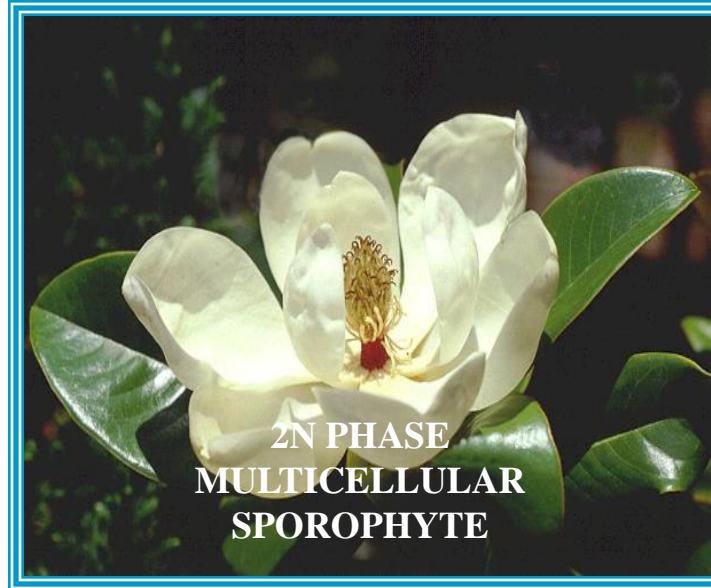


# PLANT SPORIC LIFE CYCLE



# PLANT SPORIC LIFE CYCLE



SPORANGIA

# PLANT SPORIC LIFE CYCLE



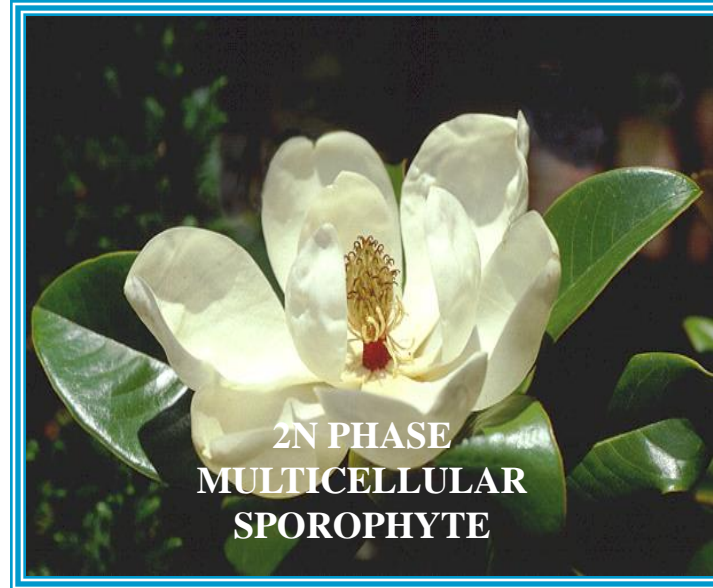
SPOROCTES

# PLANT SPORIC LIFE CYCLE



SPOROCYTES 2N

# PLANT SPORIC LIFE CYCLE



GERM CELLS

# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES

# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N



# PLANT SPORIC LIFE CYCLE

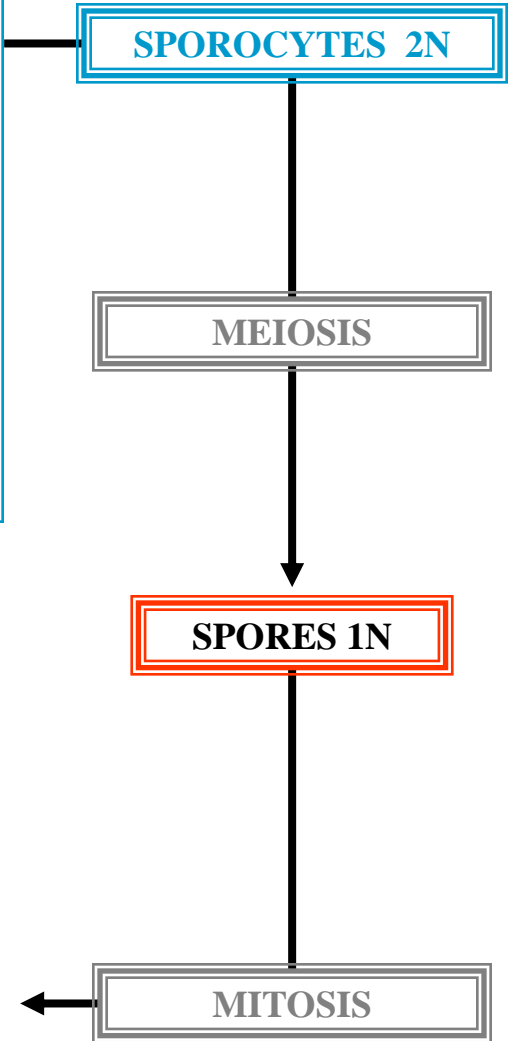


SPOROCTYES 2N

MEIOSIS

SPORES 1N

MITOSIS



# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N

1N PHASE

MITOSIS



# PLANT SPORIC LIFE CYCLE



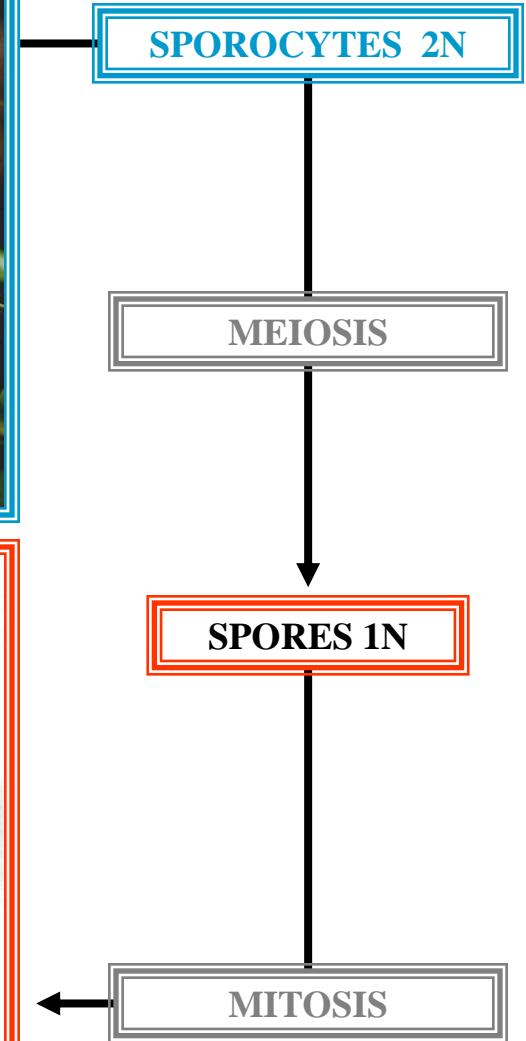
**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**



**MITOSIS**



# PLANT SPORIC LIFE CYCLE



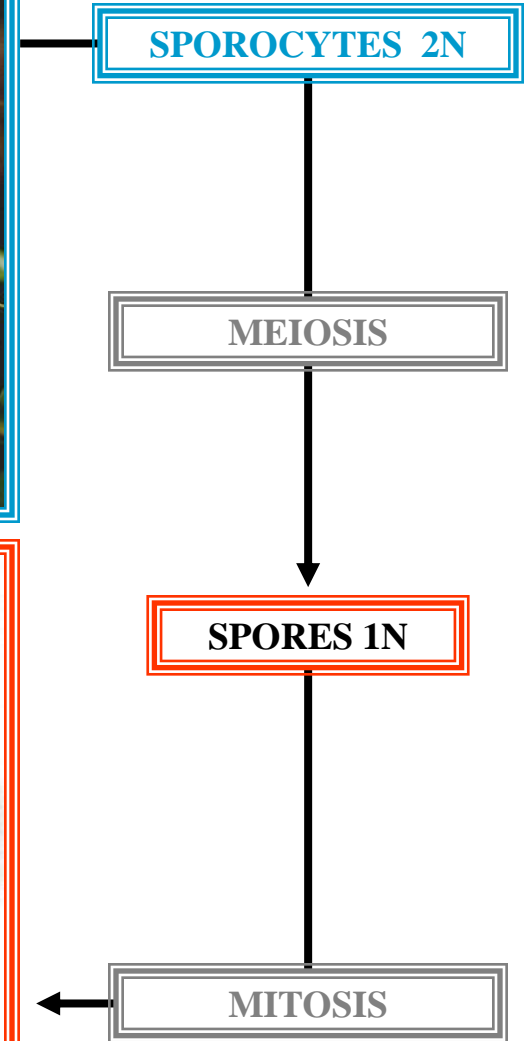
**SPOROCTYES 2N**

**MEIOSIS**

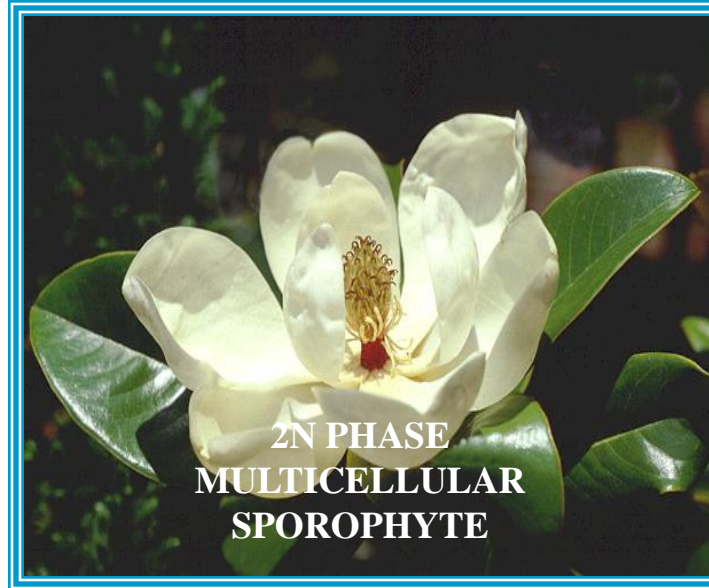
**SPORES 1N**



**MITOSIS**



# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N



MITOSIS

GAMETANGIA



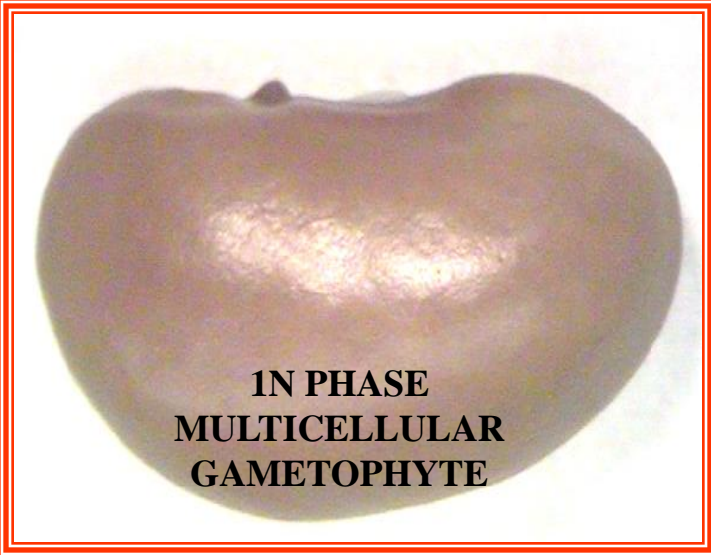
# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N



GAMETOCYTES

MITOSIS

# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

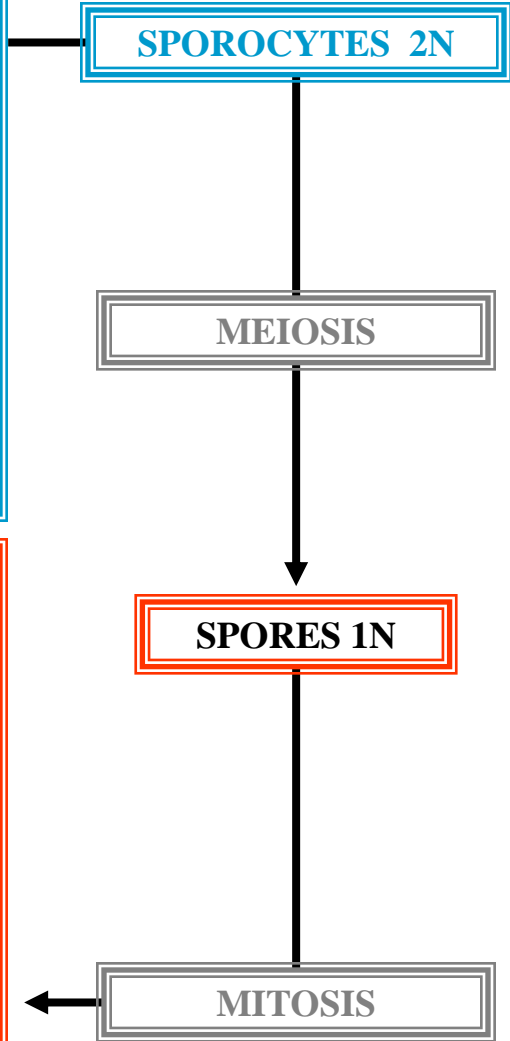
MEIOSIS

SPORES 1N

MITOSIS



GAMETOCYTES 1N



# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N

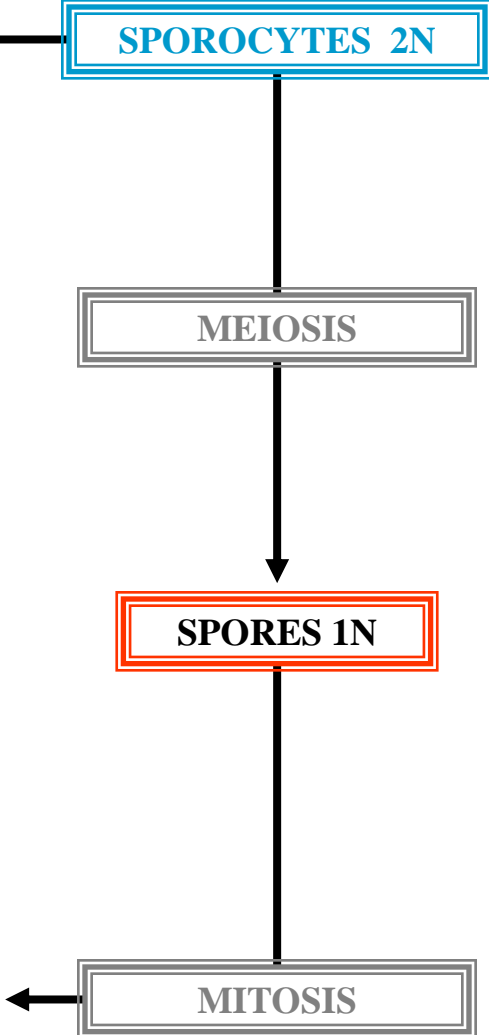
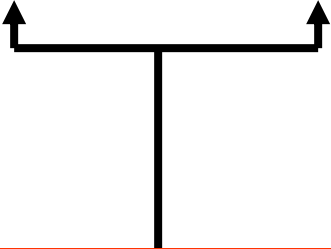
MITOSIS



GAMETE  
SPERM

GAMETE  
EGG

GAMETOCYTES 1N





# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N

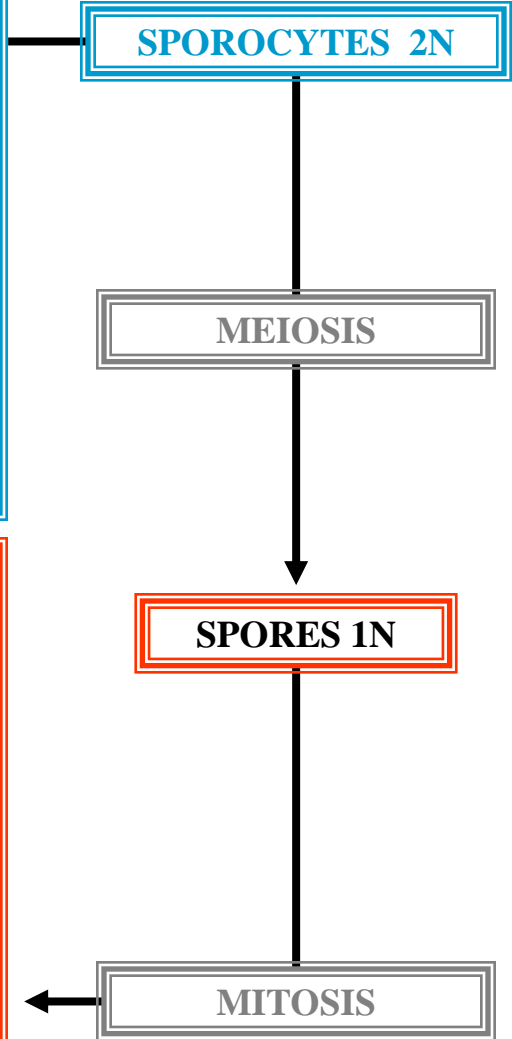
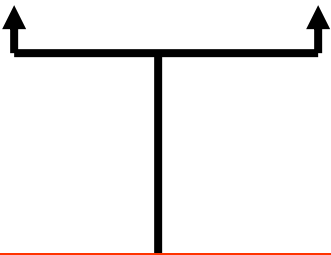
MITOSIS



GAMETE  
SPERM  
1N

GAMETE  
EGG  
1N

GAMETOCYTES 1N



# PLANT SPORIC LIFE CYCLE



SPOROCTYES 2N

MEIOSIS

SPORES 1N



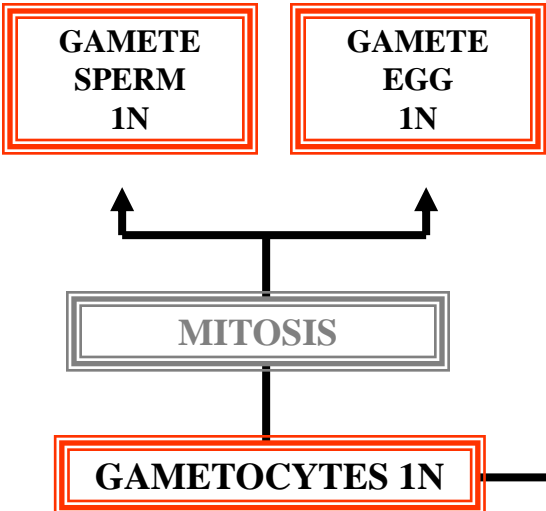
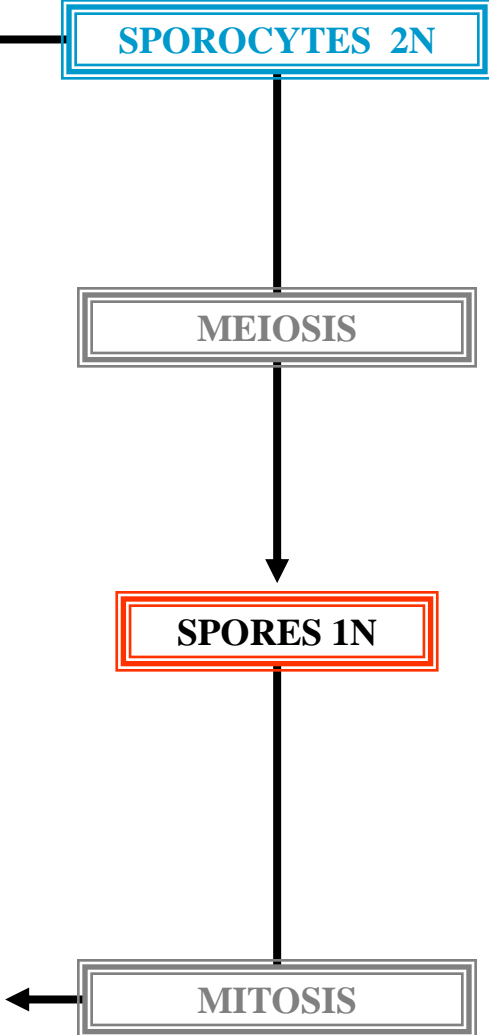
MITOSIS

