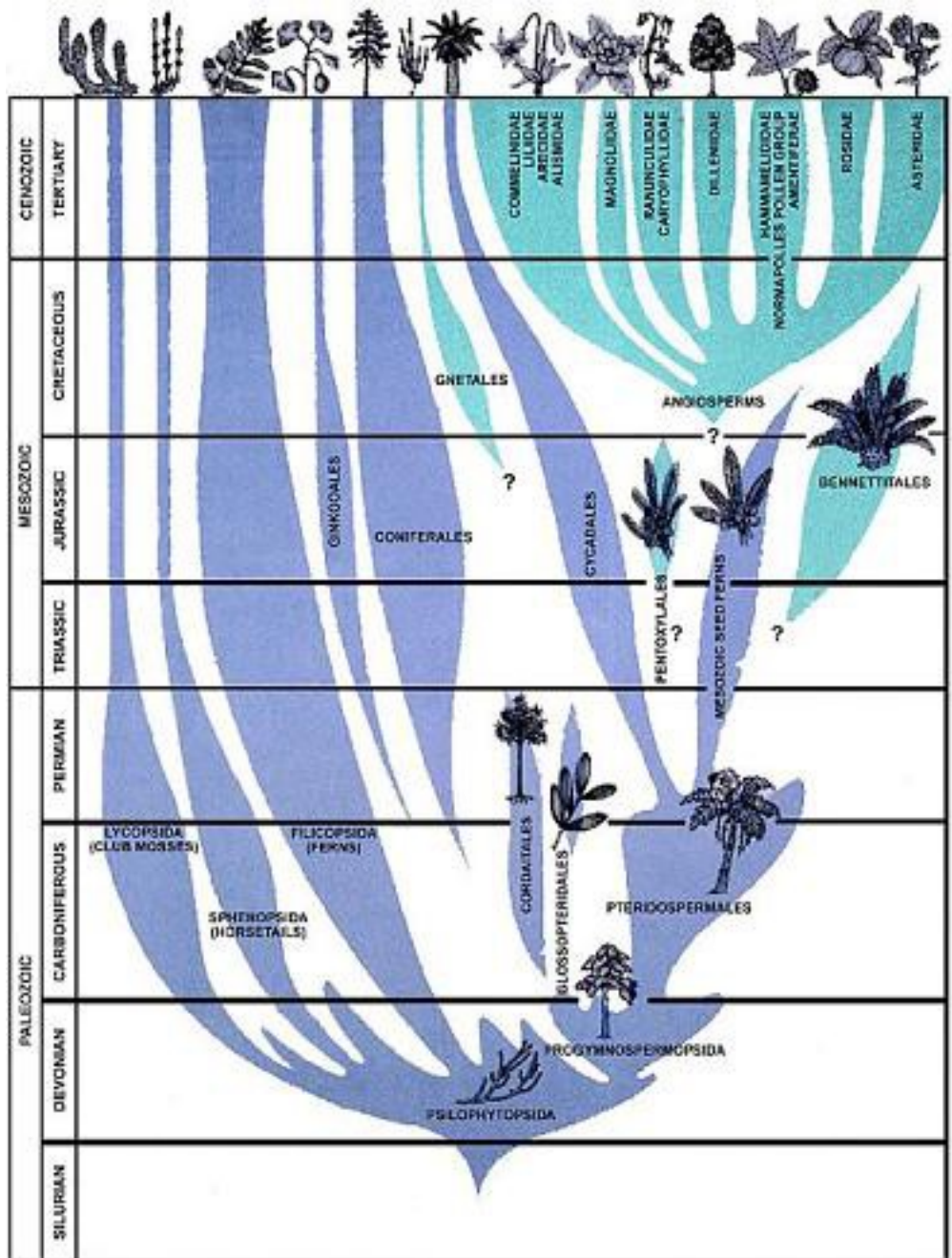
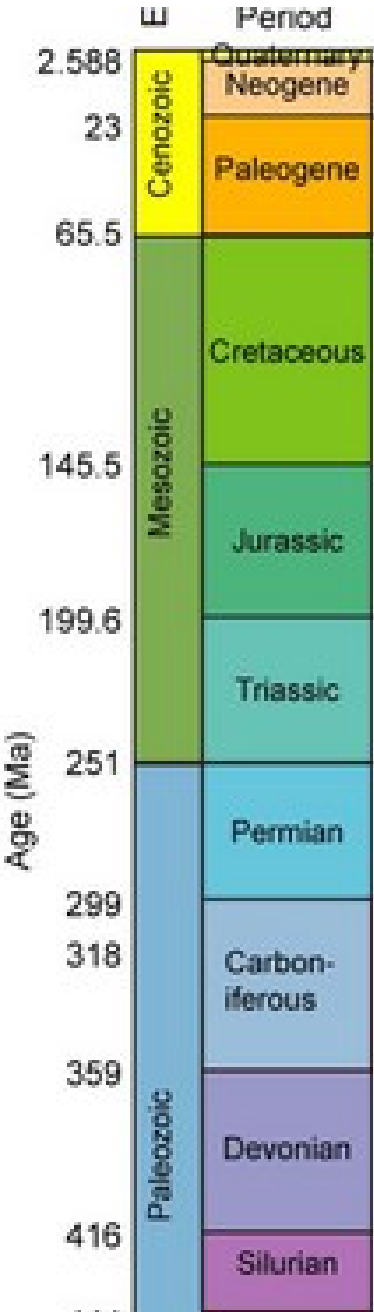


