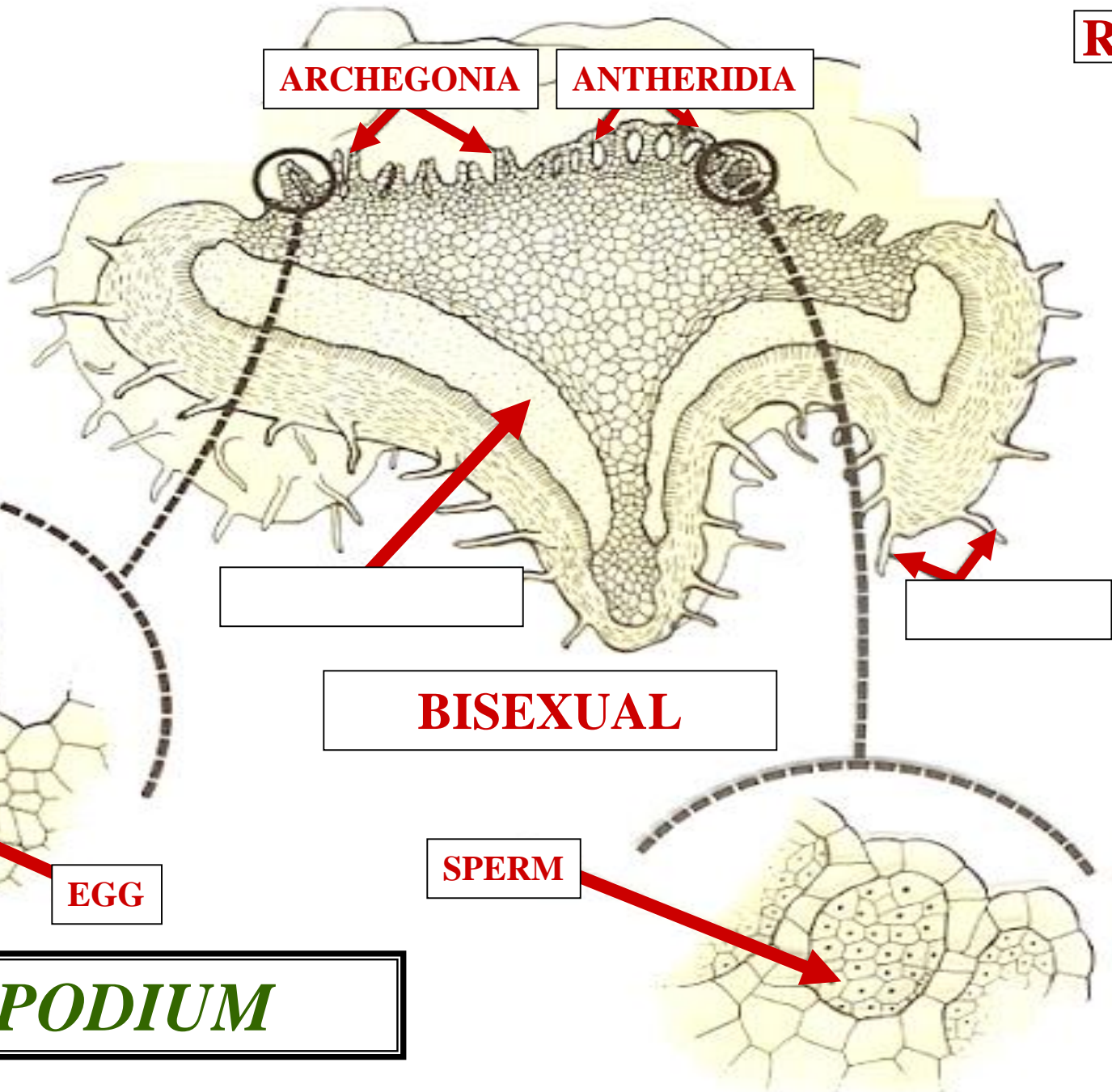
NON-PSYN

LYCOPODIUM

B



LYCOPODIUM



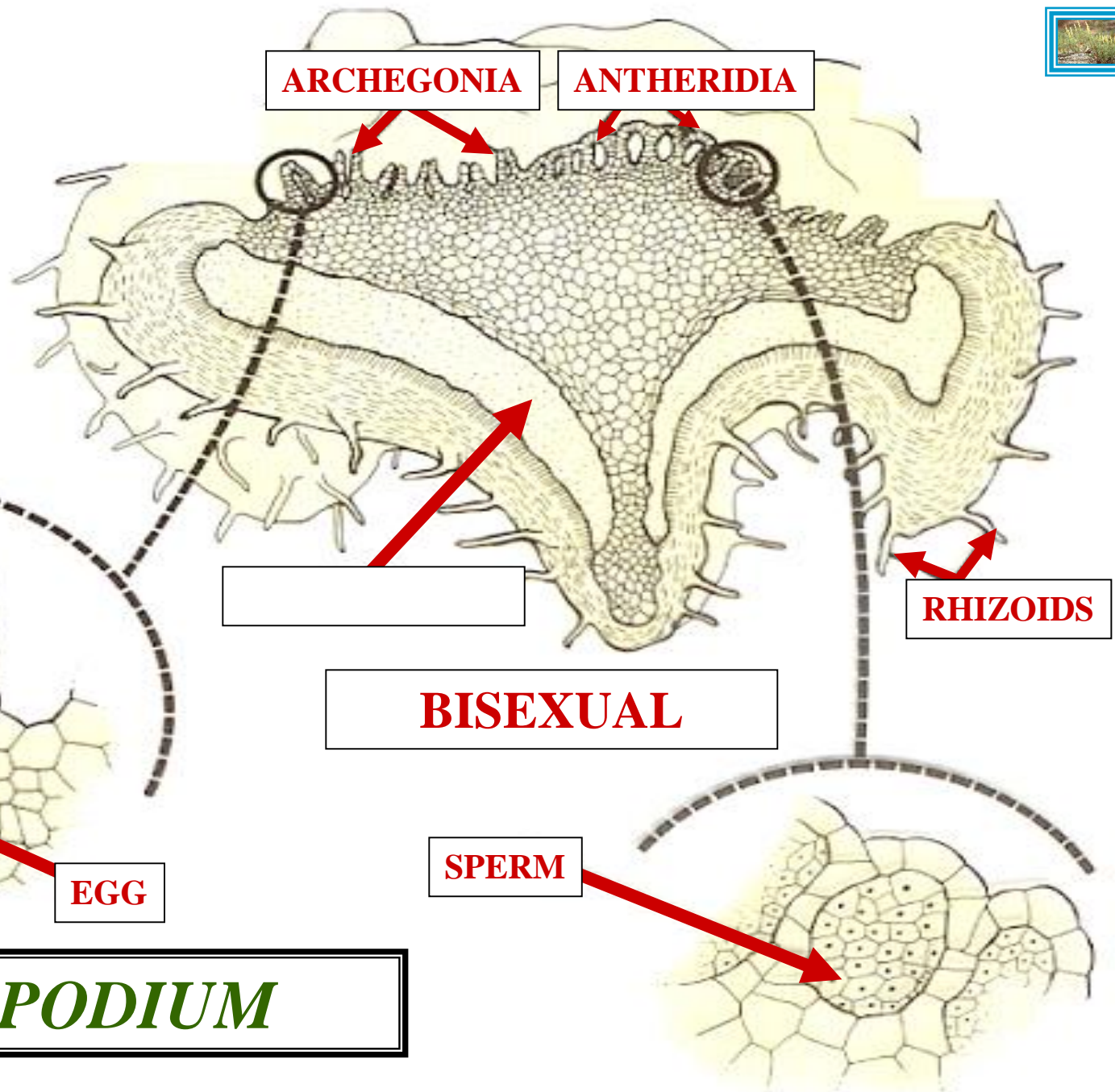
LYCOPODIUM



GAMETOPHYTE
EPITERRANEAN



GAMETOPHYTE
SUBTERRANEAN



ARCHEGONIA

ANTHERIDIA

RHIZOIDS

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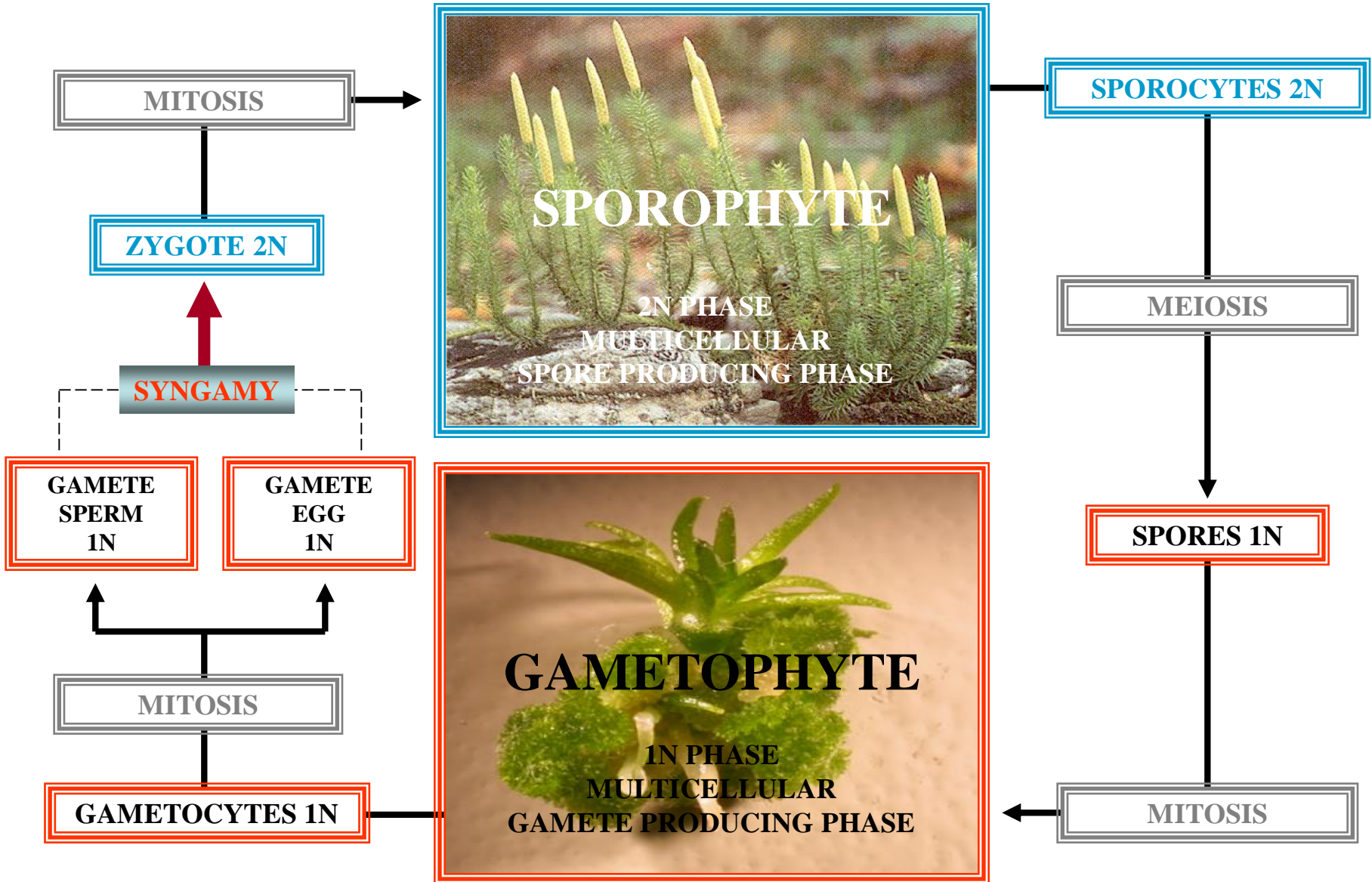
BISEXUAL

EGG

SPERM

LYCOPODIUM

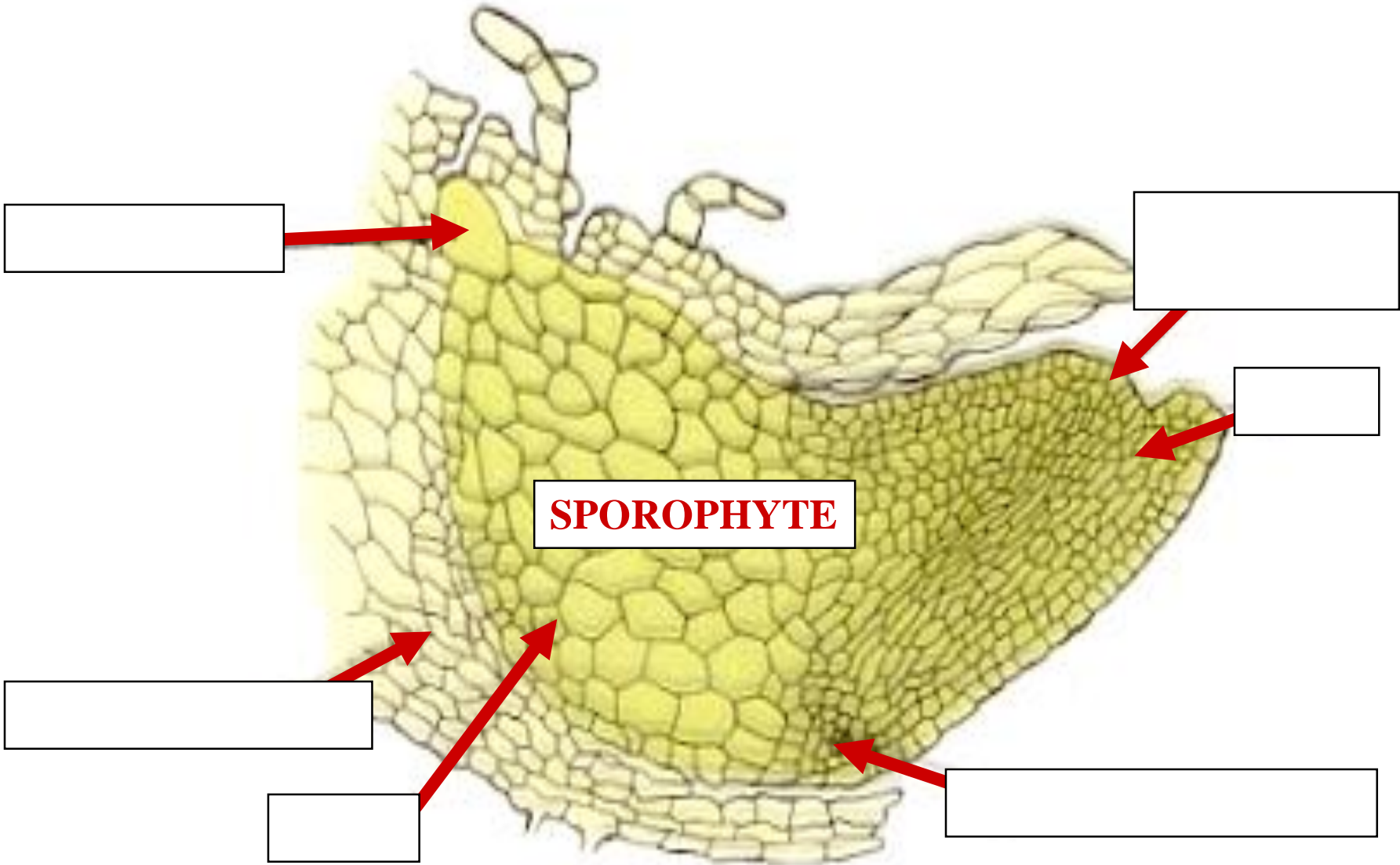
LYCOPODIALES LIFE CYCLE





REPRODUCTION

LYCOPODIUM
LIFE CYCLE



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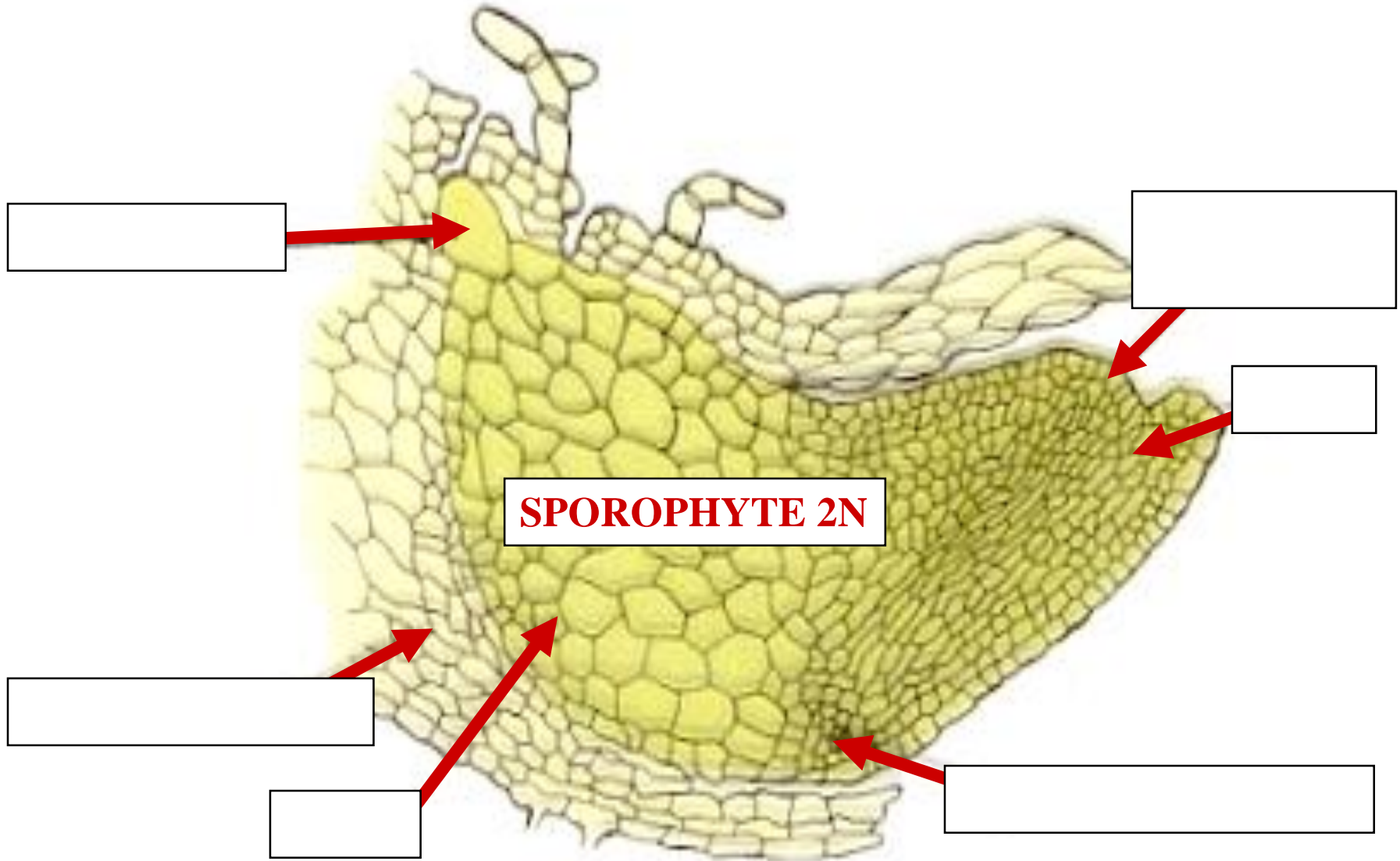
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SPOROPHYTE

[]