GAMETE  
SPERM  
1N

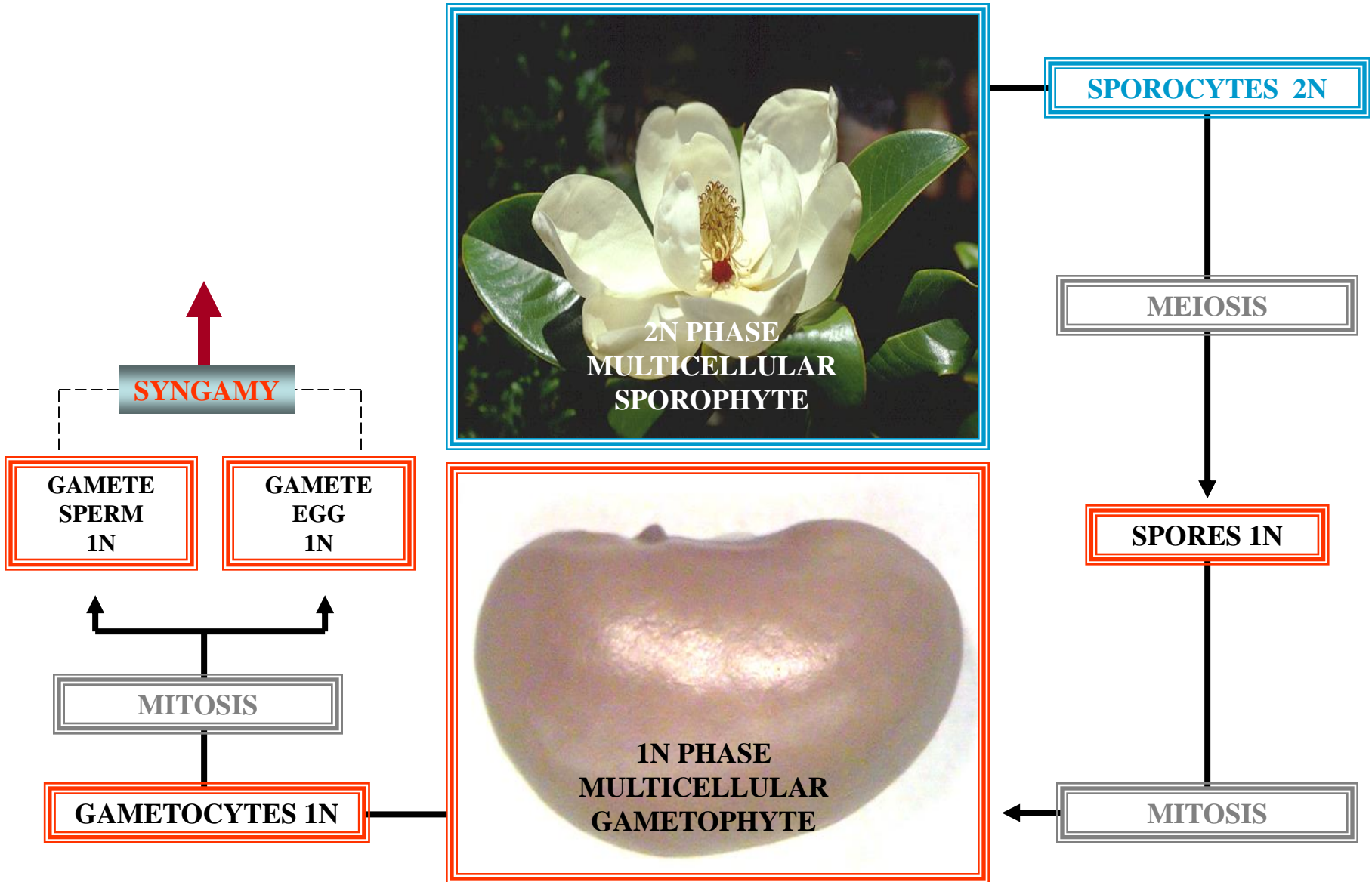
GAMETE  
EGG  
1N

MITOSIS

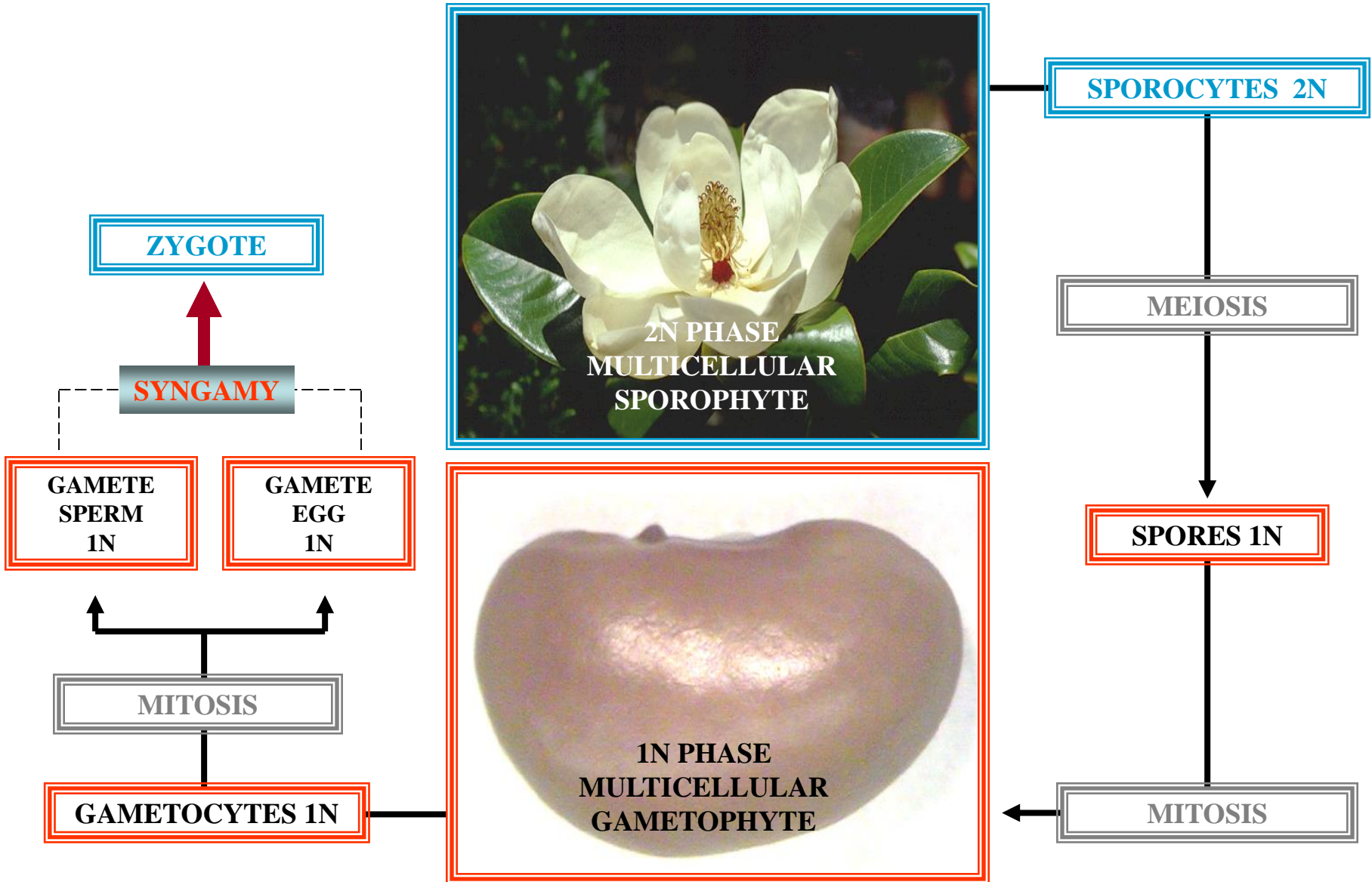
GAMETOCYTES 1N



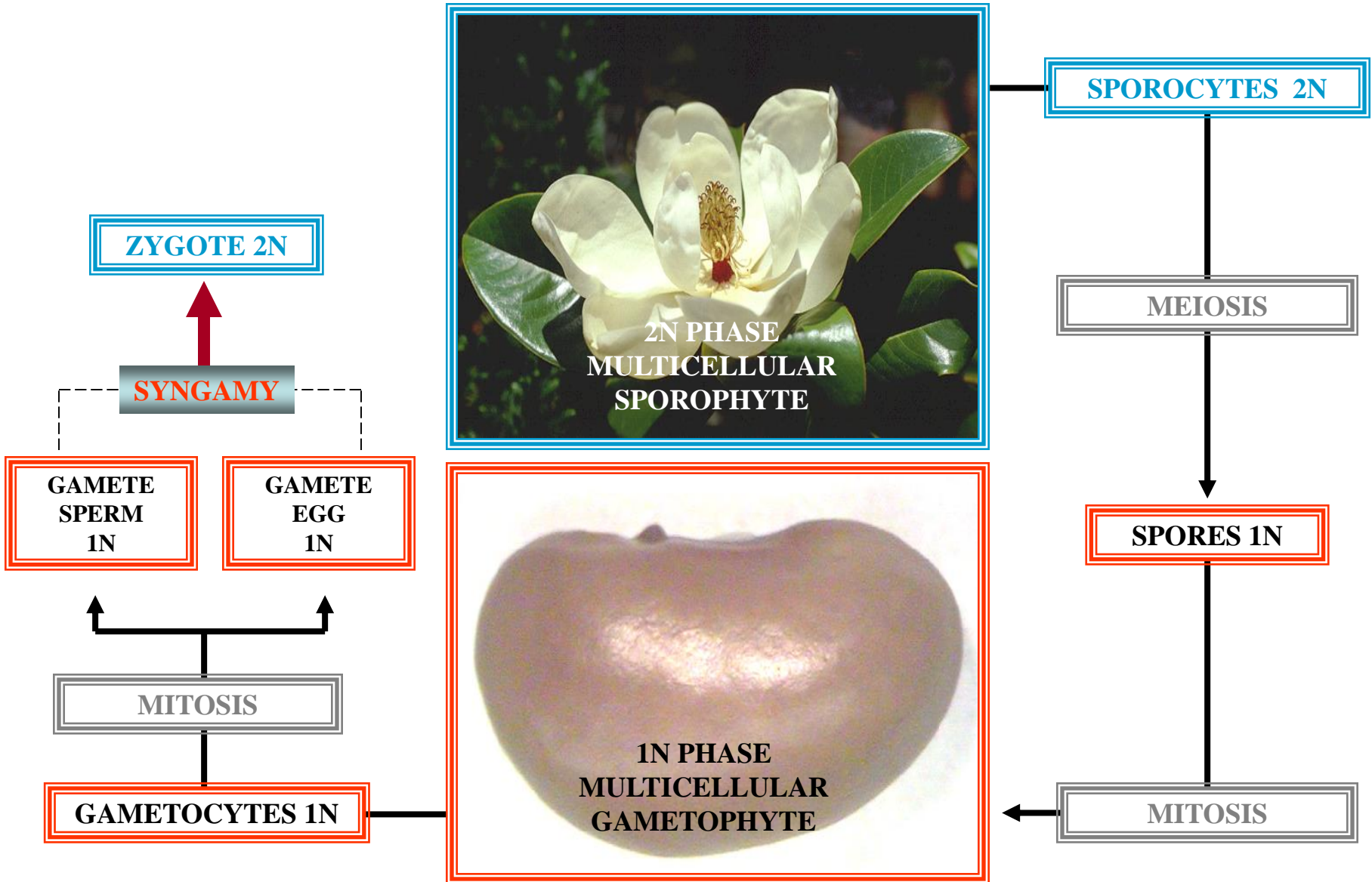
# PLANT SPORIC LIFE CYCLE



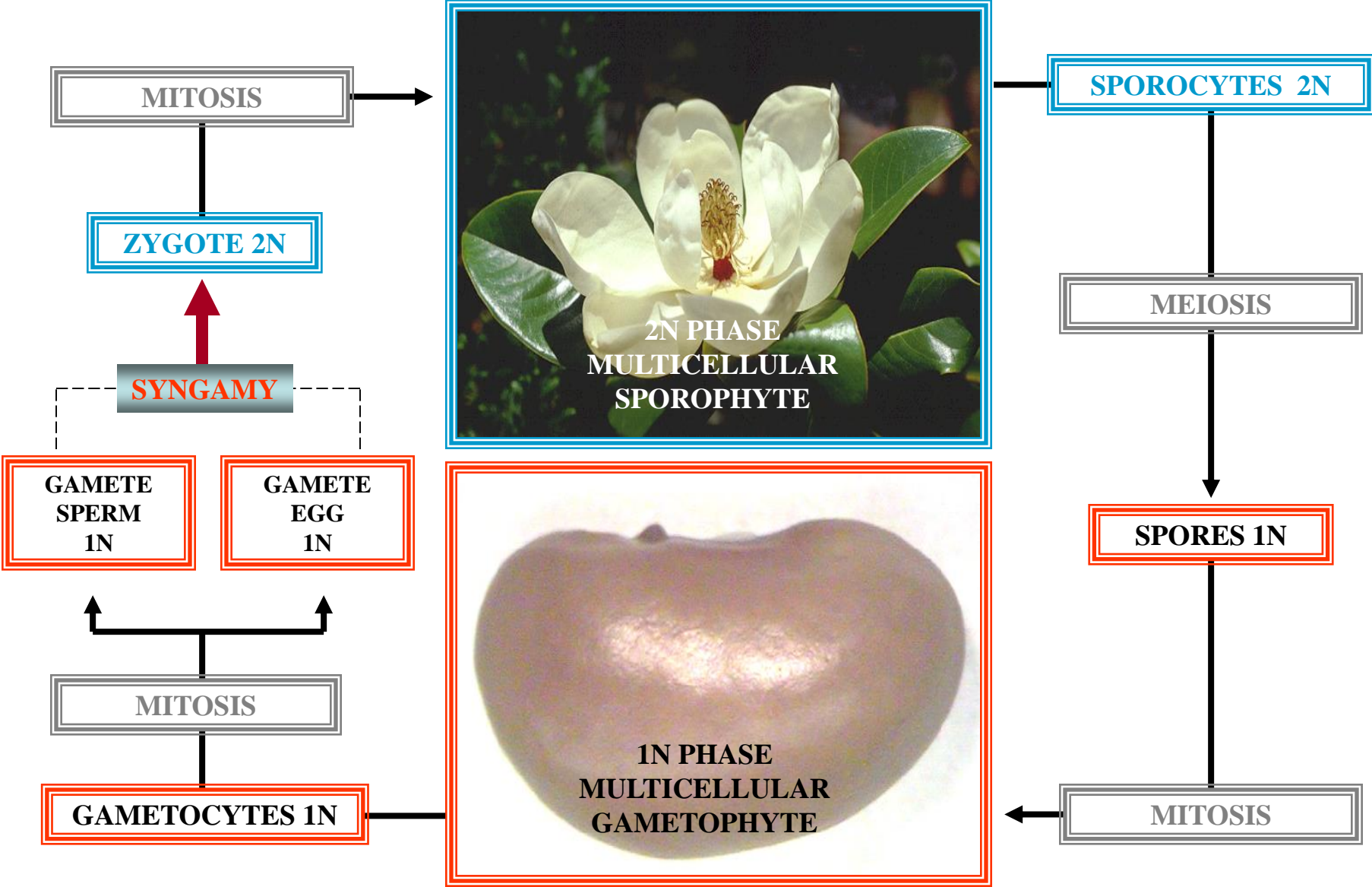
# PLANT SPORIC LIFE CYCLE



# PLANT SPORIC LIFE CYCLE



# PLANT SPORIC LIFE CYCLE



# QUESTION

G

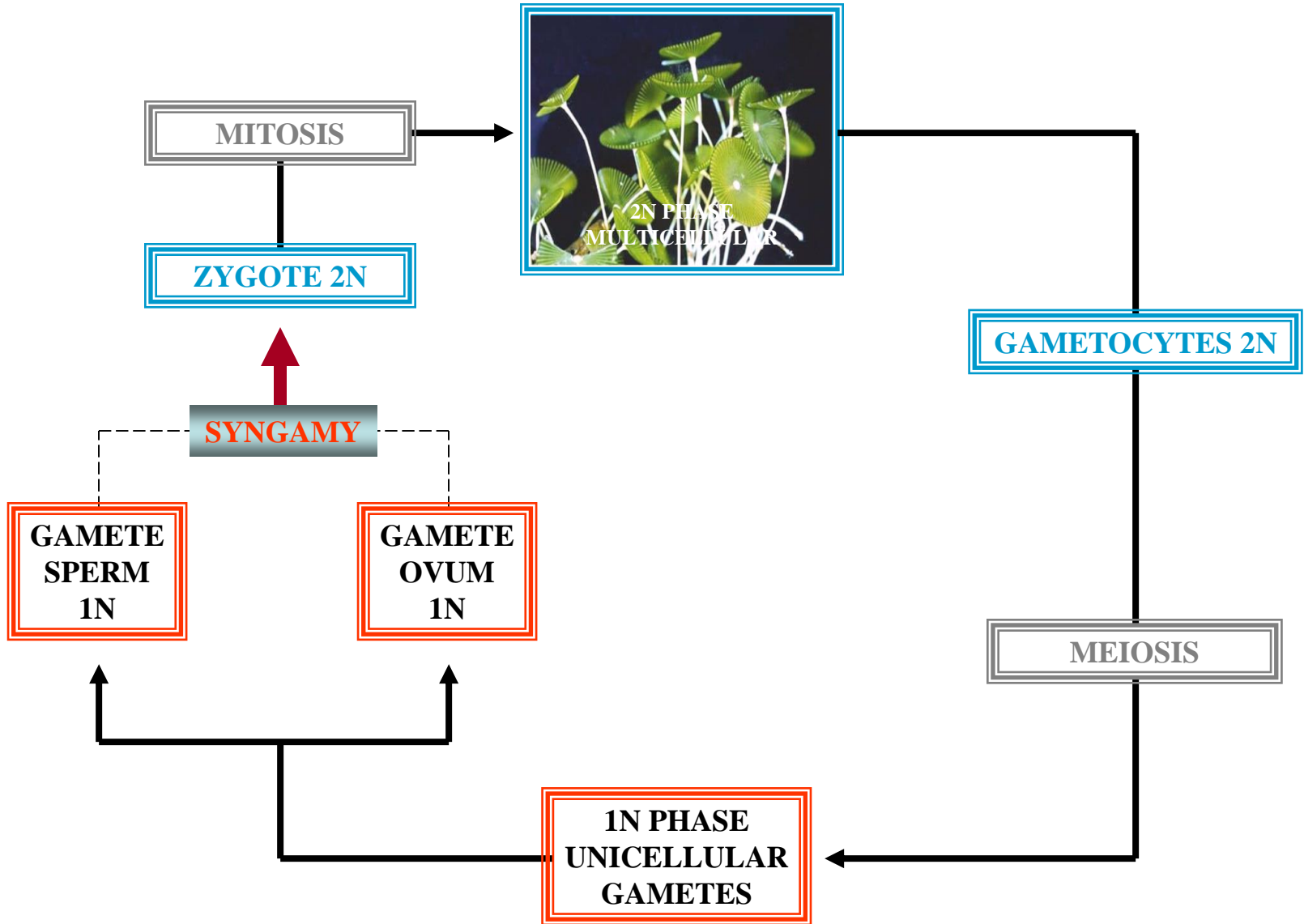


?