**CORSO DI BOTANICA SISTEMATICA**

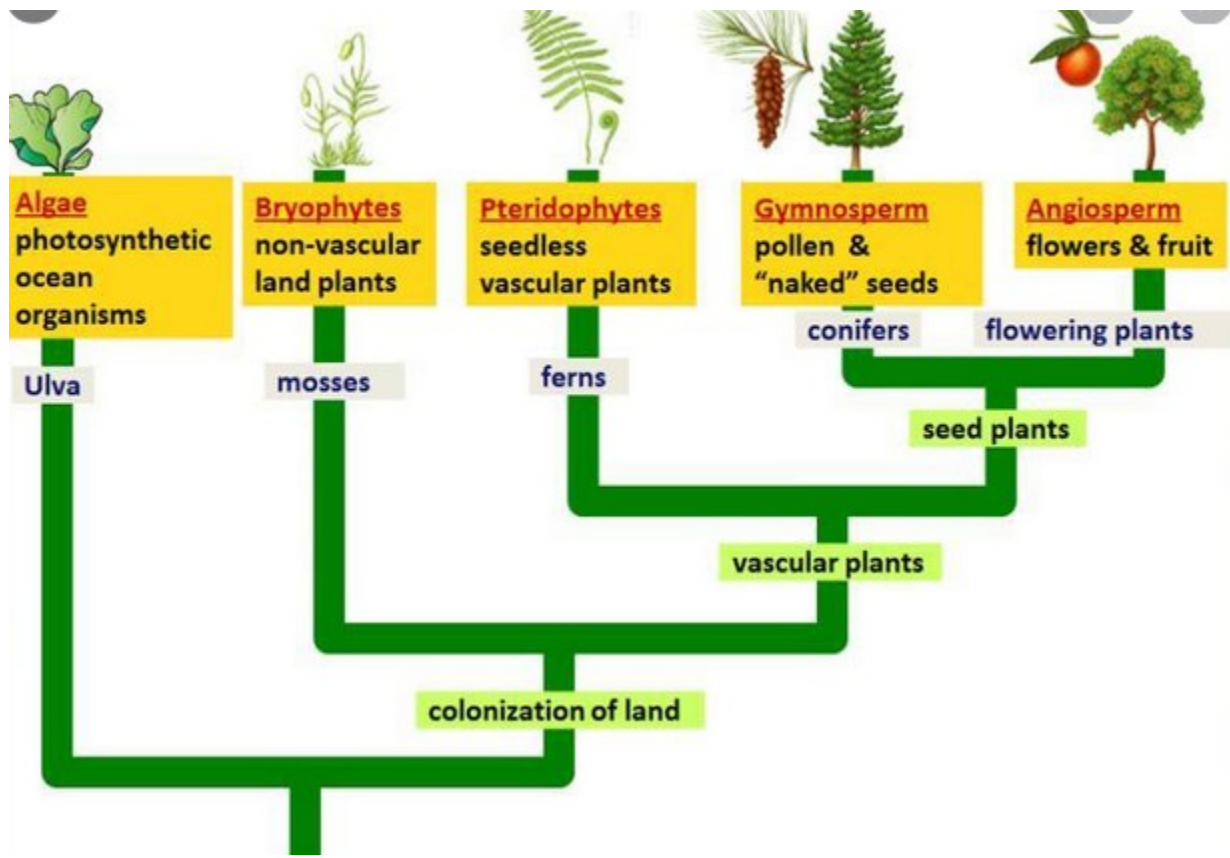
# **LEZIONE 8**

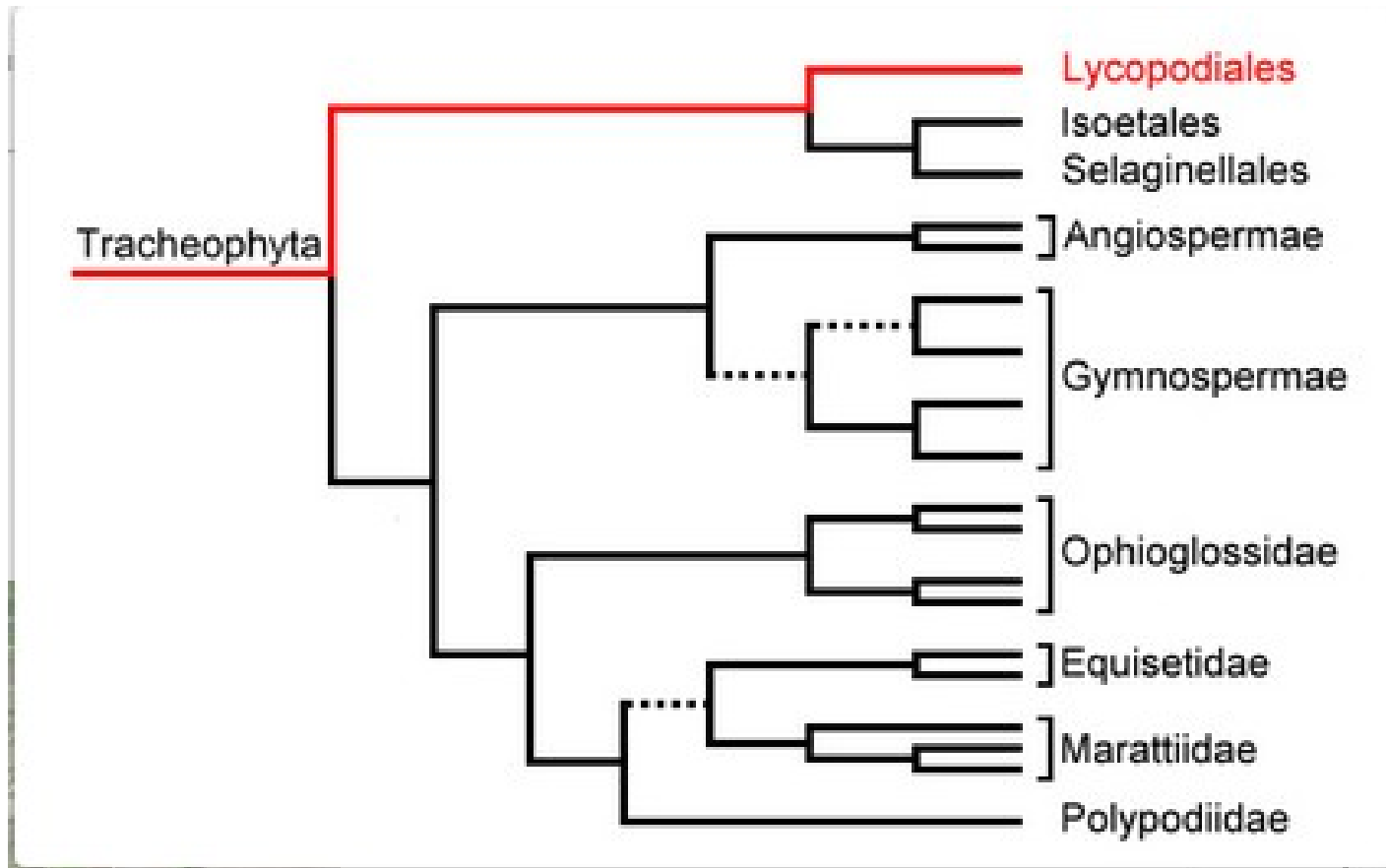
**Licopodi, Selaginelle,  
Equiseti e Felci  
("Pteridofite")**