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SPOROPHYTE 2N

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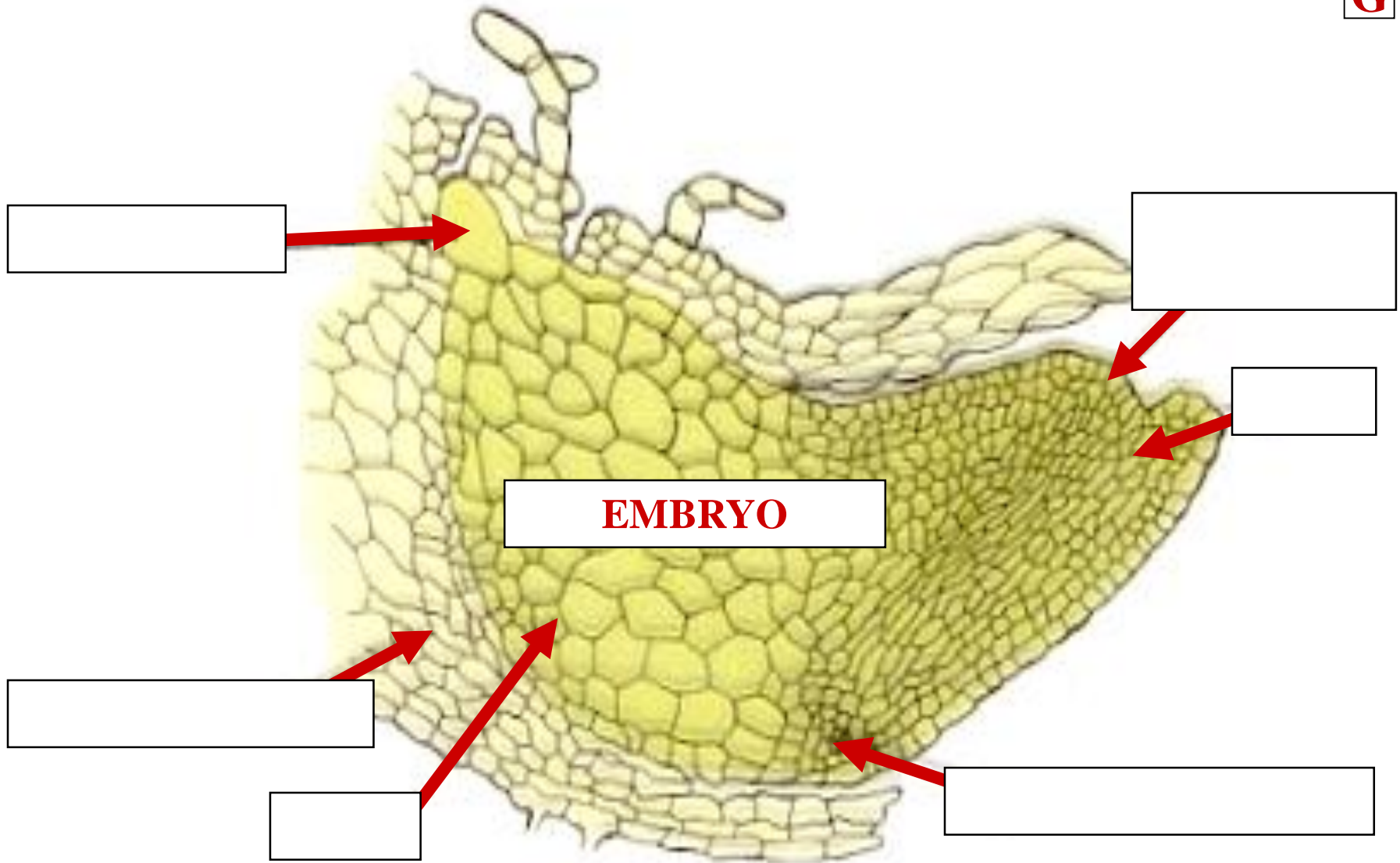
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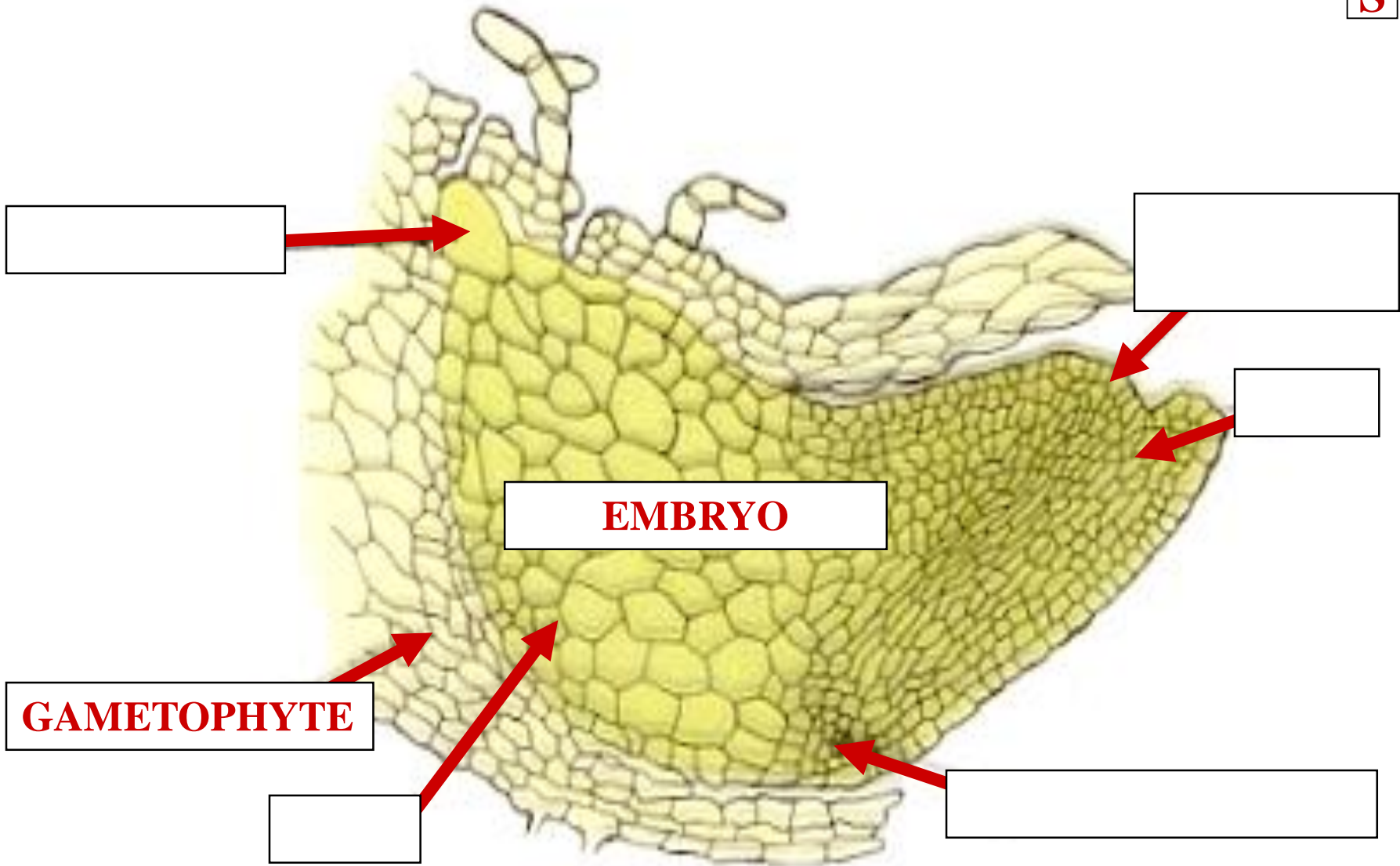
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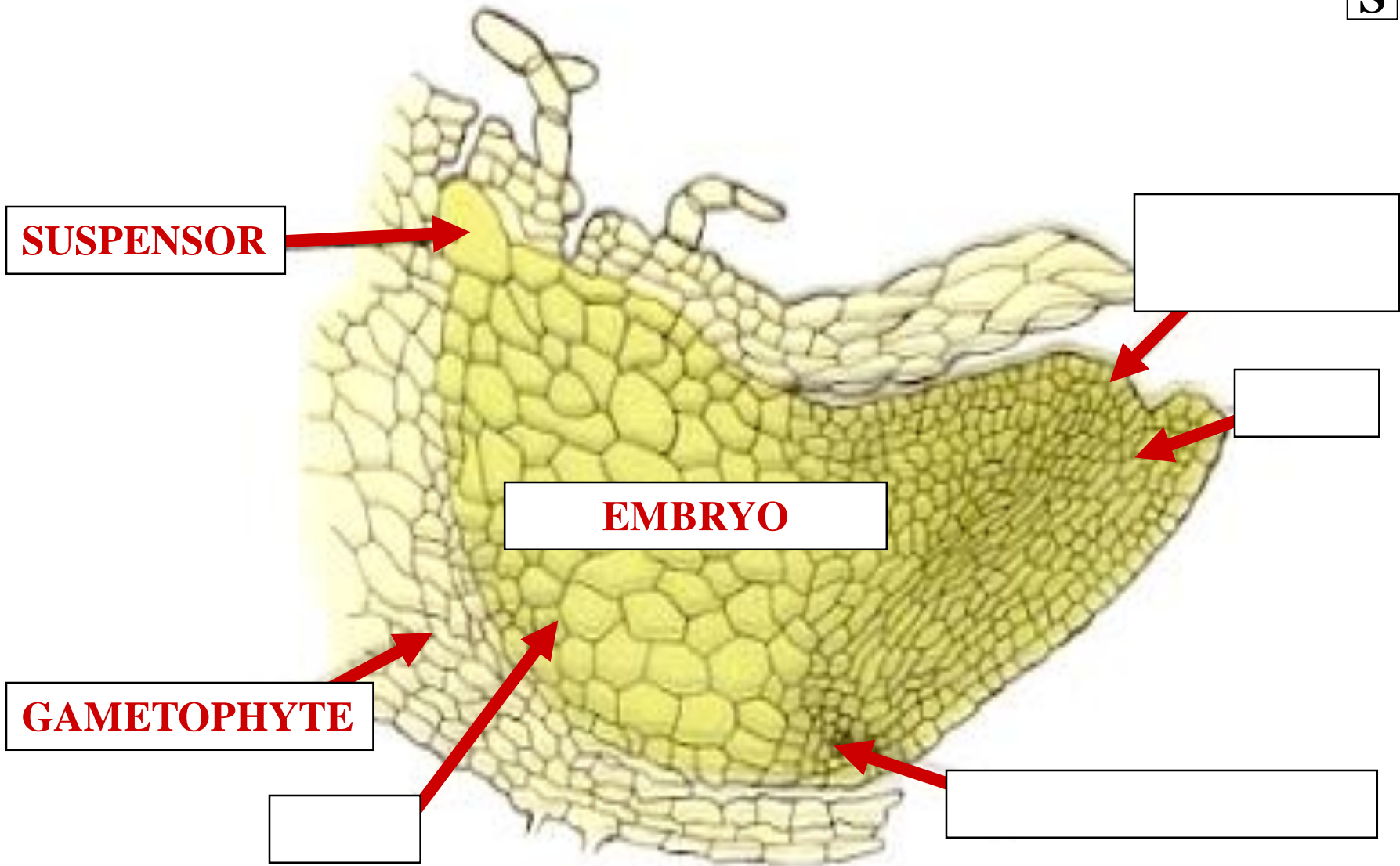
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EMBRYO