WHAT IS THE  
LIFE CYCLE  
MULTICELLULAR  
PHASE  $1N$  OR  $2N$ ?

# QUESTION

# GAMETIC LIFE CYCLE



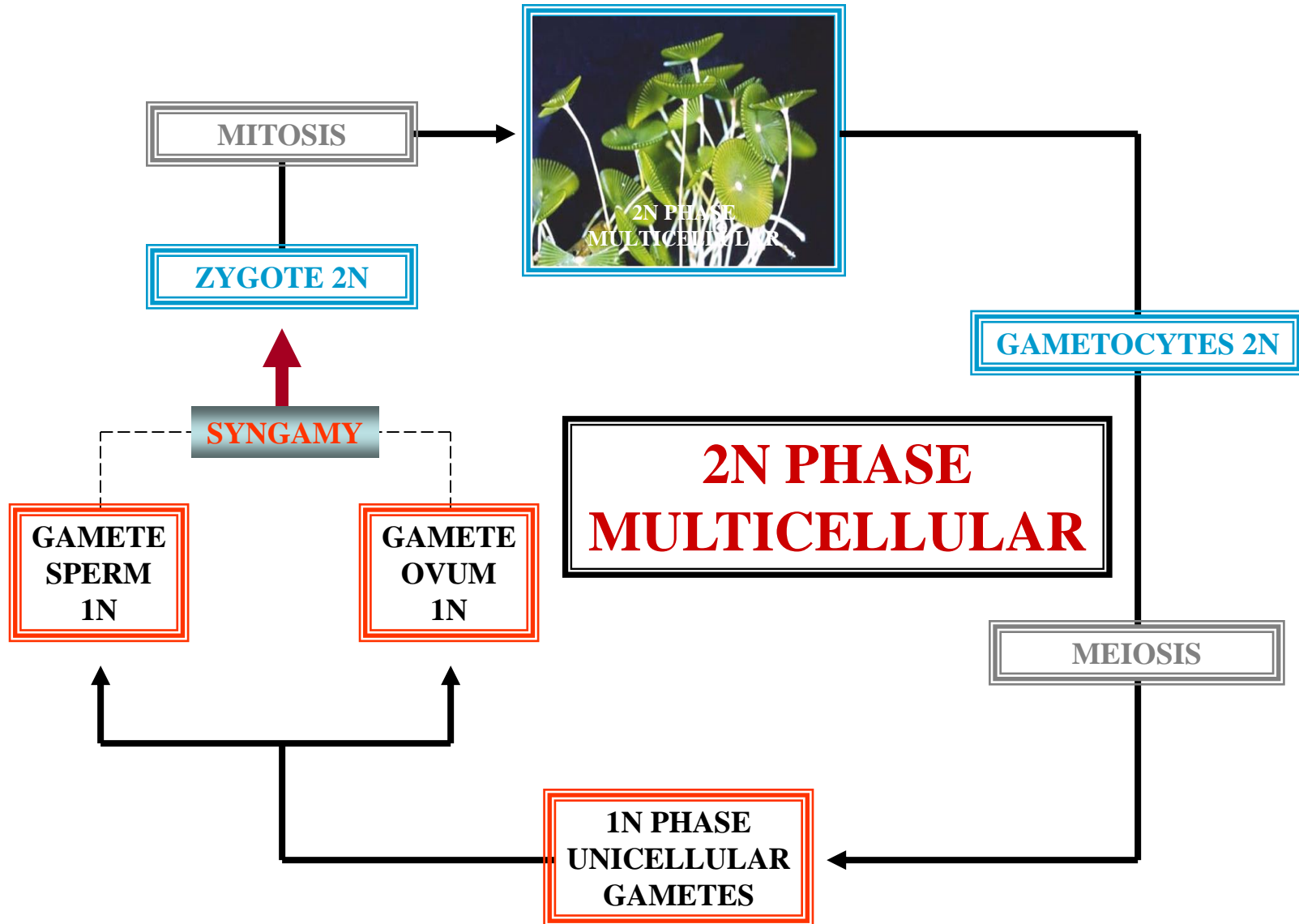


# GAMETIC LIFE CYCLE

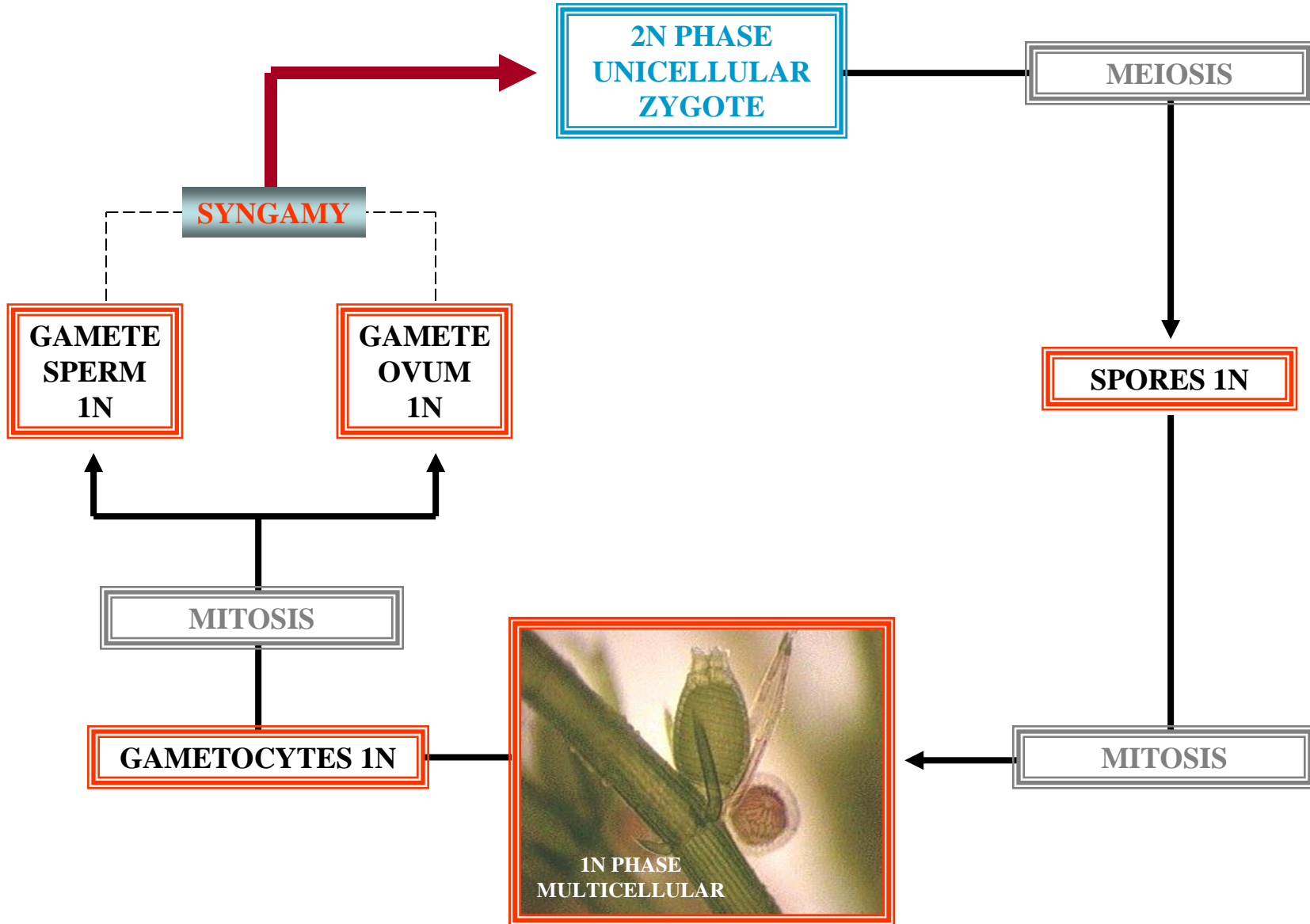
Z



?



# ZYGOTIC LIFE CYCLE

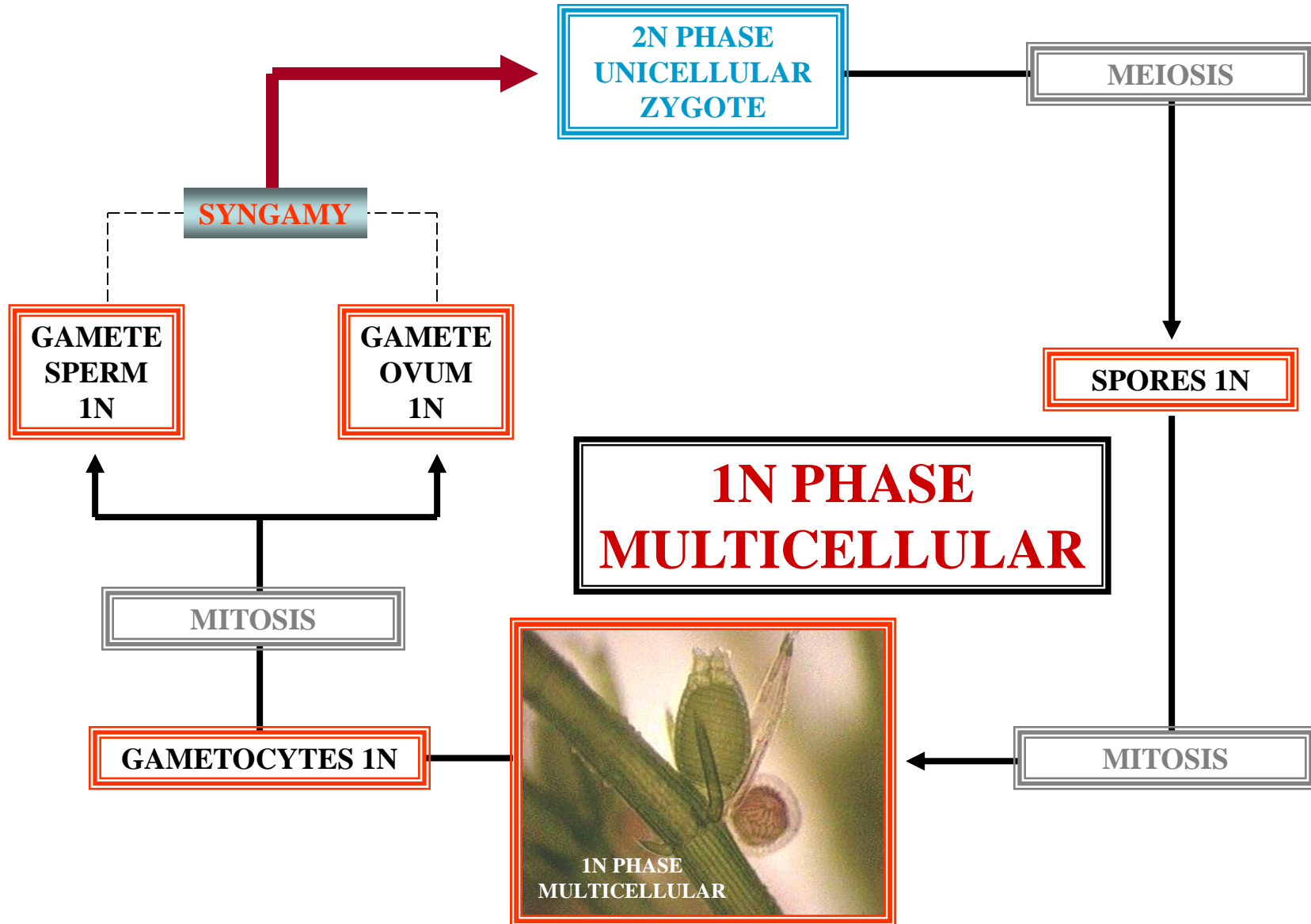


# ZYGOTIC LIFE CYCLE

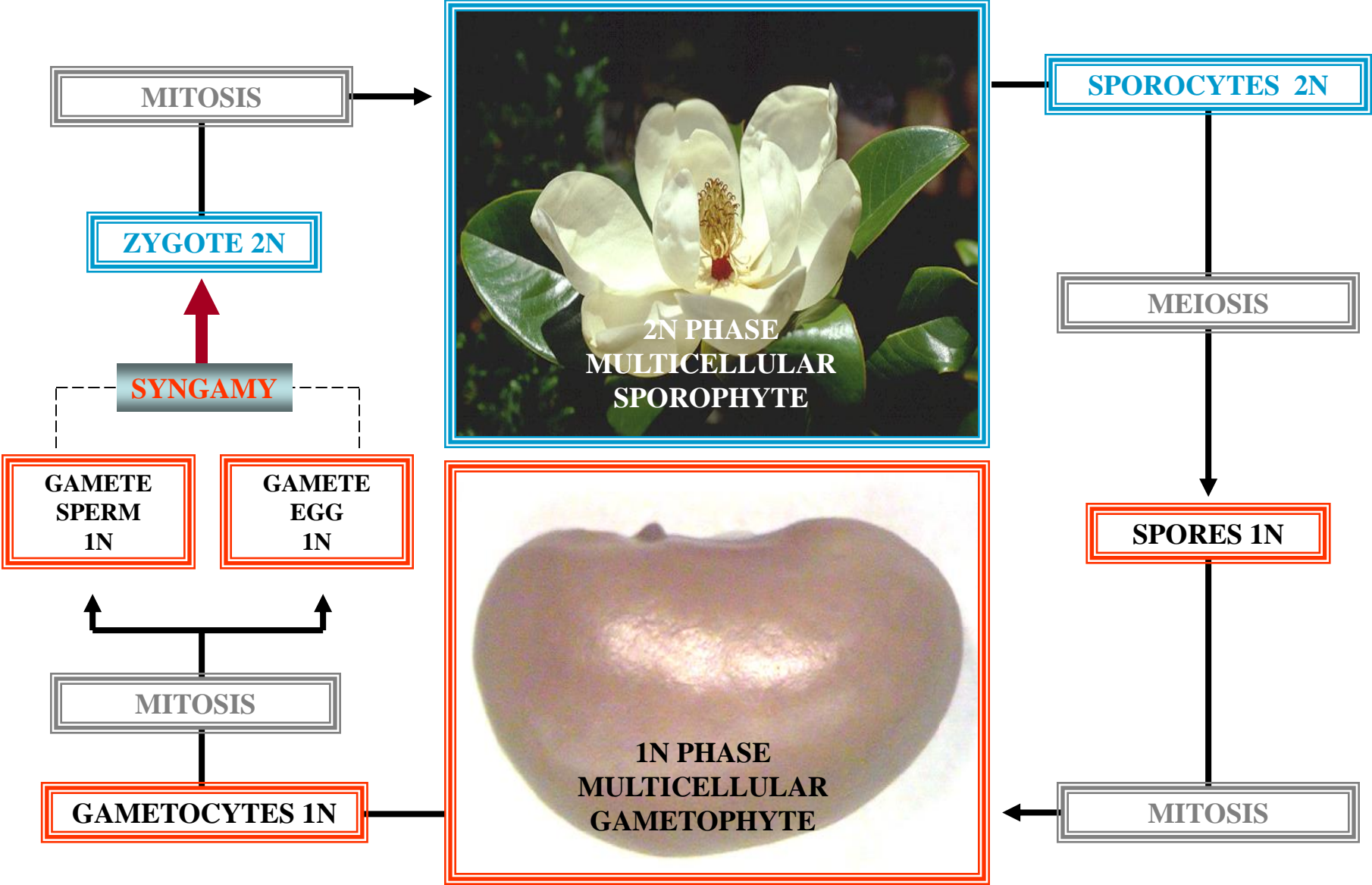
S



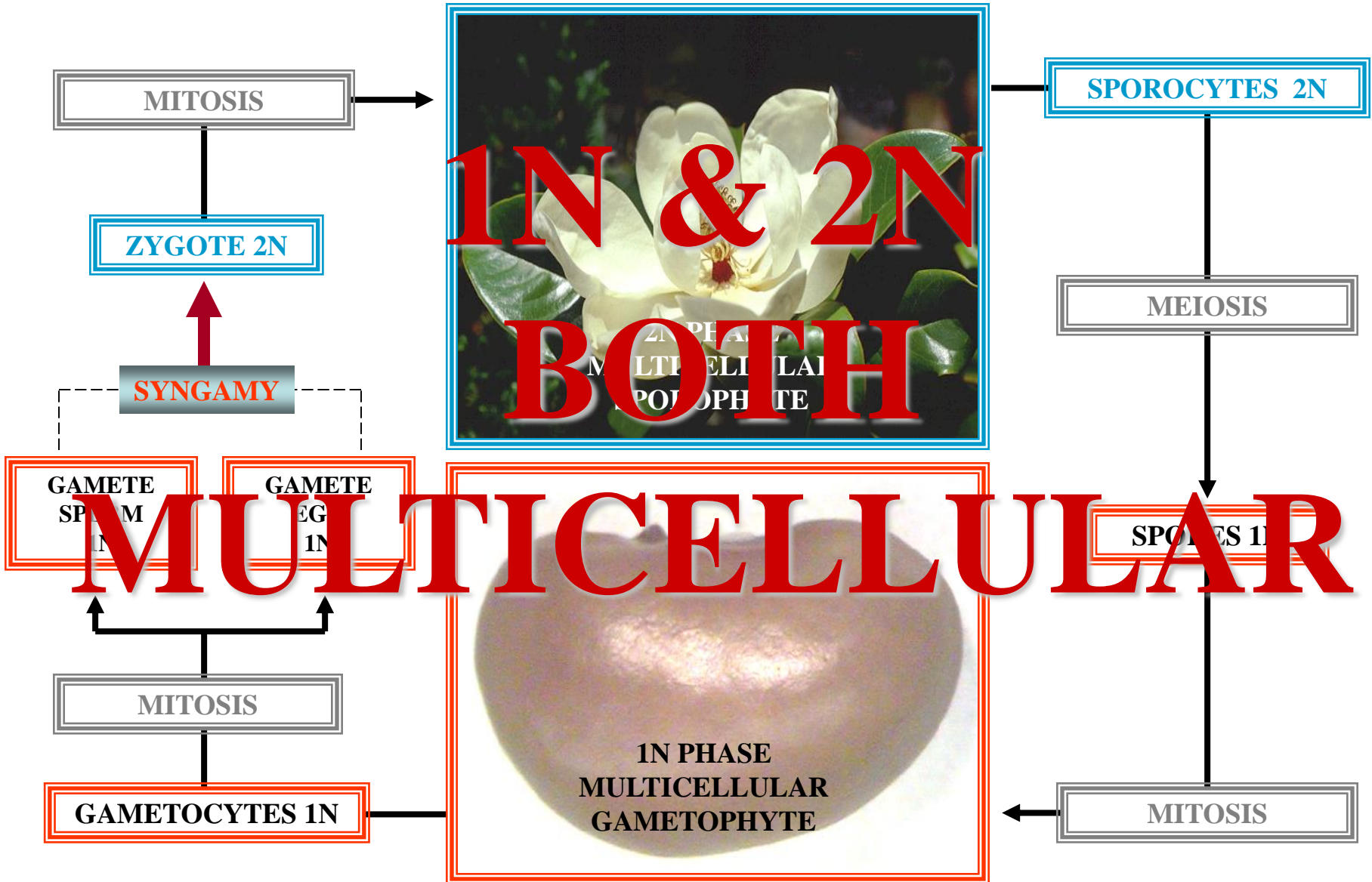
?



