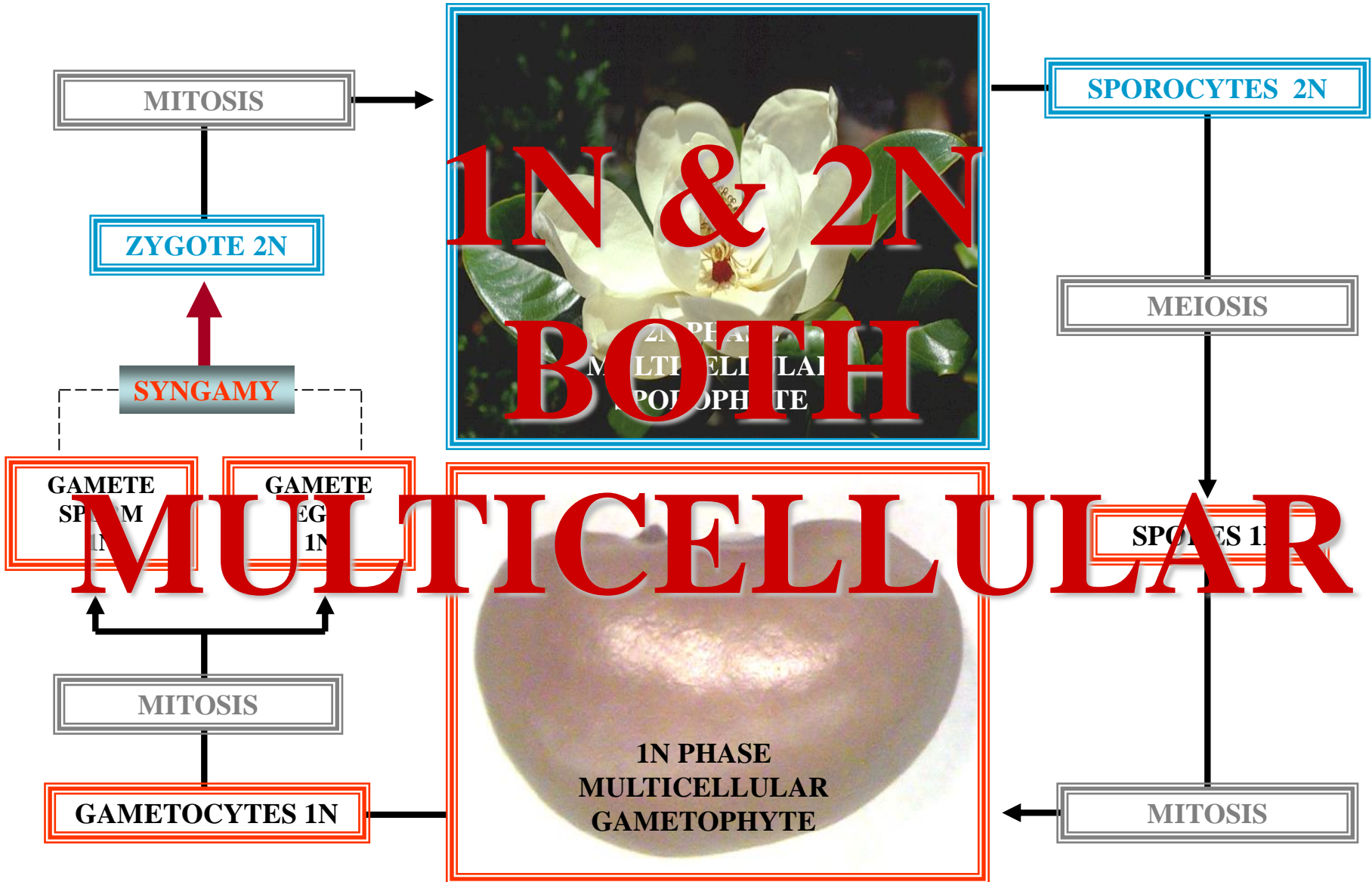


# PLANT SPORIC LIFE CYCLE



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

**ISOMORPHIC  
SPORIC  
LIFE CYCLE**



**ISOMORPHIC  
SPORIC LIFE CYCLE**

**SPOROPHYTE (2N)**

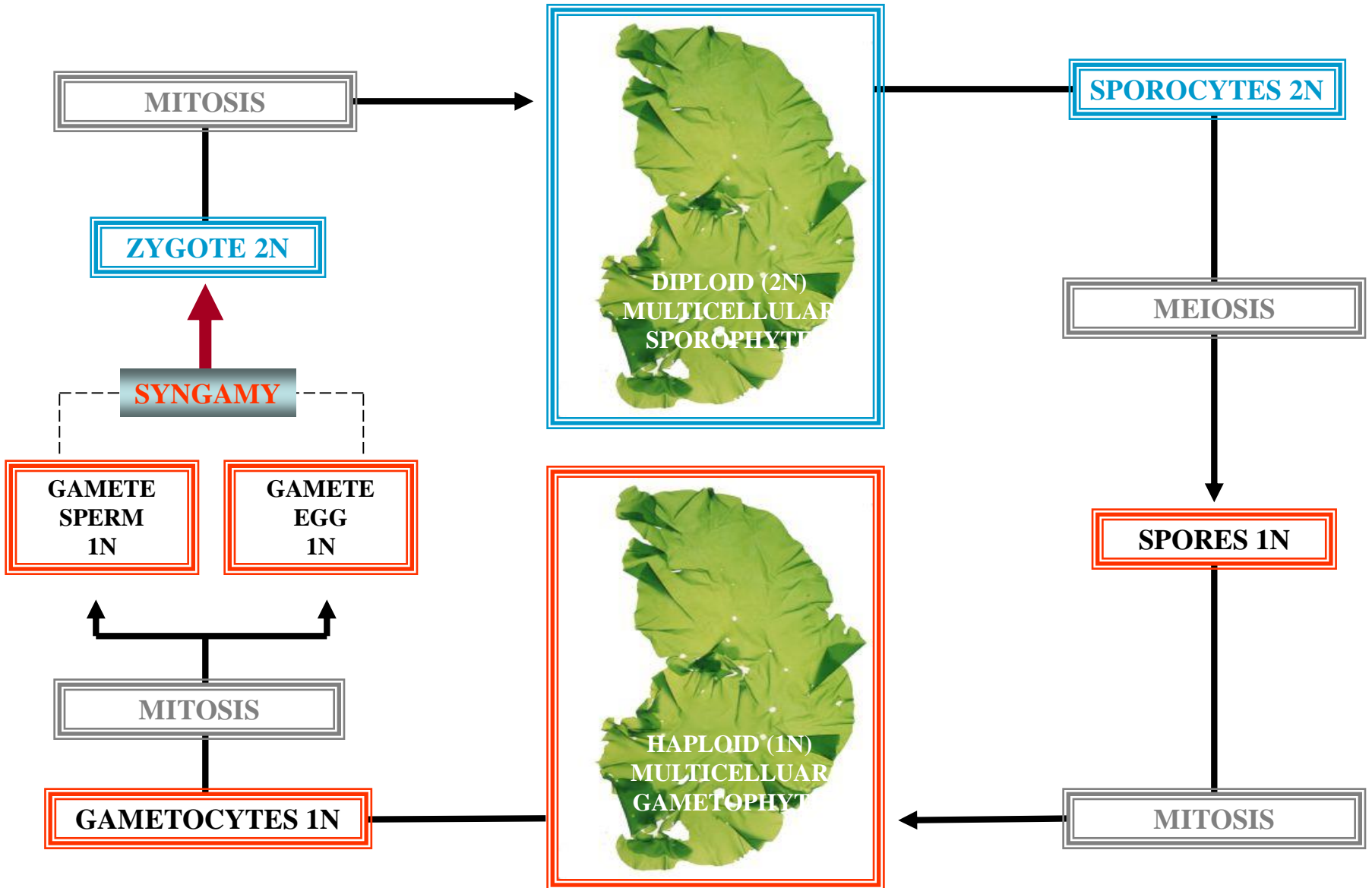
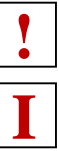
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**GAMETOPHYTE (1N)**