GAMETOPHYTE



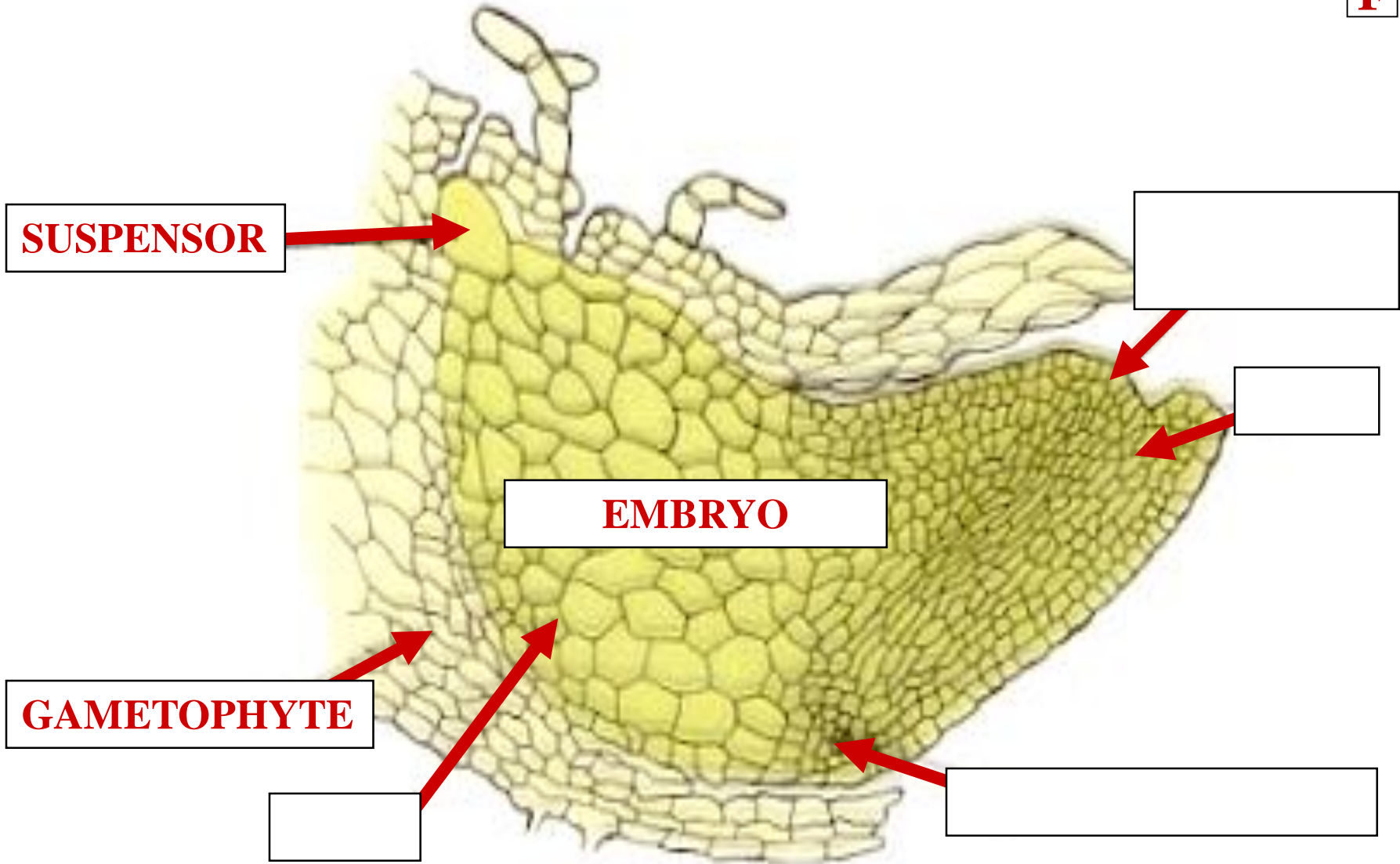
SUSPENSOR

**SPOROPHYTE
SUSPENSOR**

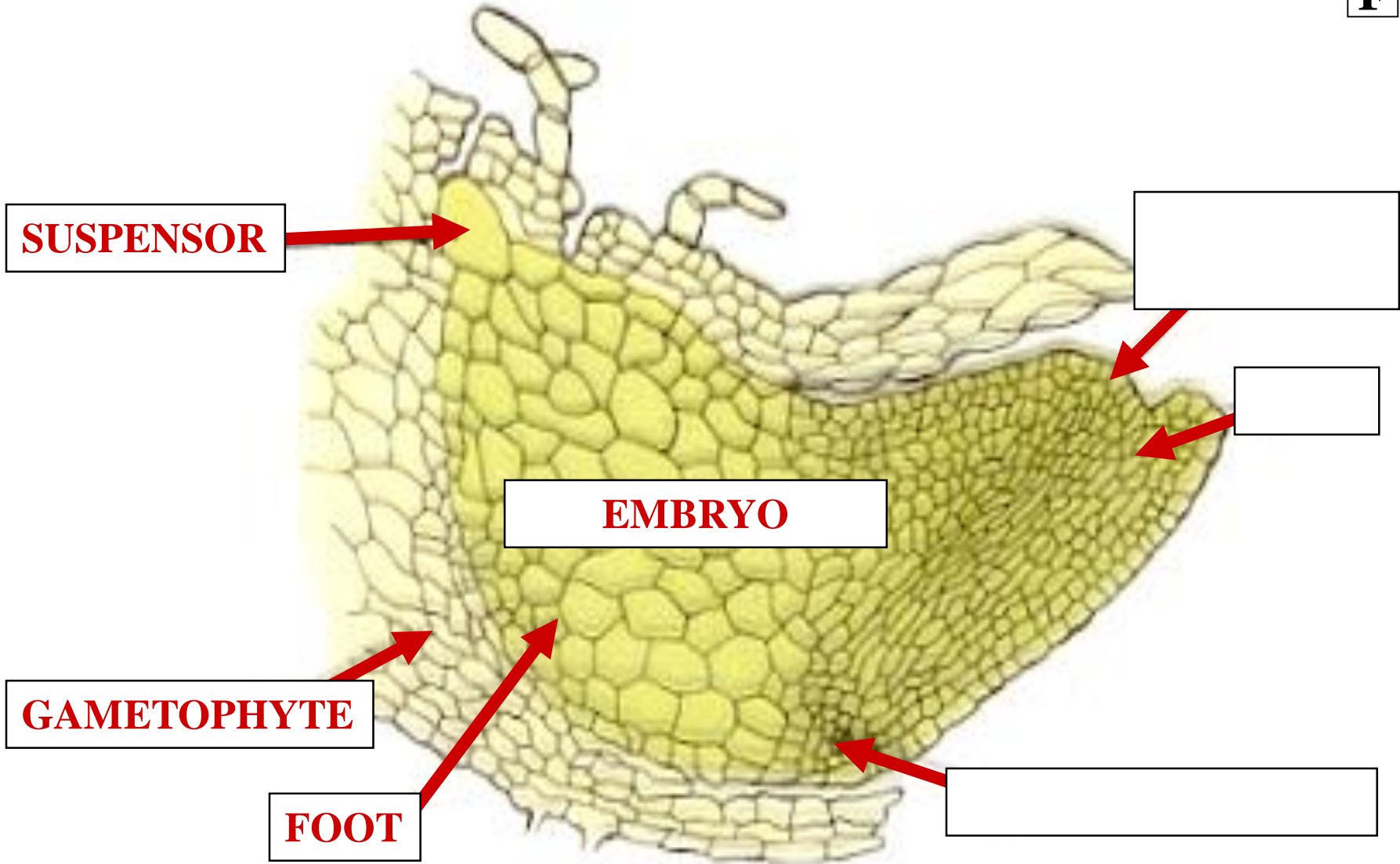


**EMBEDS EMBRYO
INTO
GAMETOPHYTE**

**SPOROPHYTE
SUSPENSOR**



F



FOOT

**SPOROPHYTE
FOOT**



AB

**ABSORBS
GAMETOPHYTE
NUTRIENTS**

**SPOROPHYTE
FOOT**

SUSPENSOR

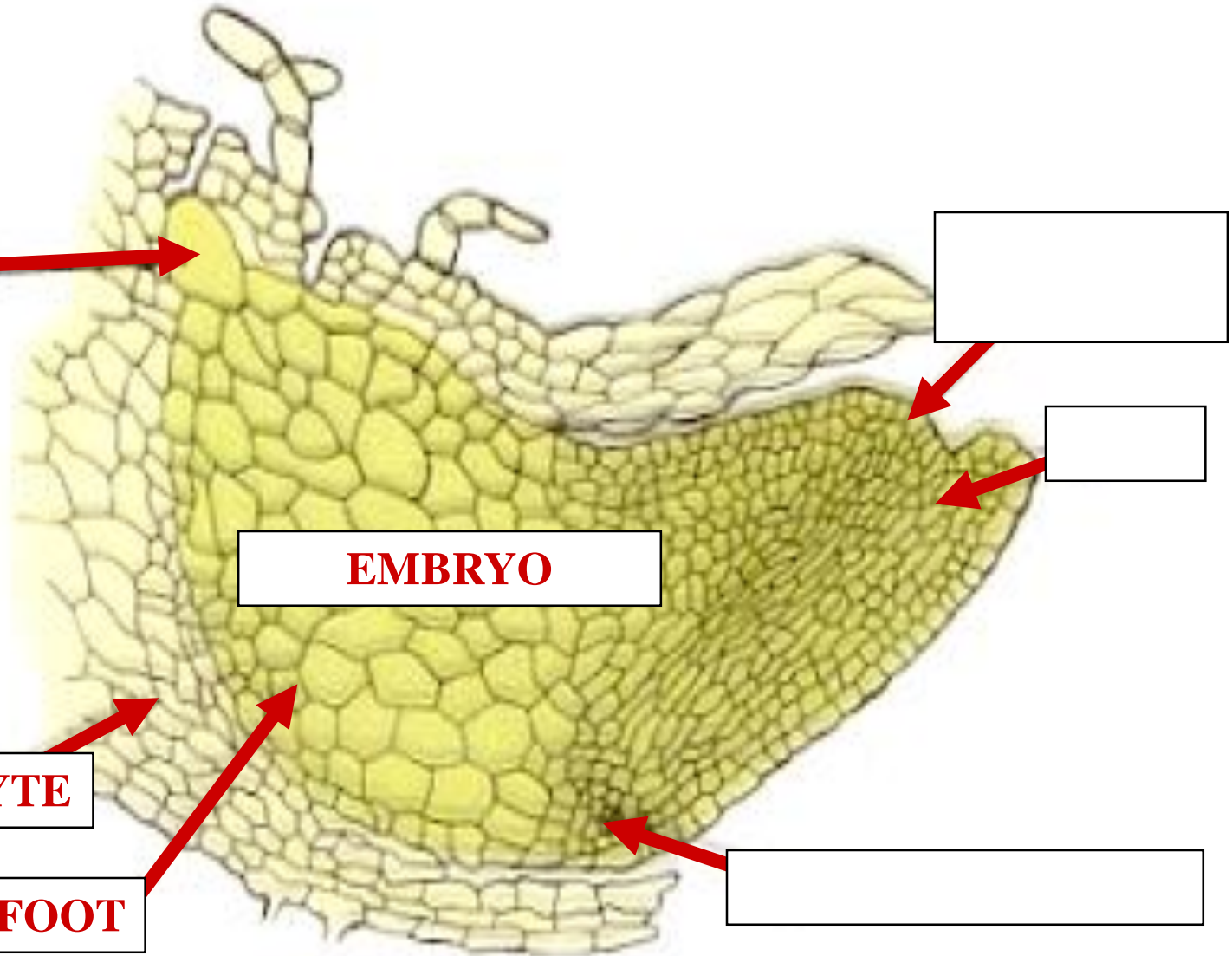


EMBRYO

GAMETOPHYTE

FOOT

**ABSORBS
NUTRIENTS**





SUSPENSOR



EMBRYO

GAMETOPHYTE

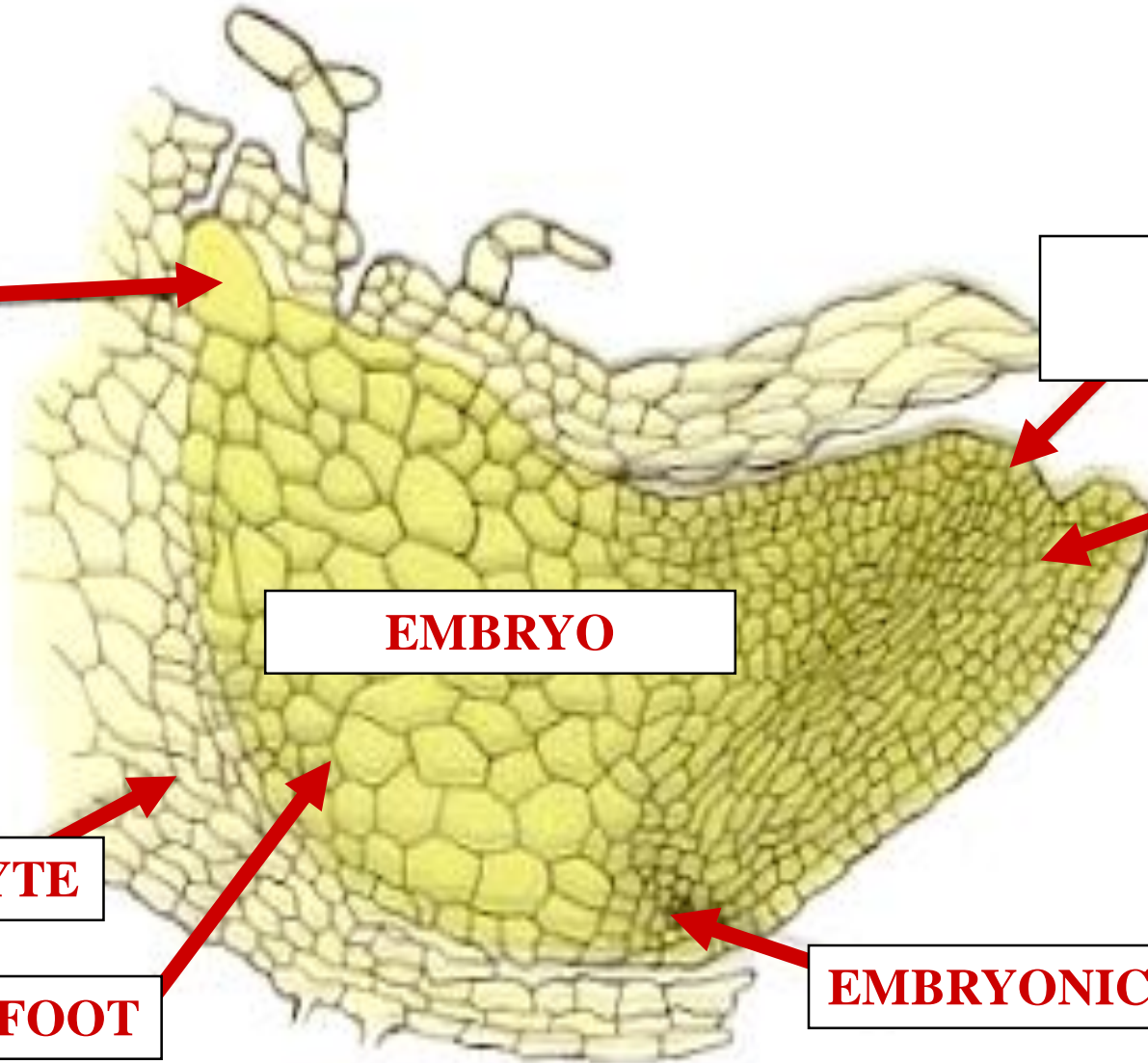


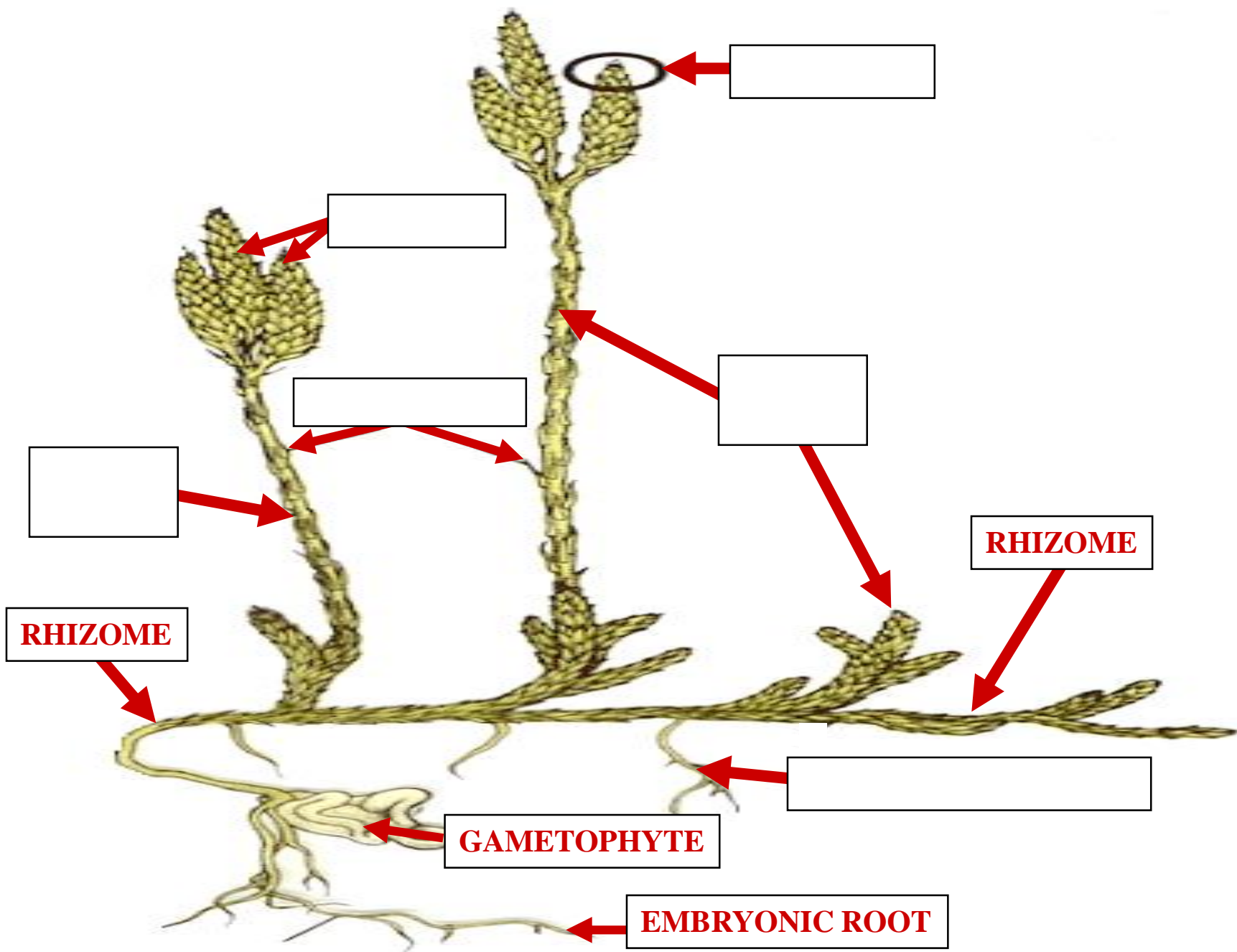
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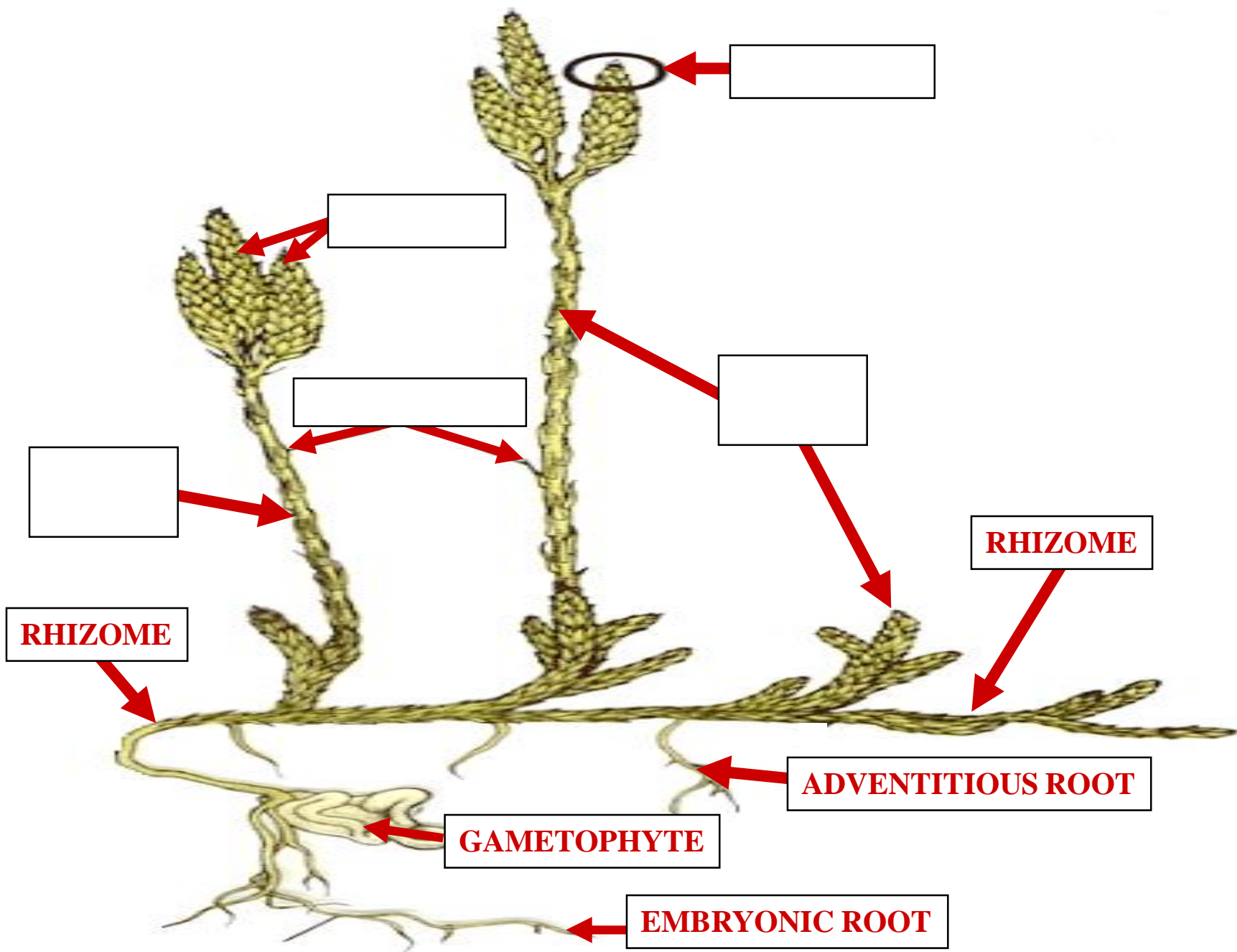