# SPORIC LIFE CYCLE



# SPORIC LIFE CYCLE



**ISOMORPHIC  
SPORIC LIFE CYCLE  
VS  
HETEROMORPHIC  
SPORIC LIFE CYCLE**

**ISOMORPHIC  
SPORIC  
LIFE CYCLE**

**ISOMORPHIC  
SPORIC LIFE CYCLE**

**GAMETOPHYTE**

**&**

**SPOROPHYTE**

**SAME**

**MORPHOLOGY**

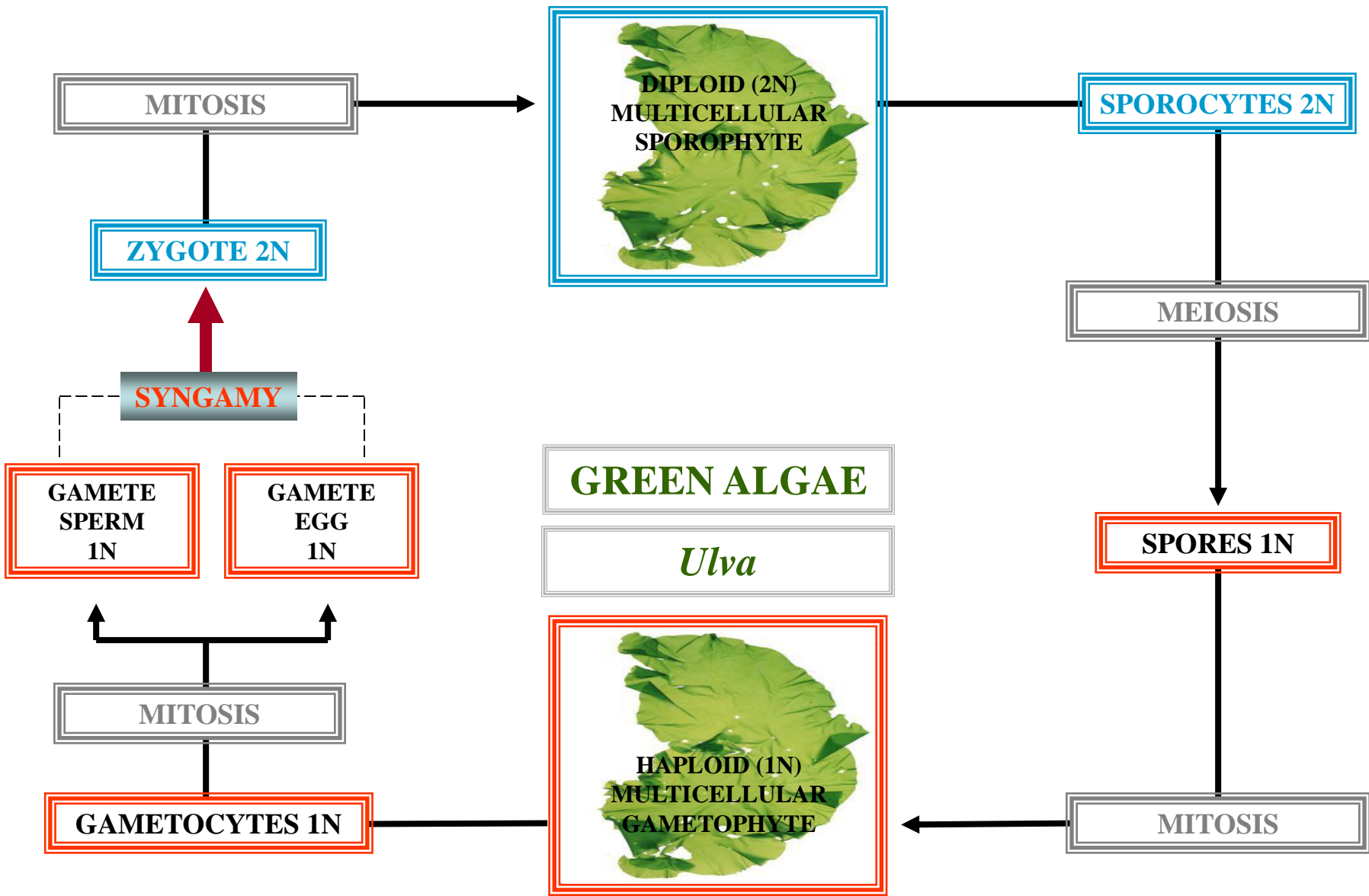
**ISOMORPHIC  
SPORIC LIFE CYCLE**



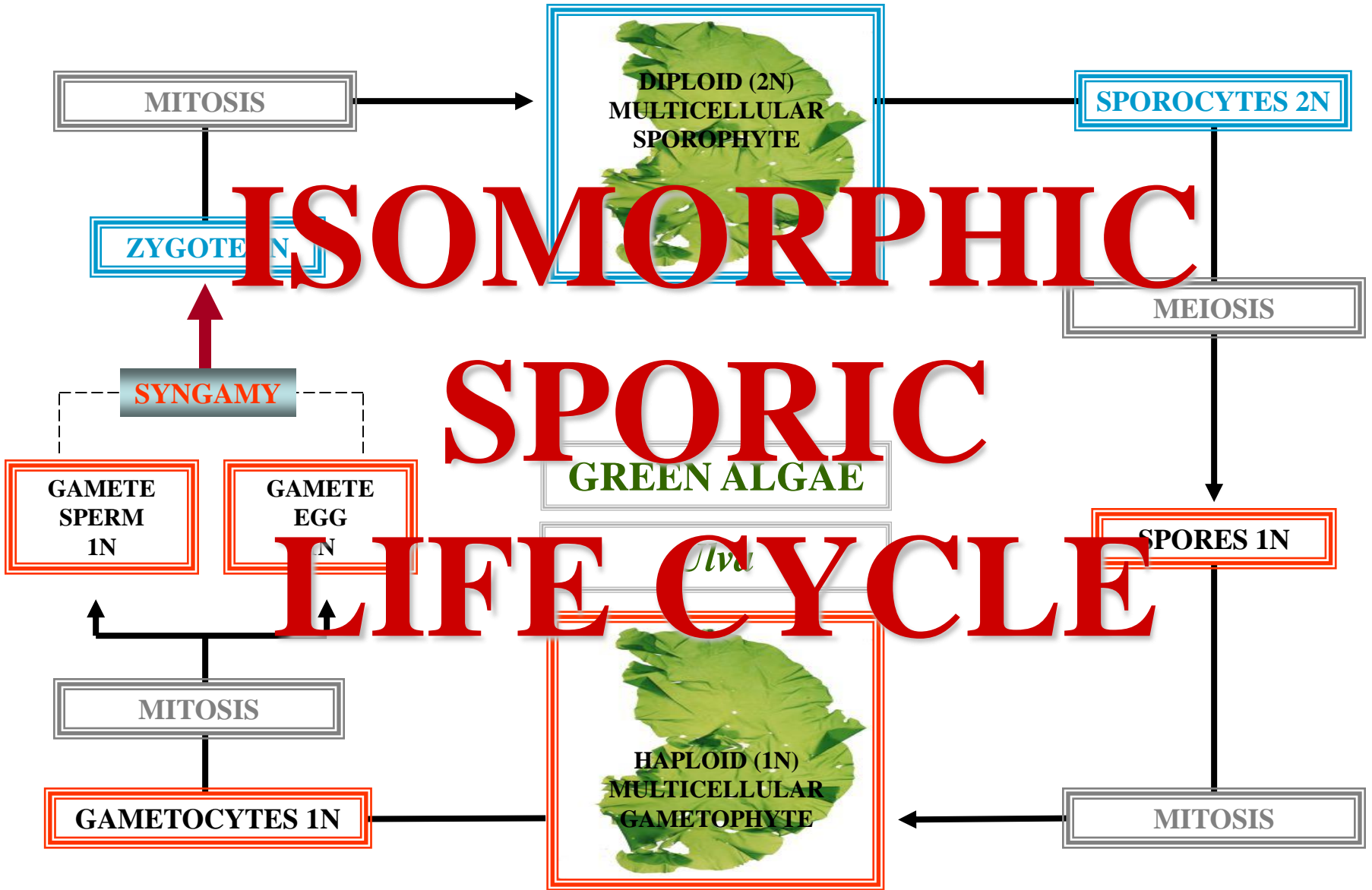


**ISOMORPHIC  
SPORIC  
LIFE CYCLE  
EXAMPLE**

# PLANT SPORIC LIFE CYCLE



# PLANT SPORIC LIFE CYCLE



**HETEROMORPHIC  
SPORIC  
LIFE CYCLE**

**HETEROMORPHIC  
SPORIC LIFE CYCLE**

**GAMETOPHYTE**

**&**

**SPOROPHYTE**

**DIFFERENT**

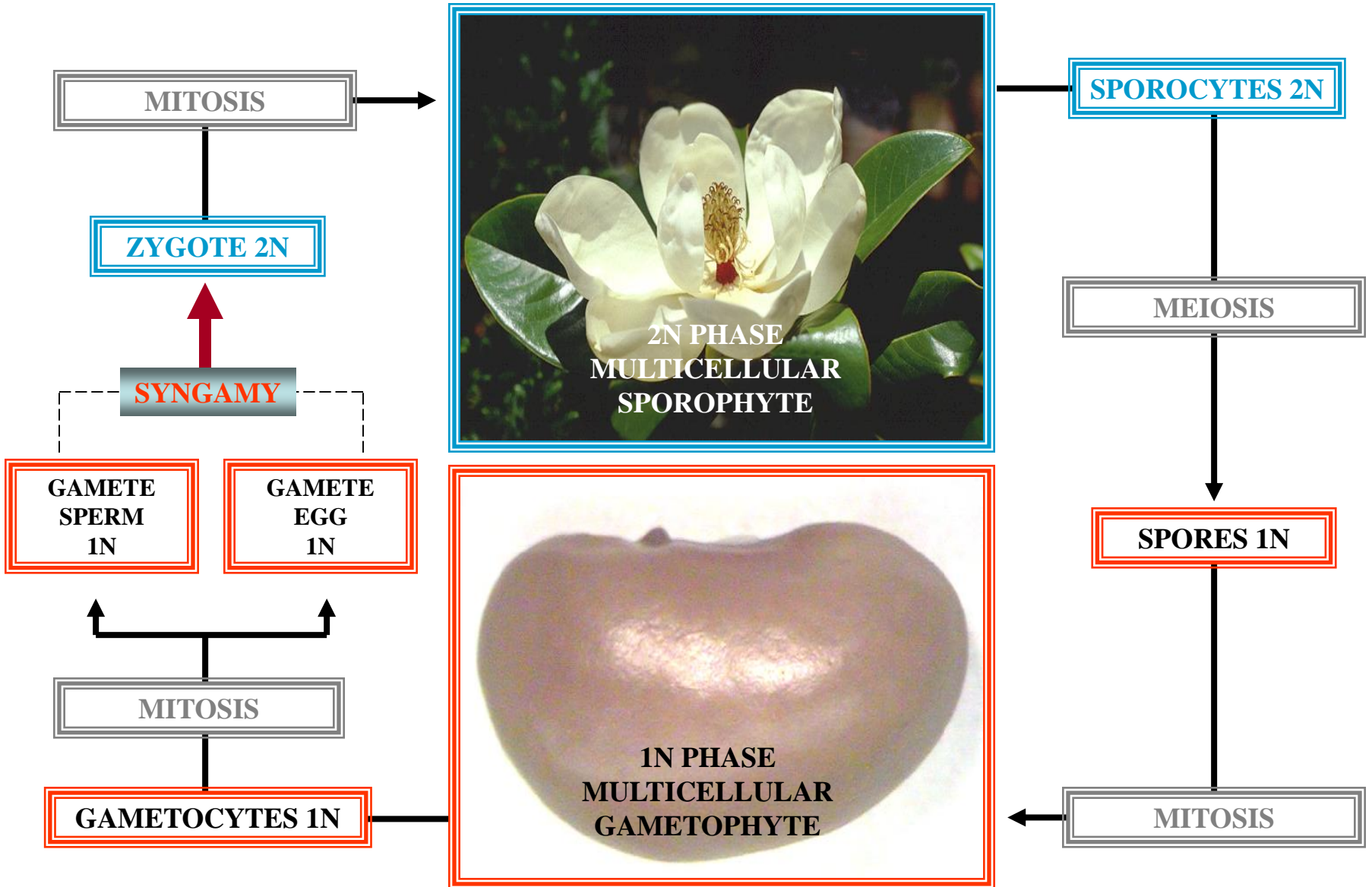
**MORPHOLOGY**

**HETEROMORPHIC  
SPORIC LIFE CYCLE**

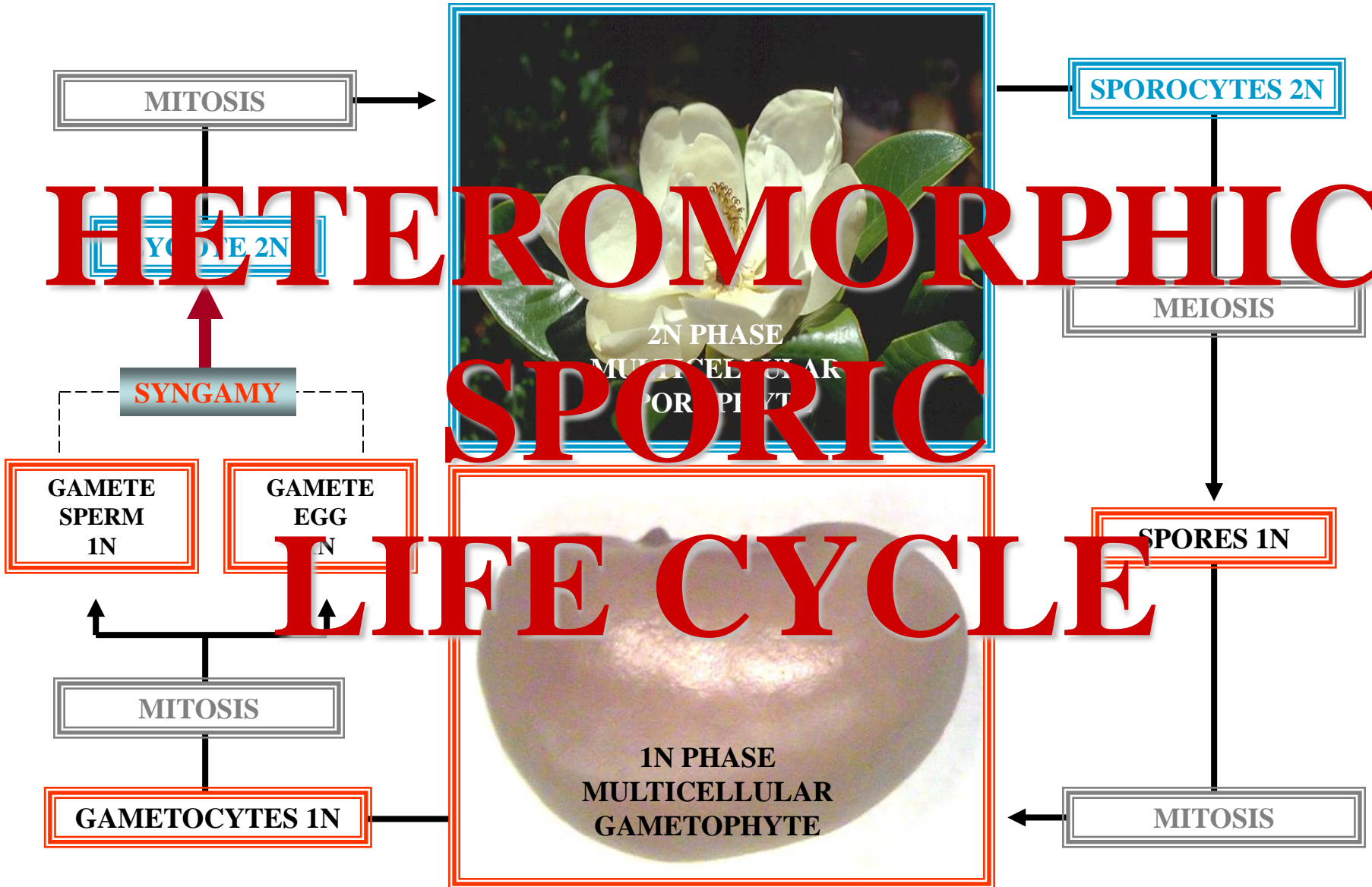


**HETEROMORPHIC  
SPORIC  
LIFE CYCLE  
EXAMPLE**