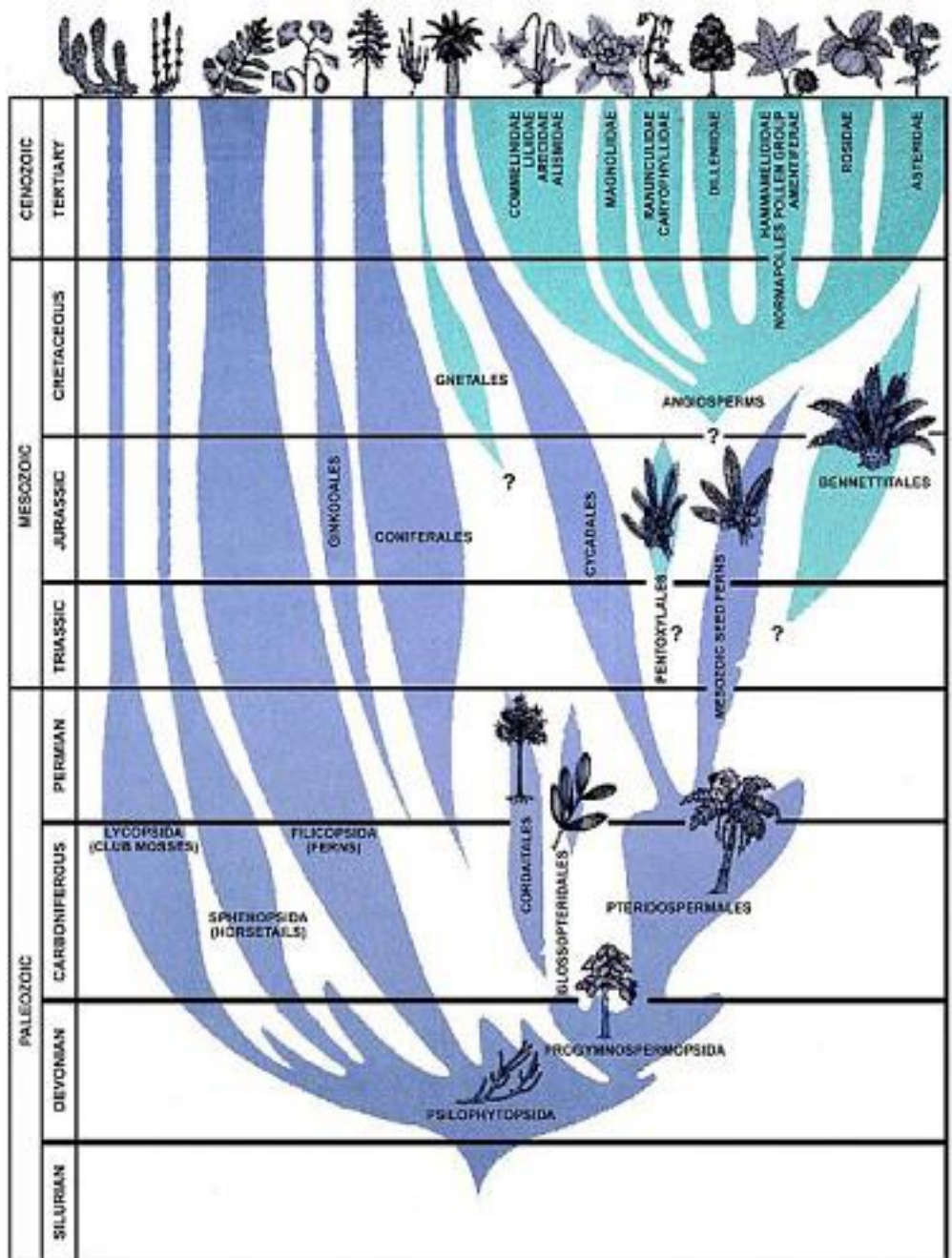
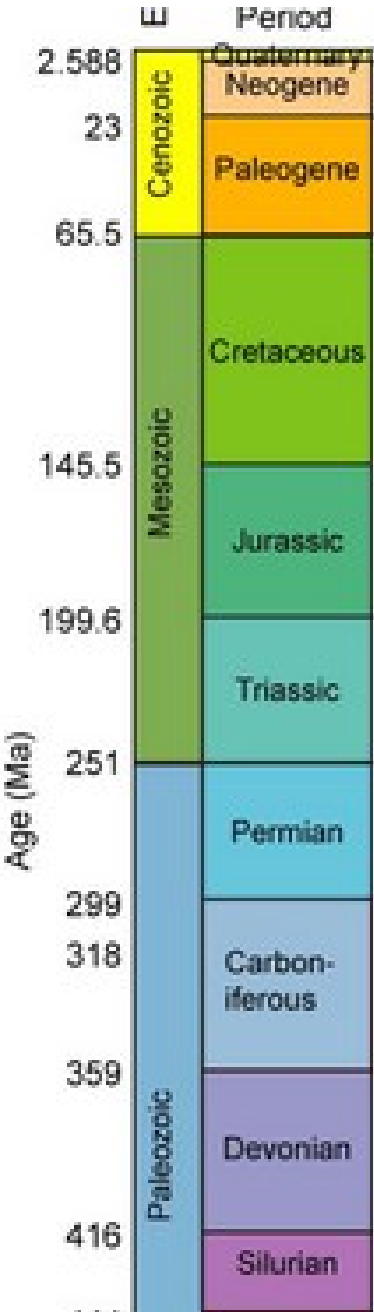
**Le vecchie “Pteridofite” non esistono più, in quanto non sono monofiletiche (Licopodi e Selaginelle appartengono a un ramo evolutivo diverso da quello di Felci, Equiseti e piante vascolari)¶**