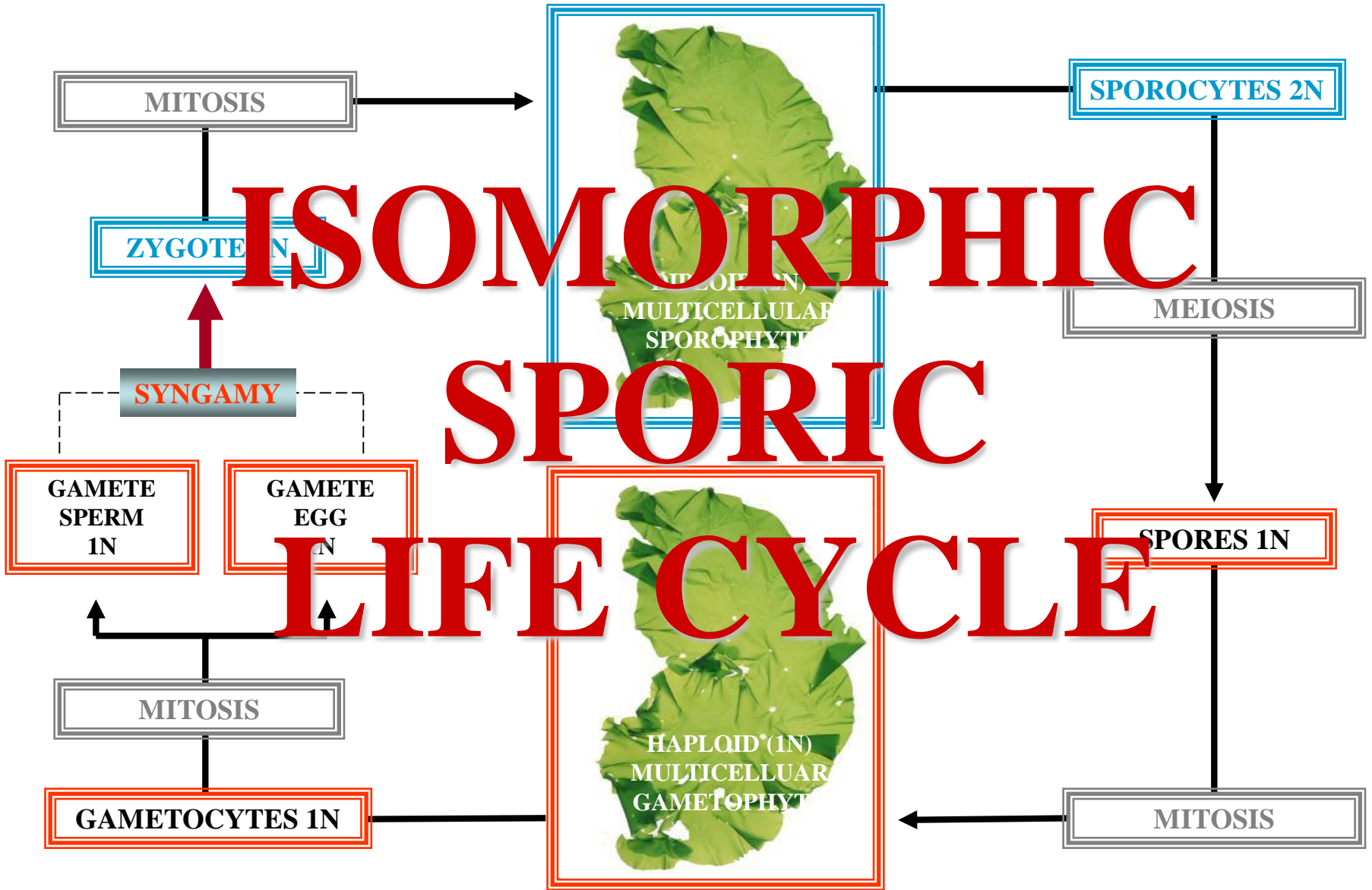
**SIMILAR MORPHOLOGY**

**ISOMORPHIC  
SPORIC LIFE CYCLE**

# ALGAE PLANT SPORIC LIFE CYCLE



# ALGAE PLANT SPORIC LIFE CYCLE



**HETEROMORPHIC  
SPORIC  
LIFE CYCLE**



**HETEROMORPHIC  
SPORIC LIFE CYCLE**

**SPOROPHYTE (2N)**

**&**

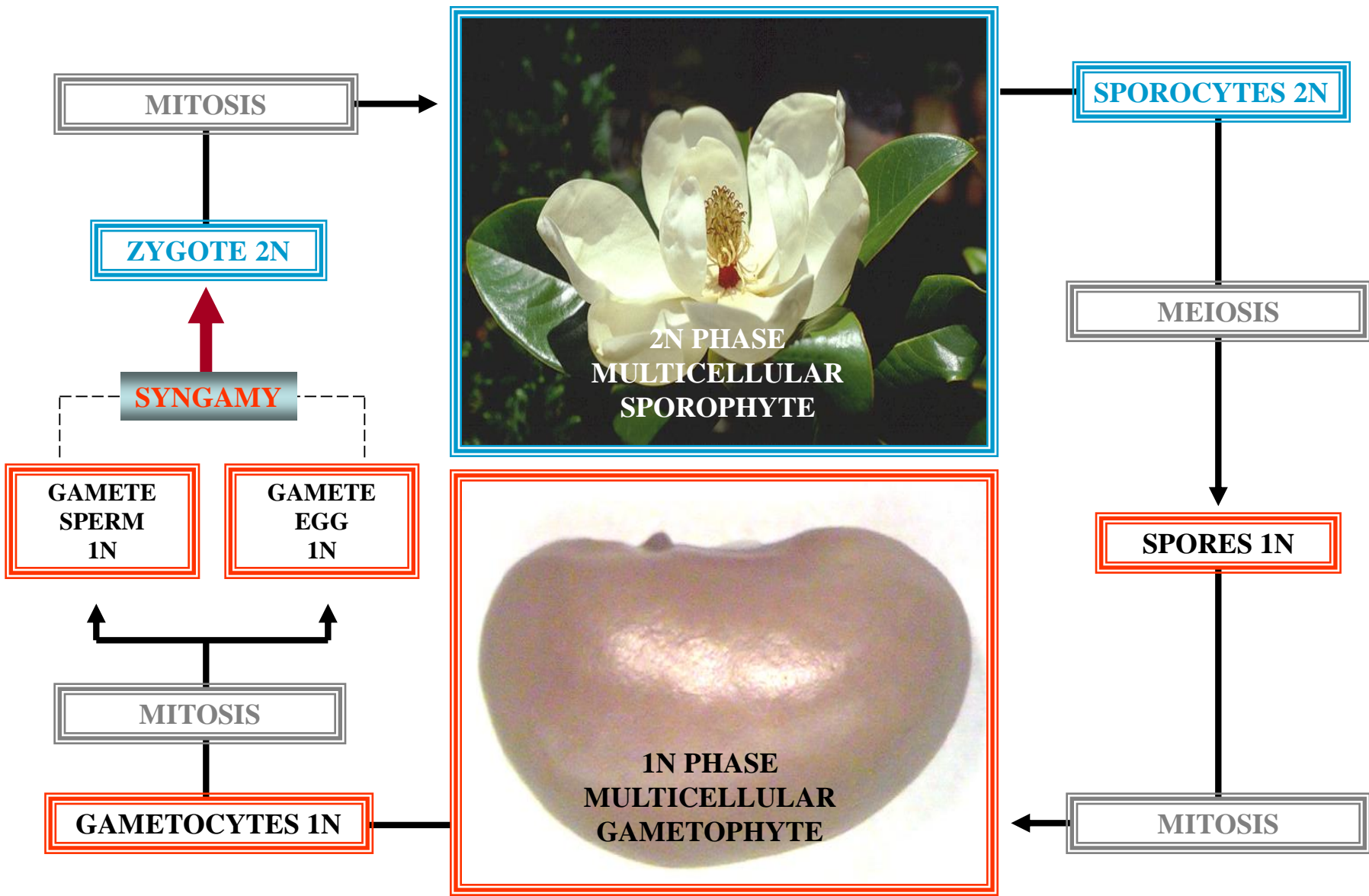
**GAMETOPHYTE (1N)**

**DIFFER MORPHOLOGY**

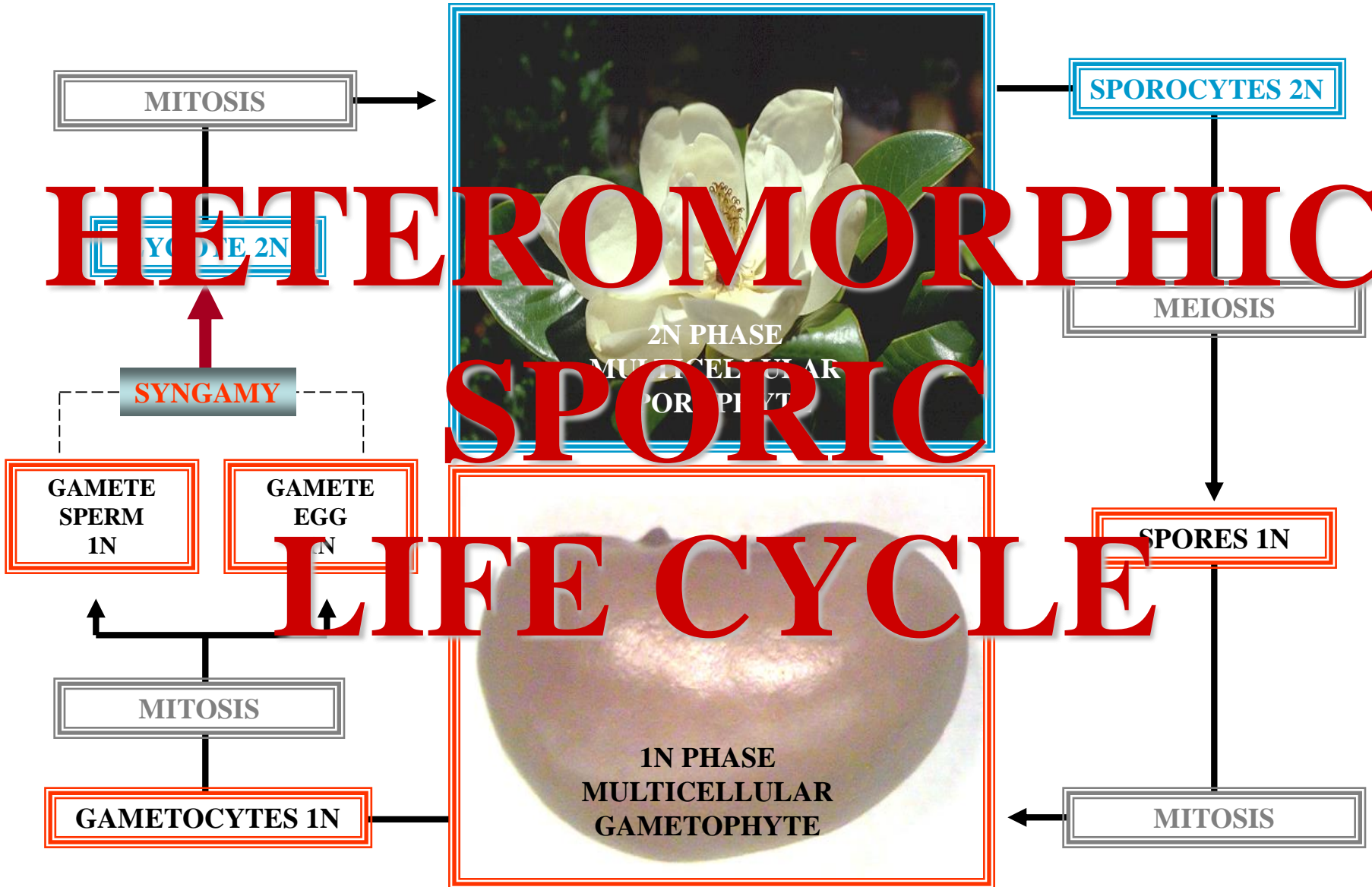
**HETEROMORPHIC  
SPORIC LIFE CYCLE**



# MAGNOLIA PLANT SPORIC LIFE CYCLE



# MAGNOLIA PLANT SPORIC LIFE CYCLE



**QUESTION**

**ISOMORPHIC L.C.**

**&**

**HETEROMORPHIC L.C.**

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