# ANGIOSPERMS SPORIC LIFE CYCLE



# ANGIOSPERMS SPORIC LIFE CYCLE



# HETEROMORPHIC SPORIC LIFE CYCLE



**QUESTION**

**ISOMORPHIC L.C.**

**&**

**HETEROMORPHIC L.C.**

**ARE ASSOCIATED  
WITH WHICH SEXUAL  
LIFE CYCLE?**

**QUESTION**



**ANSWER**

**SPORIC  
LIFE CYCLE**

**ANSWER**



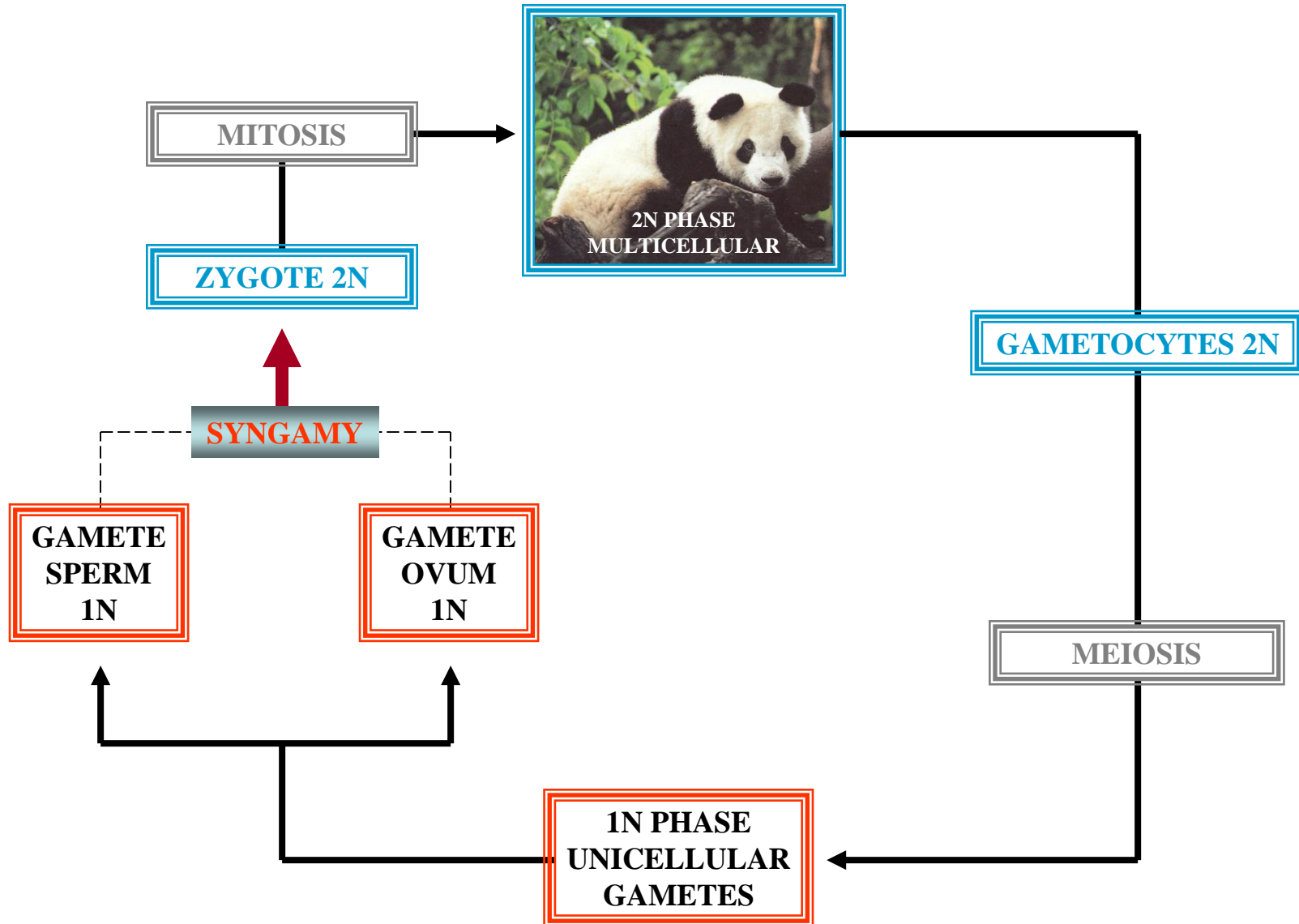
# SEXUAL LIFE CYCLES SUMMARY

# QUESTION

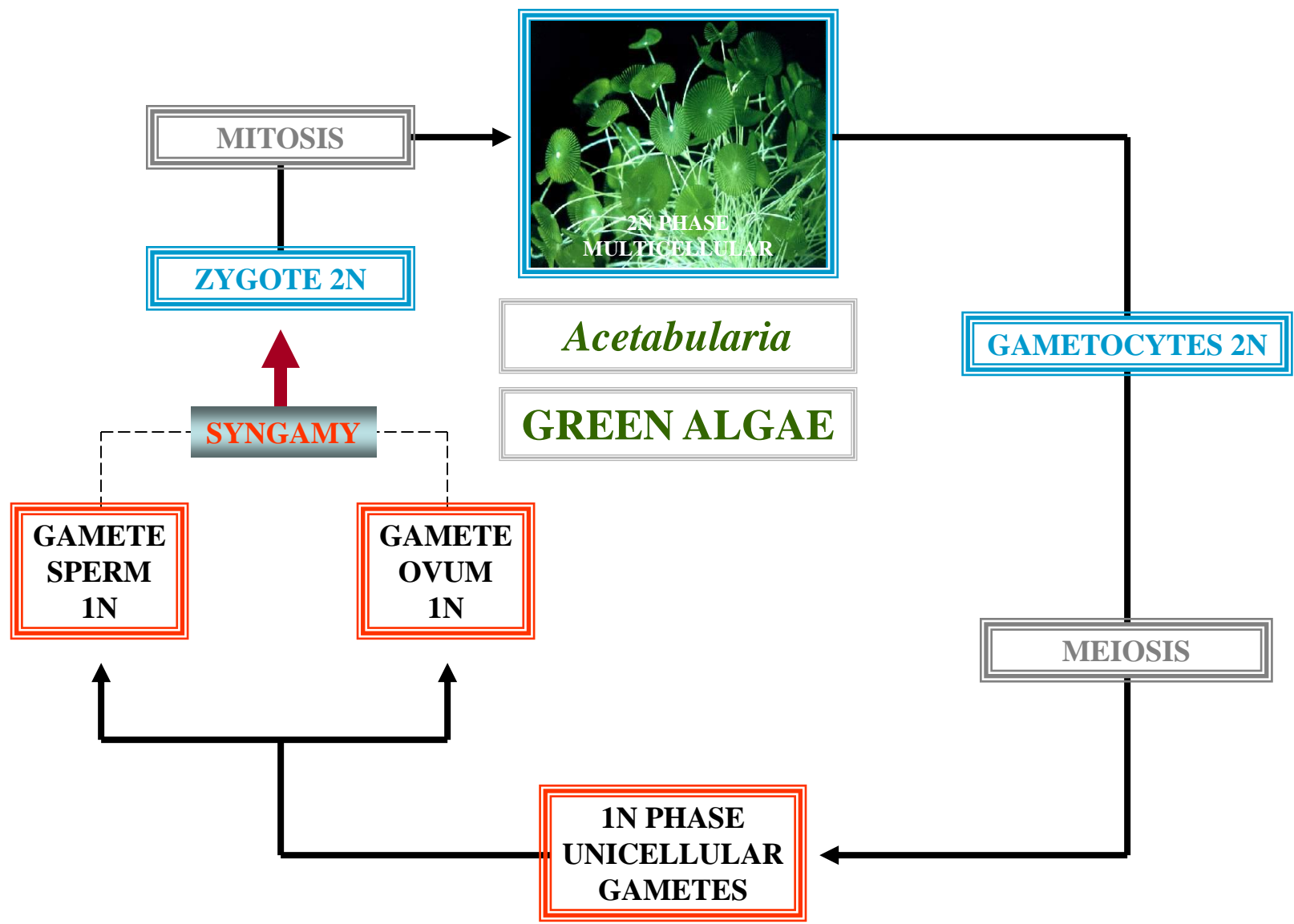
WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH ANIMALS?

# QUESTION

# ANIMAL GAMETIC LIFE CYCLE



# PLANT GAMETIC LIFE CYCLE



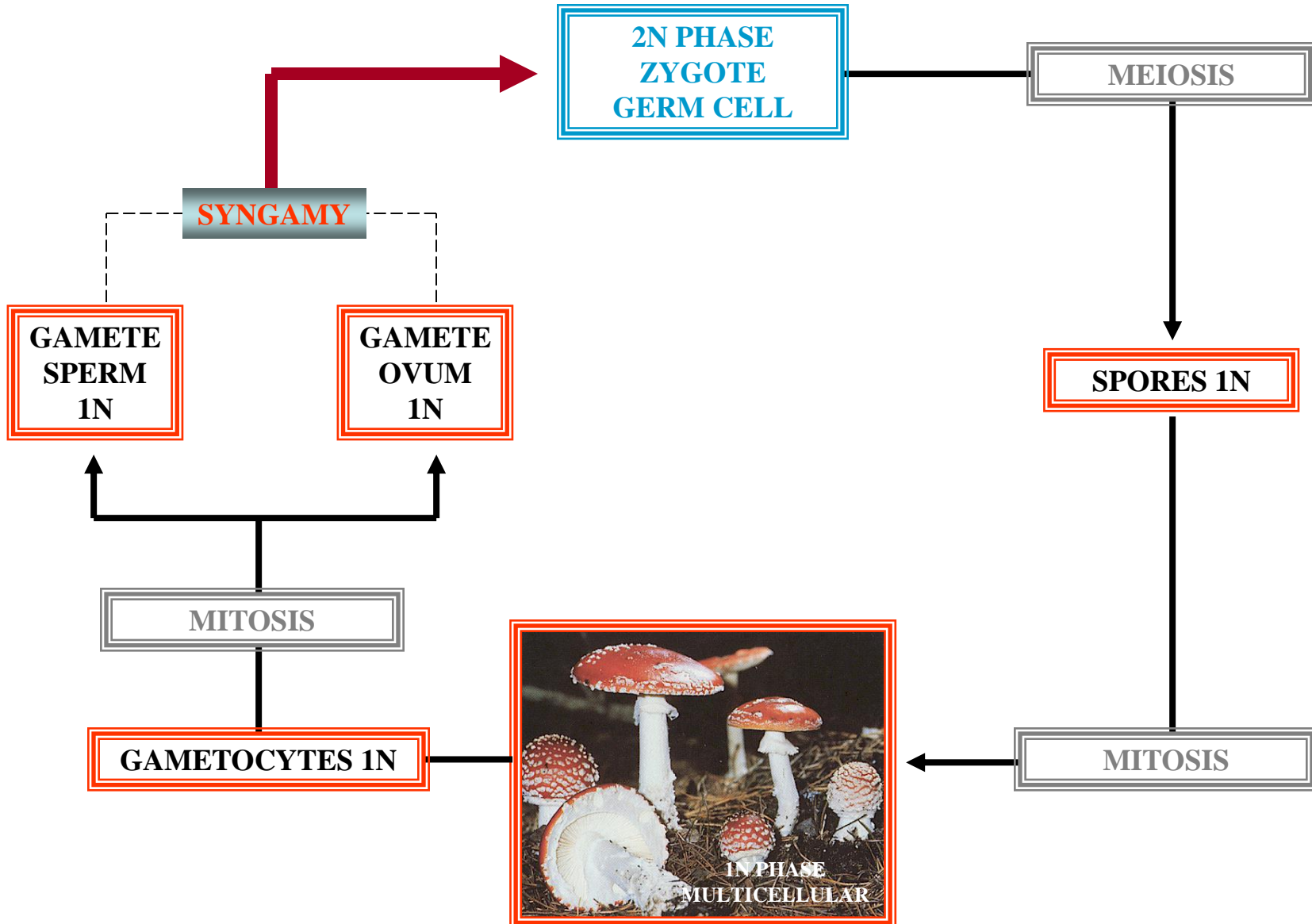
# QUESTION

WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH FUNGI?

# QUESTION

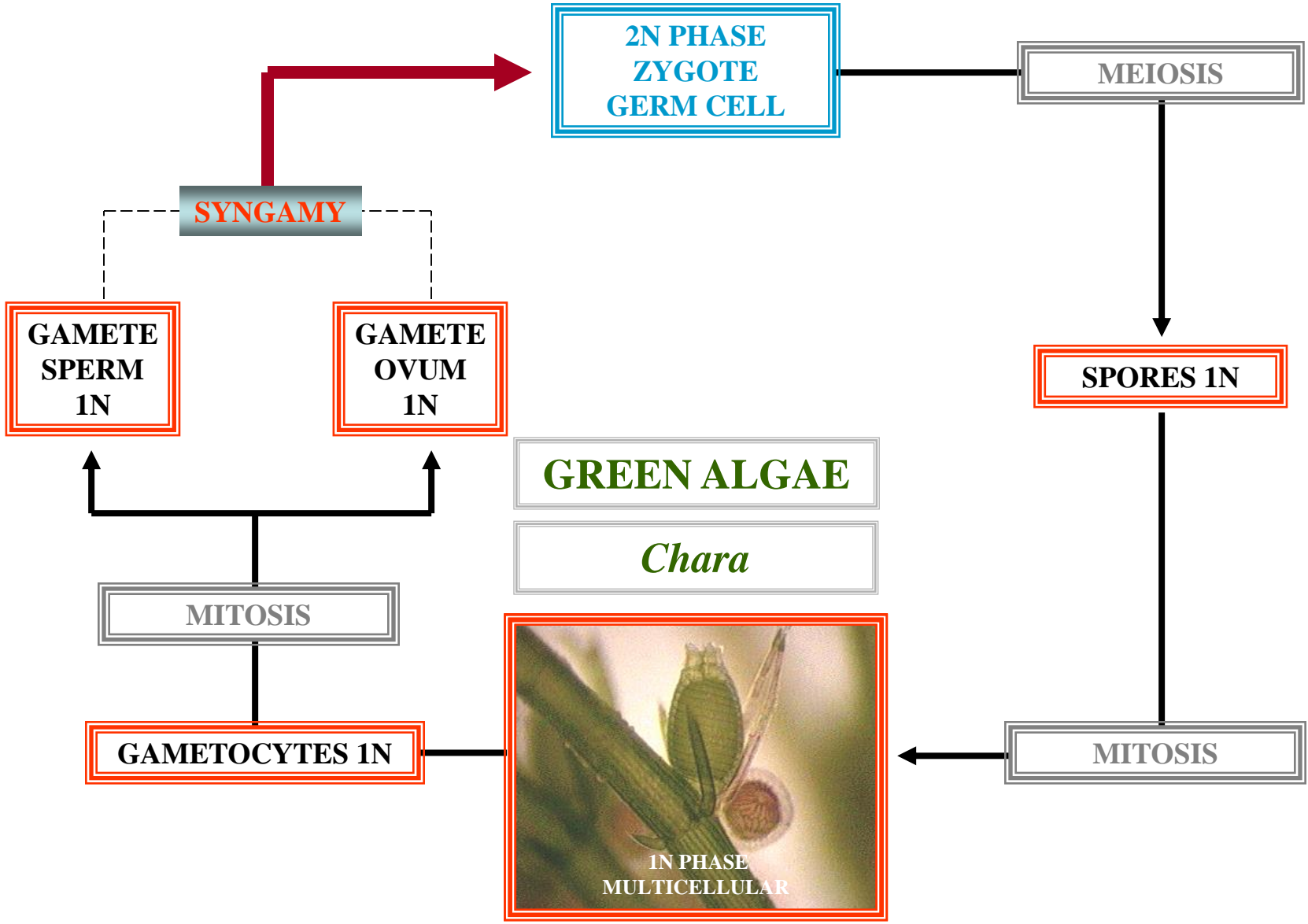
# FUNGUS

## ZYGOTIC LIFE CYCLE





# PLANT ZYGOTIC LIFE CYCLE

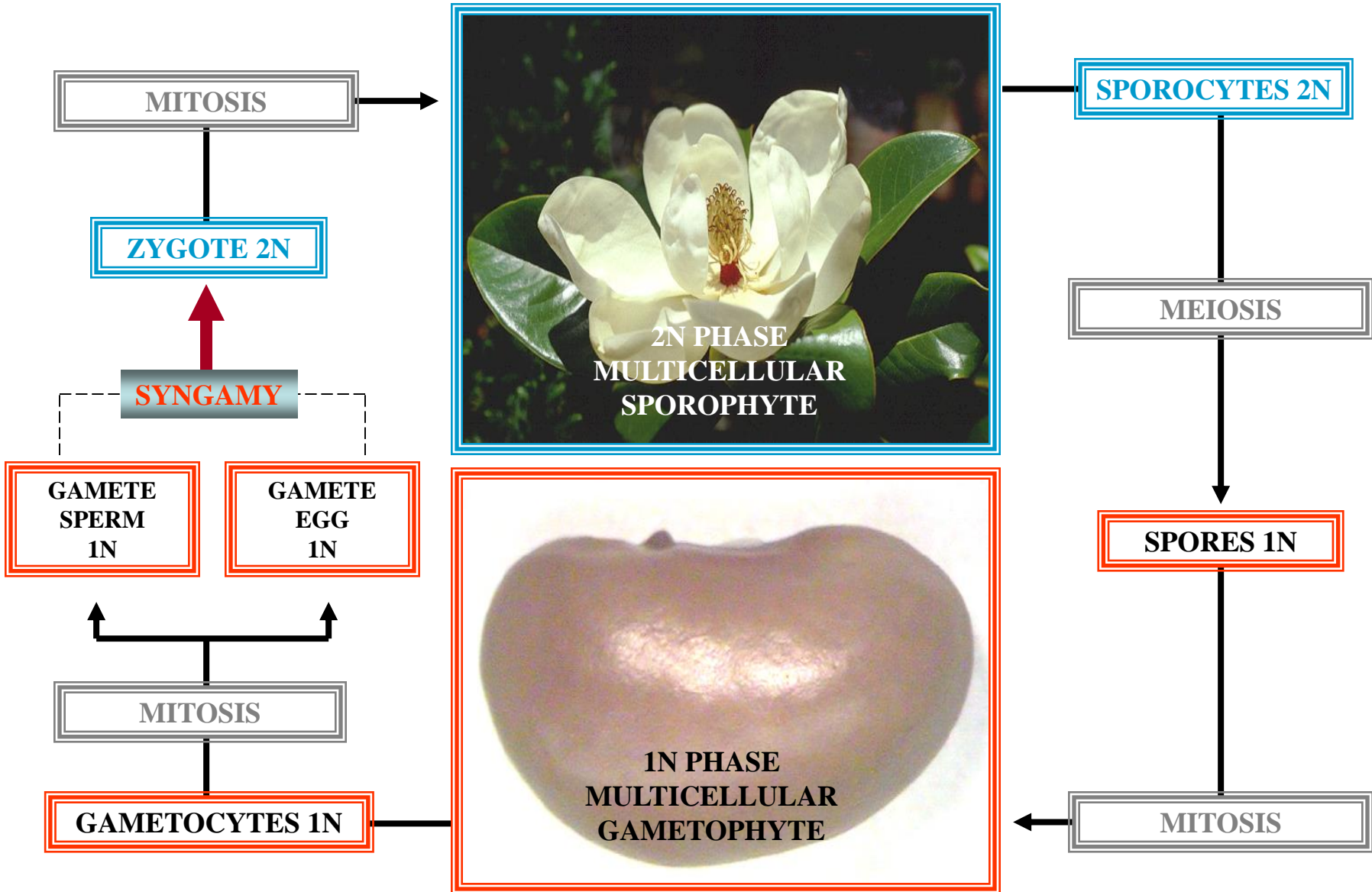


# QUESTION

WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH PLANTS?