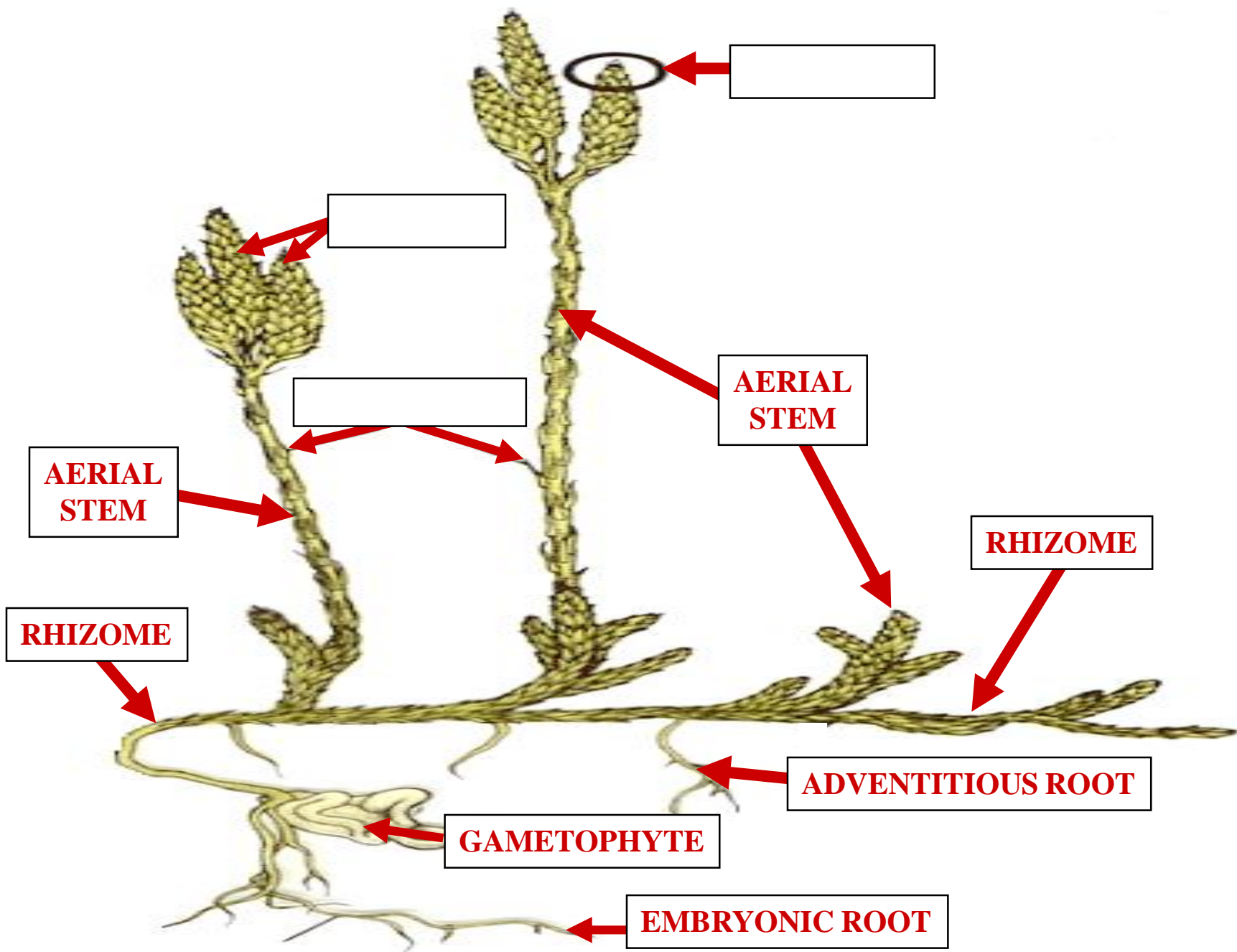
**ABSORBS
NUTRIENTS**

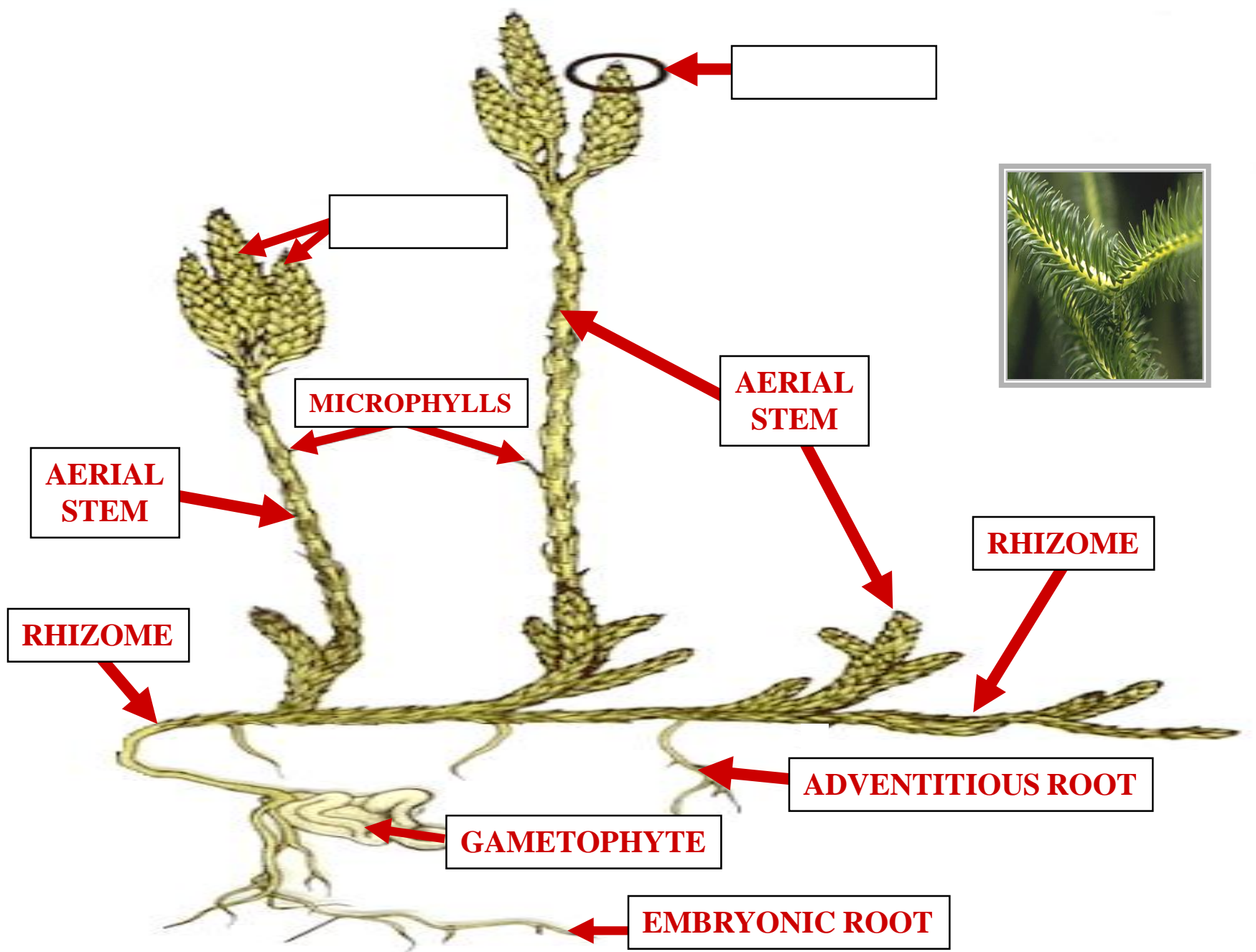
EMBRYONIC ROOT











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MICROPHYLLS

**AERIAL
STEM**

**AERIAL
STEM**

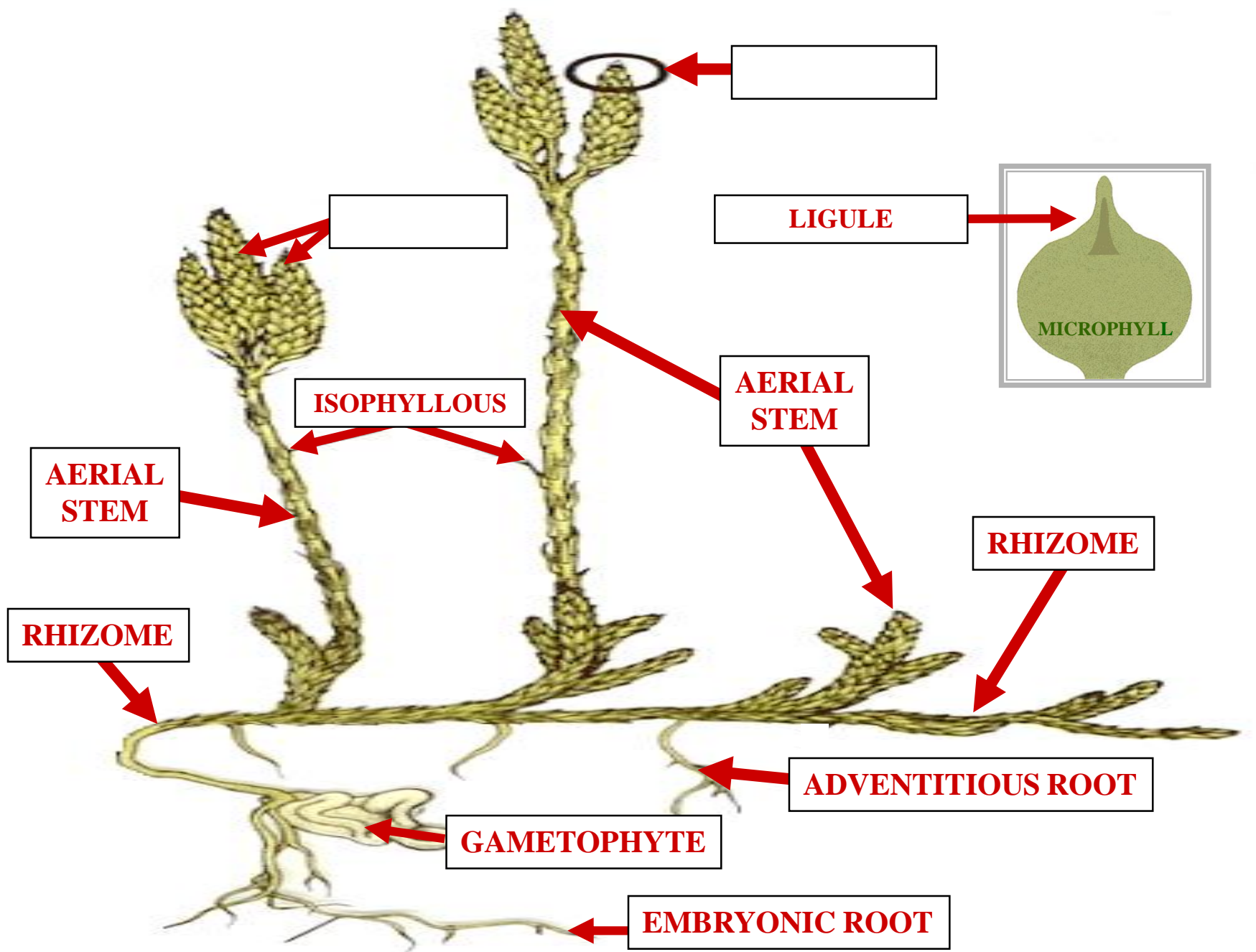
RHIZOME

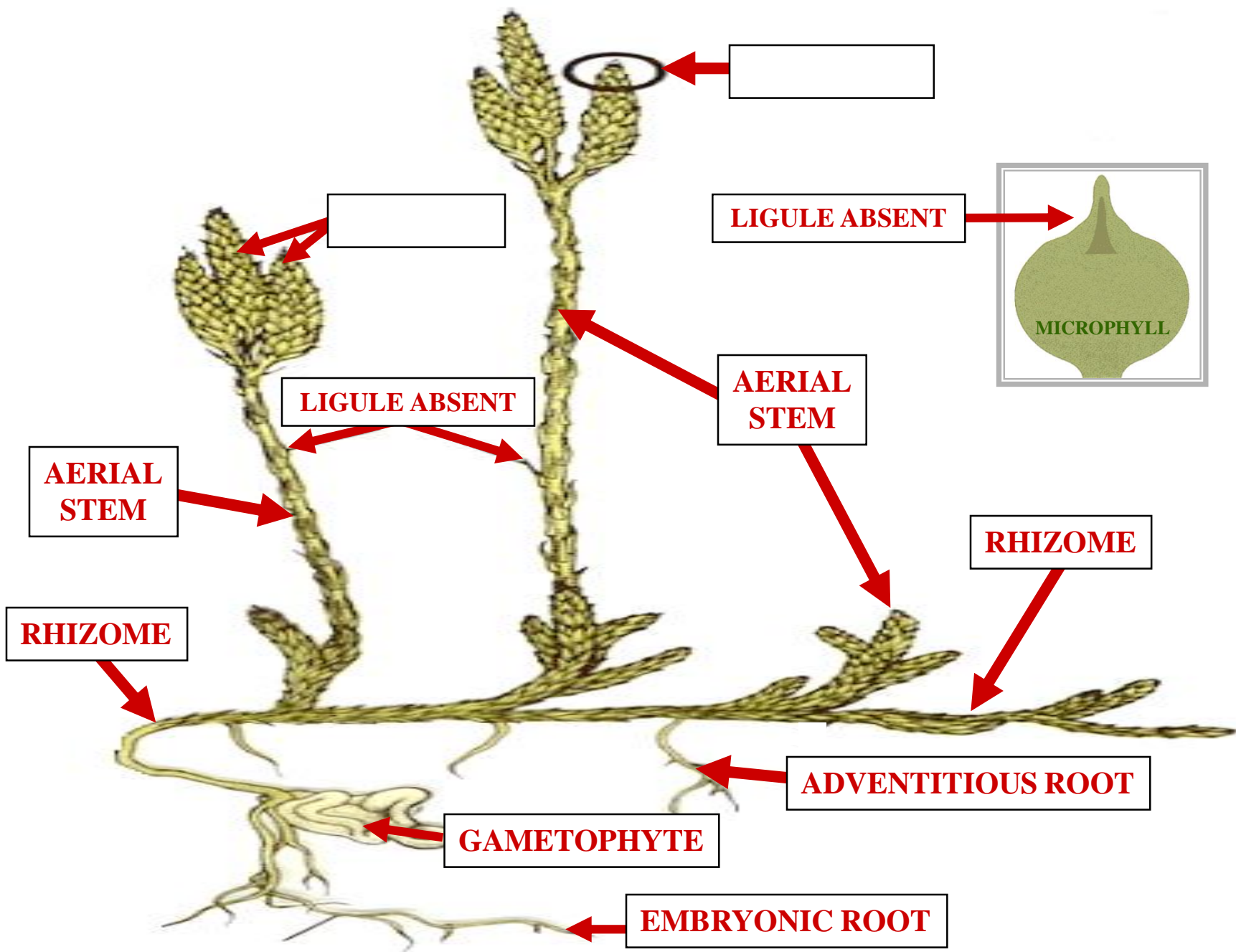
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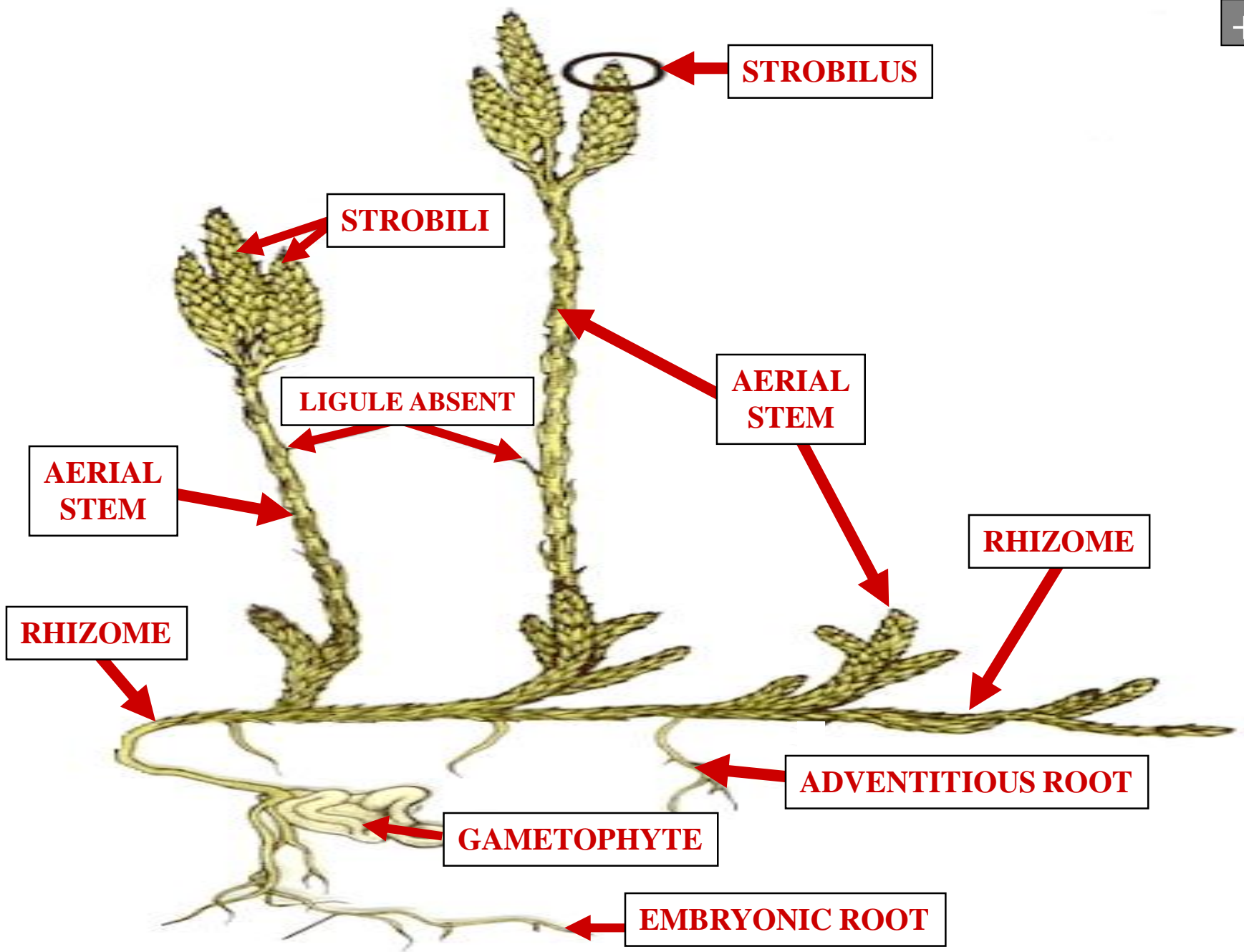
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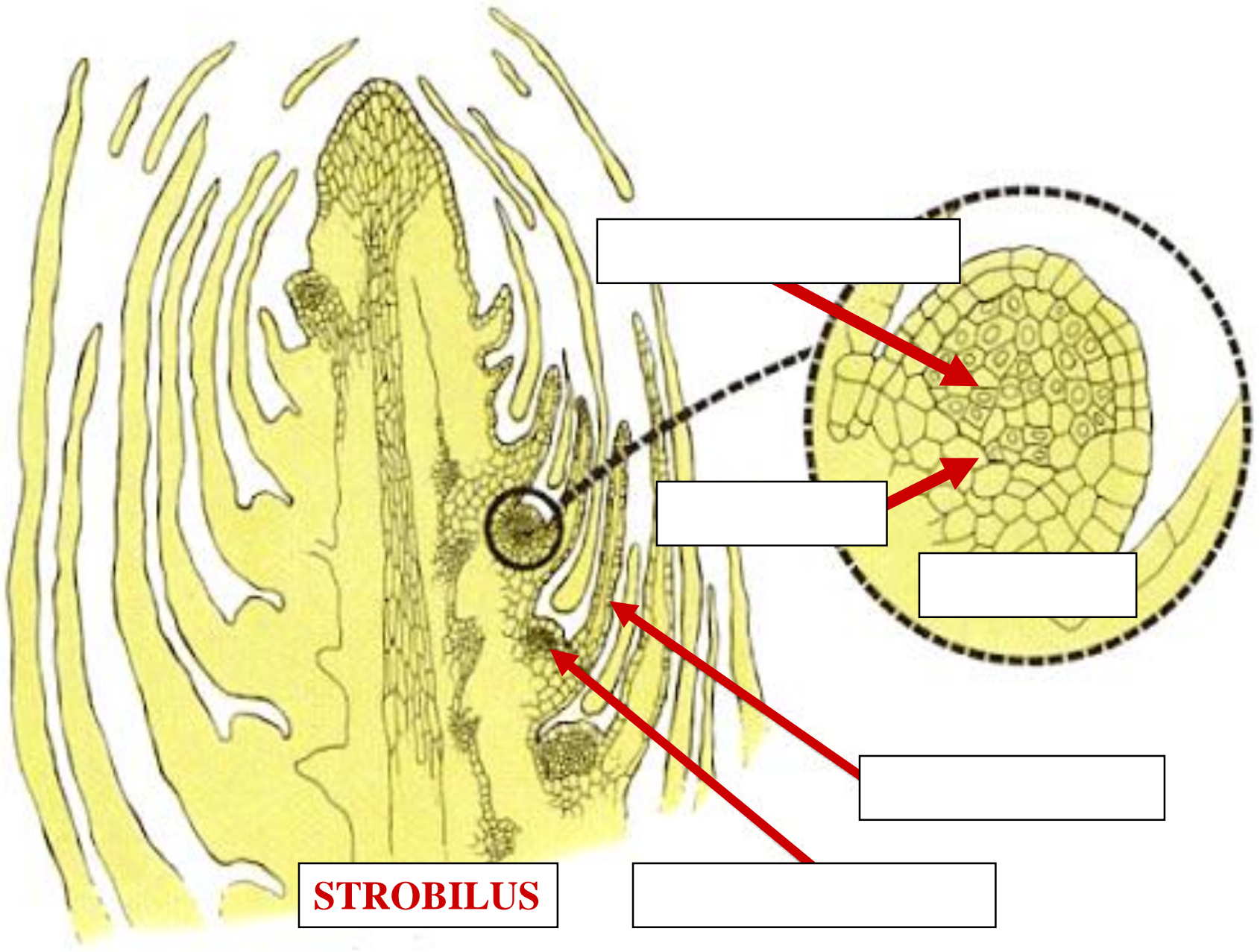
GAMETOPHYTE

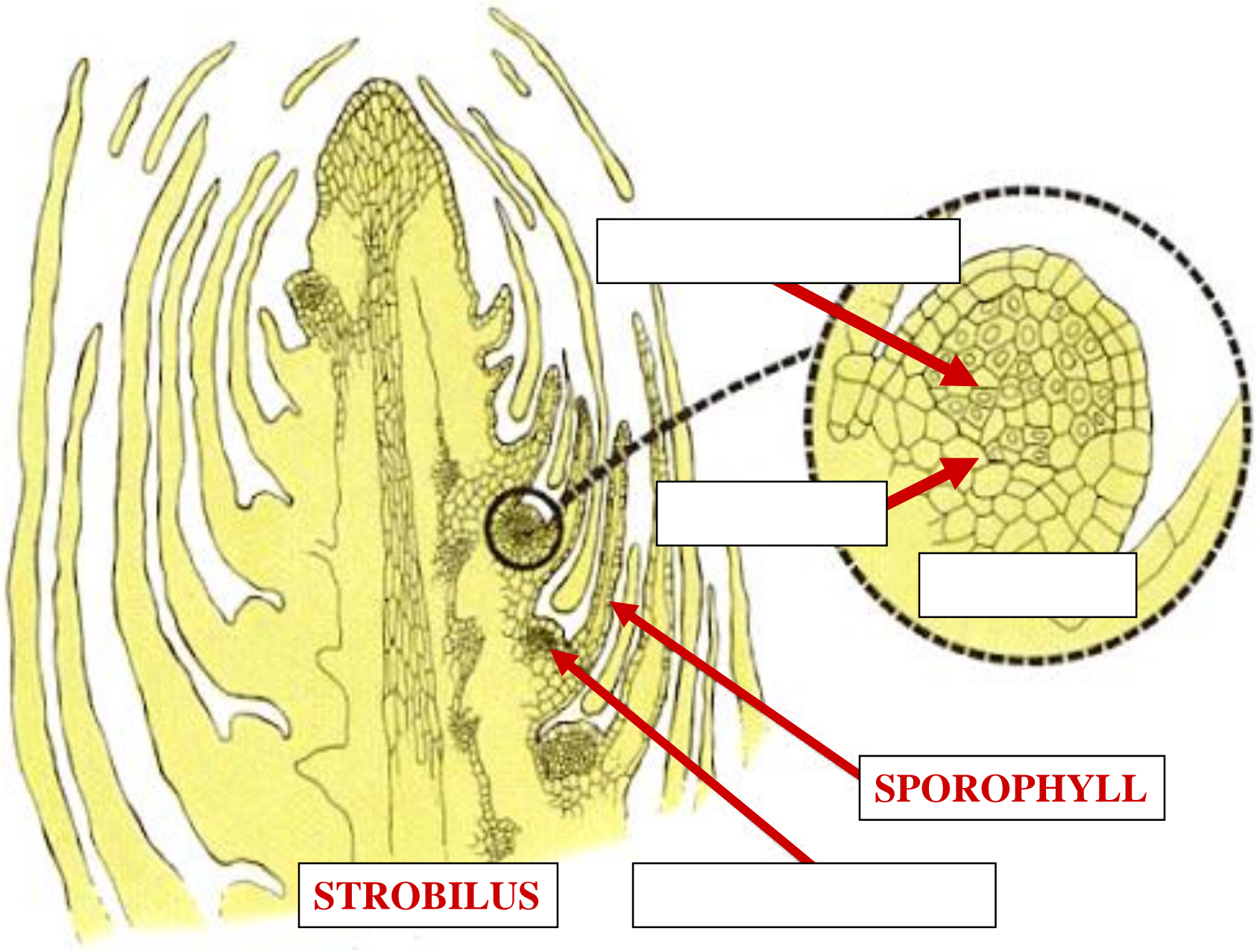
EMBRYONIC ROOT

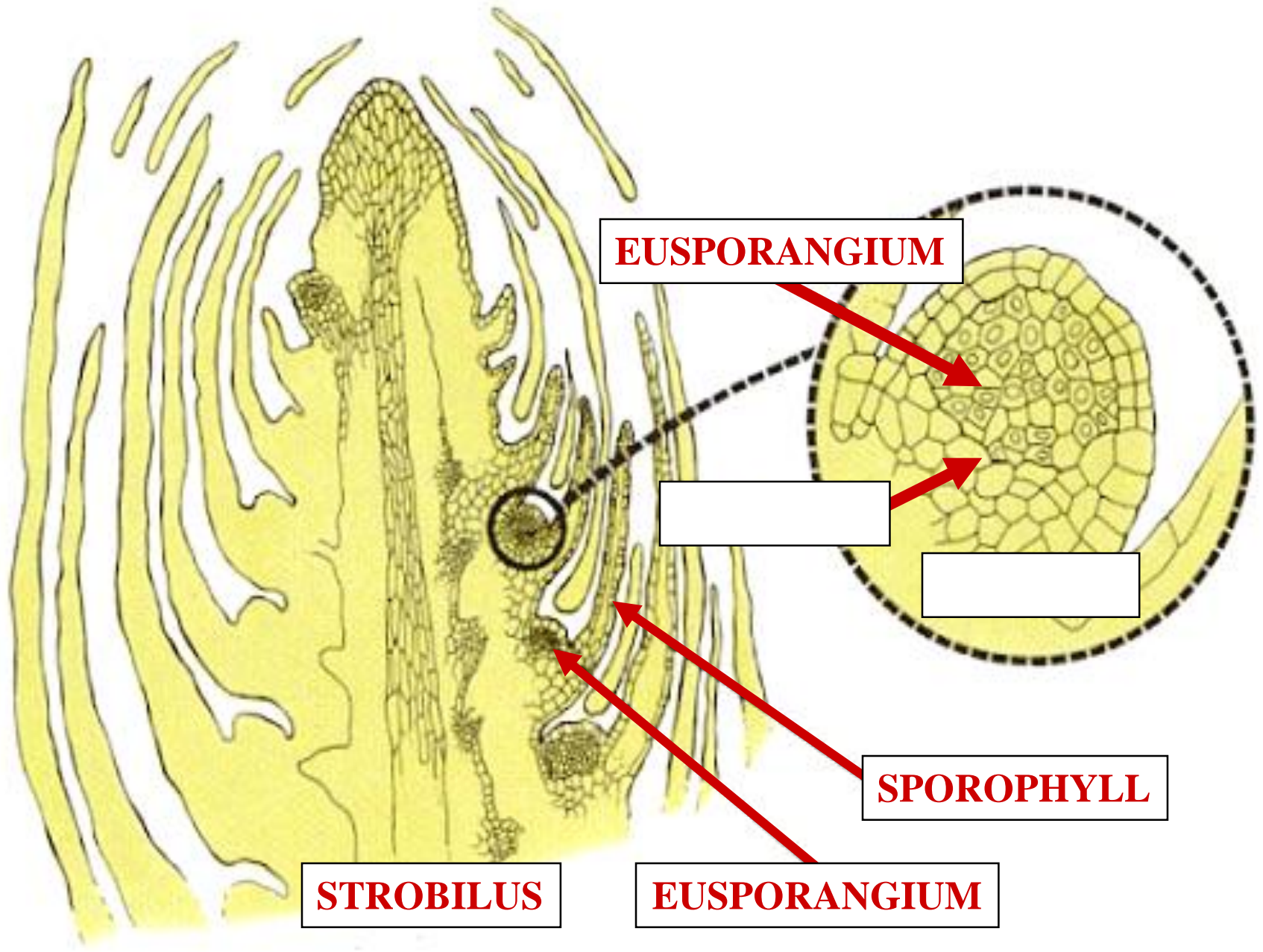












EUSPORANGIUM

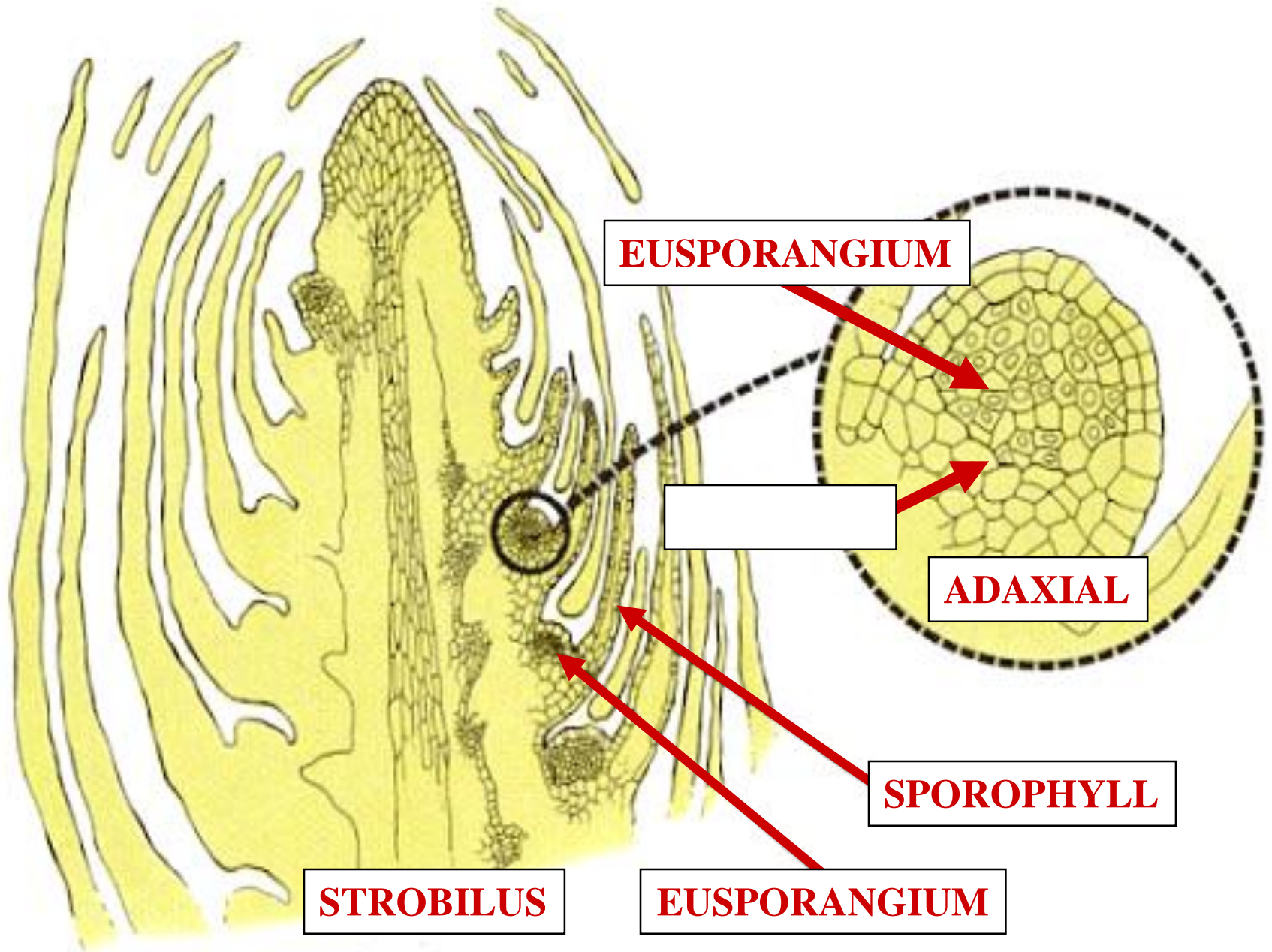
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SPOROPHYLL

STROBILUS

EUSPORANGIUM



EUSPORANGIUM

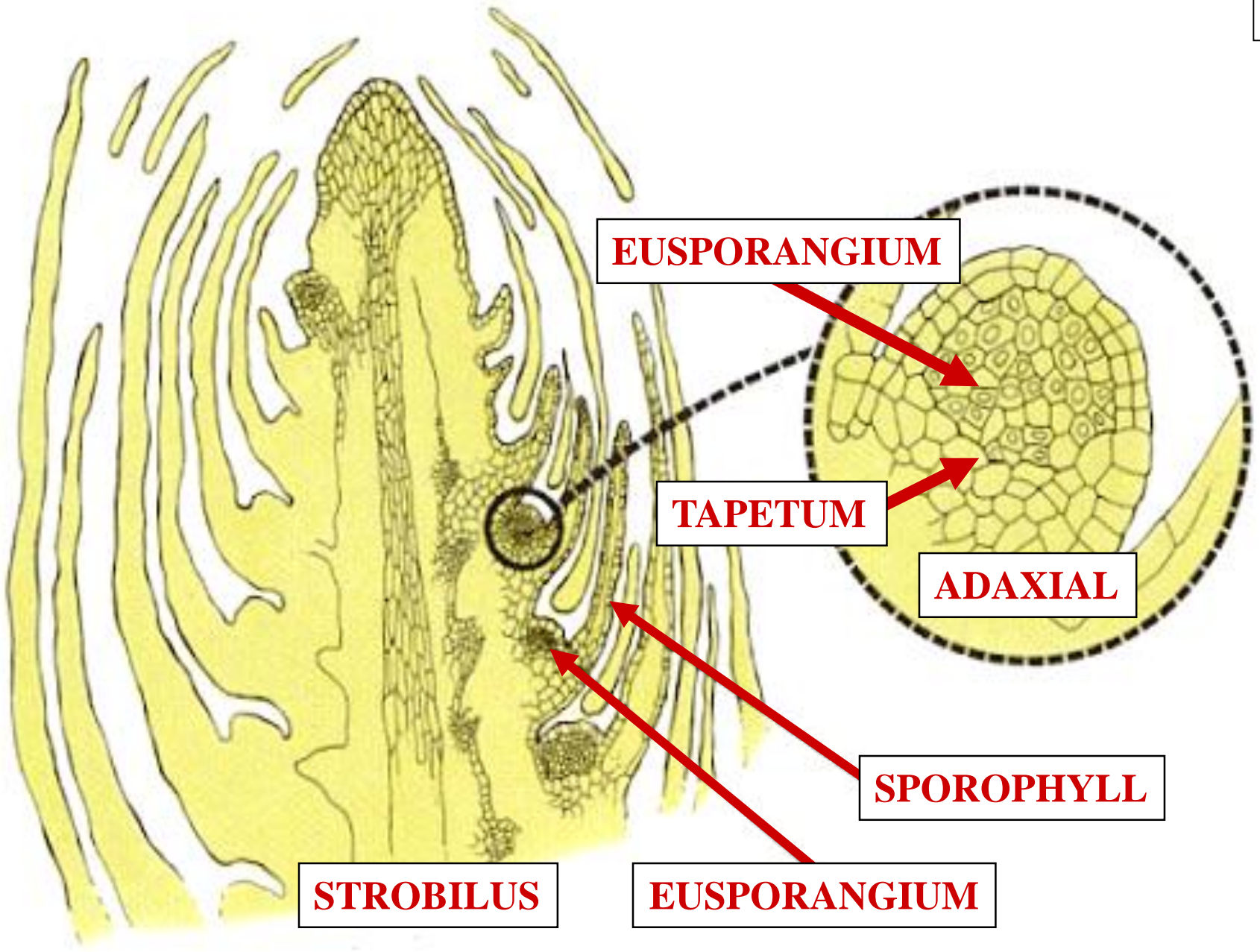
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ADAXIAL