**QUESTION**



**ANSWER**

**SPORIC  
LIFE CYCLE**

**ANSWER**



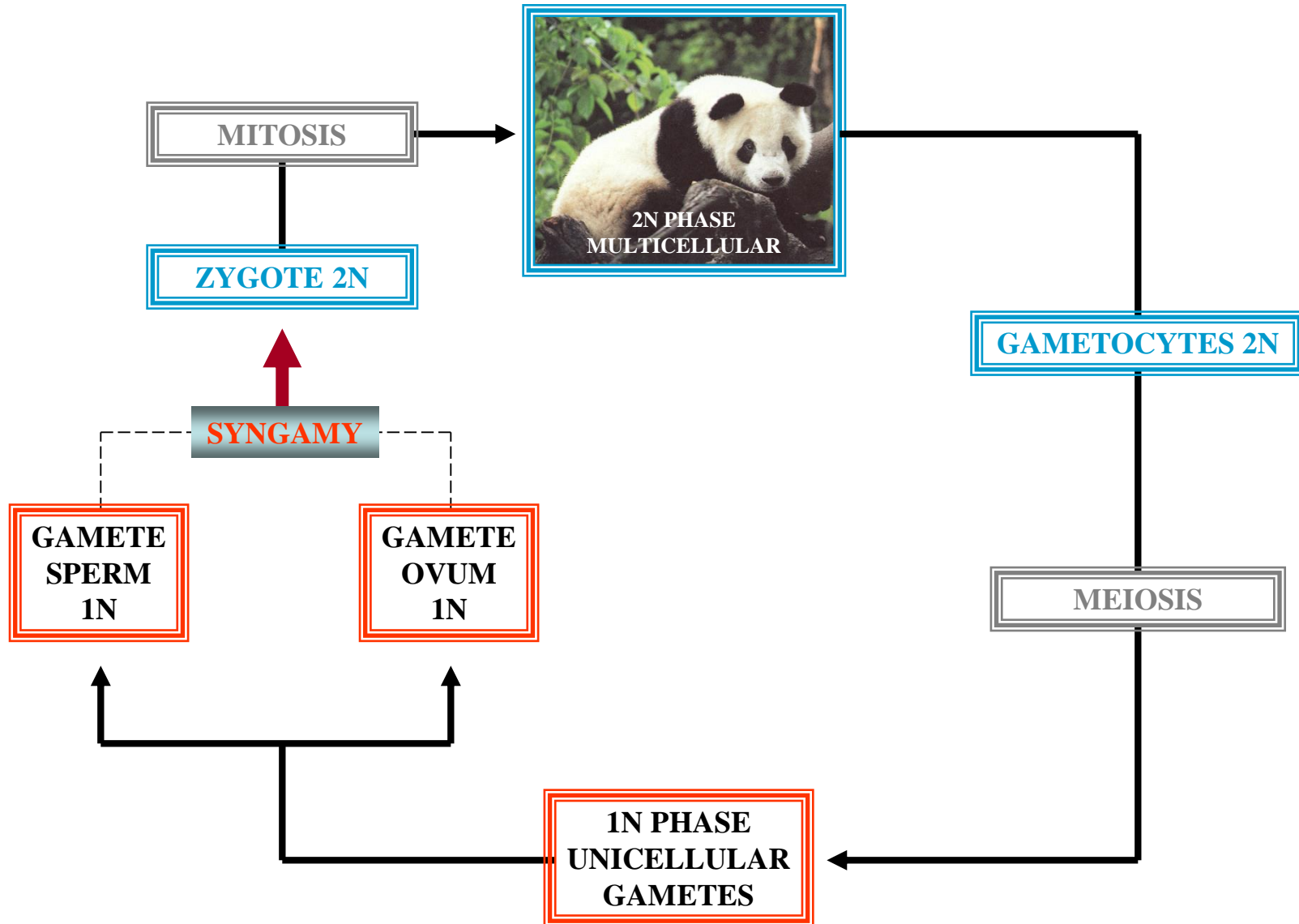
**EUKARYOTE  
SEXUAL  
LIFE CYCLES  
SUMMARY**

# QUESTION

WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH ANIMALS?

# QUESTION

# ANIMAL GAMETIC LIFE CYCLE



# QUESTION

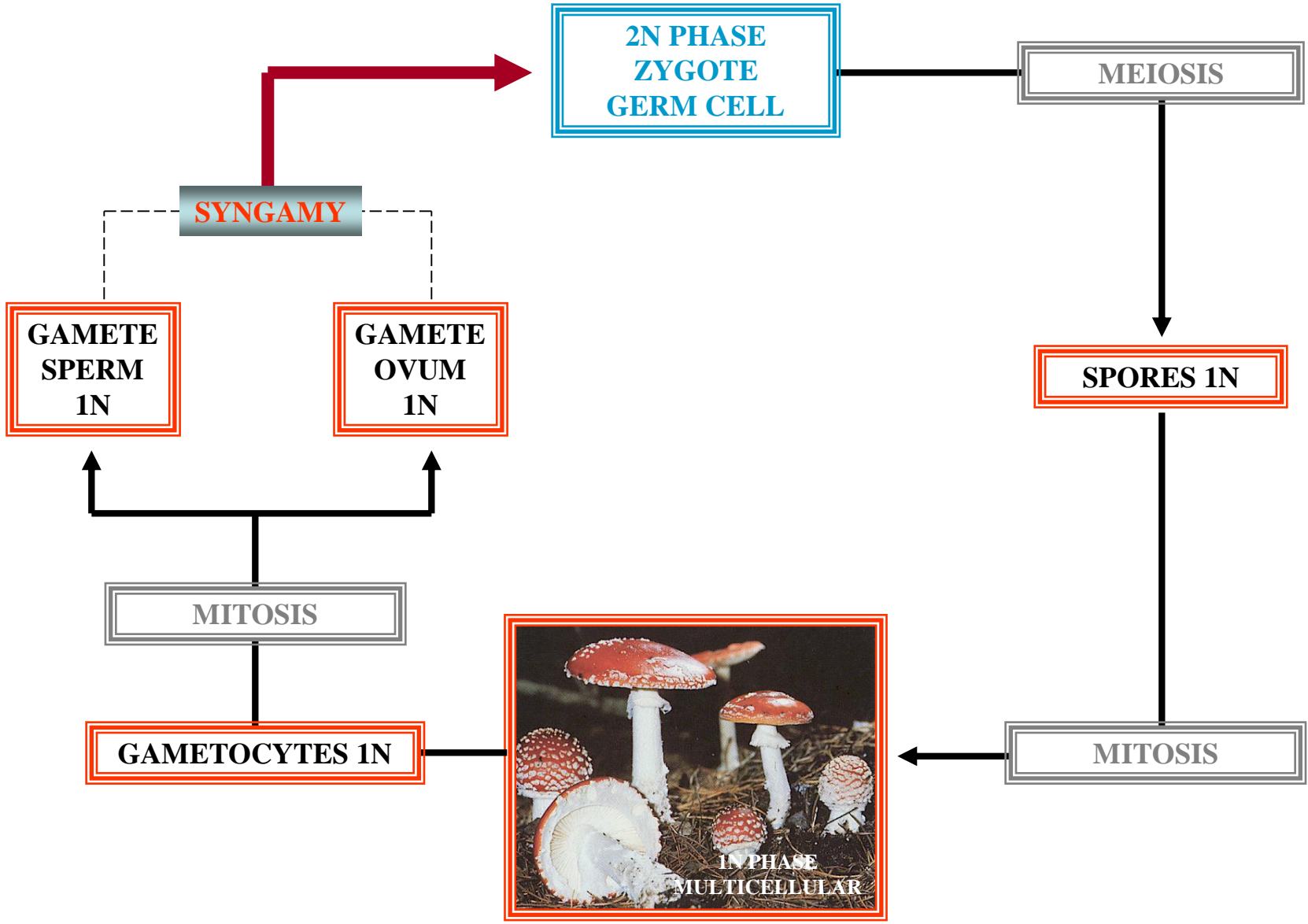
WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH FUNGI?

# QUESTION



# FUNGUS

## ZYGOTIC LIFE CYCLE



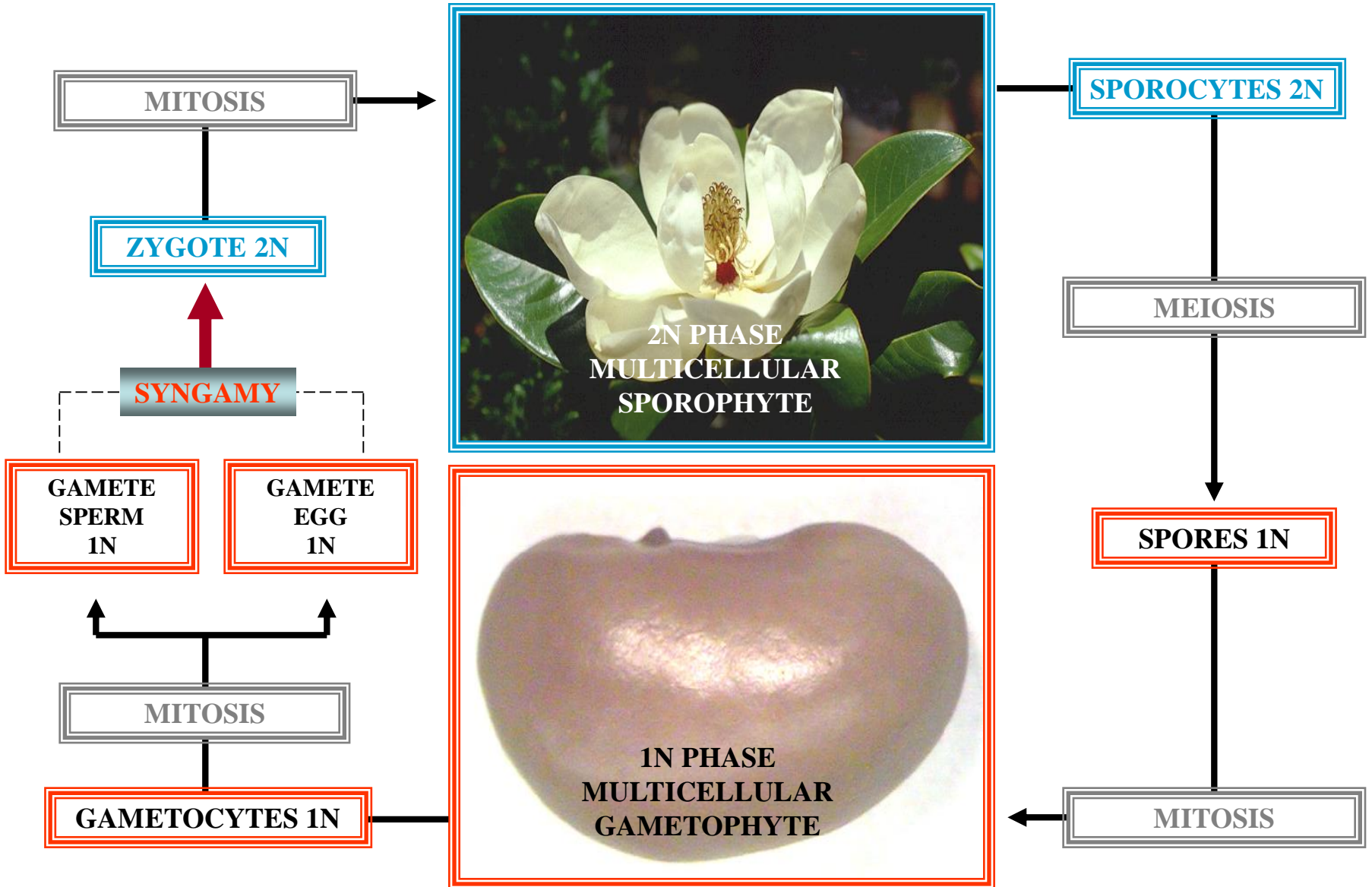
# QUESTION

WHICH LIFE CYCLE  
IS ASSOCIATED  
WITH PLANTS?