# QUESTION

# PLANT SPORIC LIFE CYCLE



# SPORIC LIFE CYCLE

A



**EMBRYOPHYTES**

# SPORIC LIFE CYCLE



**ANGIOSPERMS**



# ANGIOSPERMS



**PHYLUM**

**MAGNOLIOPHYTA**



**SYNONYM**

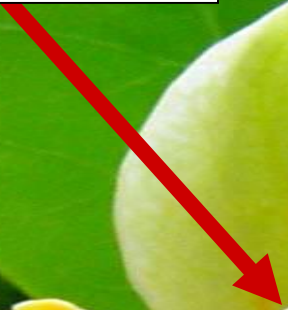




**ANTHOPHYTA**



**ANTHER**



**ANTHOPHYTA**



# COMMON NAME

# ANGIOSPERMS



**FLOWERING PLANTS**

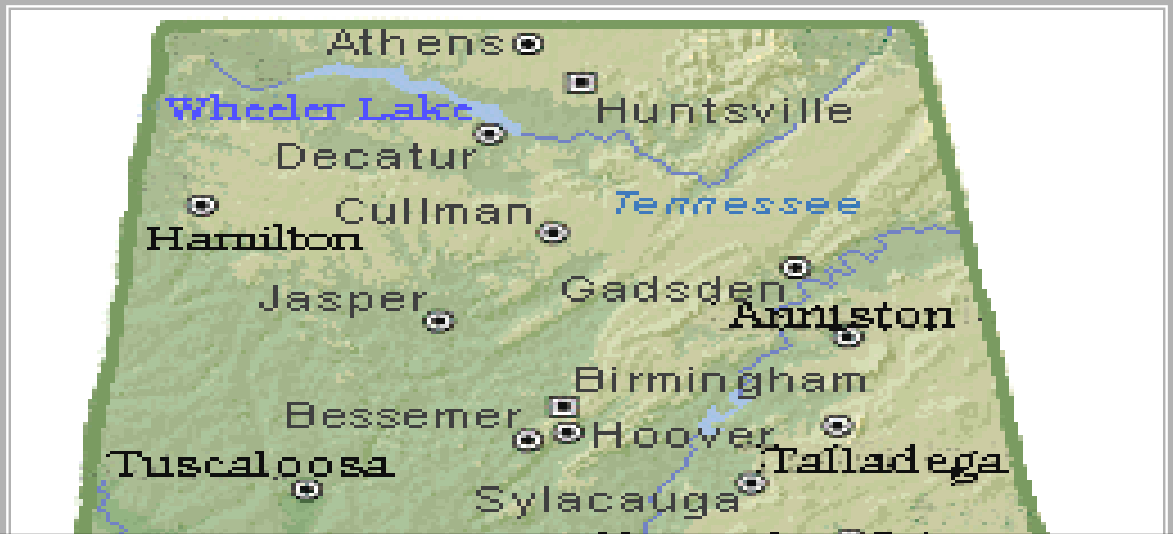


# DIVERSITY

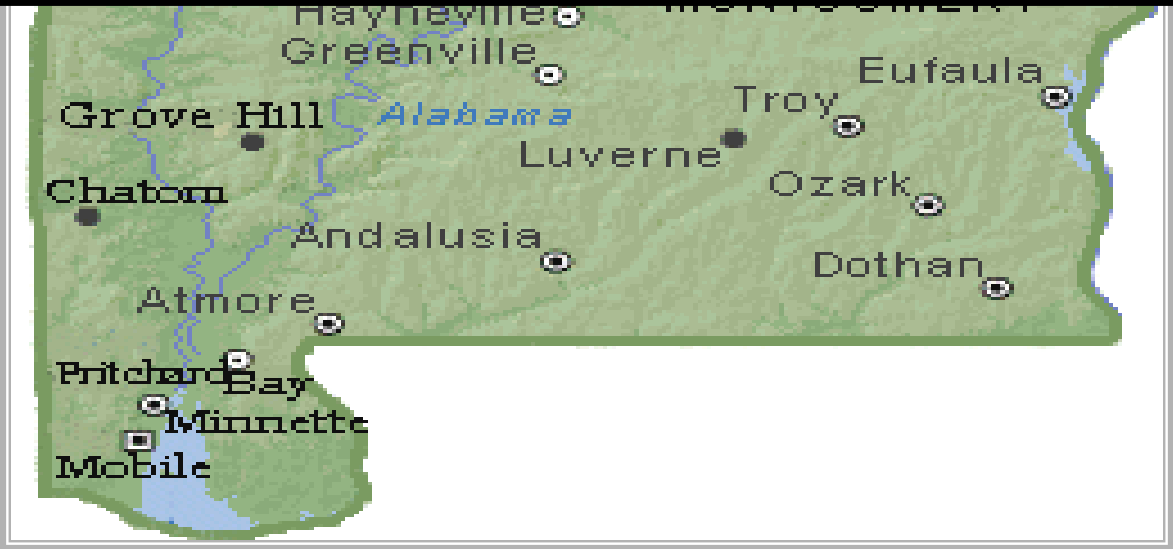


**~235,000 SPECIES**

**EARTH**



**~3,500 SPECIES**





**MAGNOLIOPHYTA**  
**MOST DIVERSE**  
**TRACHEOPHYTE**  
**PHYLUM**

**EARTH**





# ANGIOSPERM LIFE CYCLE OVERVIEW



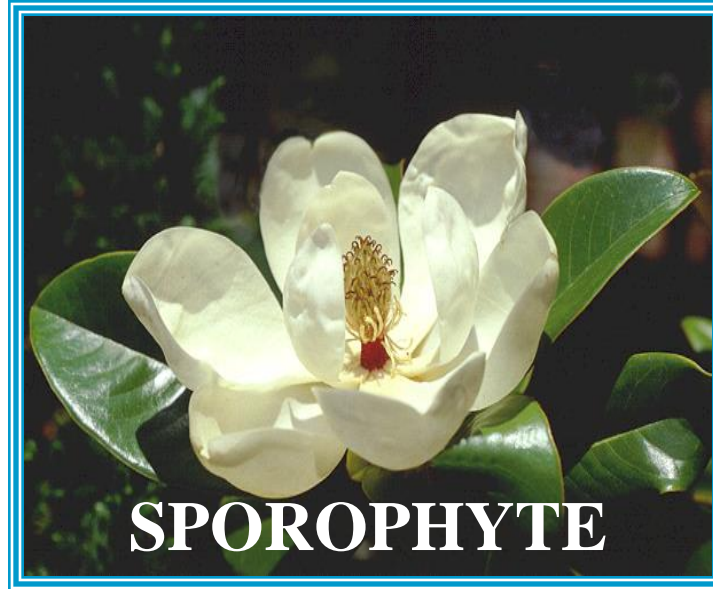
**MAGNOLIA**

# ANGIOSPERM LIFE CYCLE



**MAGNOLIA**

# ANGIOSPERM LIFE CYCLE



# ANGIOSPERM LIFE CYCLE



# ANGIOSPERM LIFE CYCLE



**SPORANGIA**

# ANGIOSPERM LIFE CYCLE



**SPORANGIA 2N**

# ANGIOSPERM LIFE CYCLE



**SPOROCYTES**



# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

**SPORES**

# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

MEIOSIS

**SPORES 1N**

MITOSIS

# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**



**MITOSIS**

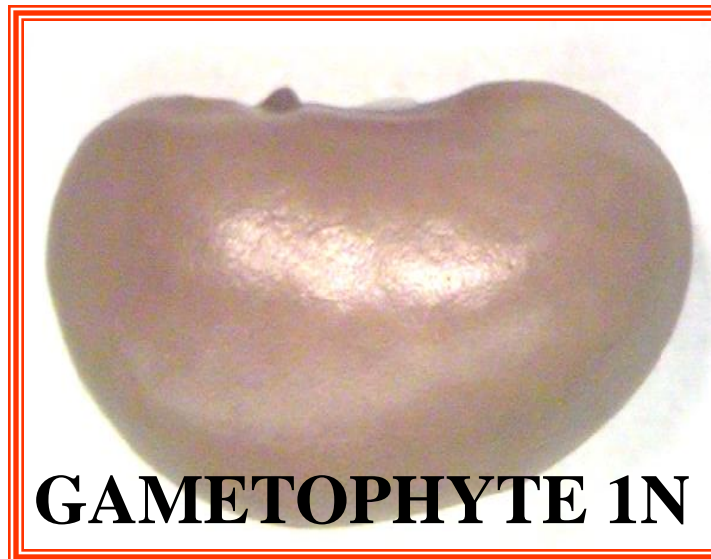
# ANGIOSPERM LIFE CYCLE



**SPOROCYTES 2N**

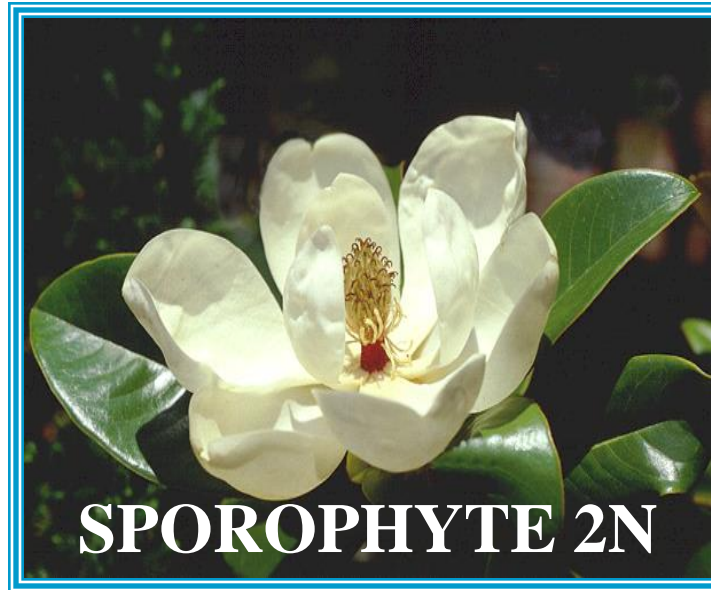
**MEIOSIS**

**SPORES 1N**



**MITOSIS**

# ANGIOSPERM LIFE CYCLE



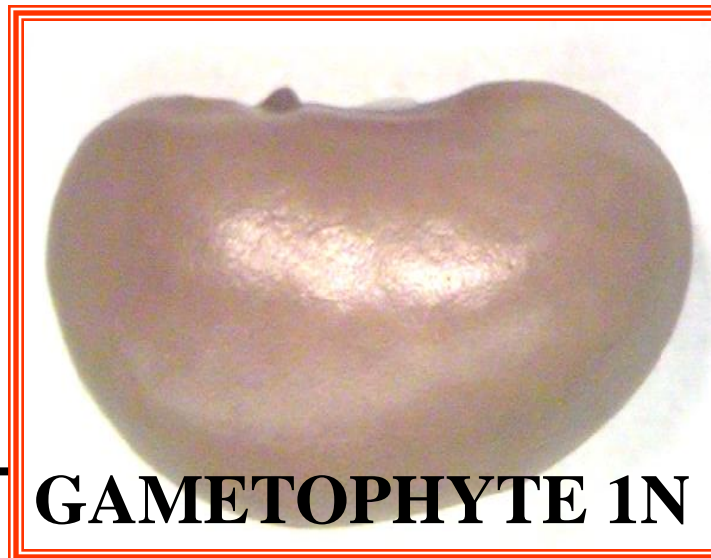
**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

**MITOSIS**

**GAMETANGIA**



**GAMETOPHYTE 1N**



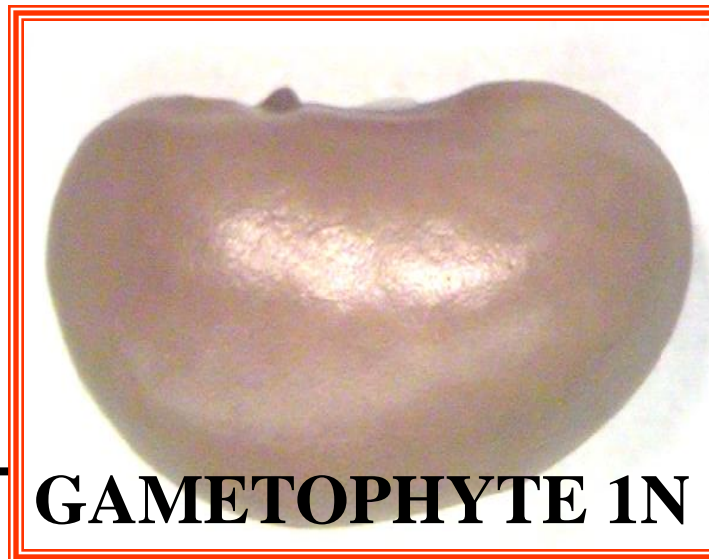
# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**



**GAMETANGIA 1N**

**MITOSIS**

# ANGIOSPERM LIFE CYCLE

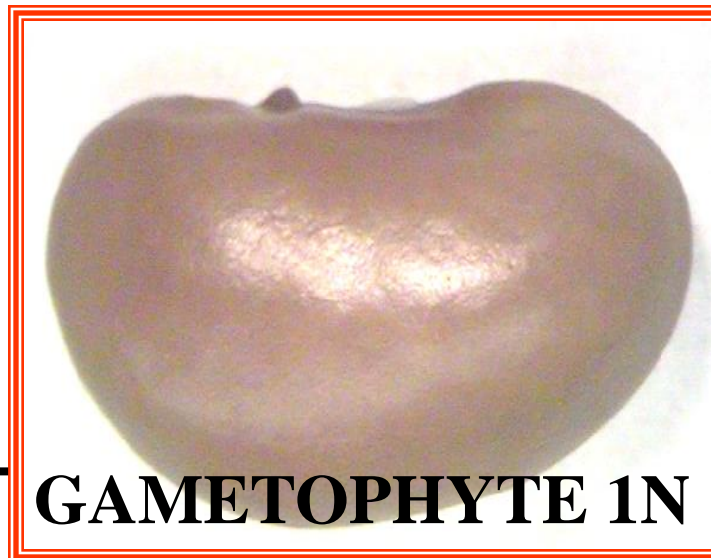


**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

**MITOSIS**



**GAMETOCYTES**

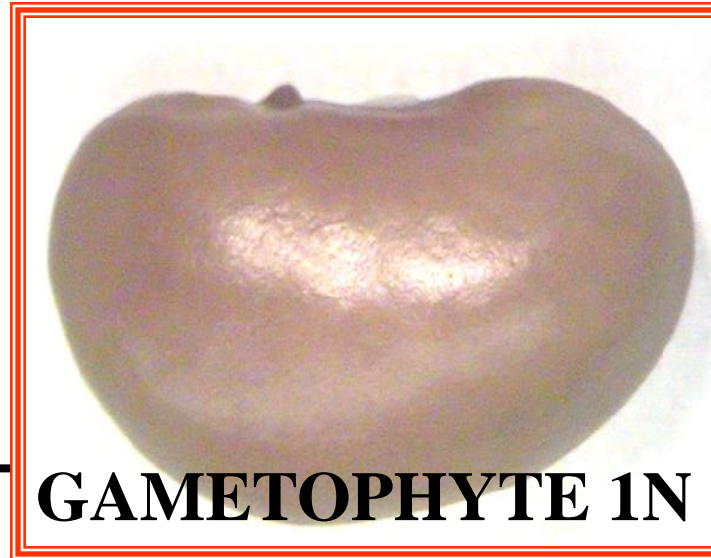
# ANGIOSPERM LIFE CYCLE



**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**



**GAMETOCYTES 1N**

**MITOSIS**

# ANGIOSPERM LIFE CYCLE

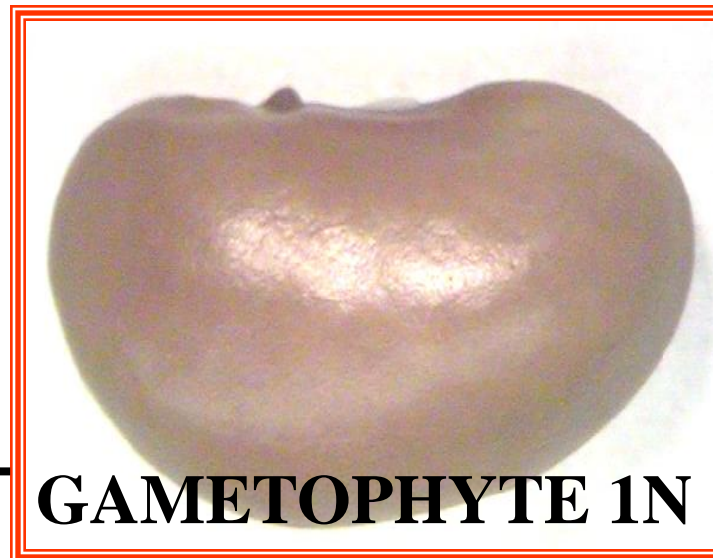


**SPOROCTYES 2N**

MEIOSIS

**SPORES 1N**

MITOSIS



MITOSIS

**GAMETOCYTES 1N**

# ANGIOSPERM LIFE CYCLE

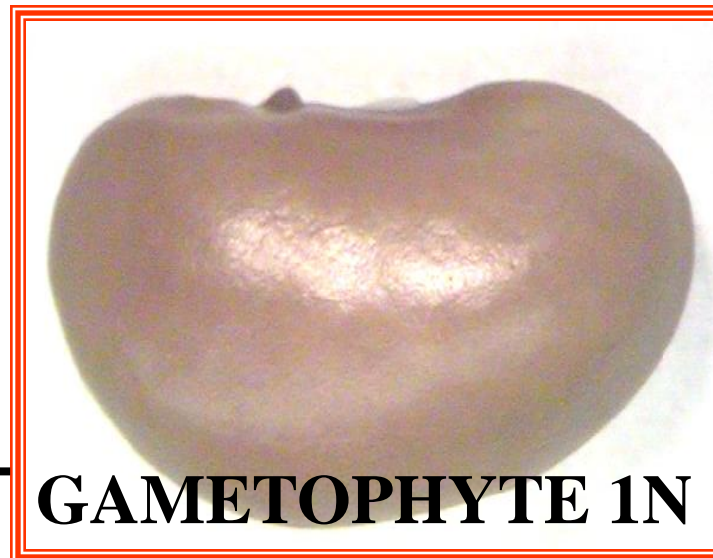


**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

**MITOSIS**

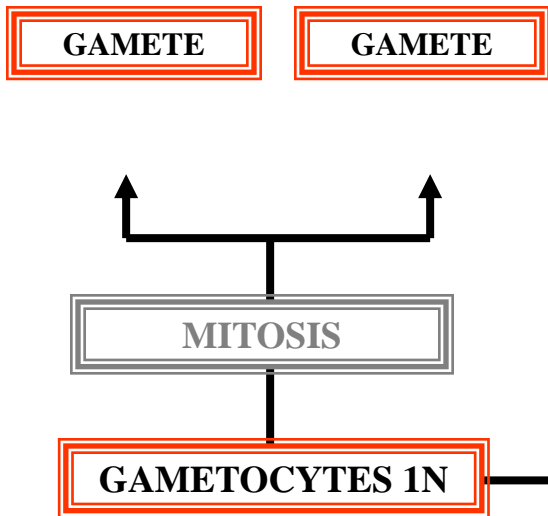
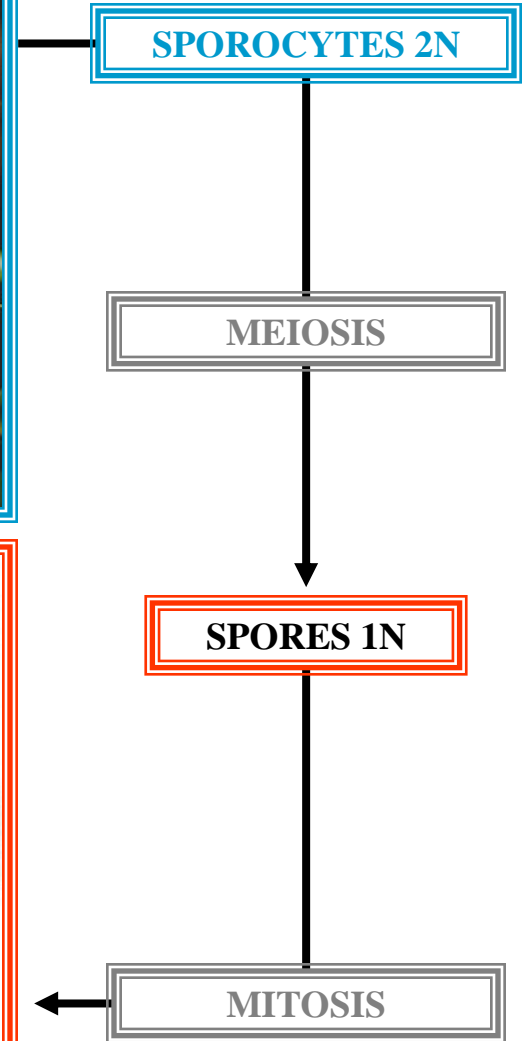