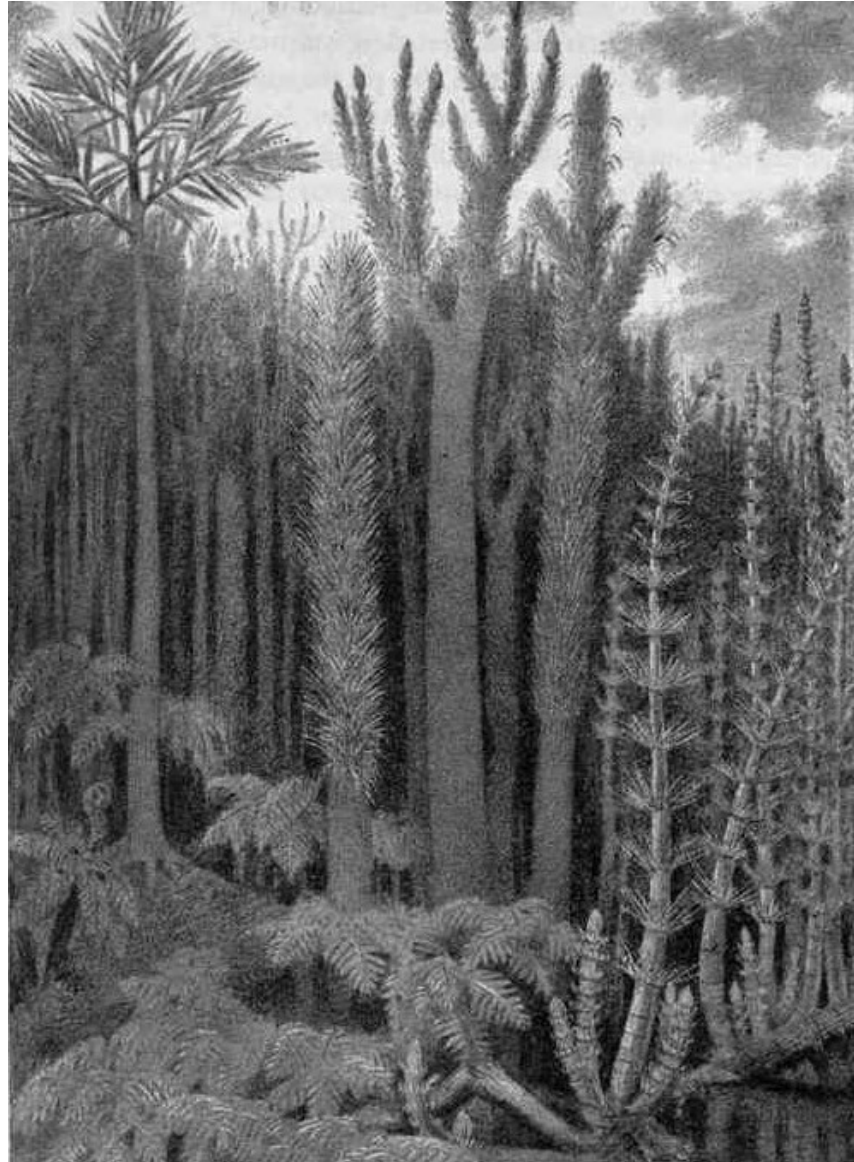
**LICOPODI·E·SELAGINELLE ¶**

¶

**LICOPODI: ·isosporei ¶**

**SELAGINELLE: ·eterosporee ¶**









**LICOPODI: Lycopodium e Huperzia con foglie aghiformi¶**



**LICOPODI: Diphasium e Diphasiastrum con foglie squamiformi ¶**





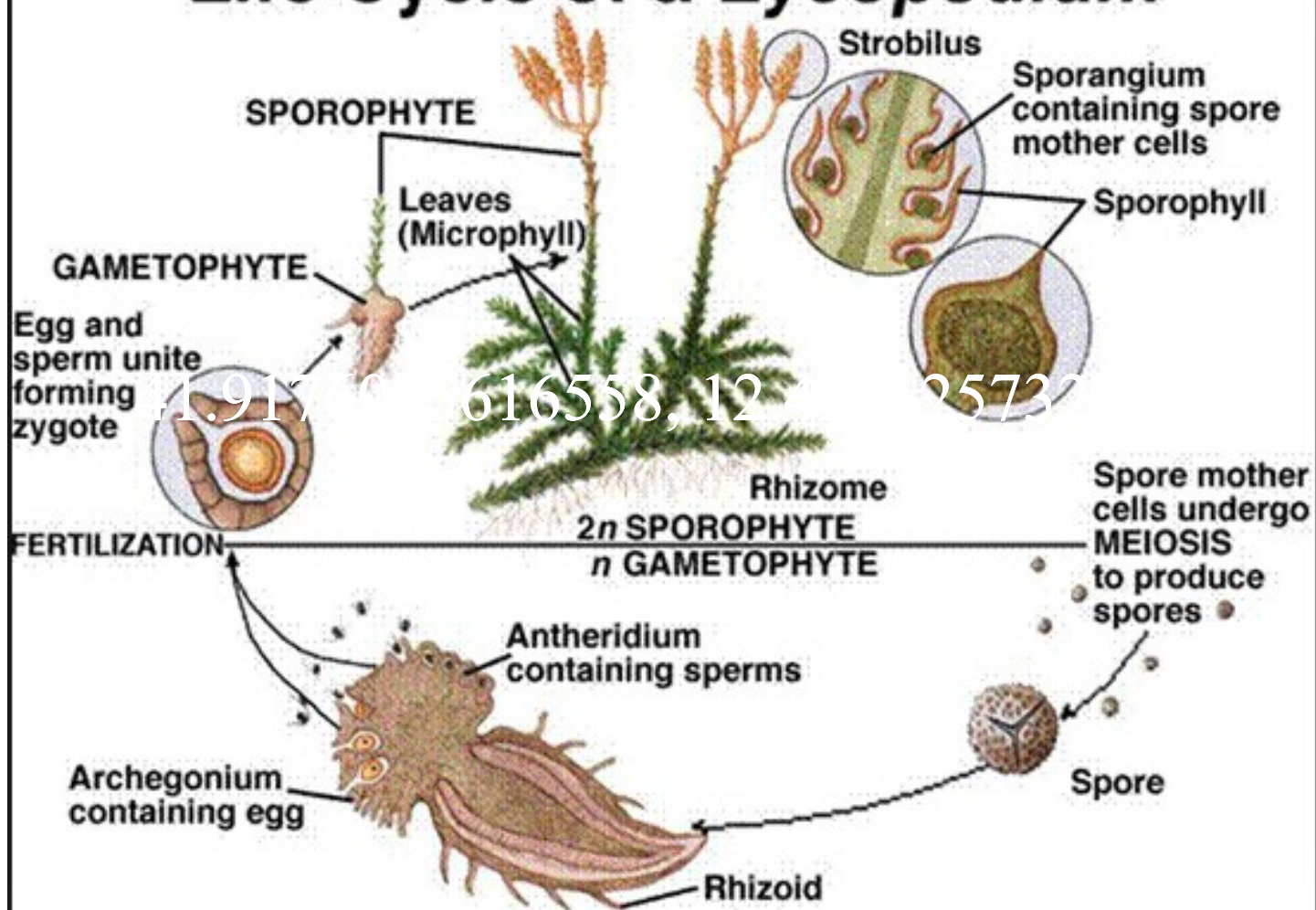


### **LICOPODI:**

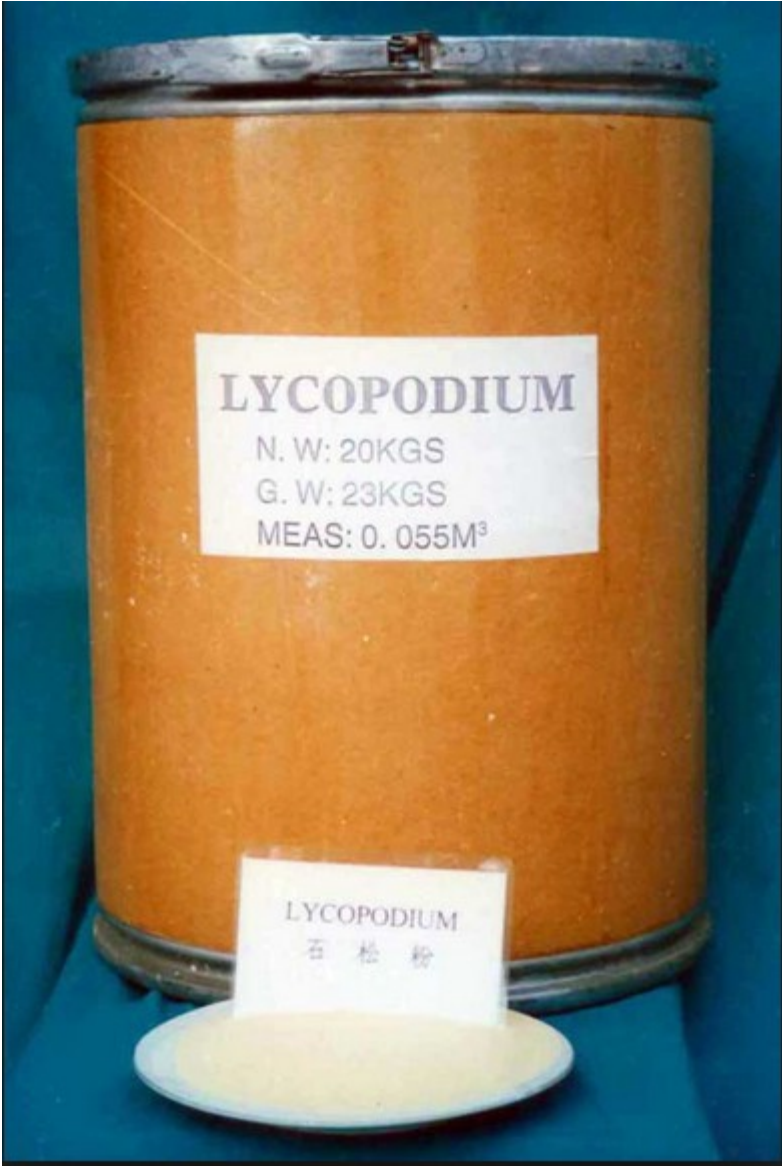
**Hupertia: sporangi all'ascella delle foglie superiori**