SPOROPHYLL

STROBILUS

EUSPORANGIUM



EUSPORANGIUM

TAPETUM

ADAXIAL

SPOROPHYLL

STROBILUS

EUSPORANGIUM

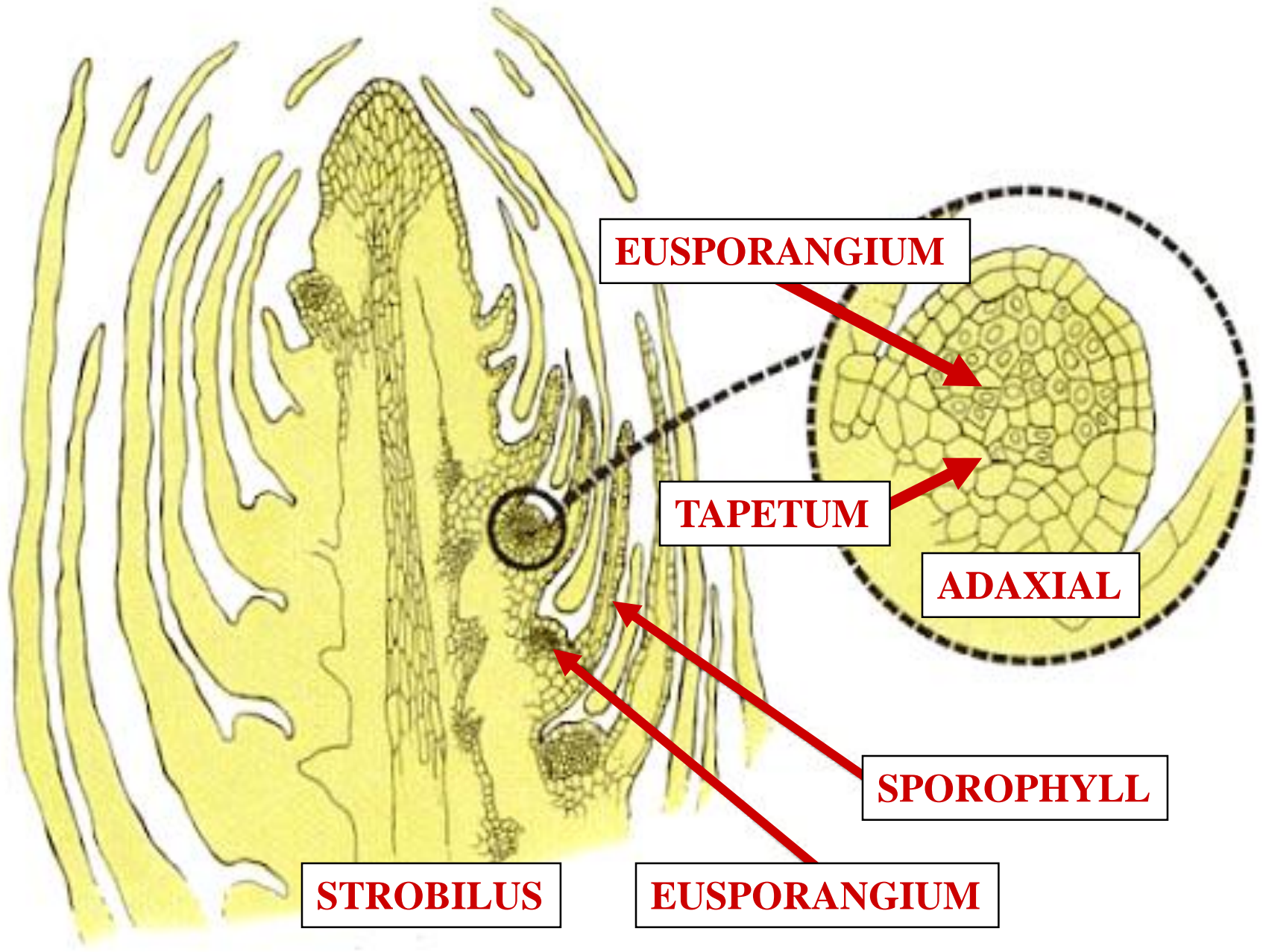
TAPETUM

**EUSPORANGIUM
TAPETUM**



**SPOROCYTE
NUTRIENT**

**EUSPORANGIUM
TAPETUM**



SPOROCYTES

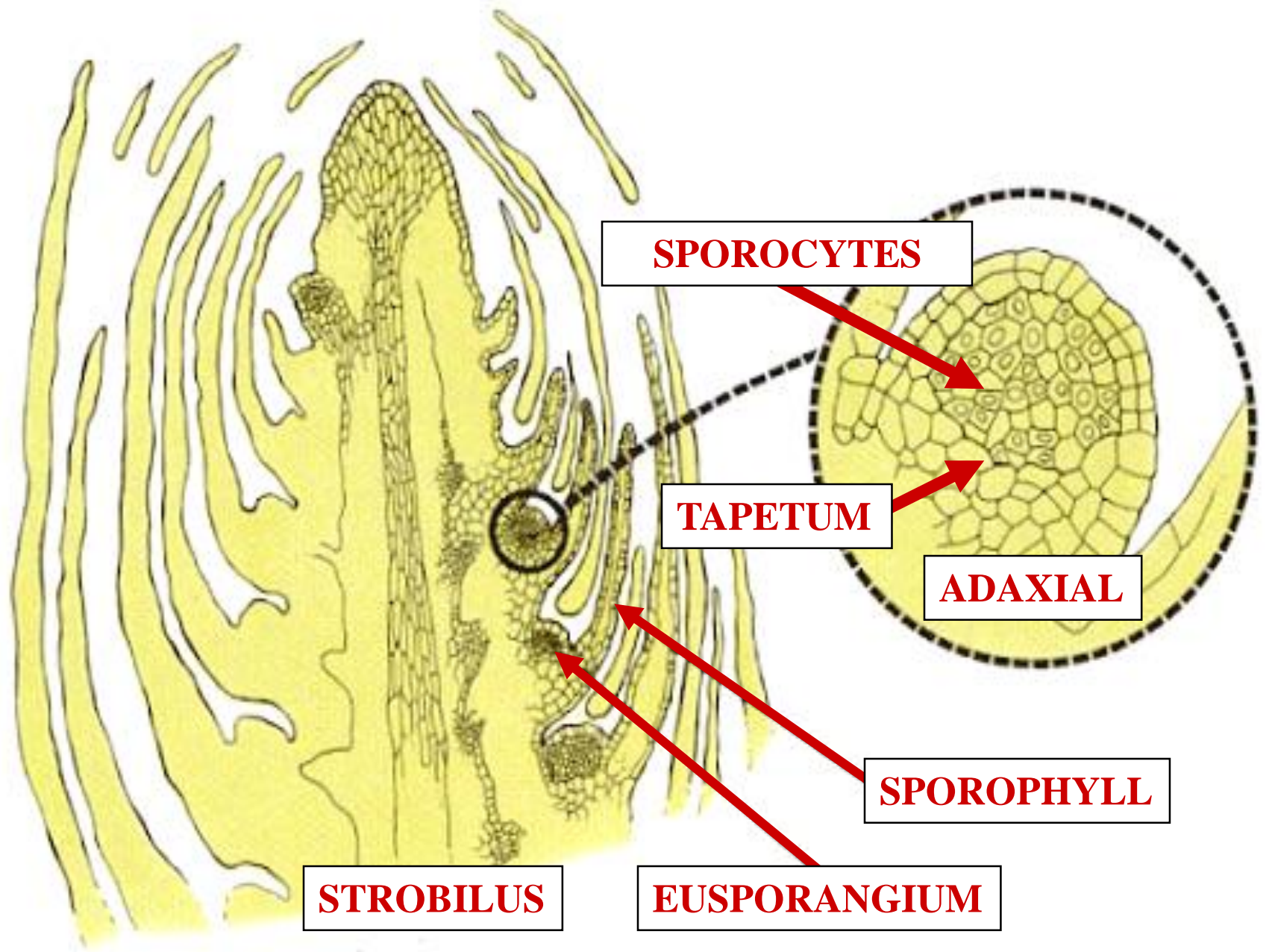
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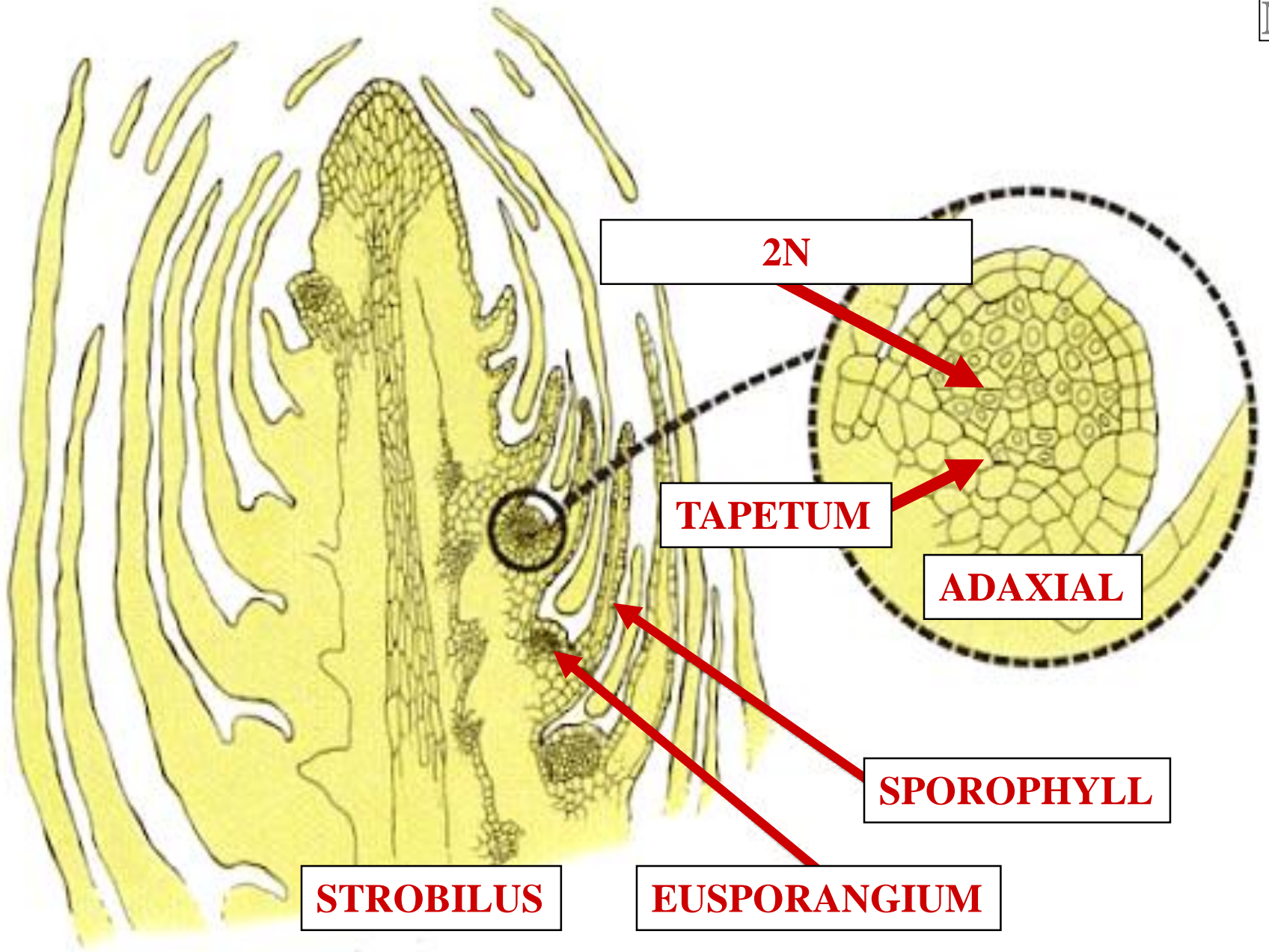
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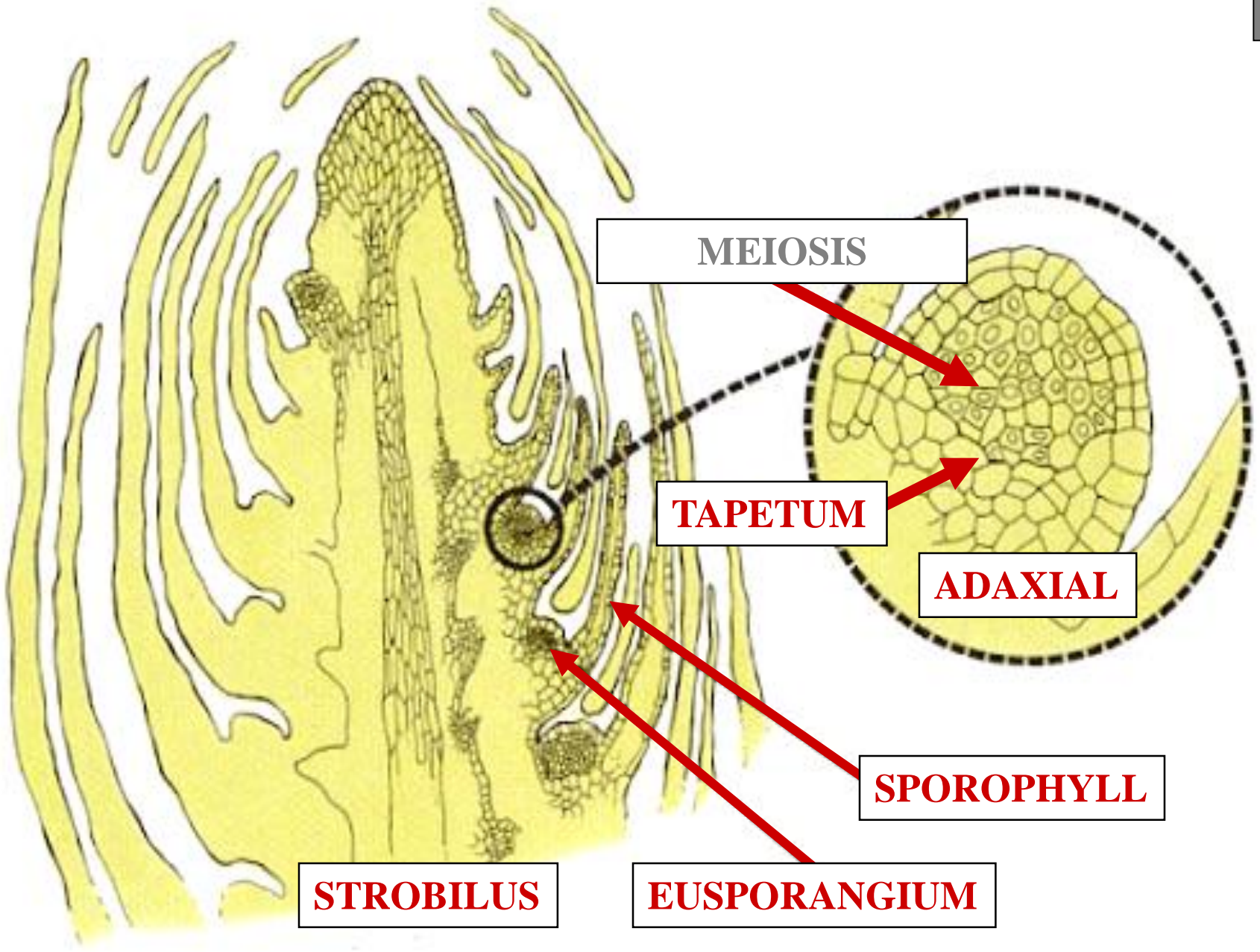
SPOROPHYLL