# QUESTION



# PLANT SPORIC LIFE CYCLE





# GAMETES

# GAMETE TYPES

# **SEXUAL LIFE CYCLE GAMETE TYPES**



**ISOGAMOUS GAMETES**

**SEXUAL LIFE CYCLE  
GAMETE TYPES**

# **SEXUAL LIFE CYCLE**

## **GAMETE TYPES**



**ISOGAMOUS GAMETES**

**ANISOGAMOUS GAMETES**

# **SEXUAL LIFE CYCLE**

## **GAMETE TYPES**

# SEXUAL LIFE CYCLE GAMETE TYPES



ISOGAMOUS GAMETES  
ANISOGAMOUS GAMETES  
OOGAMOUS GAMETES

SEXUAL LIFE CYCLE  
GAMETE TYPES



# SEXUAL LIFE CYCLE

## GAMETE TYPES

I

**M = MALE GAMETE**

**F = FEMALE GAMETE**

# SEXUAL LIFE CYCLE

## GAMETE TYPES

# **ISOGAMOUS GAMETES**



# ISOGAMOUS GAMETES

M&F GAMETE  
EQUAL SIZE

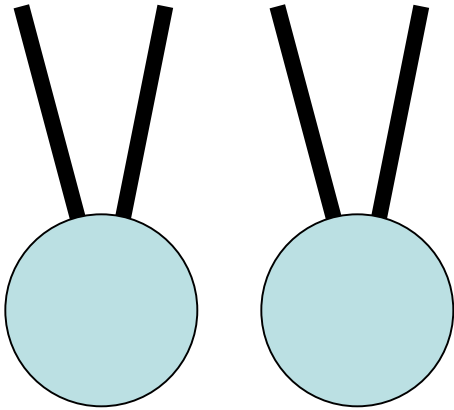
# ISOGAMOUS GAMETES

**ISOGAMOUS GAMETES**

**M&F GAMETE  
MOTILE**

**ISOGAMOUS GAMETES**

# GAMETE TYPES



**ISOGAMOUS**

**———— = FLAGELLUM**

# **ANISOGAMOUS GAMETES**



# **ANISOGAMOUS GAMETES**

**M&F GAMETE  
DIFFERENT SIZE**

**---**

**F LARGER**

# **ANISOGAMOUS GAMETES**

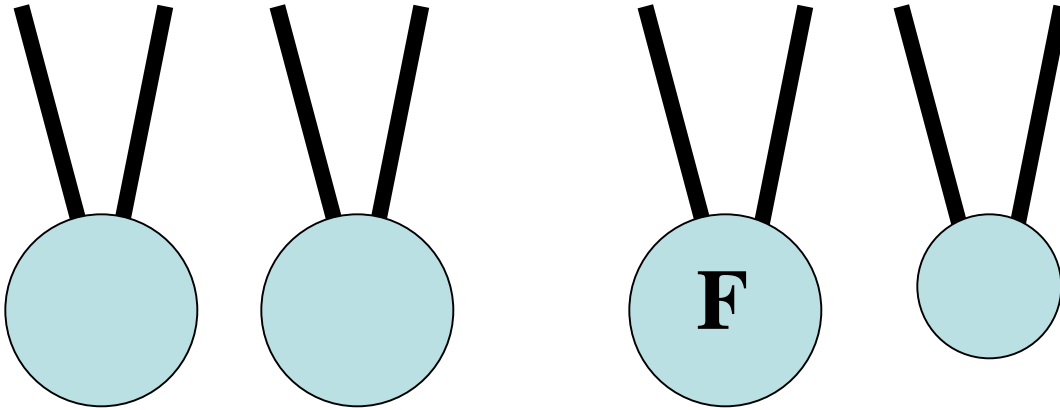
**ANISOGAMOUS GAMETES**

**M&F GAMETE  
MOTILE**

**ANISOGAMOUS GAMETES**



# GAMETE TYPES



**ISOGAMOUS**

**ANISOGAMOUS**

**F = FEMALE GAMETE**

**———— = FLAGELLUM**

**OOGAMOUS  
GAMETES**



**OOGAMOUS GAMETES**

**M&F GAMETE  
DIFFERENT SIZE**

**OOGAMOUS GAMETES**



**OOGAMOUS GAMETES**

**M&F GAMETE**

**DIFFERENT MOTILITY**

**OOGAMOUS GAMETES**



**OOGAMOUS GAMETES**

**F GAMETE**

**LARGER**

**&**

**NON-MOTILE**

**OOGAMOUS GAMETES**



**OOGAMOUS GAMETES**

**M GAMETE**

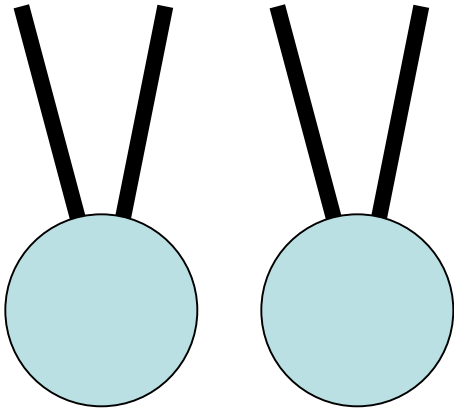
**SMALLER**

**&**

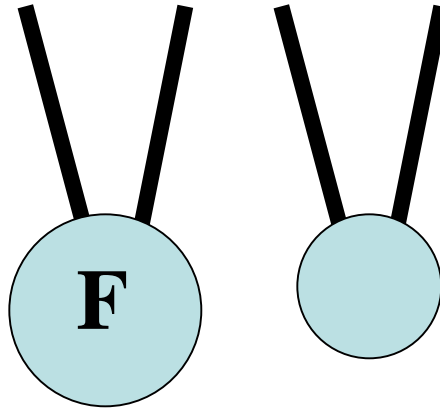
**MOTILE**

**OOGAMOUS GAMETES**

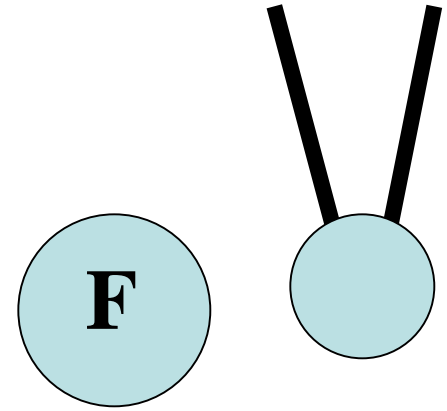
# GAMETE TYPES



**ISO**GAMOUS



**ANISO**GAMOUS



**OOG**AMOUS

**F** = FEMALE GAMETE

**————** = FLAGELLUM



# HUMAN LIFE CYCLE SUMMARY



**QUESTION**



**WHICH LIFE CYCLE  
IS OUR  
LIFE CYCLE?**

**QUESTION**

# SEXUAL LIFE CYCLE



*HOMO SAPIENS*

# SEXUAL LIFE CYCLE



## GAMETIC LIFE CYCLE



*HOMO SAPIENS*

# QUESTION



WHAT TYPE OF  
GAMETES DOES OUR  
LIFE CYCLE HAVE?

QUESTION

# SEXUAL LIFE CYCLE GAMETES



*HOMO SAPIENS*

# SEXUAL LIFE CYCLE GAMETES



## OOGAMOUS GAMETES



*HOMO SAPIENS*

# CHAPTER 14

## GENETICS

# GENETICS



# GENETICS



**GENETICS**

**STUDY  
INHERITANCE**

**GENETICS**

# **BLENDING THEORY**

# **BLENDING THEORY**

# **BLENDING THEORY**

**PARENTAL CHARACTERS**

**“BLEND”**

**WITHIN OFFSPRING**

**BLENDING THEORY**



# **EXAMPLE**

# **BLENDING THEORY**

# BLENDING THEORY



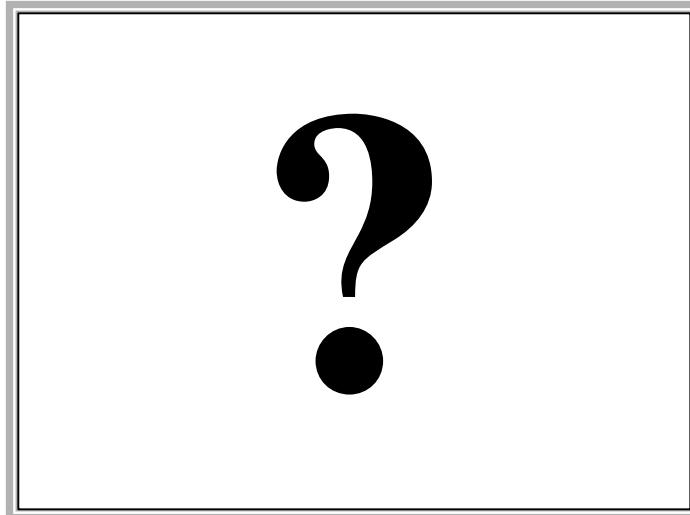
**X**



# BLENDING THEORY



X





# BLENDING THEORY



X





# **BLENDING THEORY**

**PRIOR**

**MODERN GENETICS**

**“BLENDING THEORY”**

**WIDELY ACCEPTED**

**BLENDING THEORY**



# BLENDING THEORY



X



**“BLENDING THEORY”  
PROBLEM**



# BLENDING THEORY



X



**“BLENDING THEORY”**

**DID NOT**

**ALWAYS WORK**



# BLENDING THEORY



X



# BLENDING THEORY



X



# BLENDING THEORY



X



# BLENDING THEORY



X





# BLENDING THEORY



X



# BLENDING THEORY



X



# BLENDING THEORY



X



# BLENDING THEORY



X



# BLENDING THEORY



X



# **BLENDING THEORY**

**PRIOR**

**MODERN GENETICS**

**“BLENDING THEORY”**

**WIDELY ACCEPTED**

**BLENDING THEORY**



# BLENDING THEORY



X



**“BLENDING THEORY”  
PROBLEM**



# BLENDING THEORY



X



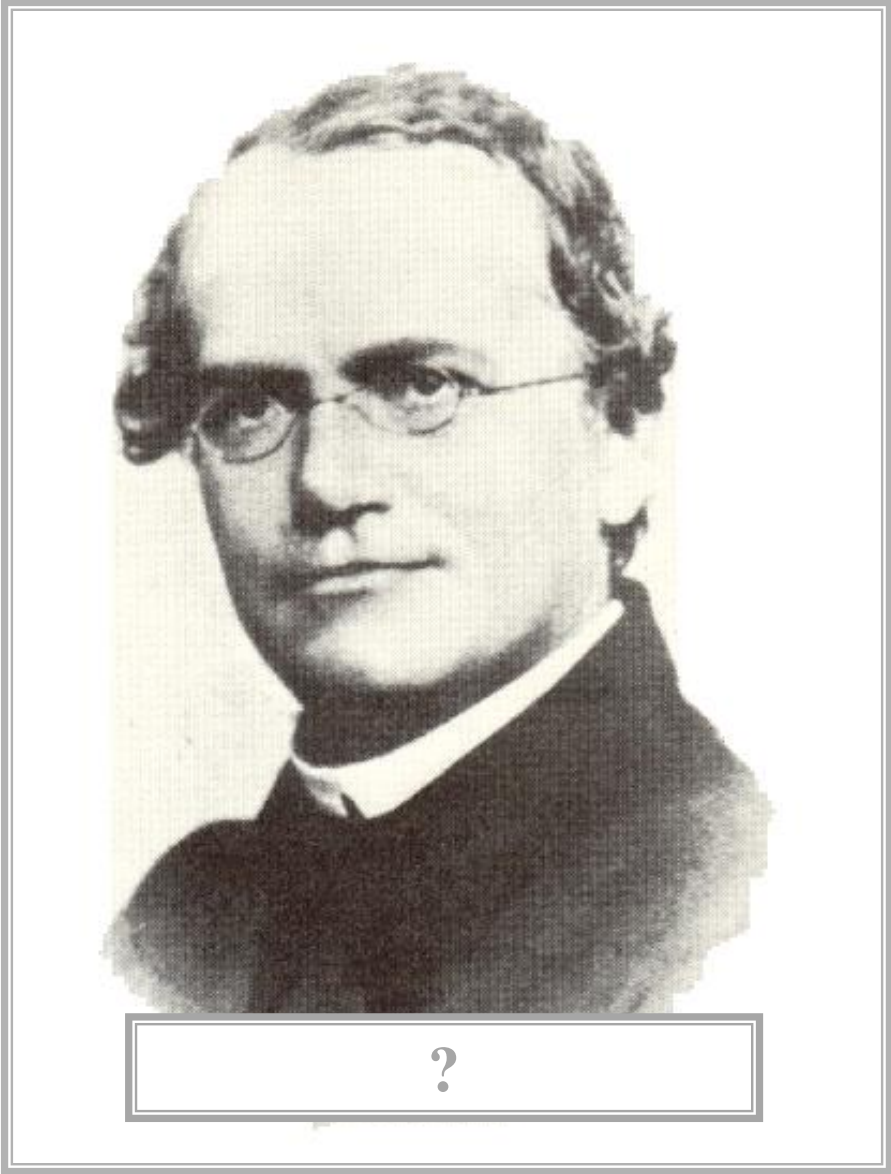
**“BLENDING THEORY”**

**DID NOT**

**ALWAYS WORK**







?