**Lycopodium: sporangi disposti in spighe apicali**

# Life Cycle of a *Lycopodium*







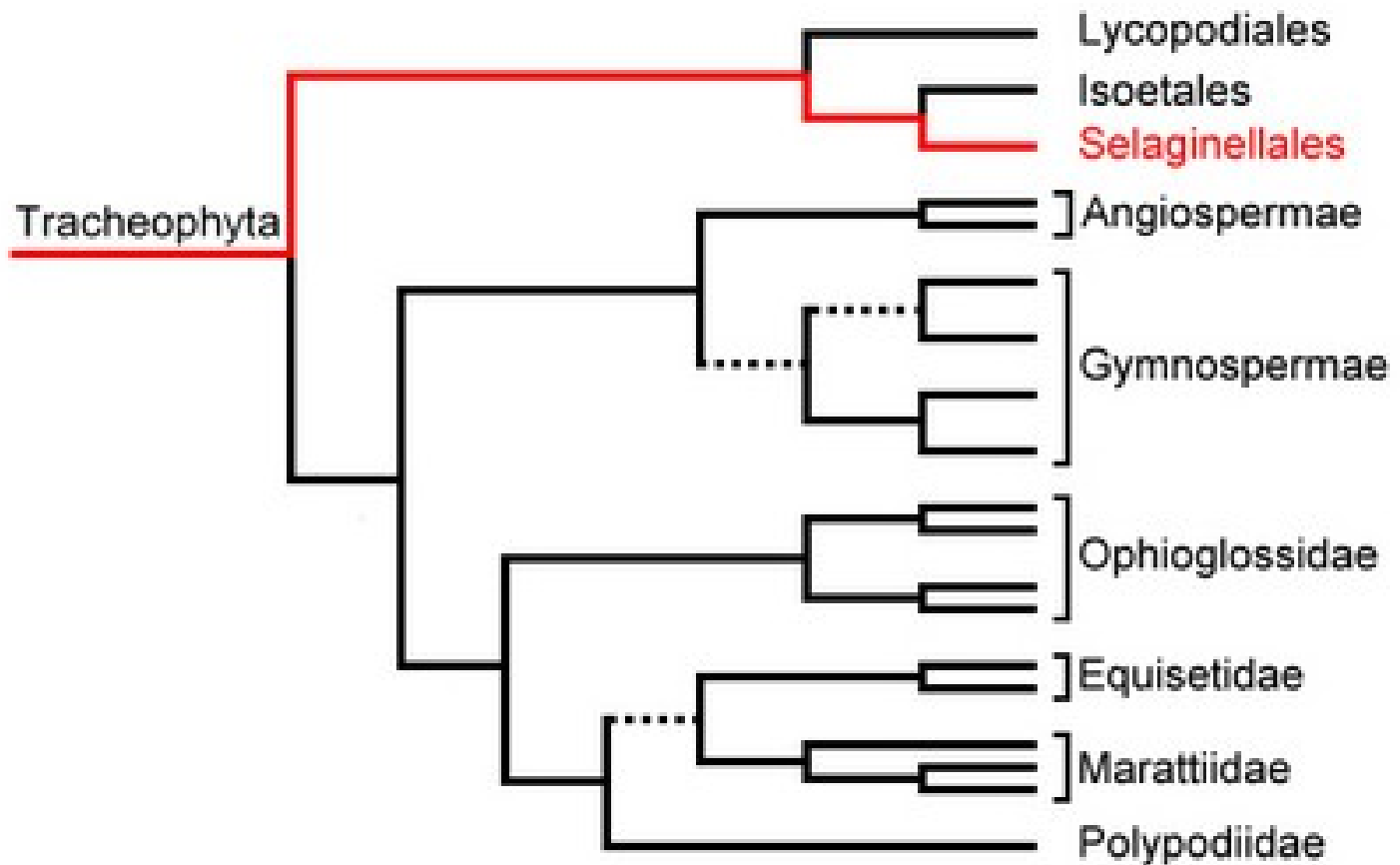








**SELAGINELLE**





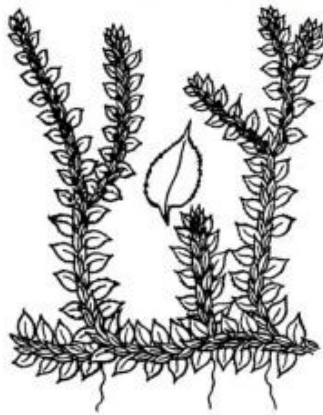