STROBILUS

EUSPORANGIUM







MEIOSIS

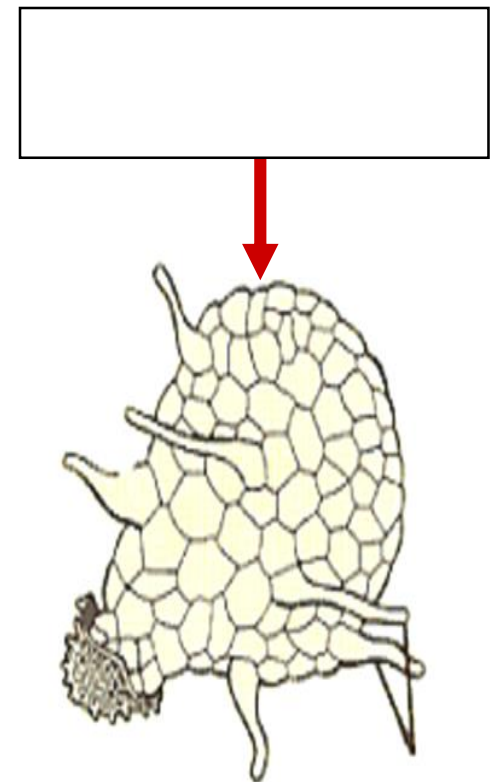
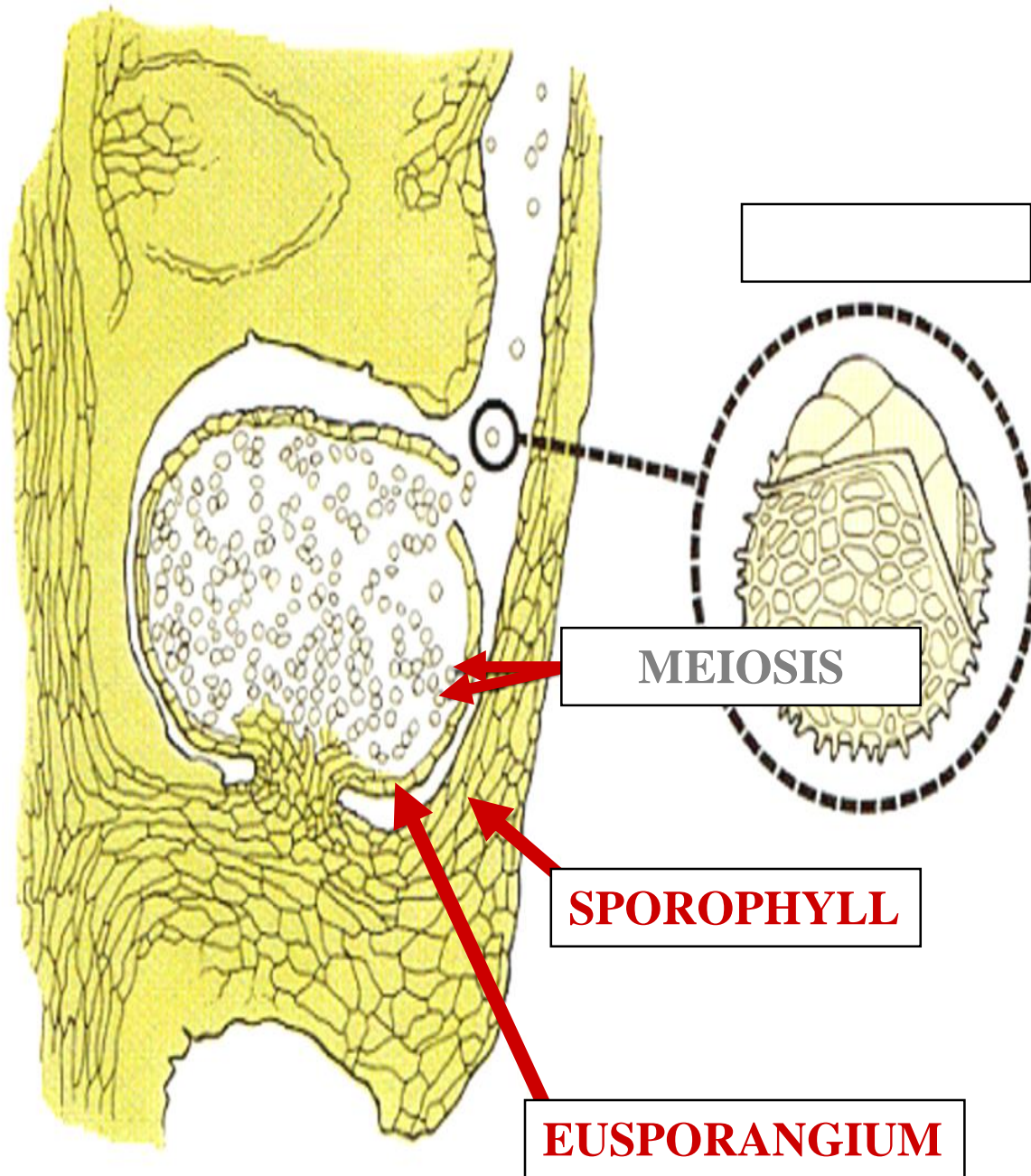
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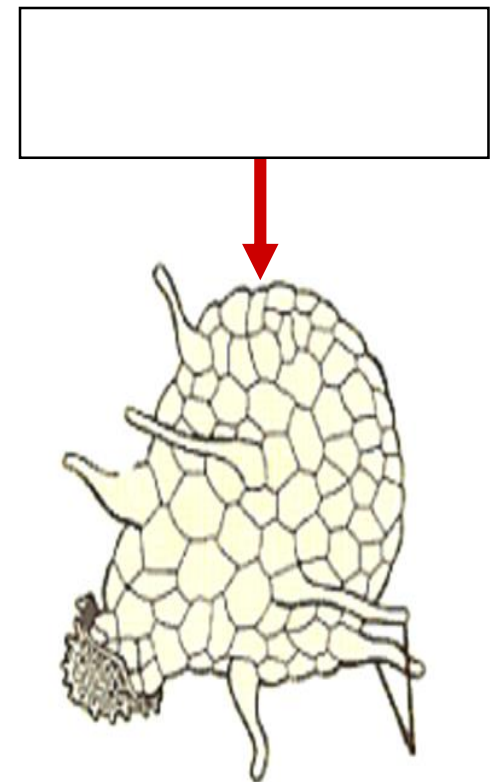
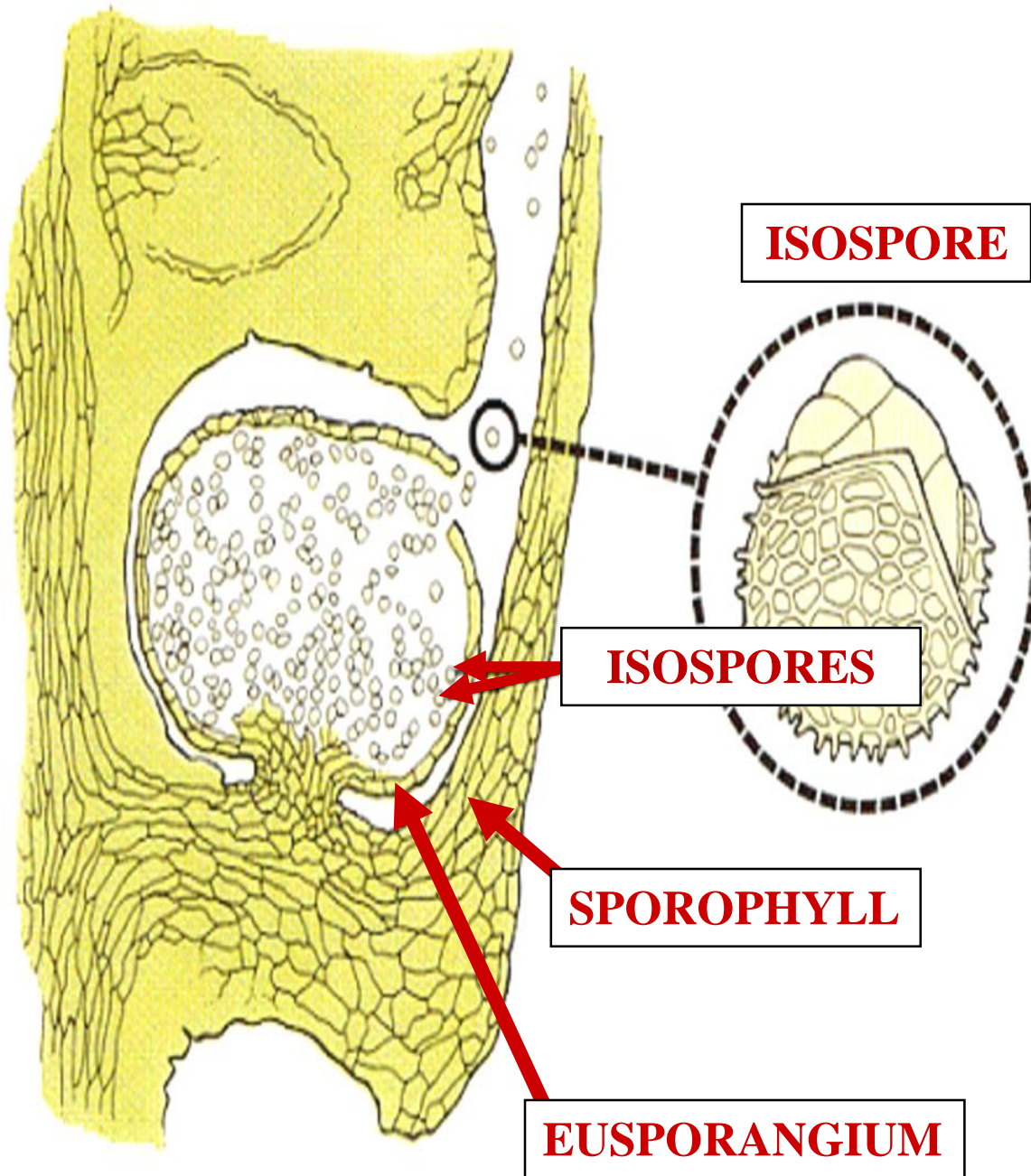
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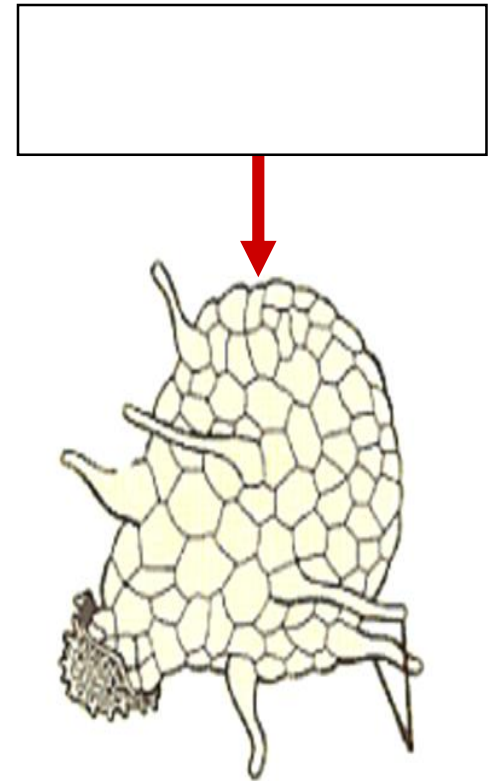
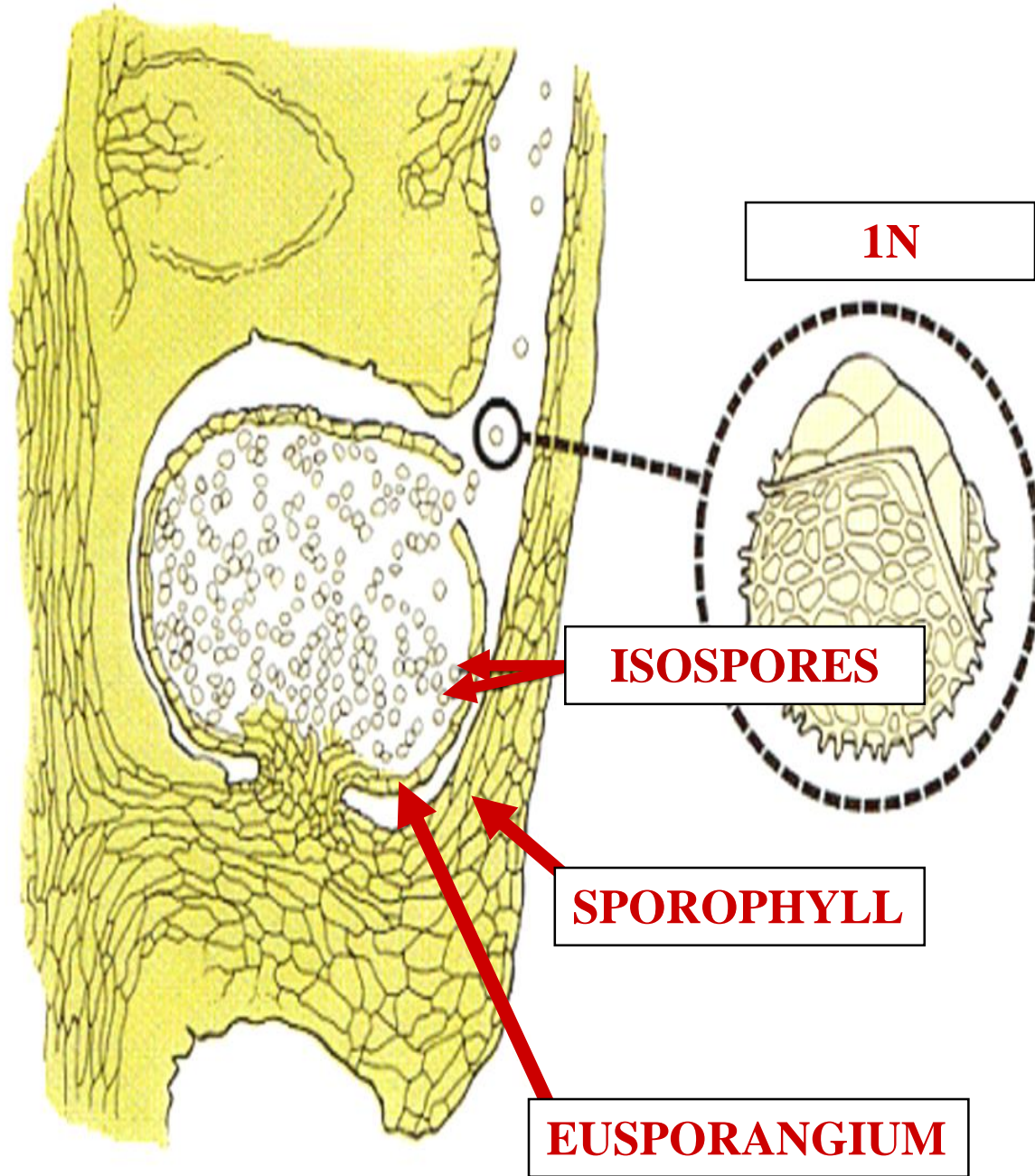
SPOROPHYLL

STROBILUS

EUSPORANGIUM





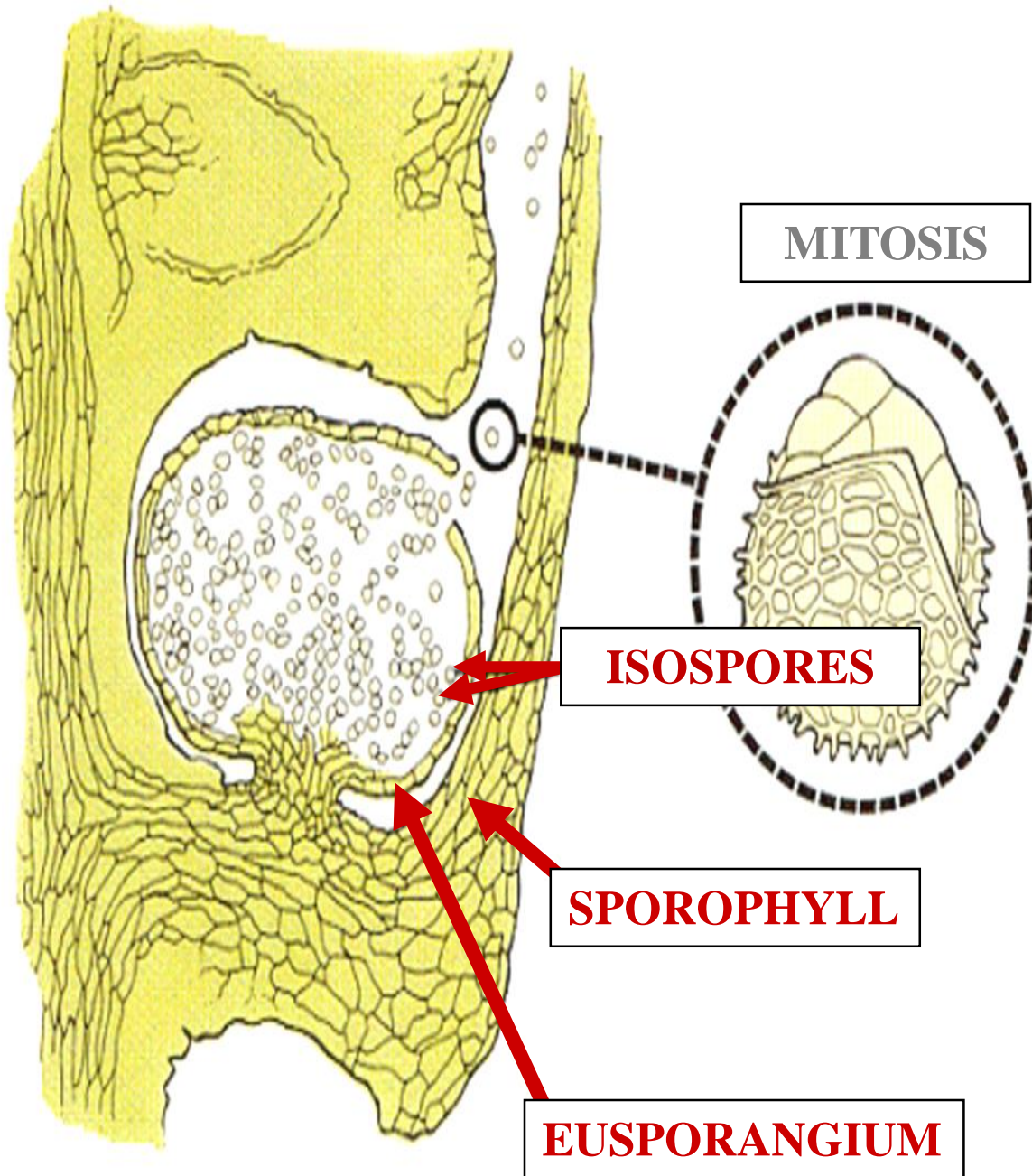
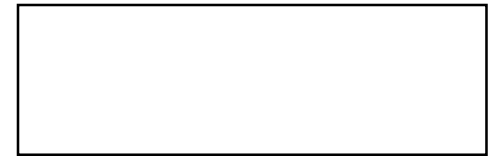


MITOSIS

ISOSPORES

SPOROPHYLL

EUSPORANGIUM



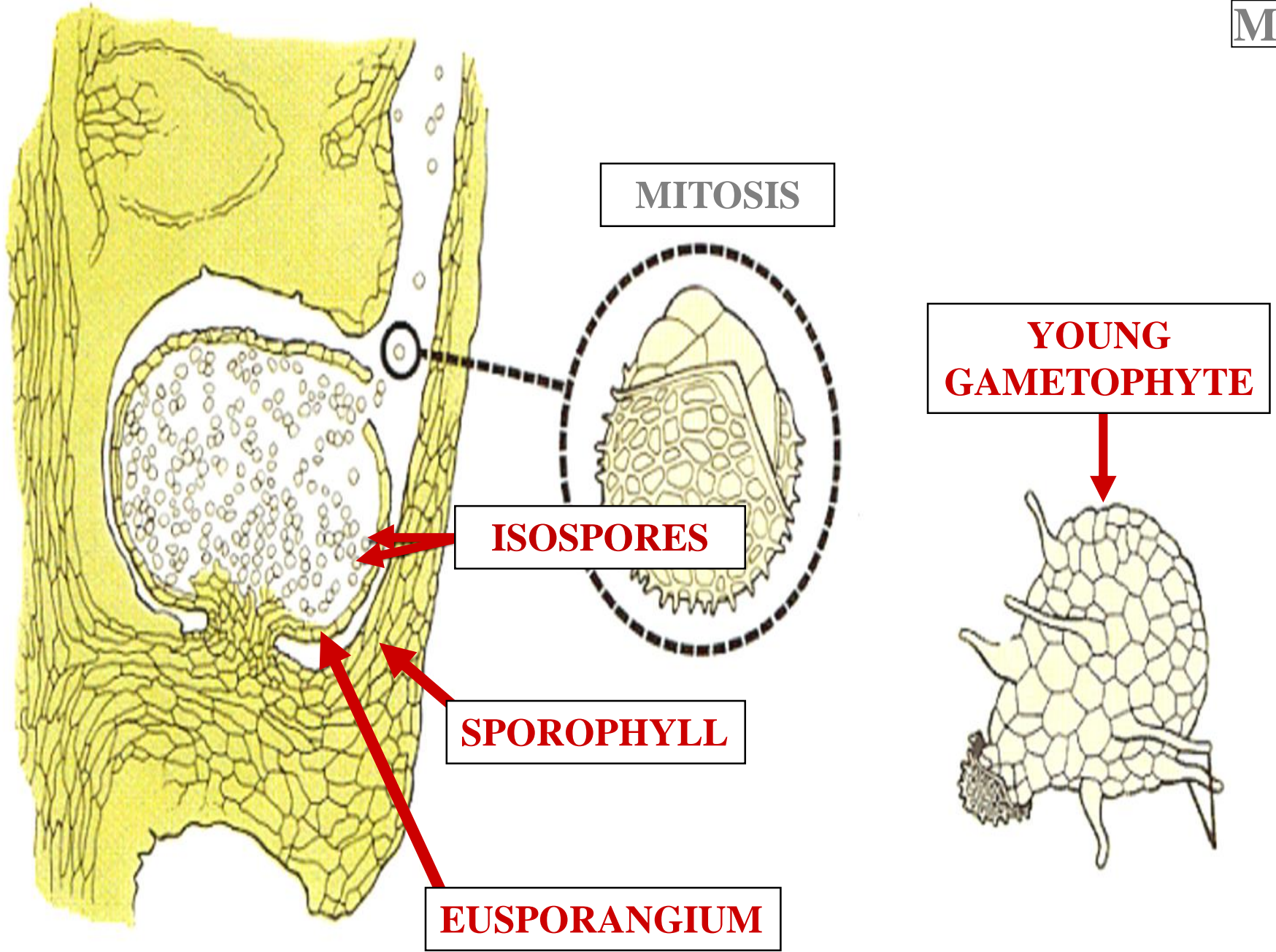
MITOSIS

YOUNG
GAMETOPHYTE

ISOSPORES

SPOROPHYLL

EUSPORANGIUM



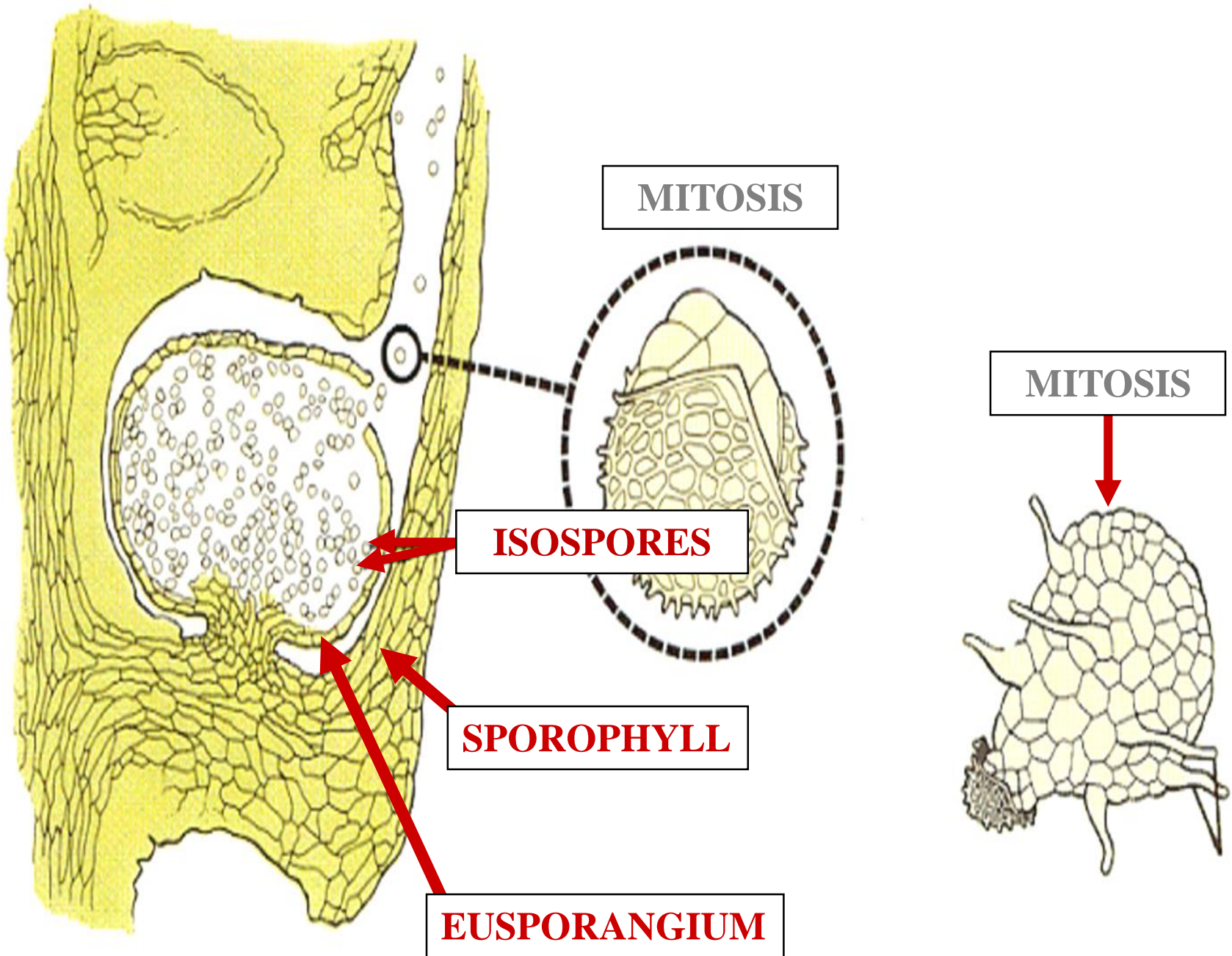
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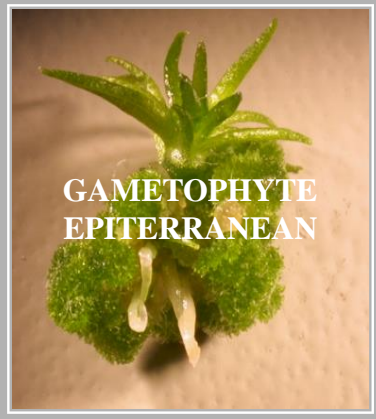
MITOSIS