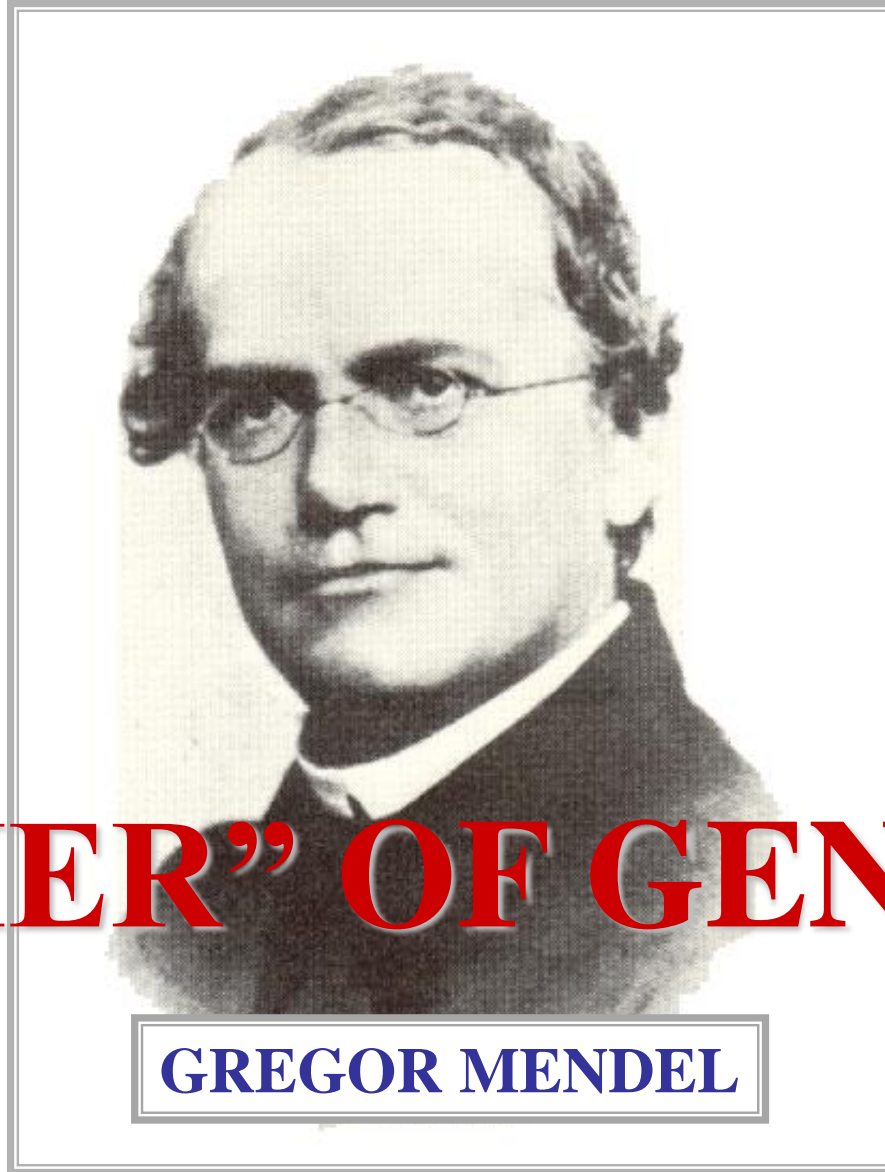


**GREGOR MENDEL**

# GREGOR MENDEL

## 1822 - 1884

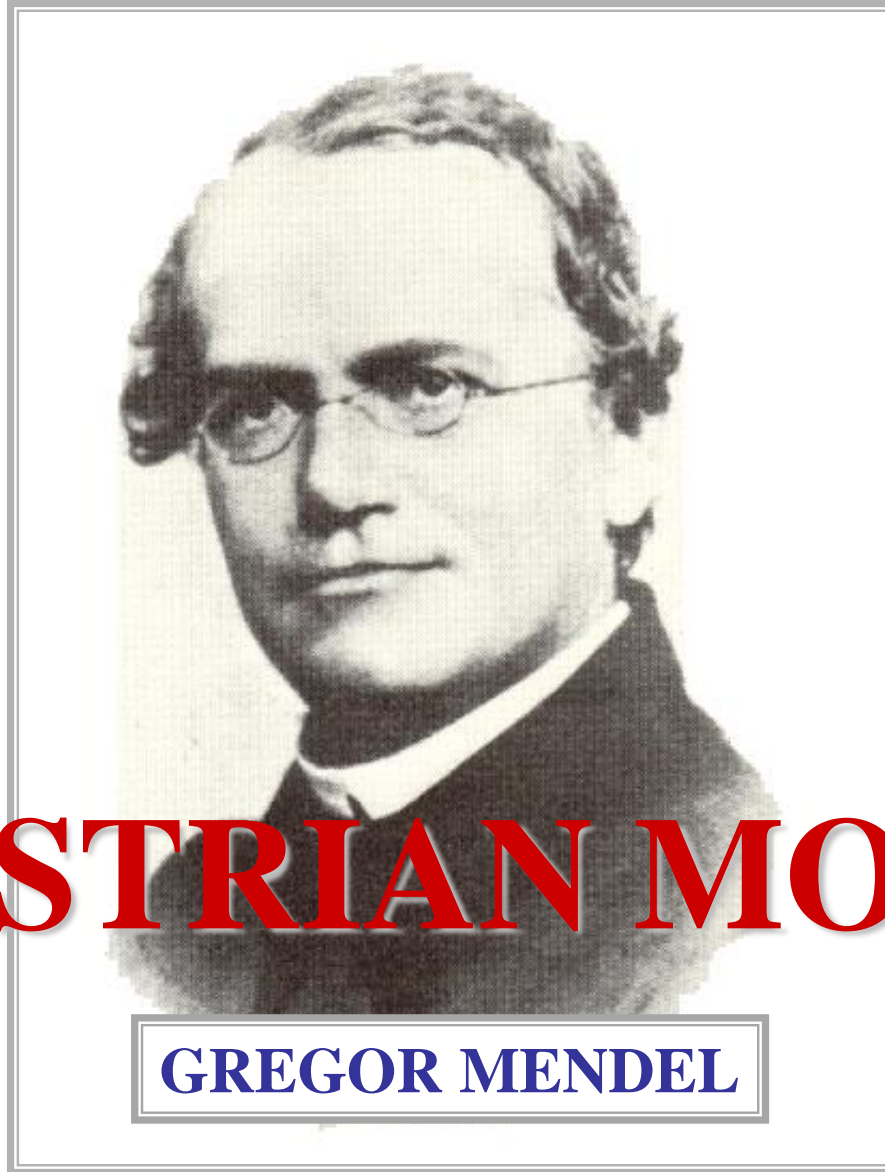
# FATHER OF GENETICS



**“FATHER” OF GENETICS**

**GREGOR MENDEL**

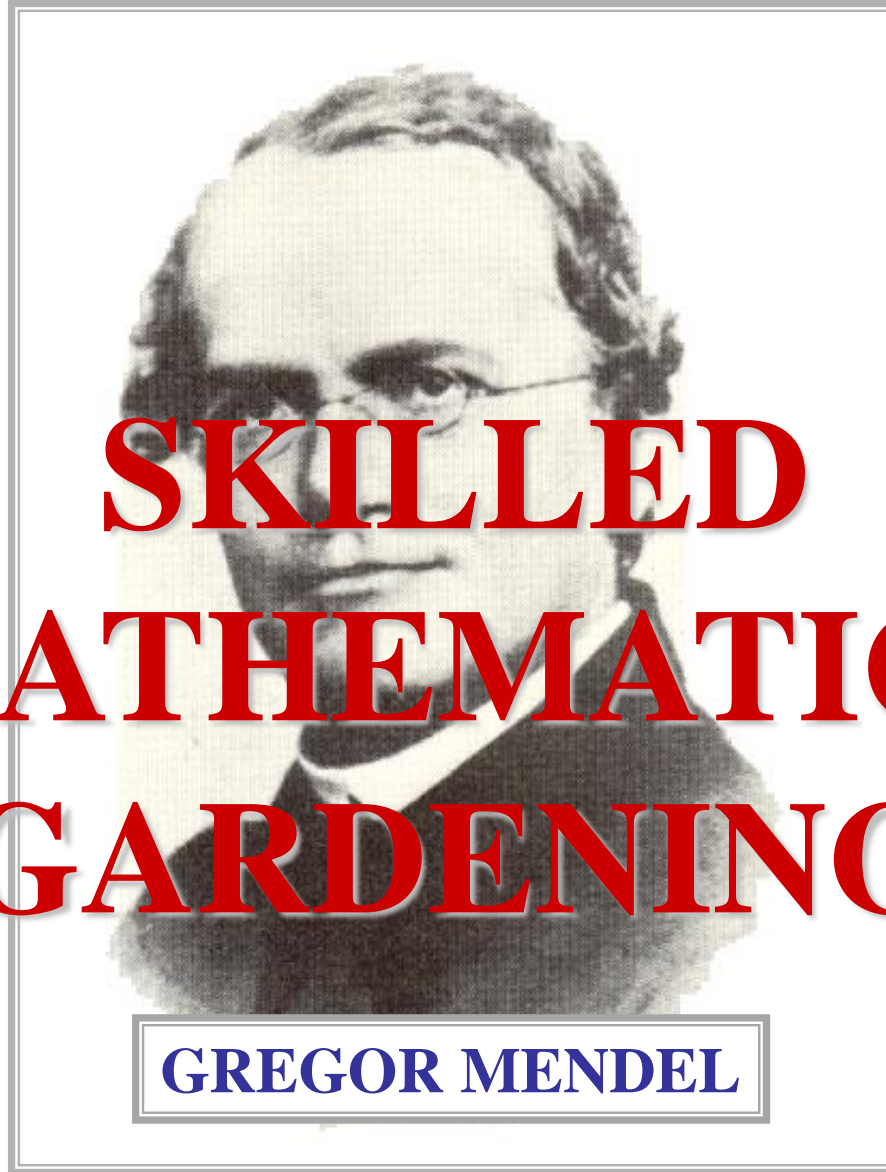
# FATHER OF GENETICS



**AUSTRIAN MONK**

**GREGOR MENDEL**

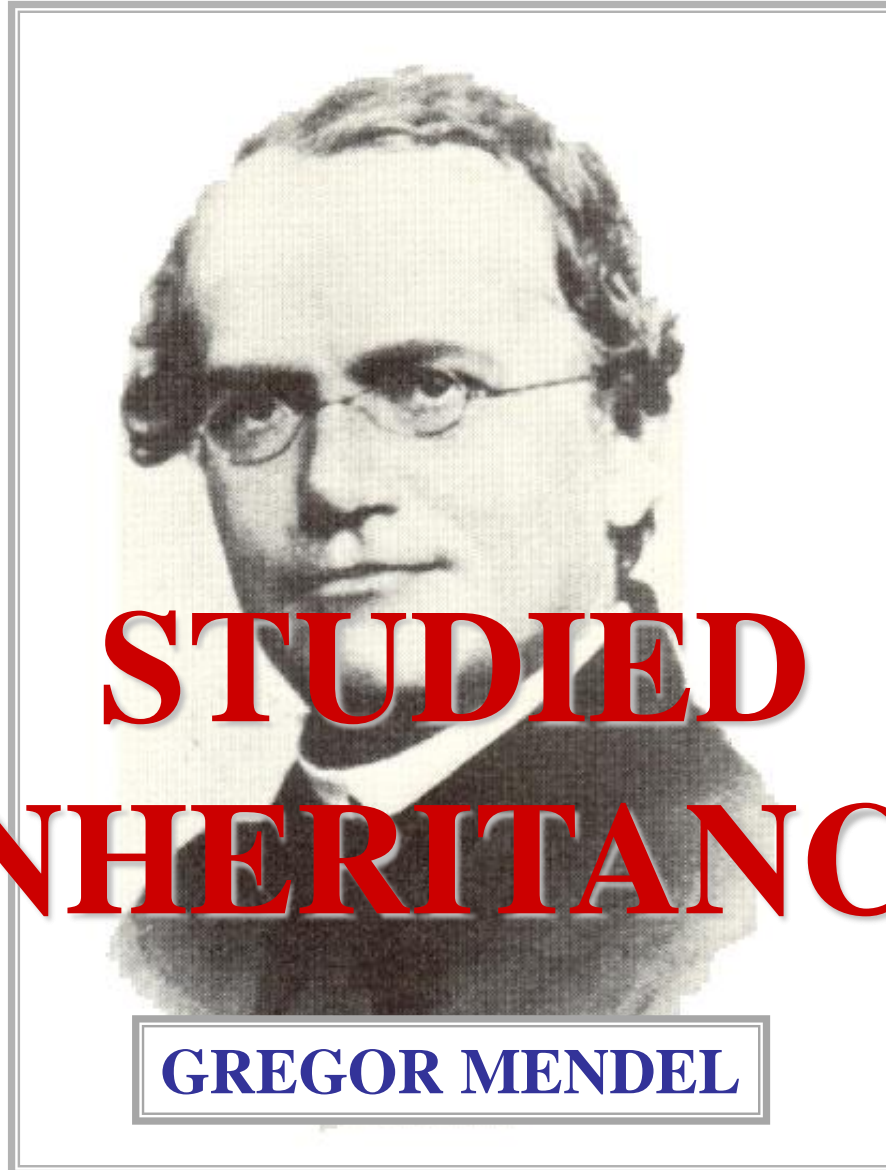
# FATHER OF GENETICS



**SKILLED  
MATHEMATICS  
GARDENING**

**GREGOR MENDEL**

# FATHER OF GENETICS



**STUDIED**

**INHERITANCE**

**GREGOR MENDEL**

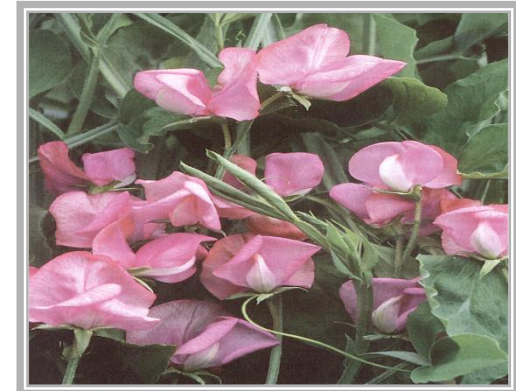
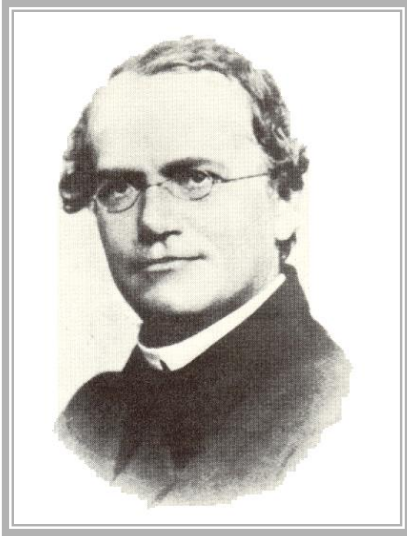
















# STUDIED GARDEN PEA INHERITANCE

**GARDEN  
PEA**

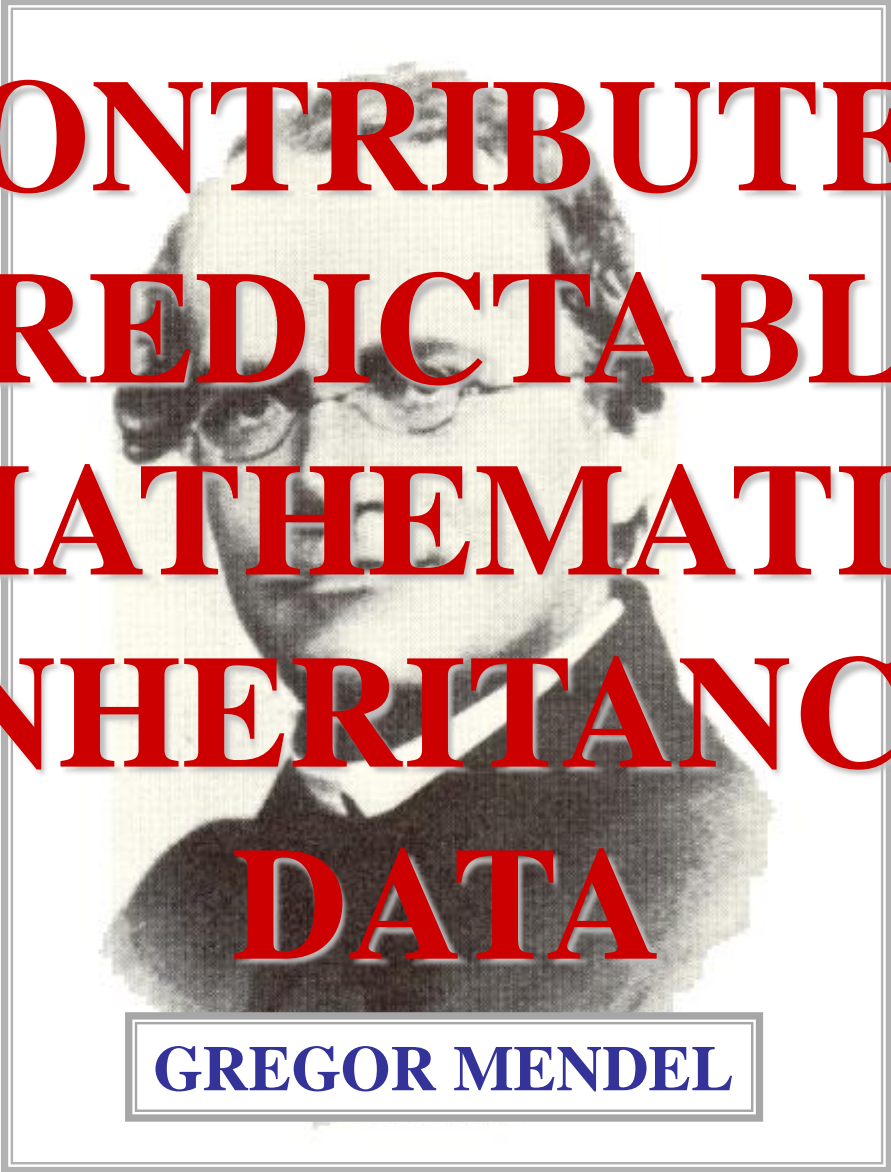


# GARDEN PEA CHARACTERS



<b>Flower color</b>	 Purple	 White
<b>Flower position</b>	 Axial	 Terminal
<b>Seed color</b>	 Yellow	 Green
<b>Seed shape</b>	 Round	 Wrinkled
<b>Pod shape</b>	 Inflated	 Constricted
<b>Pod color</b>	 Green	 Yellow
<b>Stem length</b>	 Tall	 Dwarf