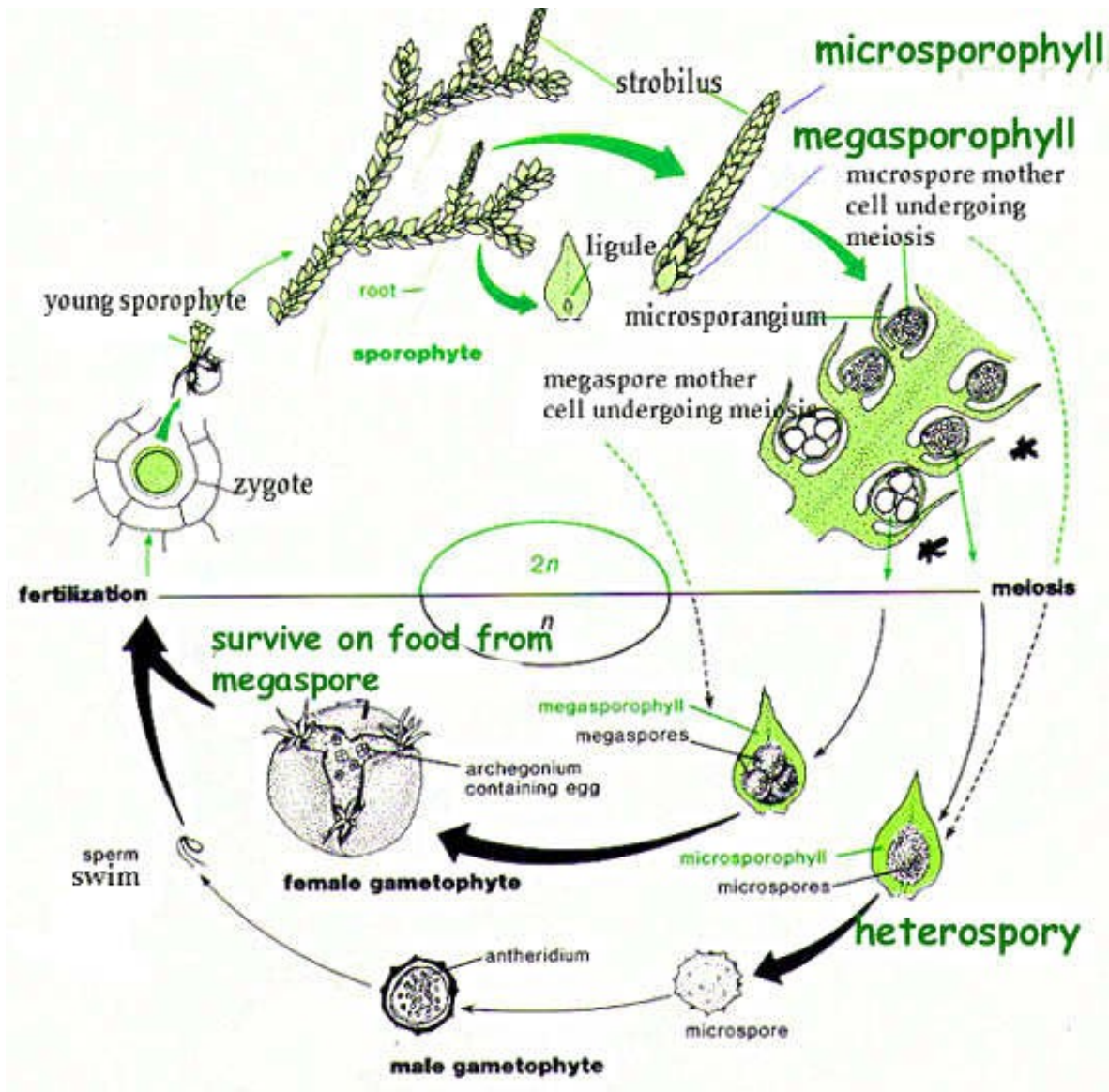


***Selaginella selaginoides***





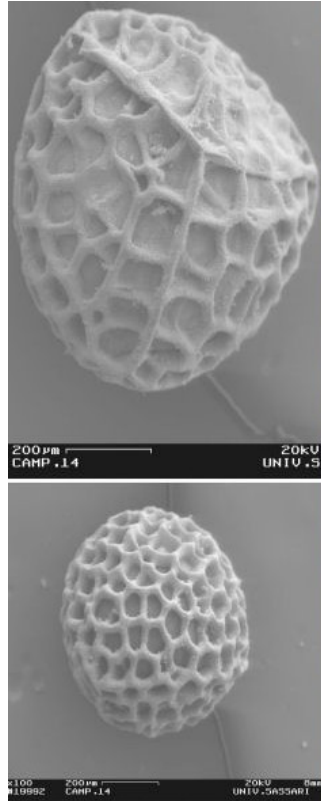
**Selaginella denticulata e S. helvetica**