ISOSPORES

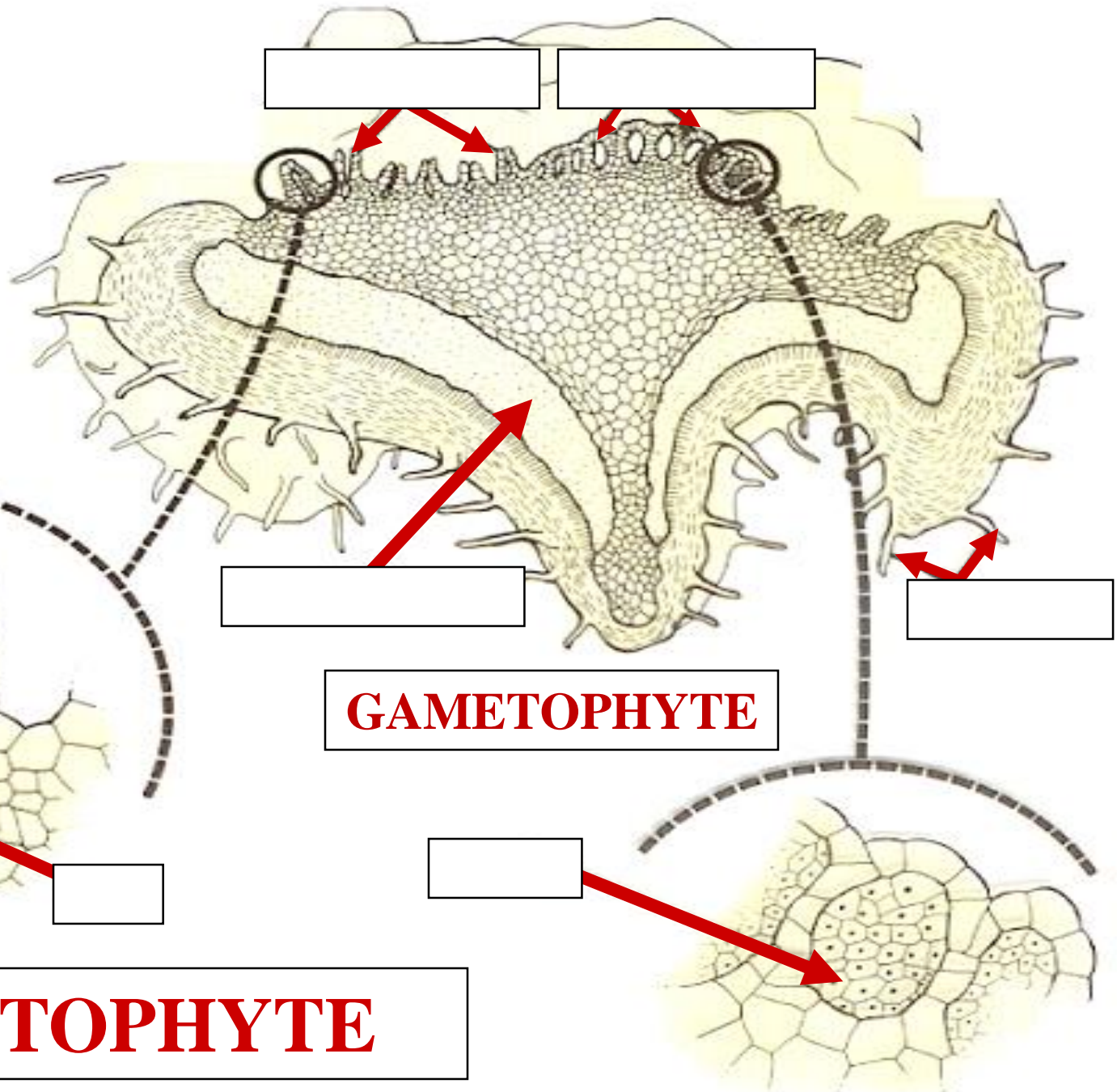
SPOROPHYLL

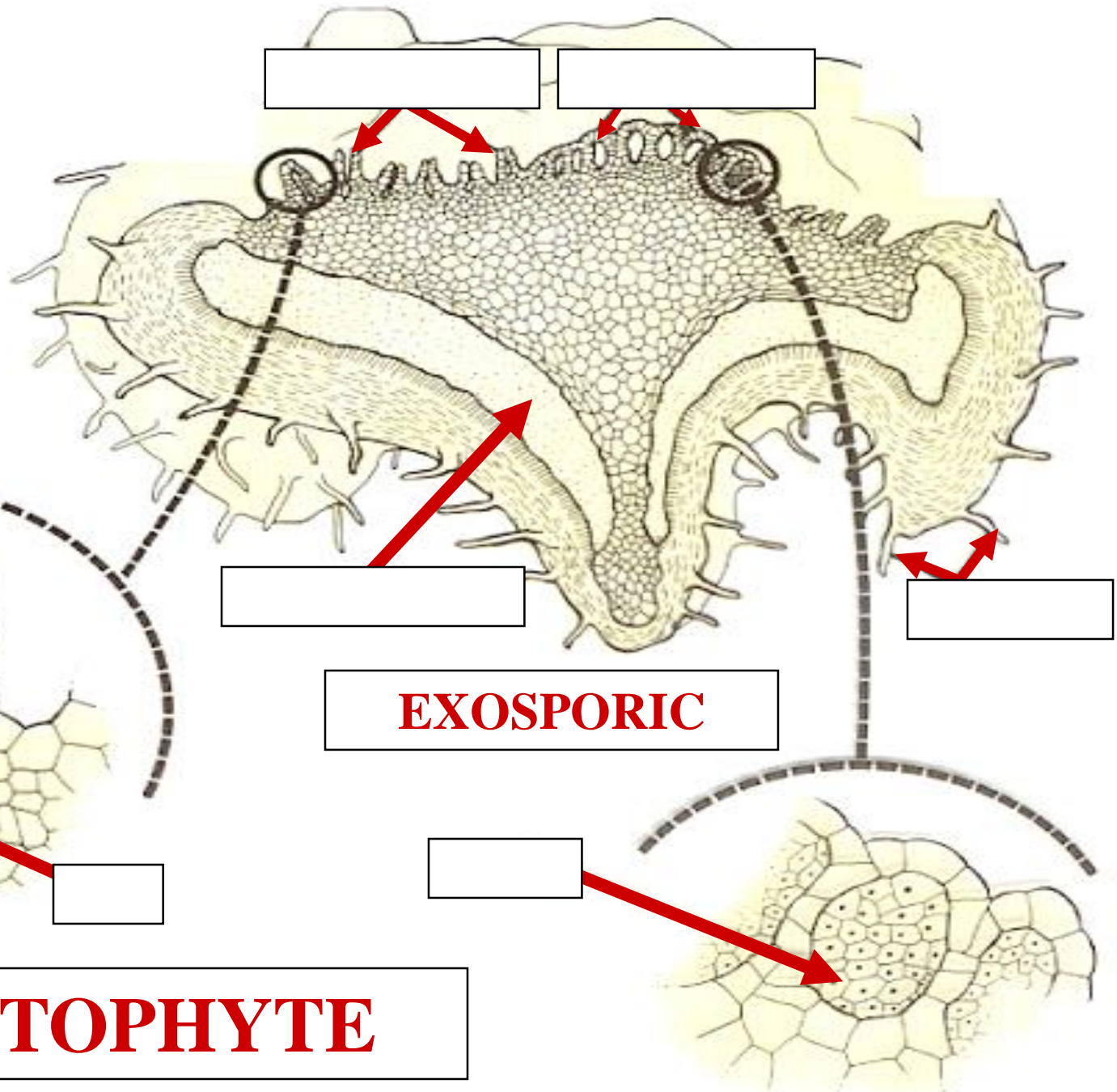
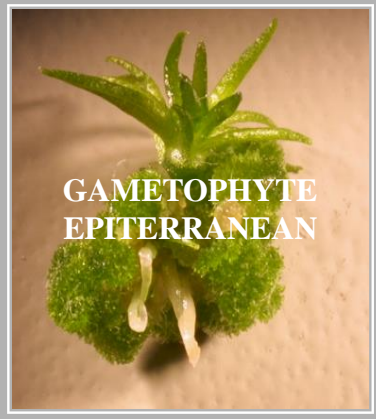
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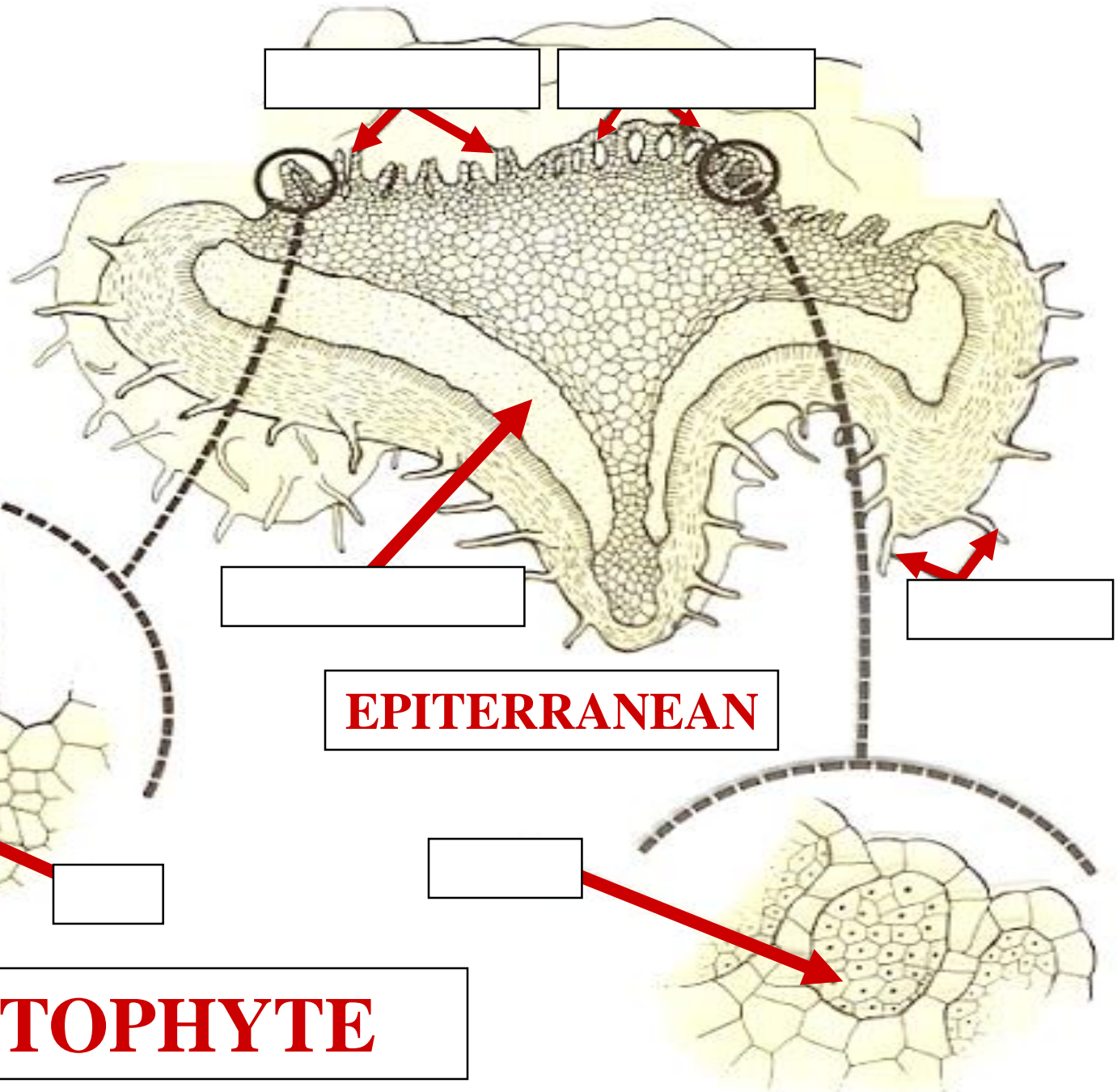
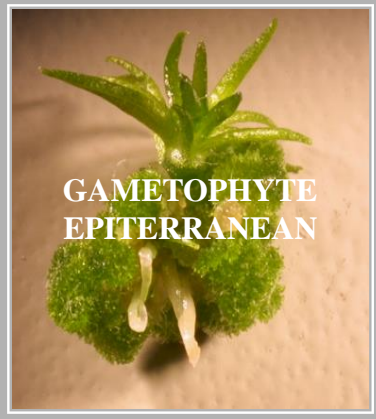