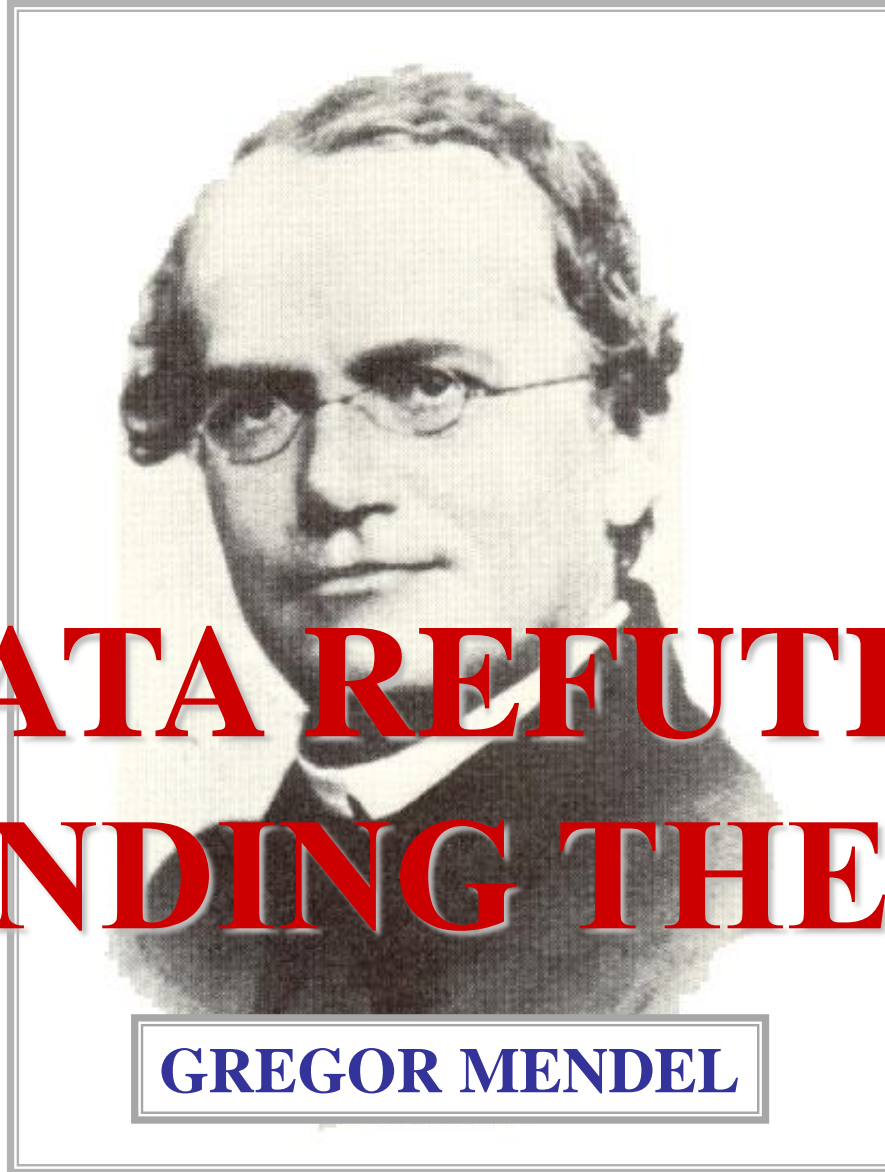
# FATHER OF GENETICS

A black and white portrait of Gregor Mendel, an elderly man with glasses, wearing a suit and tie. The portrait is centered and framed by a double-line border. Overlaid on the portrait is the text 'CONTRIBUTED PREDICTABLE MATHEMATIC INHERITANCE DATA' in large, bold, red, serif capital letters. At the bottom of the portrait, there is a small white box with a blue border containing the name 'GREGOR MENDEL' in blue, serif capital letters.