**GAMETE**

**GAMETE**

**MITOSIS**

**GAMETOCYTES 1N**



# ANGIOSPERM LIFE CYCLE

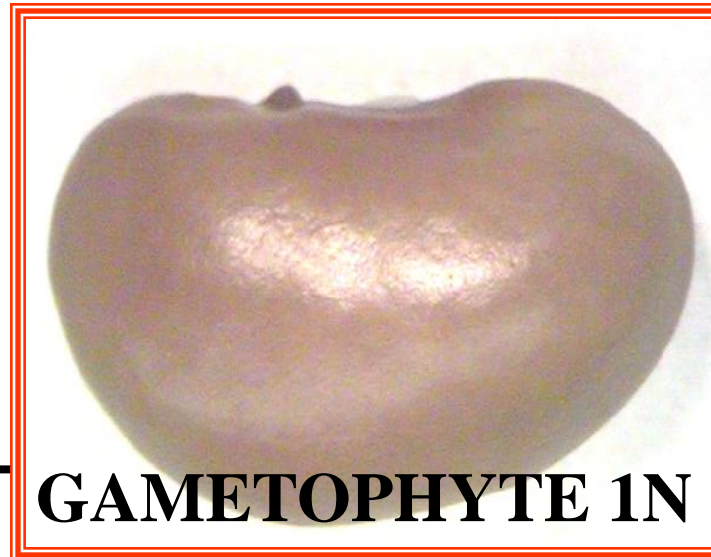


**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

**MITOSIS**

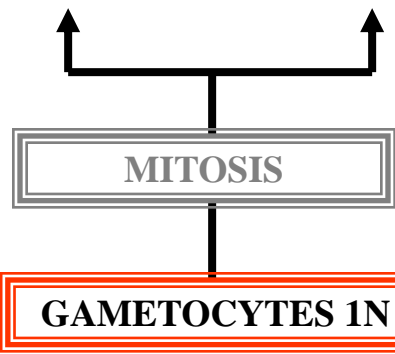
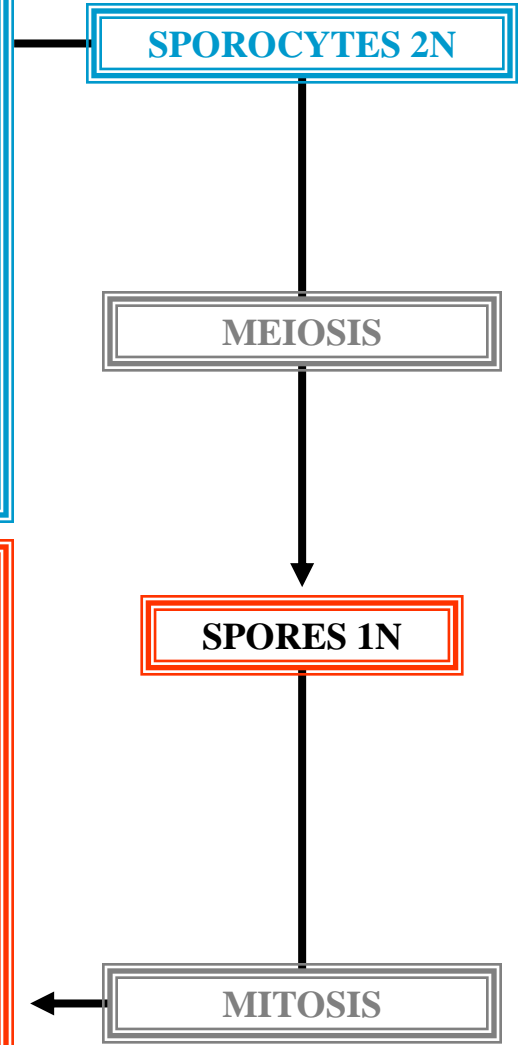


**GAMETE  
1N**

**GAMETE  
1N**

**MITOSIS**

**GAMETOCYTES 1N**



# ANGIOSPERM LIFE CYCLE

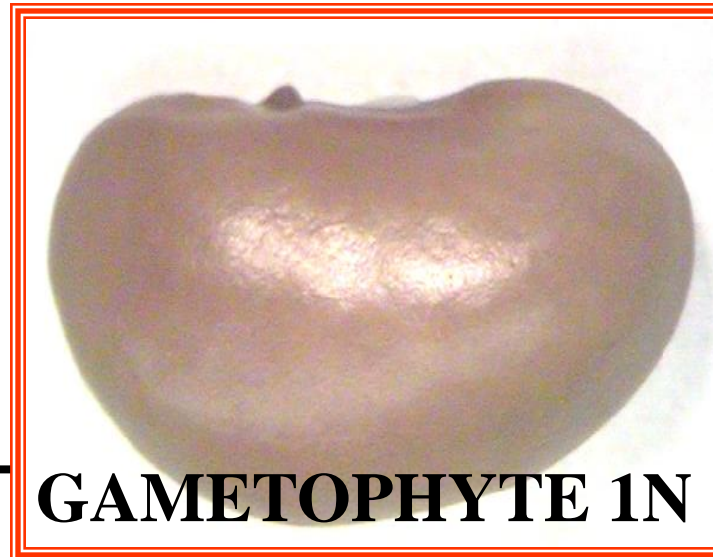


**SPOROCTYES 2N**

**MEIOSIS**

**SPORES 1N**

**MITOSIS**

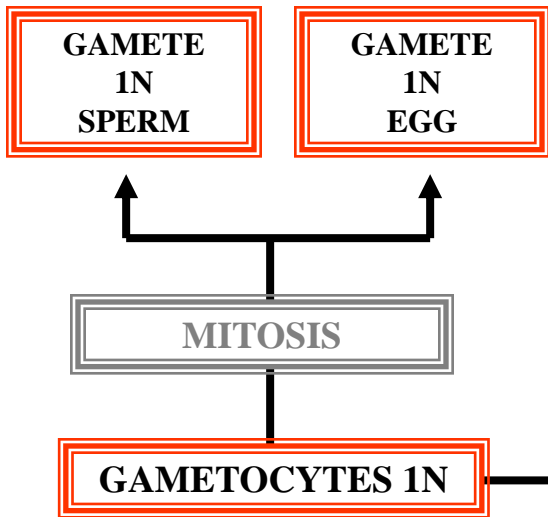
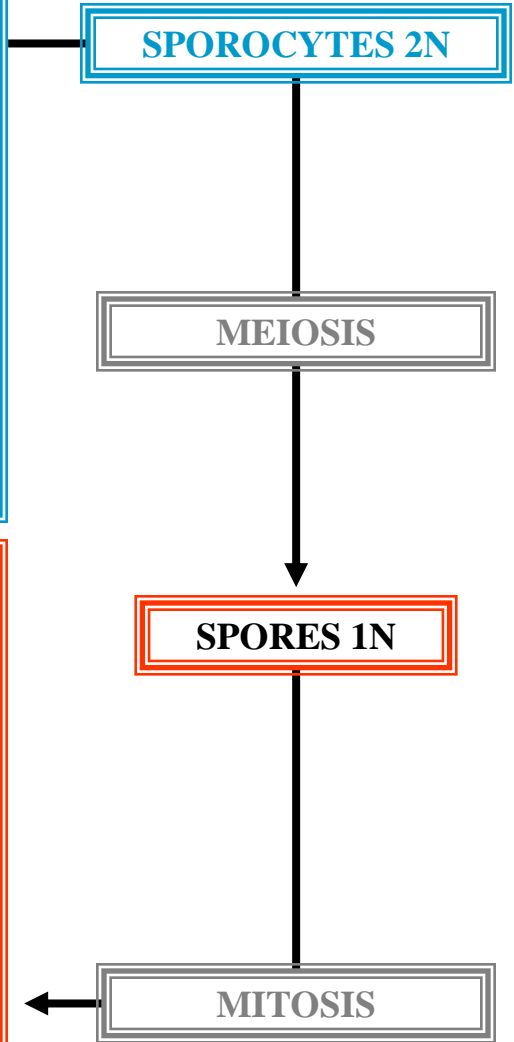


**GAMETE  
1N  
SPERM**

**GAMETE  
1N  
EGG**

**MITOSIS**

**GAMETOCYTES 1N**



# ANGIOSPERM LIFE CYCLE

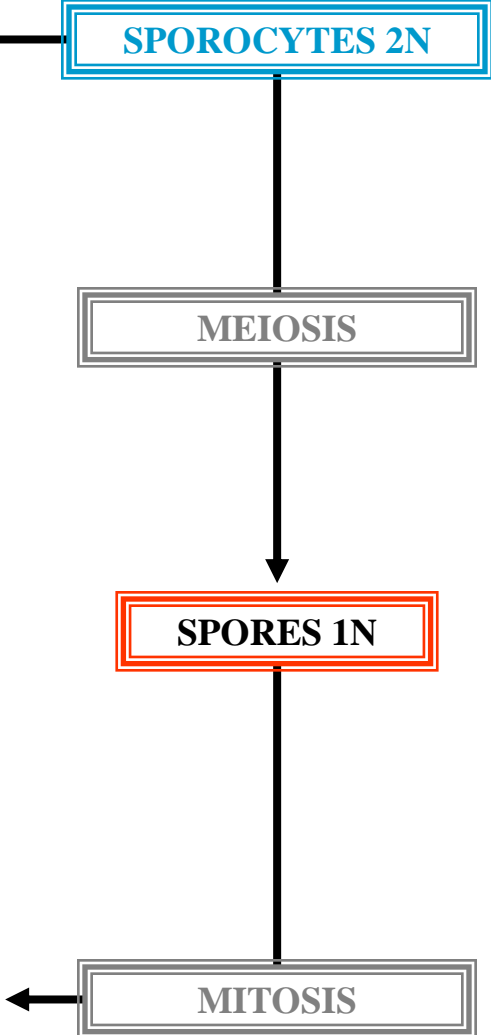
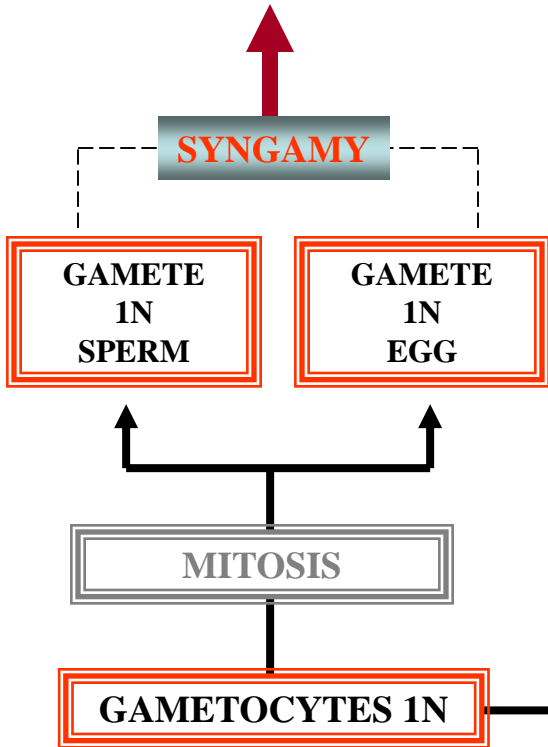
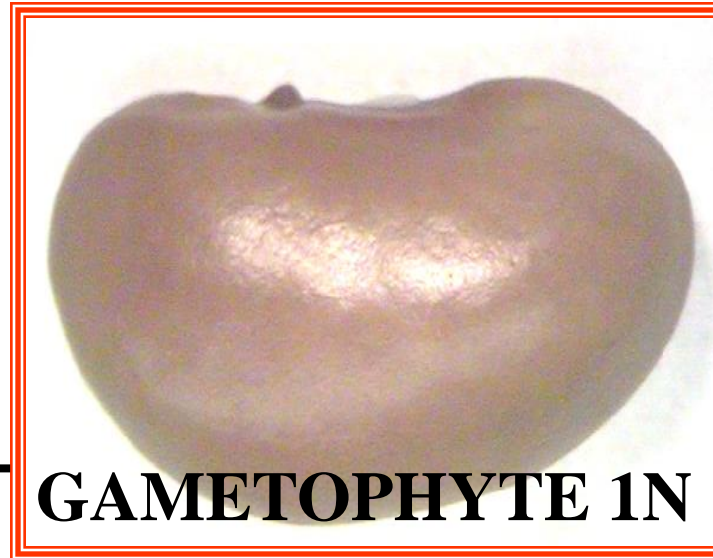