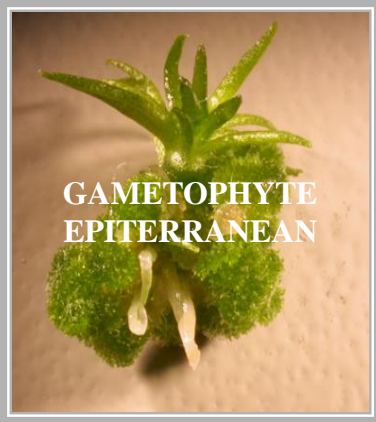


**GAMETOPHYTE
EPITERRANEAN**

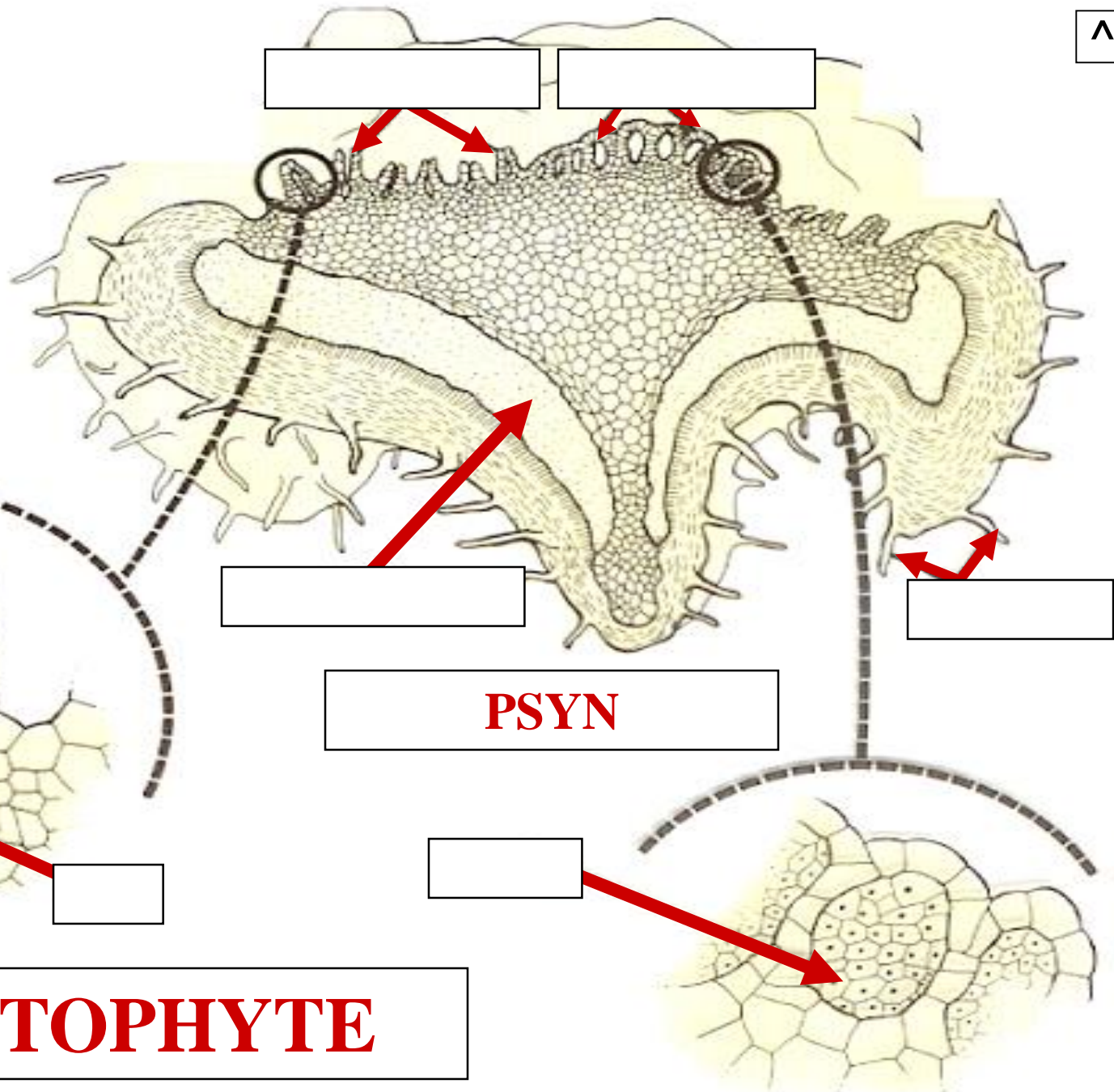




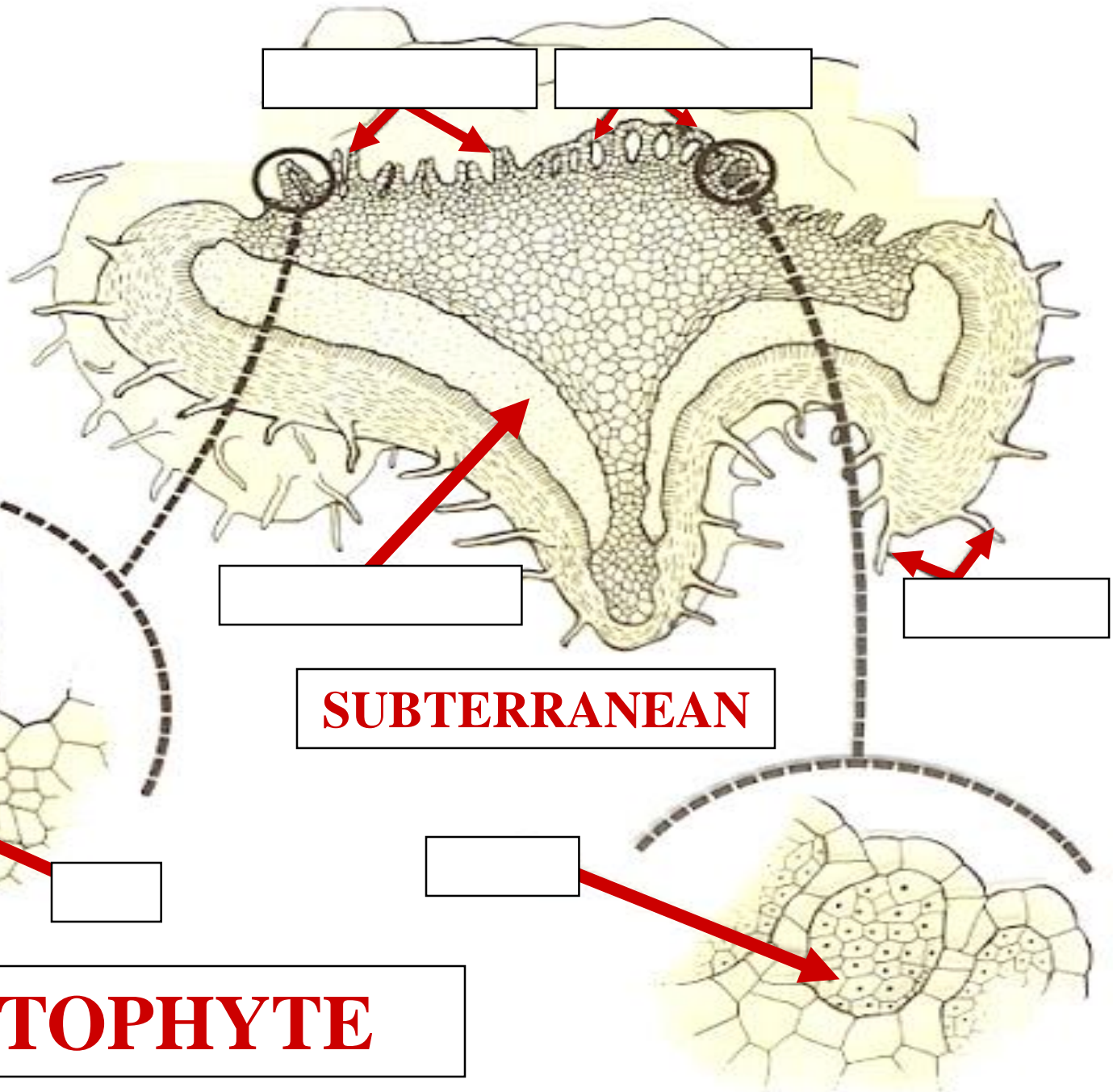


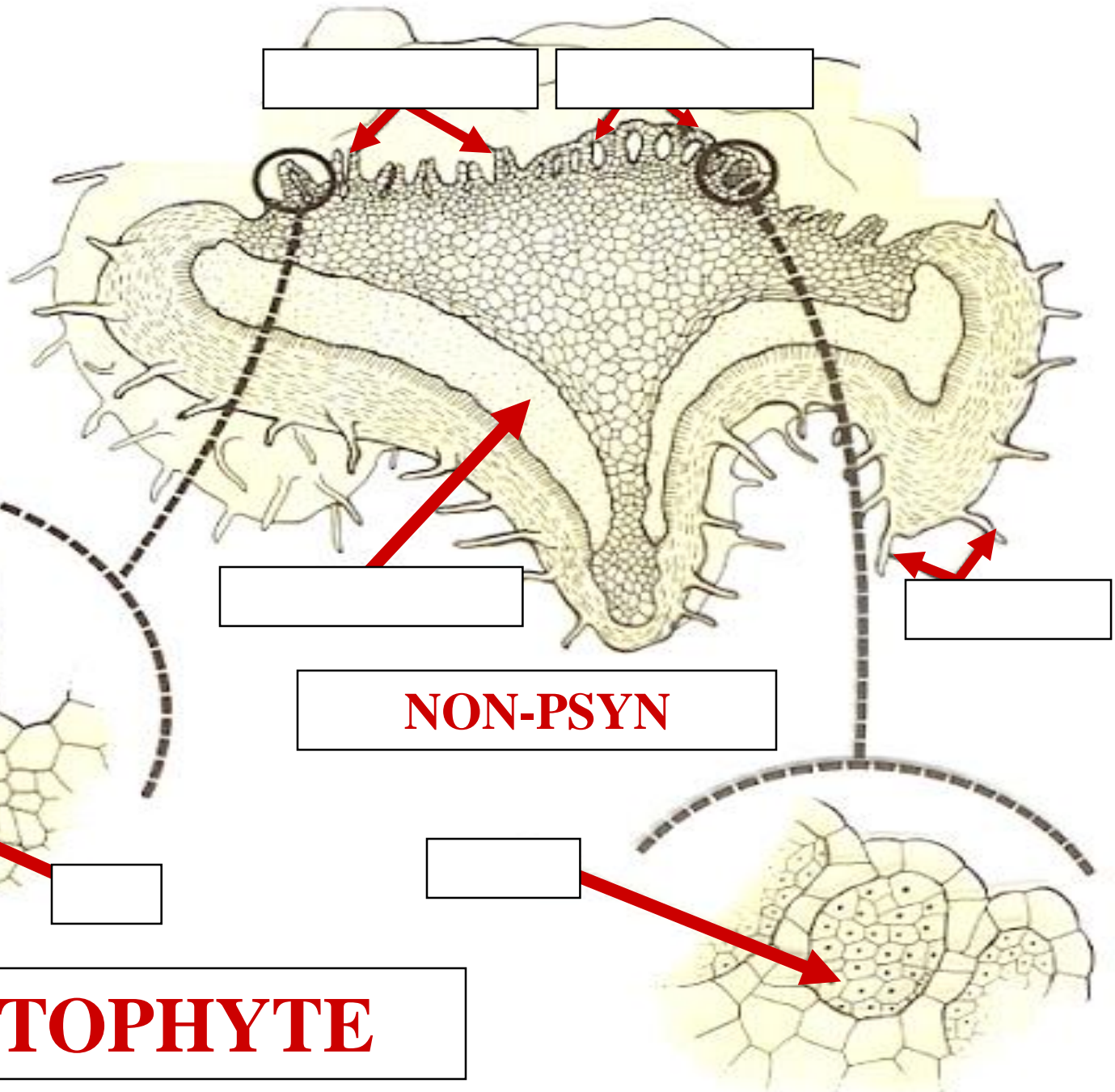


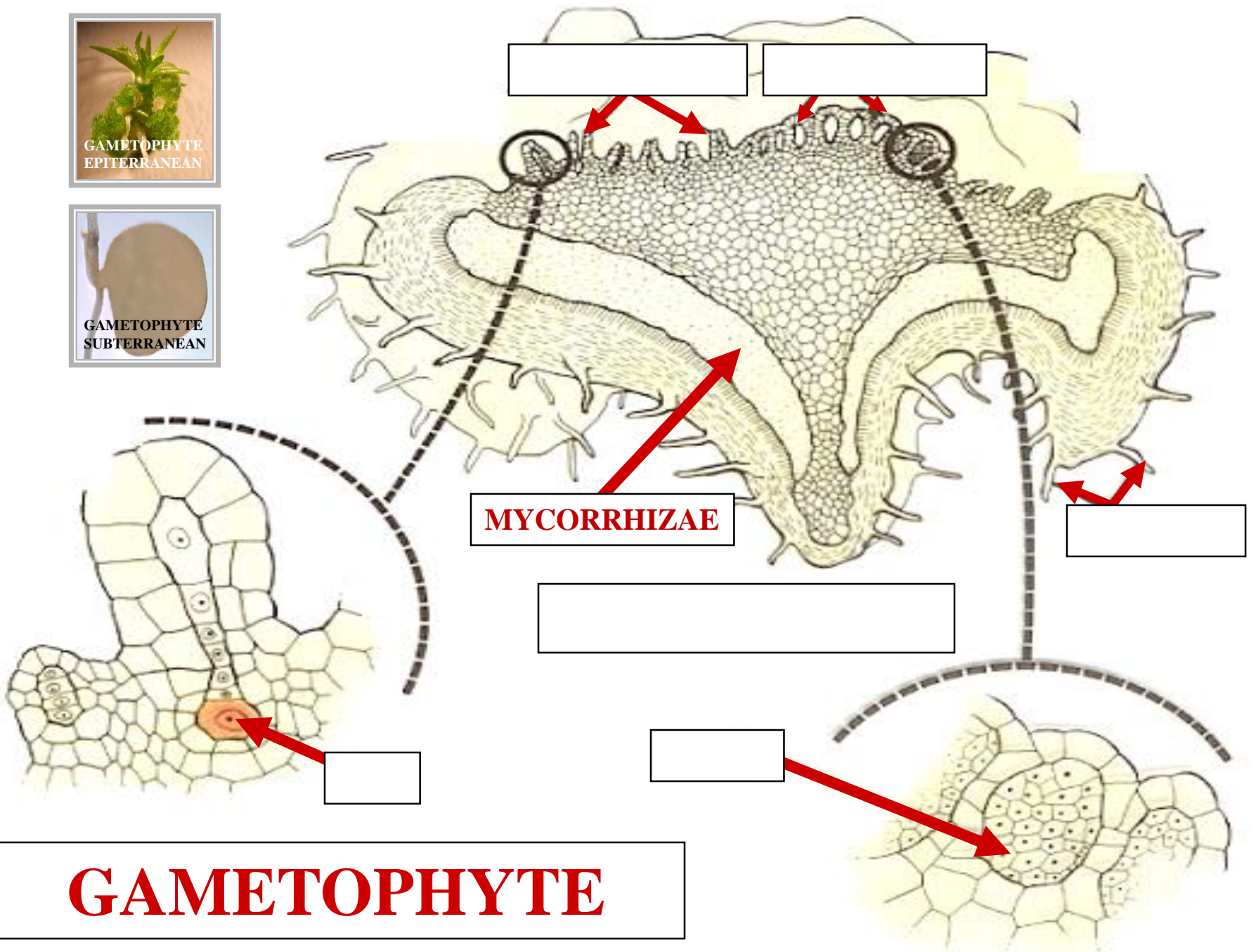
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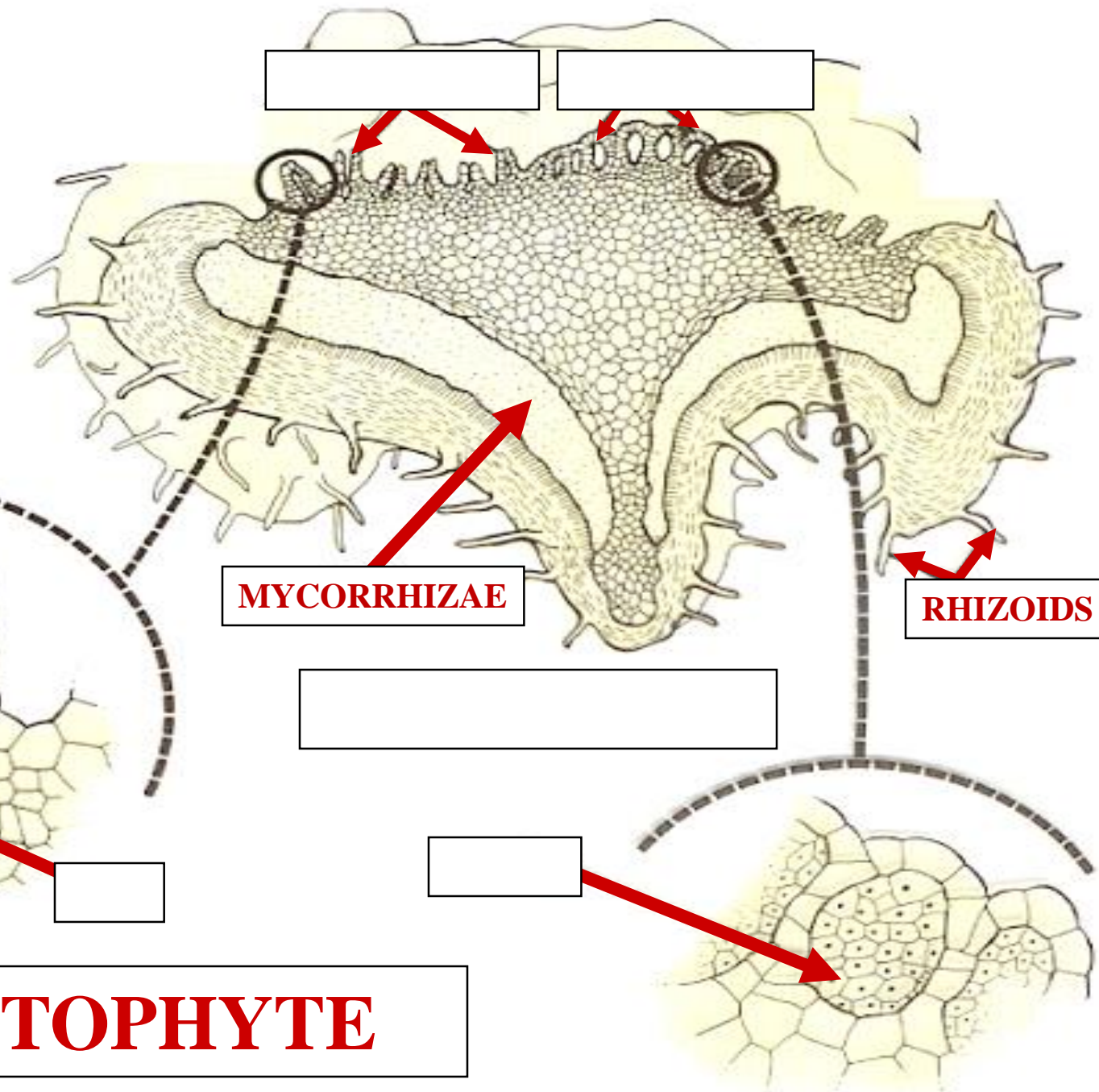
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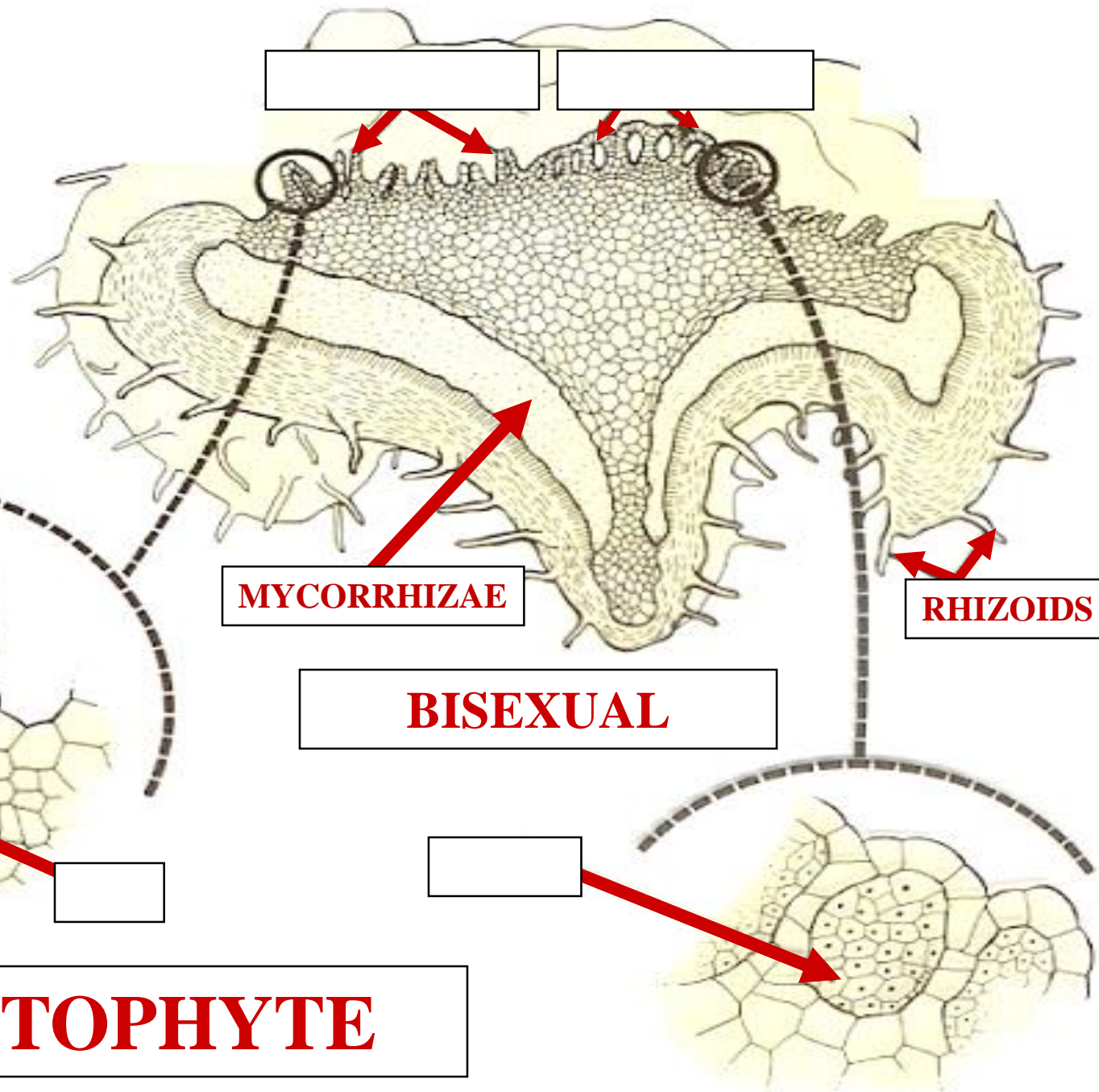




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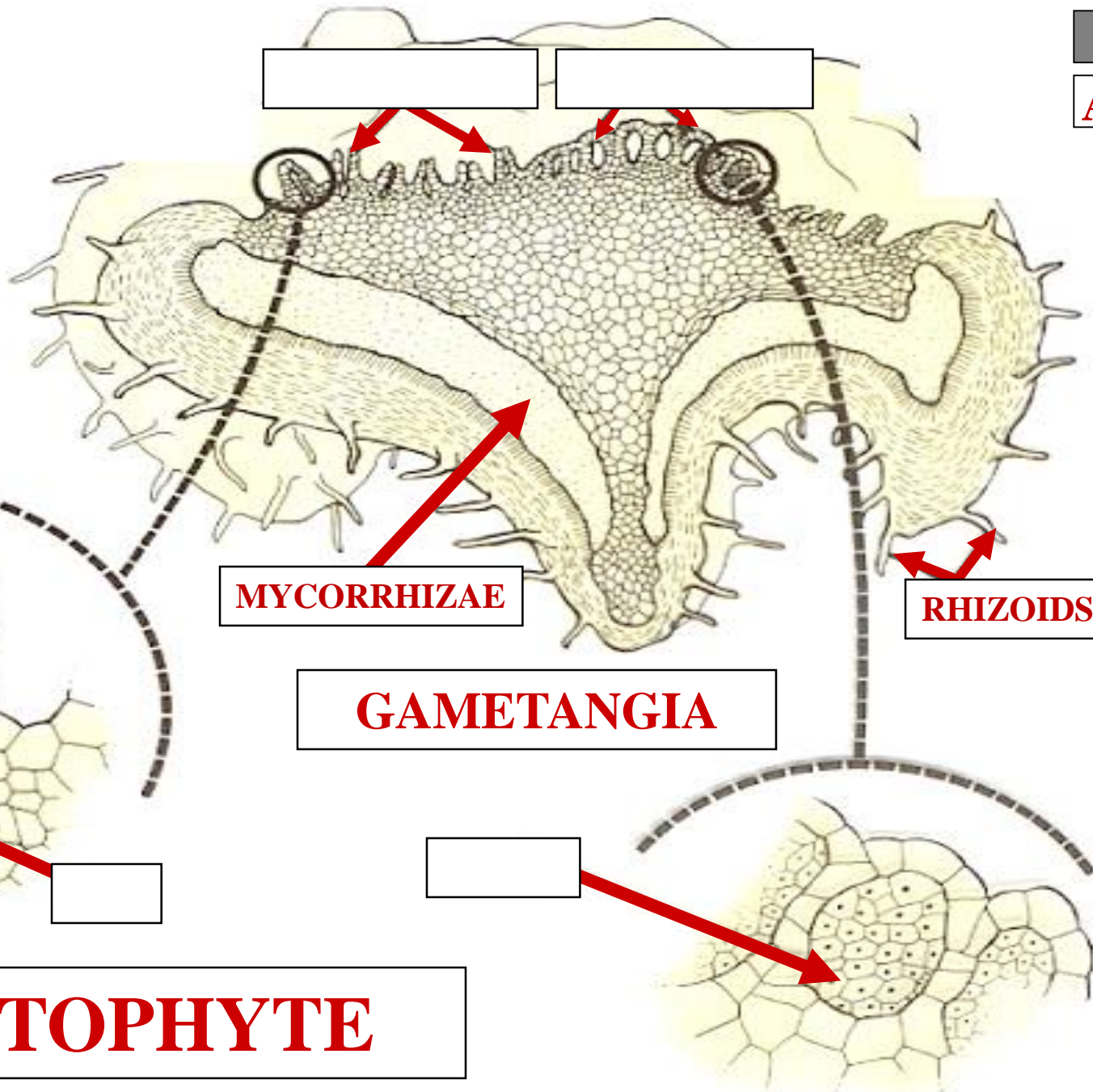


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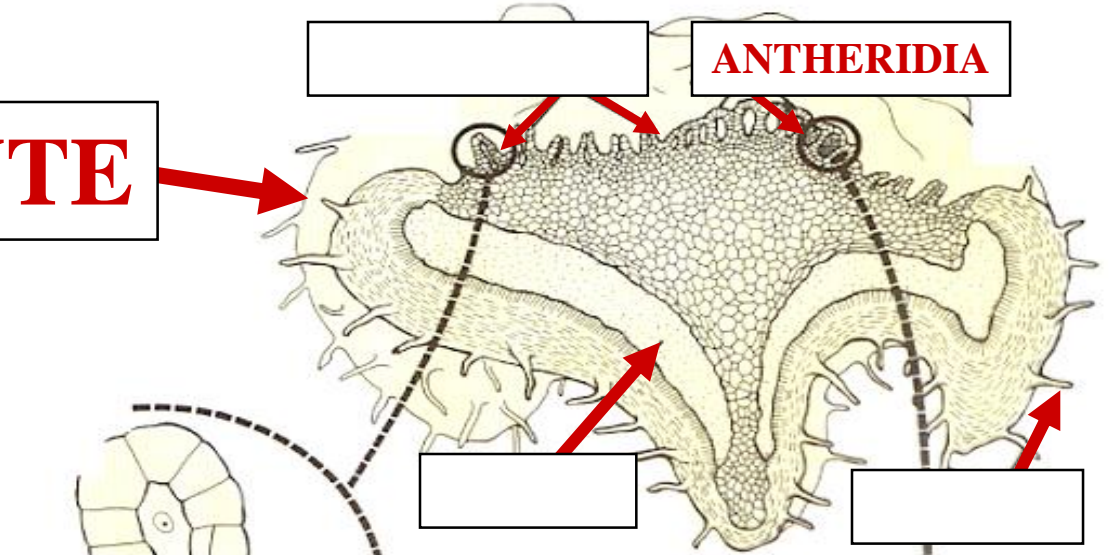
BISEXUAL

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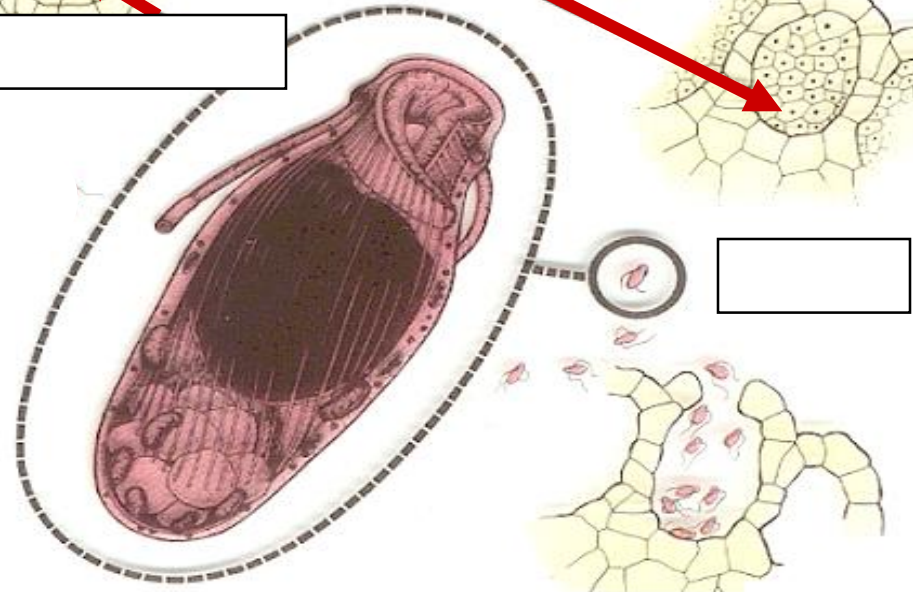
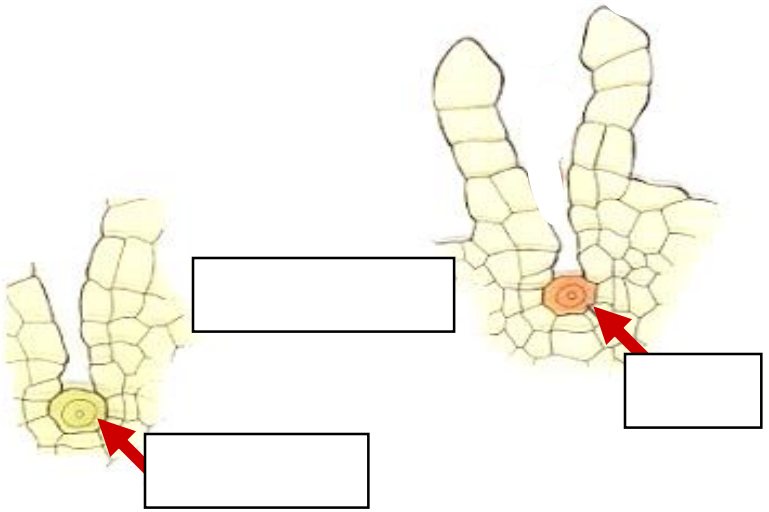
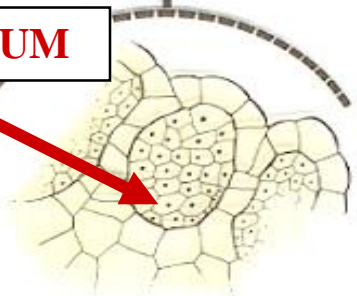


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ANTHERIDIA



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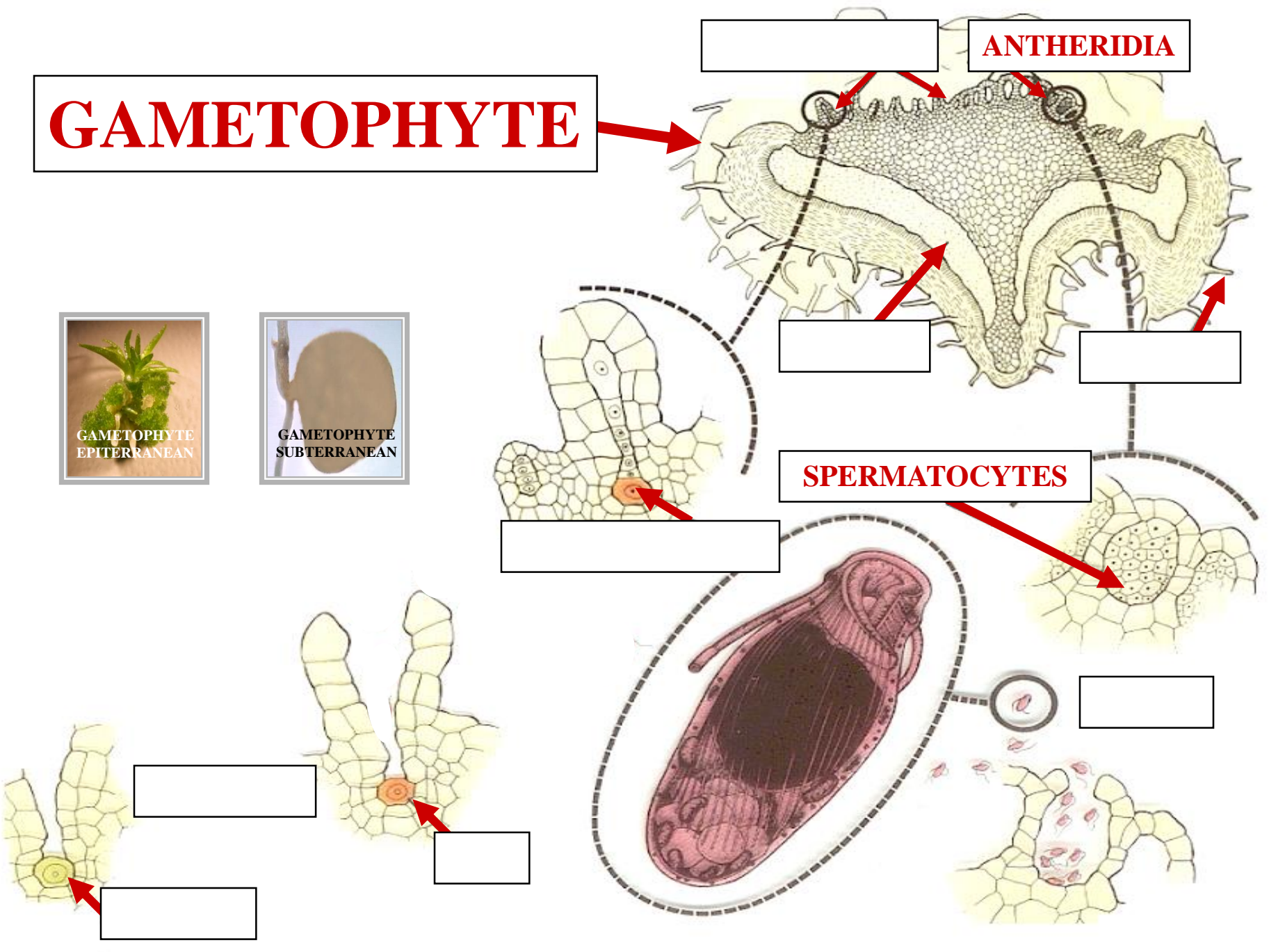


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