**CONTRIBUTED  
PREDICTABLE  
MATHEMATIC  
INHERITANCE  
DATA**

**GREGOR MENDEL**

# FATHER OF GENETICS



**DATA REFUTED  
“BLENDING THEORY”**

**GREGOR MENDEL**

# FATHER OF GENETICS

**DATA  
MISUNDERSTOOD  
BY  
CONTEMPORARIES  
WHY?**

**GREGOR MENDEL**

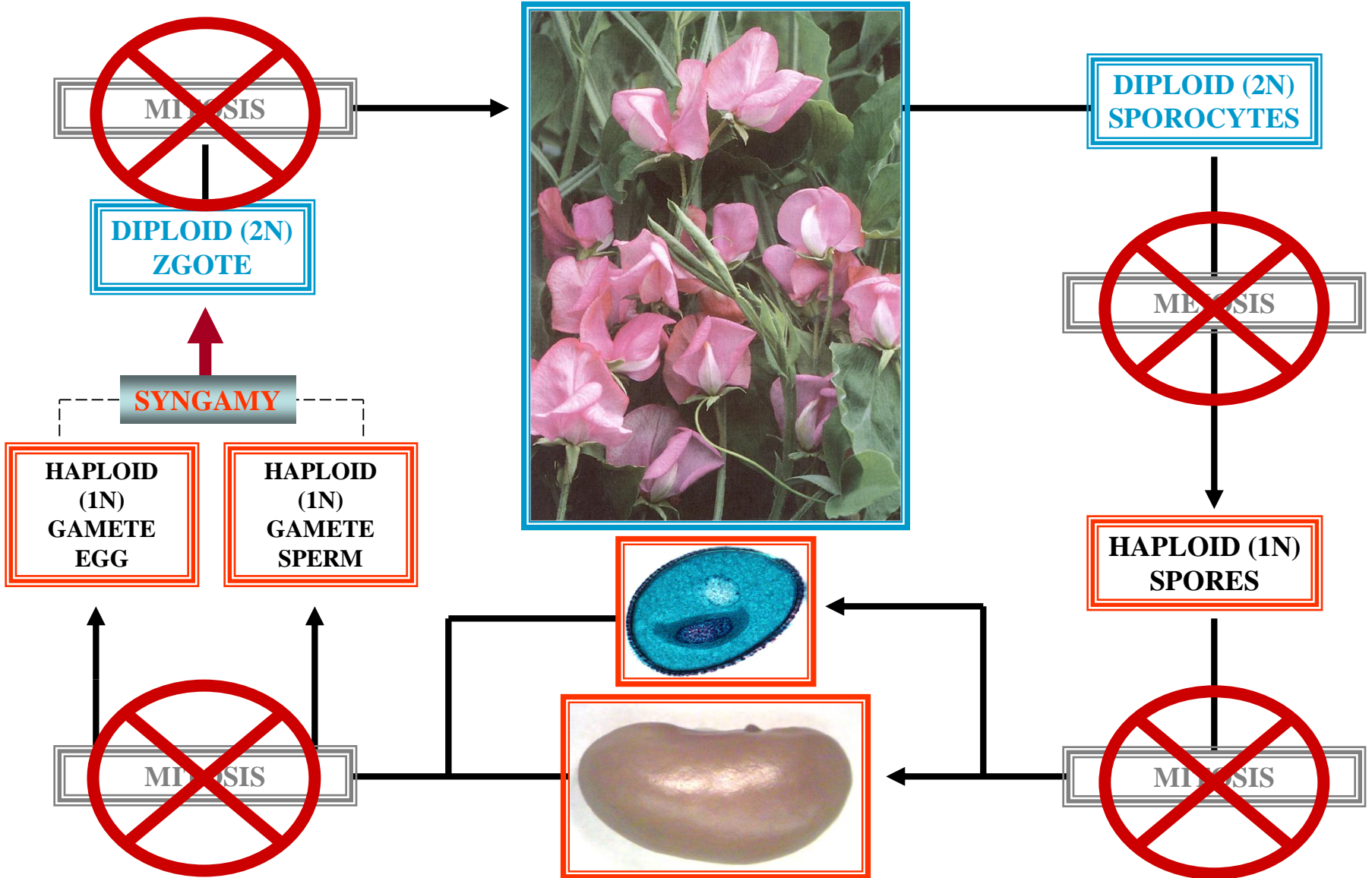
# FATHER OF GENETICS



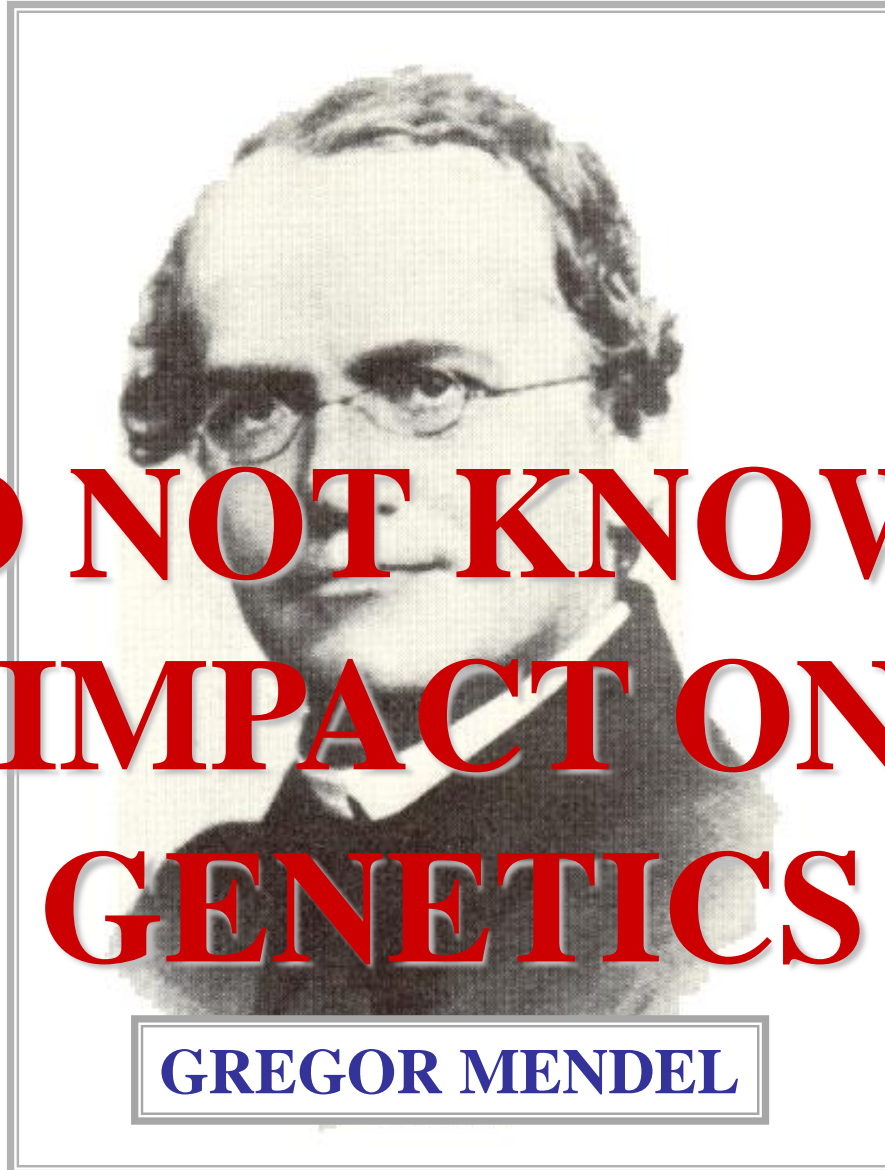
**PRIOR 1900 MEIOSIS  
UNKNOWN**

**GREGOR MENDEL**

# PLANT LIFE CYCLE



# FATHER OF GENETICS



**DIED NOT KNOWING  
IMPACT ON  
GENETICS**

**GREGOR MENDEL**

# FATHER OF GENETICS

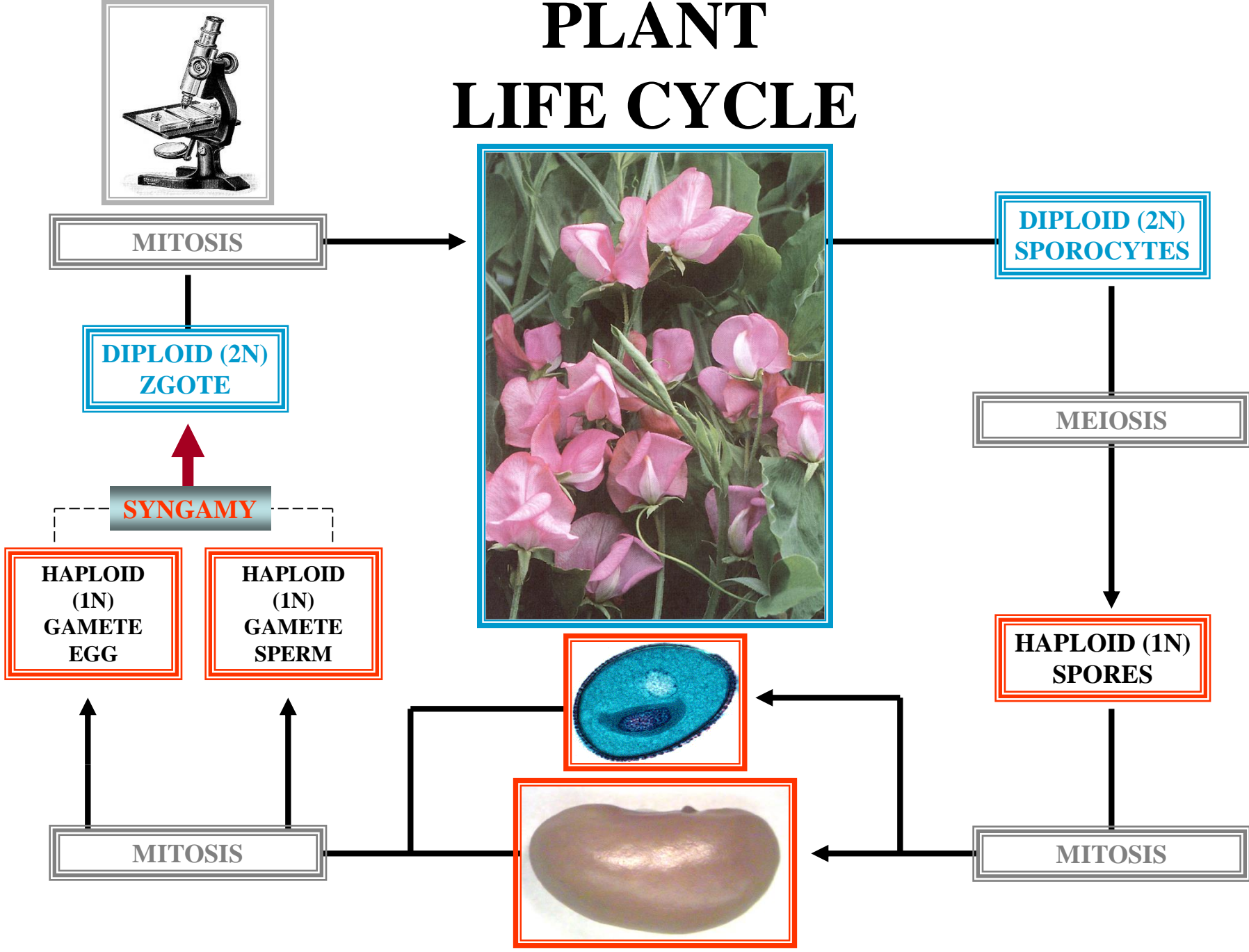


**POST 1900 MEIOSIS  
KNOWN**

**GREGOR MENDEL**



# PLANT LIFE CYCLE



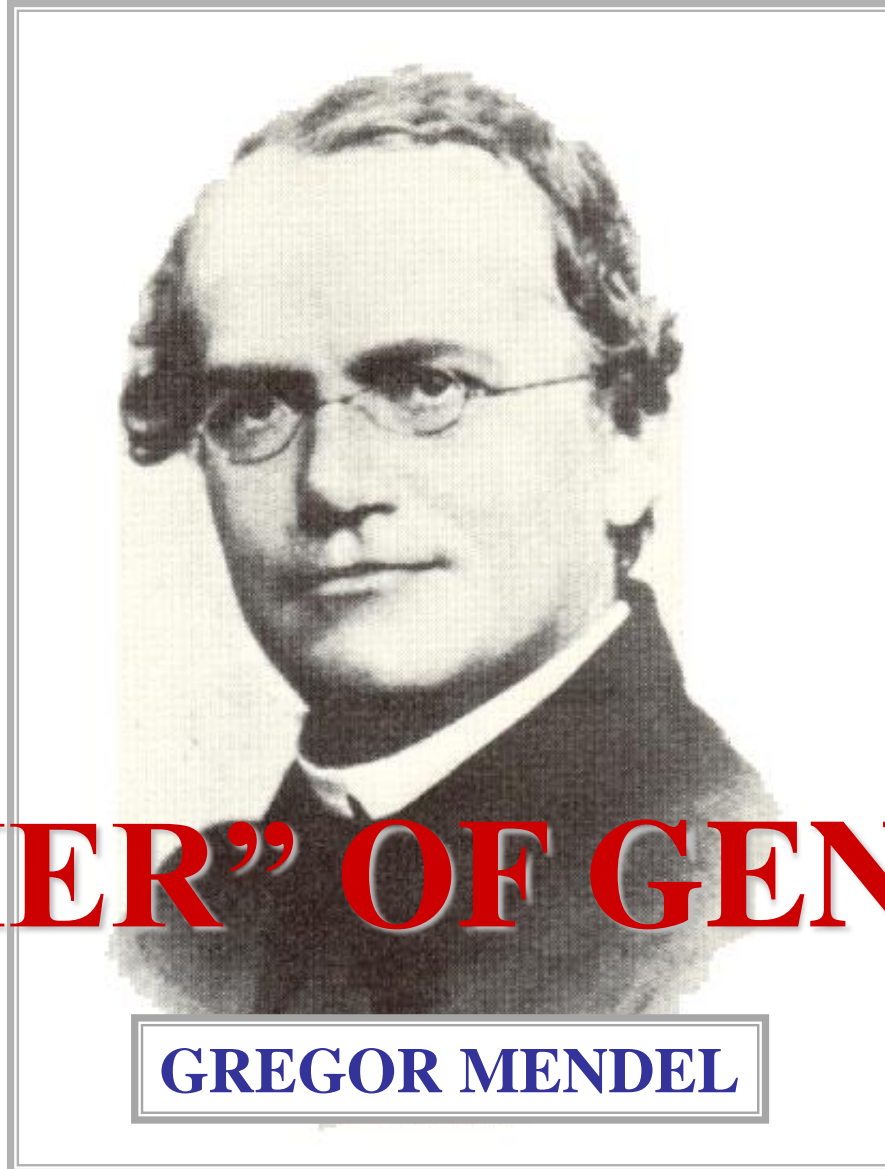