**SPOROCTYES 2N**

**MEIOSIS**

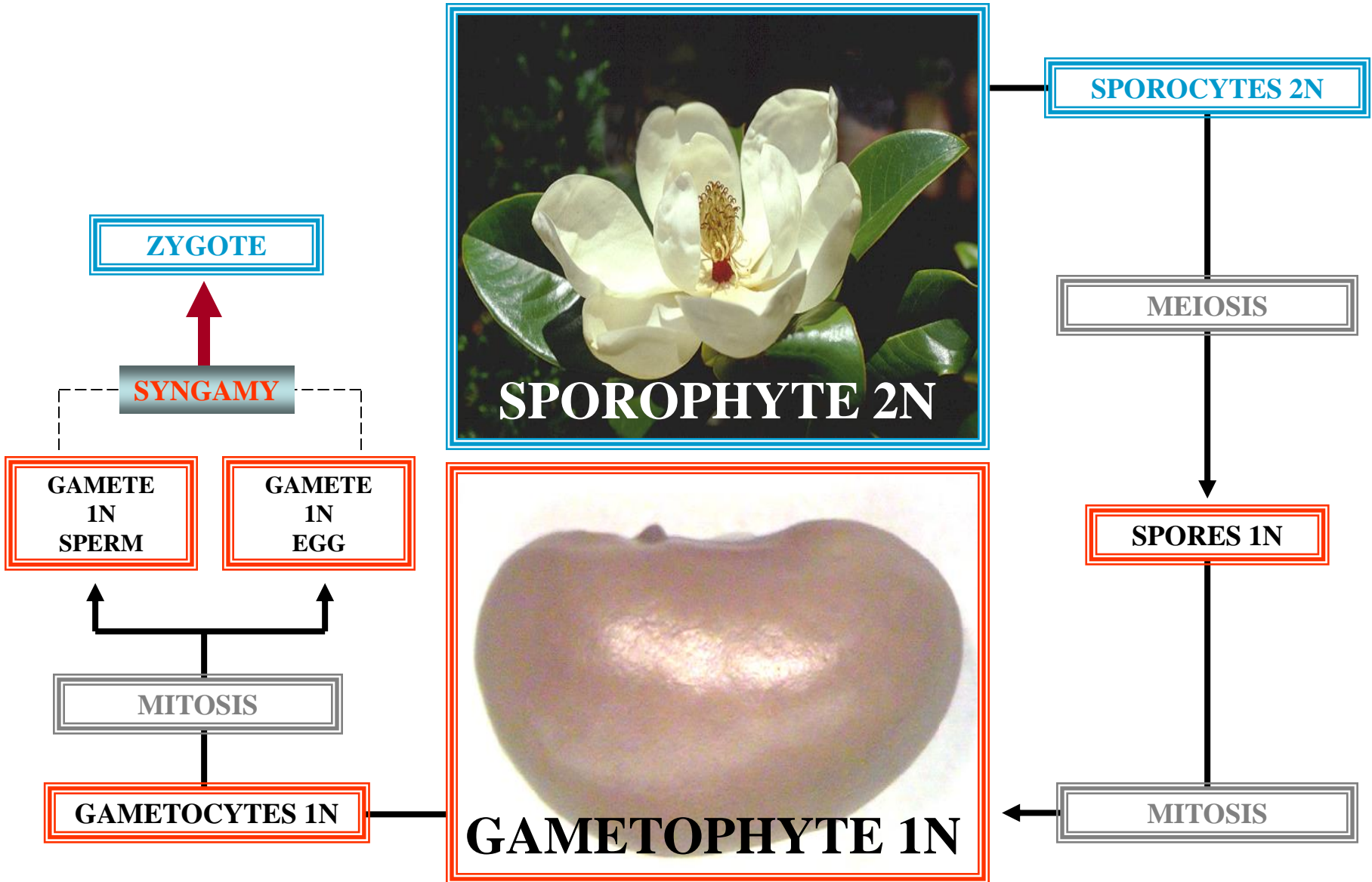
**SPORES 1N**

**MITOSIS**

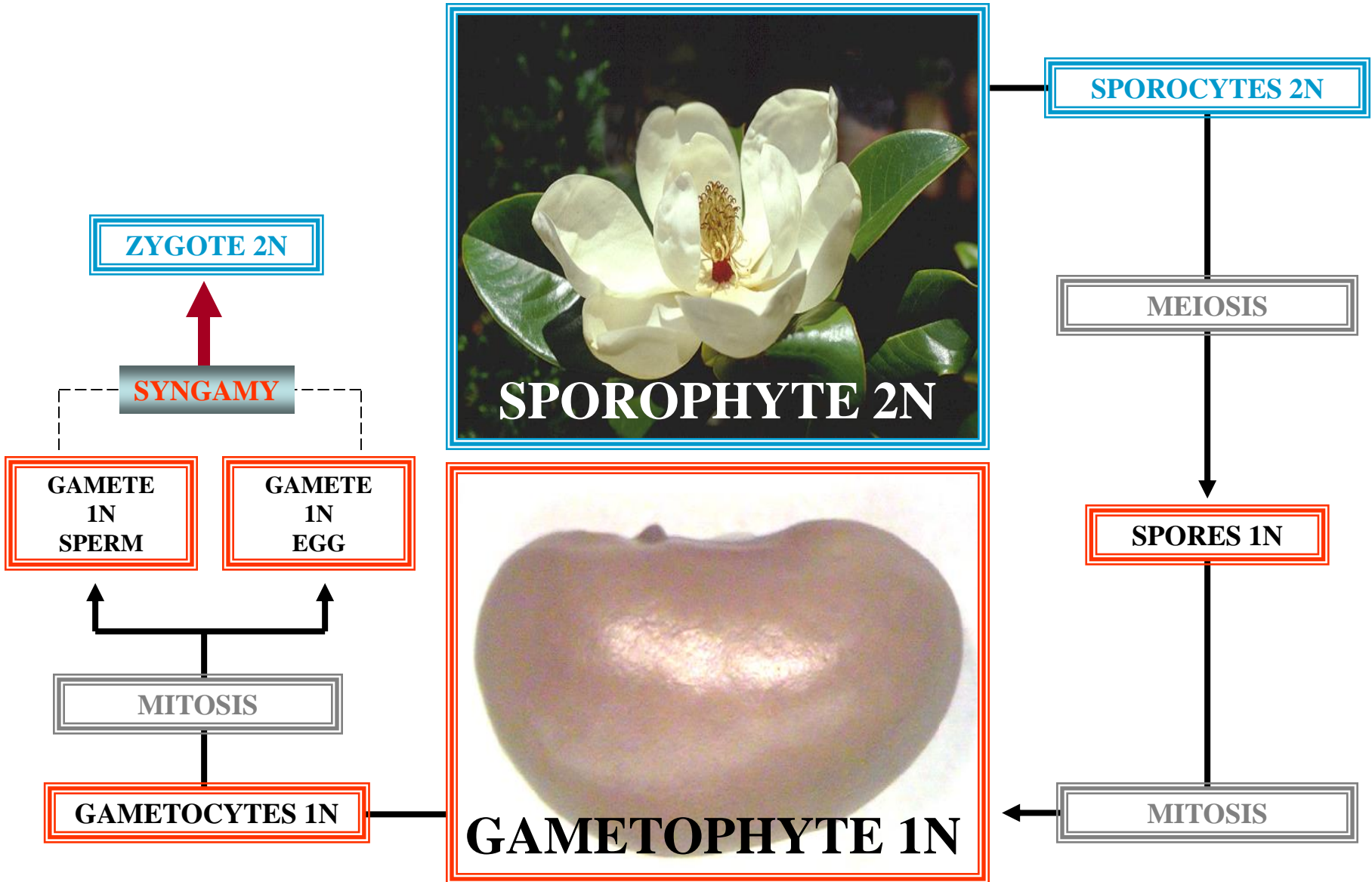




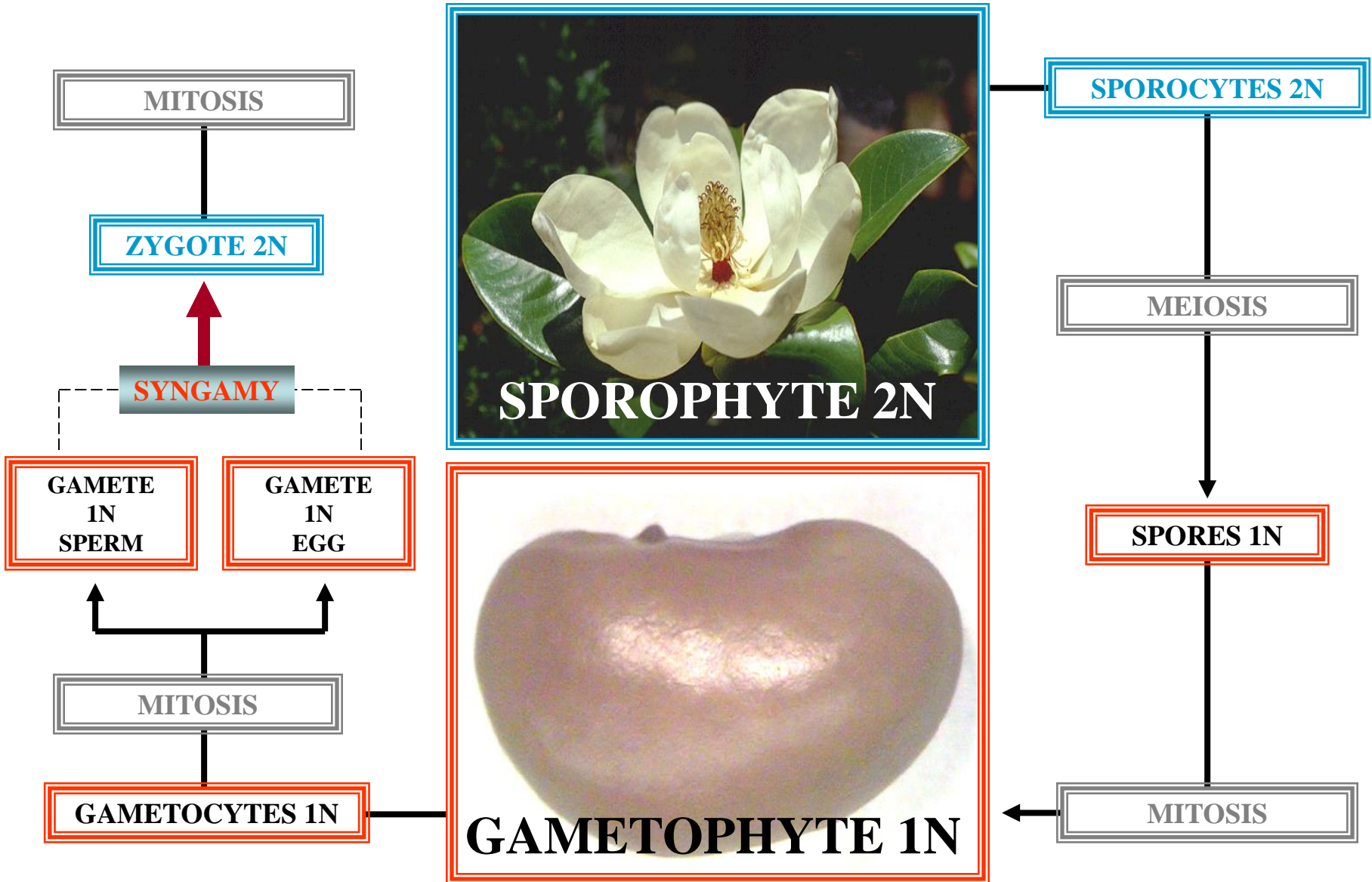
# ANGIOSPERM LIFE CYCLE



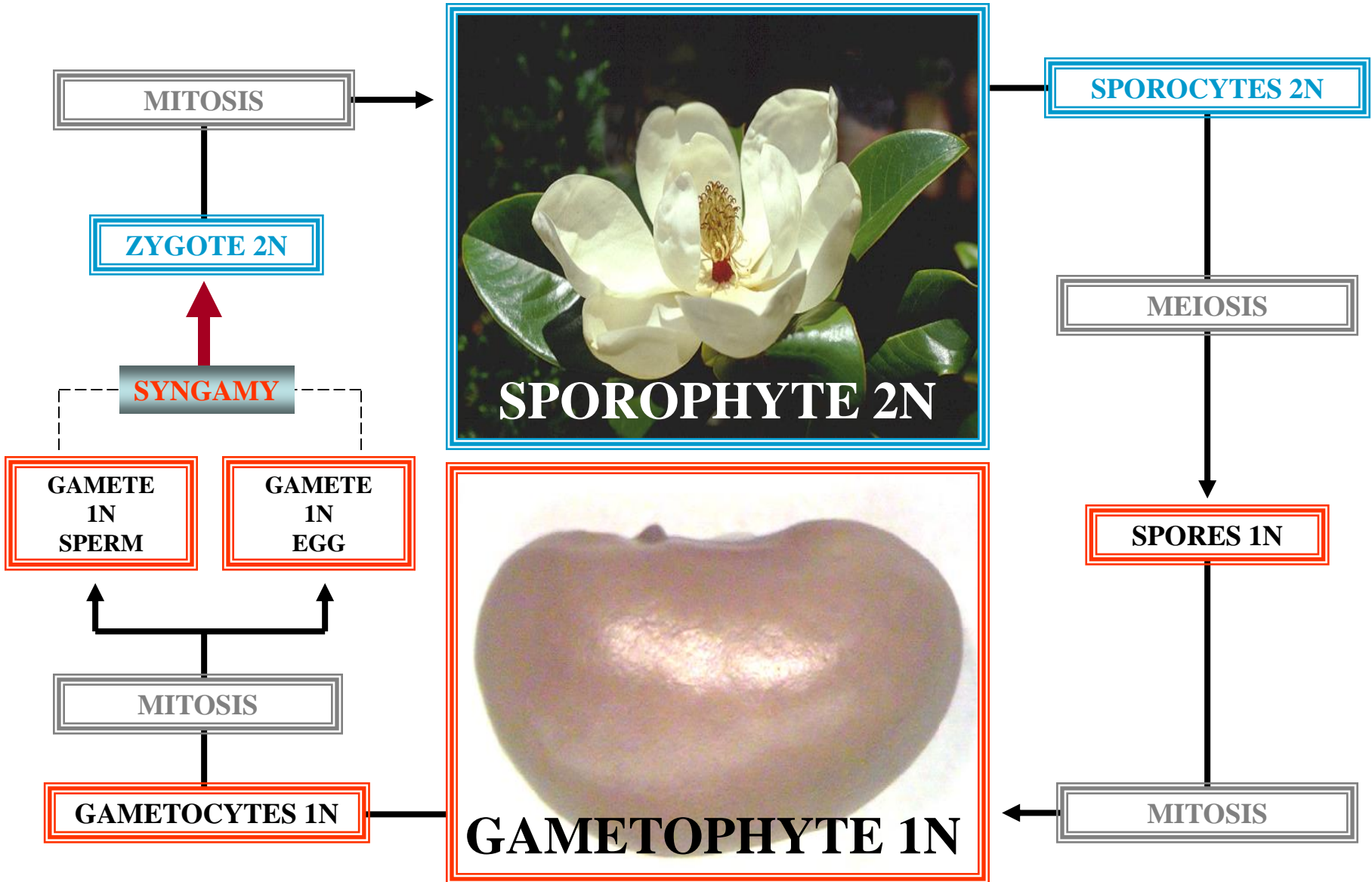
# ANGIOSPERM LIFE CYCLE



# ANGIOSPERM LIFE CYCLE



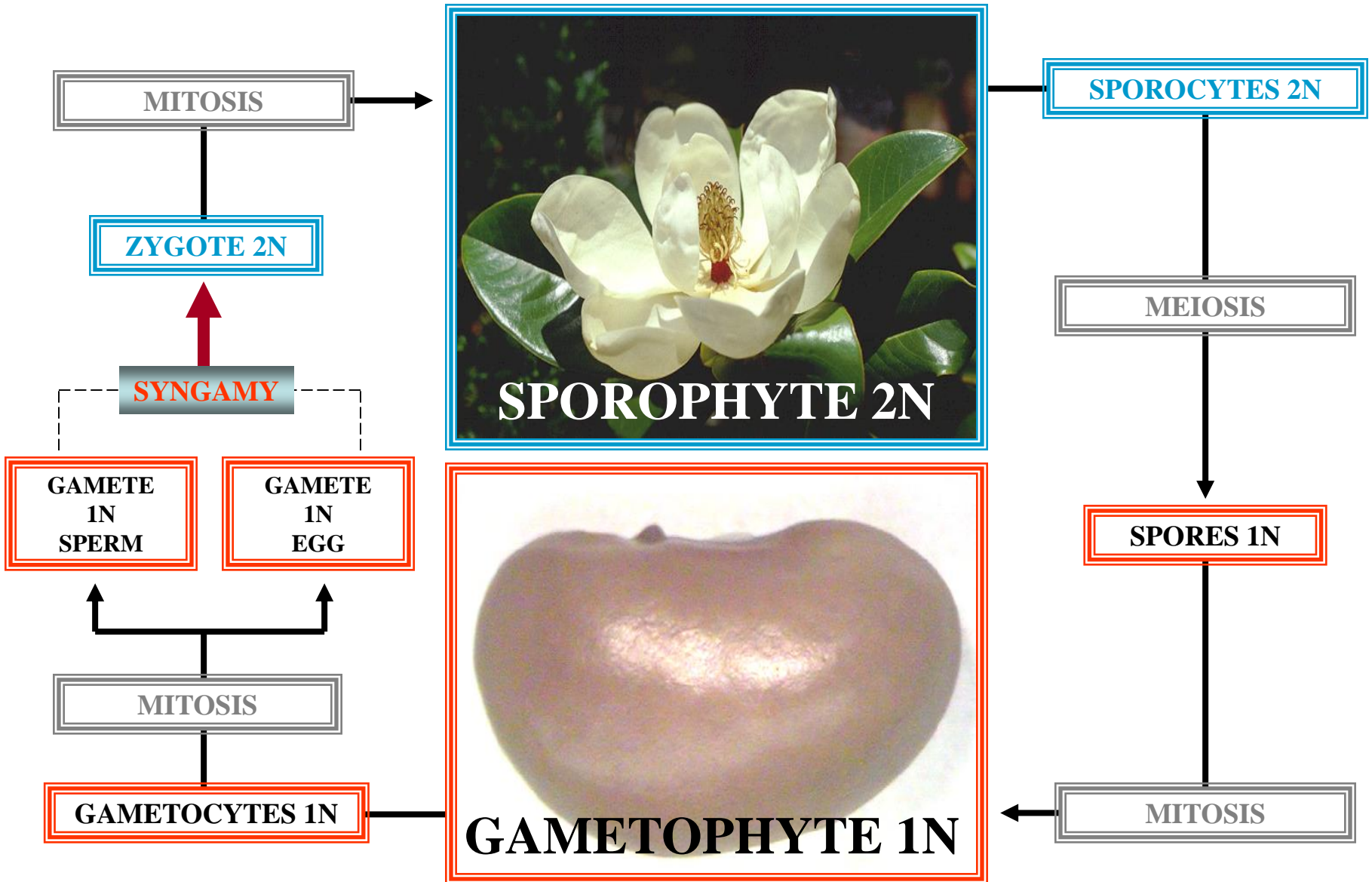
# ANGIOSPERM LIFE CYCLE



# ANGIOSPERM SPORIC LIFE CYCLE

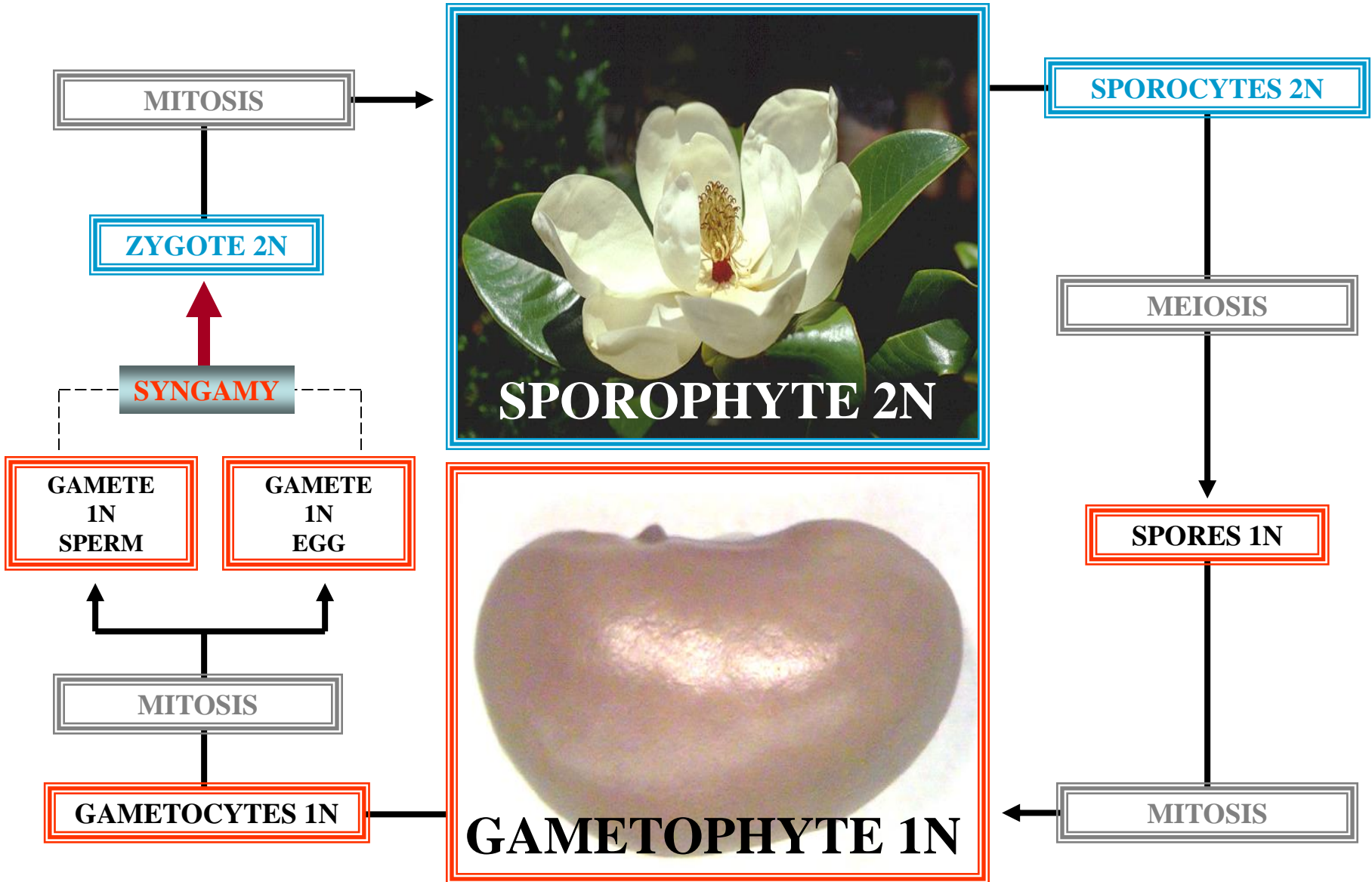
i

h



# ANGIOSPERM

## SPORIC HETEROMORPHIC LIFE CYCLE



# **LECTURE QUIZ**

**WEDNESDAY  
19 JANUARY**

# LECTURE QUIZ

SEXUAL  
LIFE CYCLES





# **LECTURE QUIZ**

**FORMAT  
MULTIPLE CHOICE  
QUESTIONS**

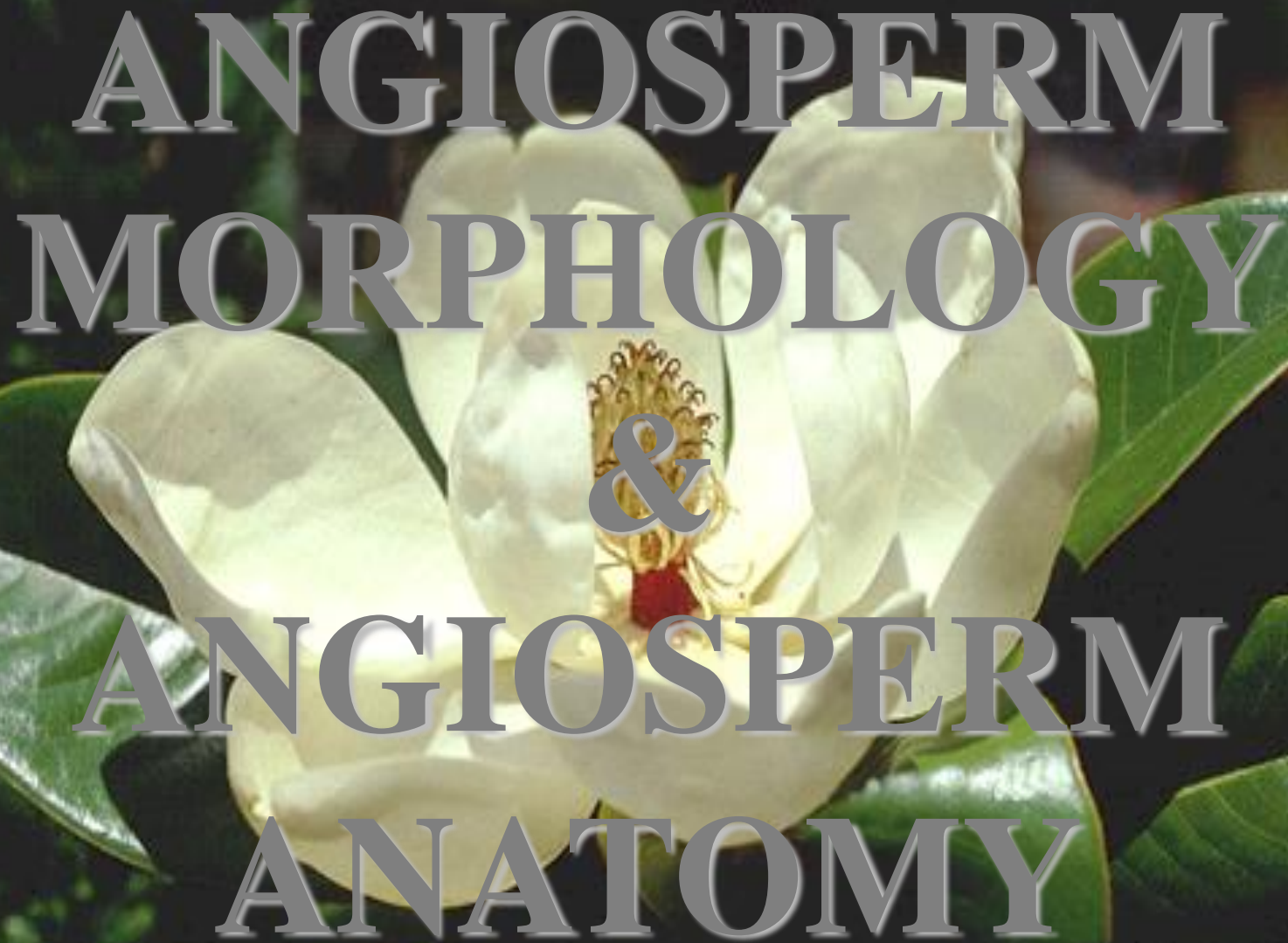
**BIOLOGY 460 / 560**

**PLANT**

**PHYSIOLOGY**

**COURSE**

**COMPONENTS**



ANGIOSPERM  
MORPHOLOGY  
&  
ANGIOSPERM  
ANATOMY



**ANGIOSPERM  
CYTOLOGY**