# FATHER OF GENETICS



**DATA  
UNDERSTOOD  
AND  
ACCREDITED**

**GREGOR MENDEL**

# FATHER OF GENETICS



**“FATHER” OF GENETICS**

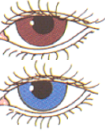
**GREGOR MENDEL**



# MENDELIAN GENETICS

# GENE TERMS

**CHARACTER**

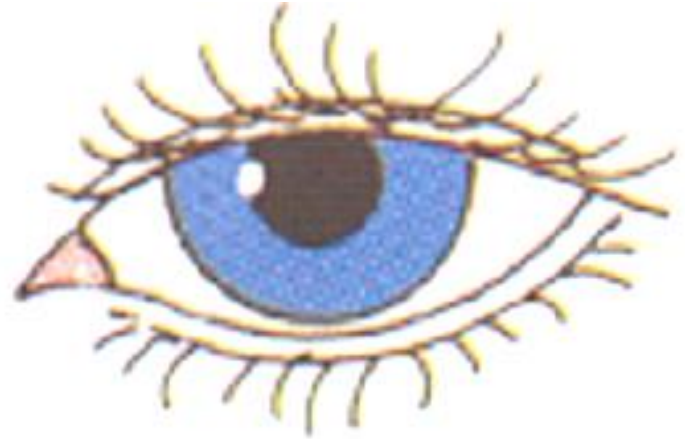
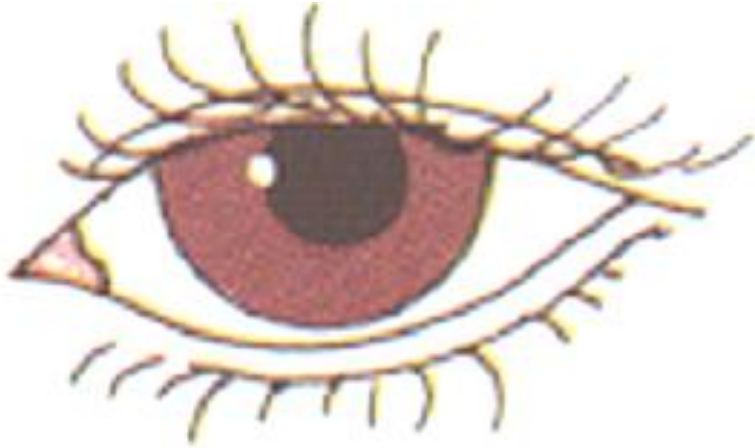


**CHARACTER**

**INHERITABLE  
TRAIT**

**CHARACTER**

# GENE TERMS

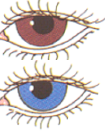


**EYE COLOR**

**CHARACTER**



# **CHARACTER TRAIT**

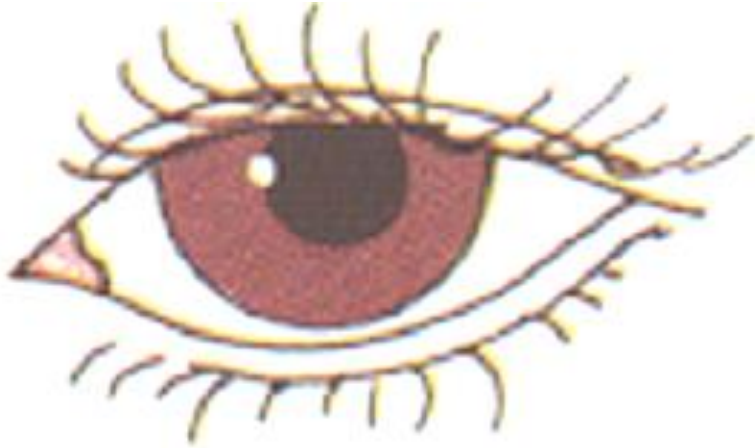


**CHARACTER TRAIT**

**CHARACTER  
VARIANT**

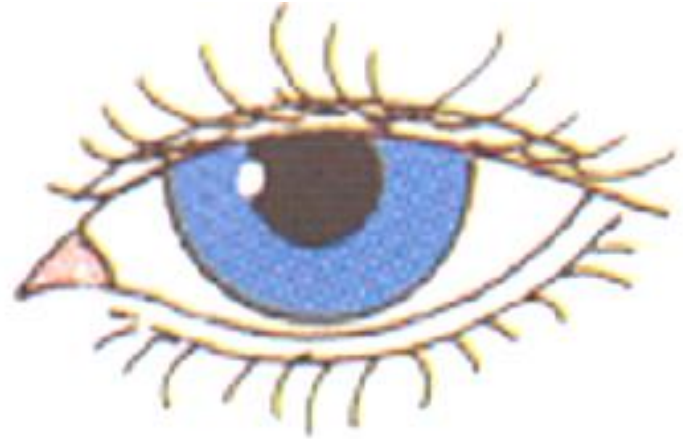
**CHARACTER TRAIT**

# GENE TERMS



**BROWN EYES**

**EYE COLOR**



**BLUE EYES**

**CHARACTER  
TRAIT**

**GENE**