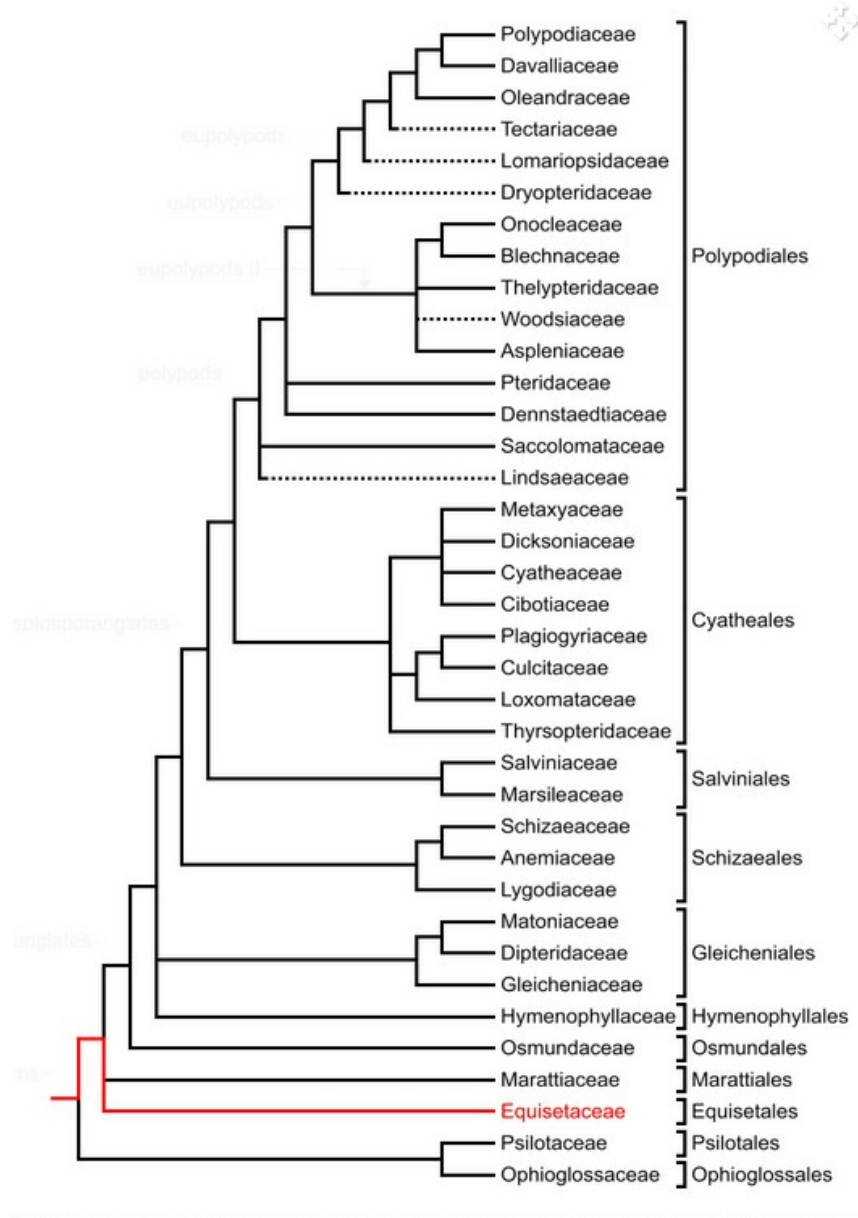
**Ciclo di Selaginella**

**ISOETES**



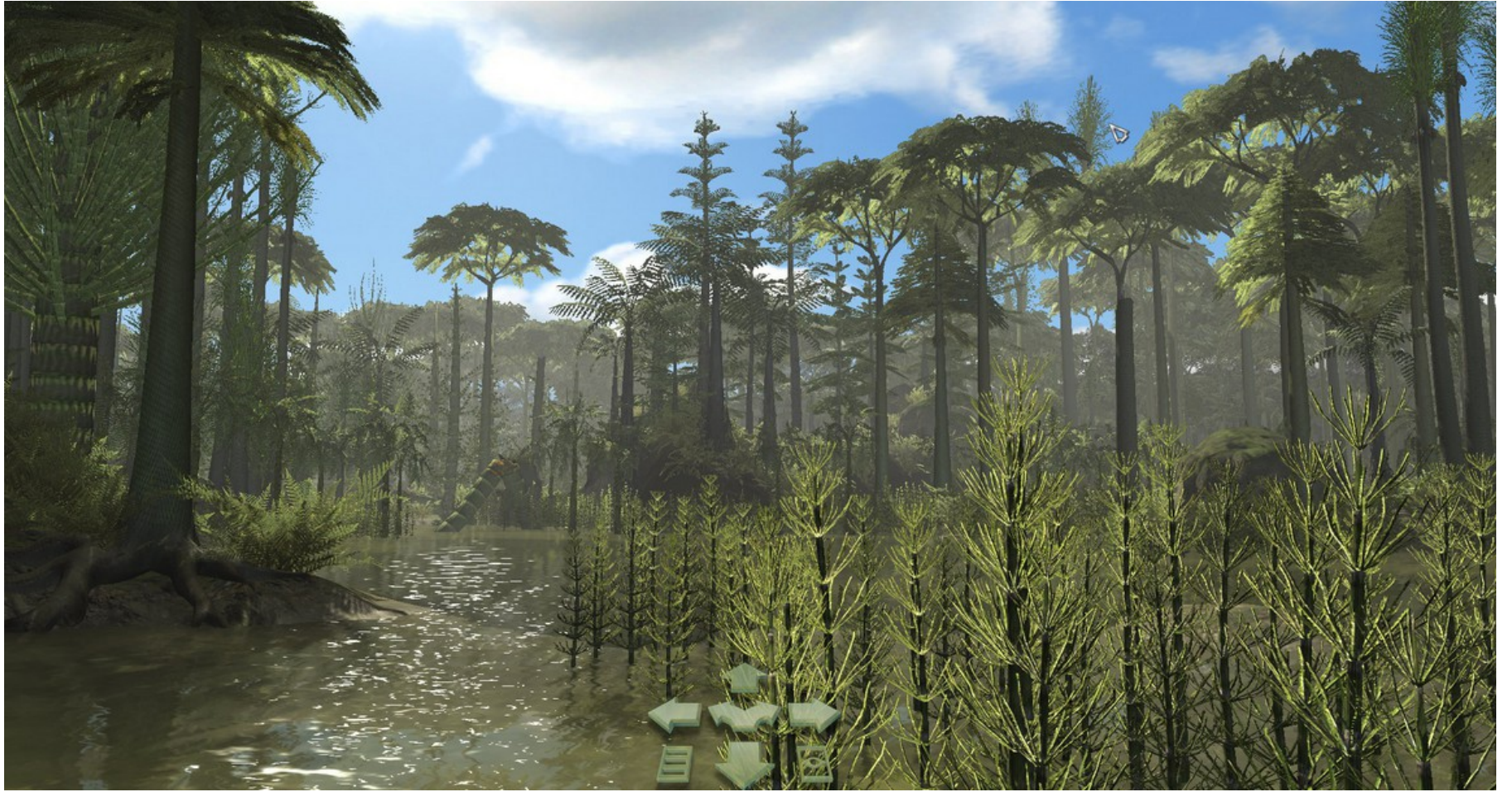


**EQUISETI**



**EQUISETI: isosporei ma eterotallici**











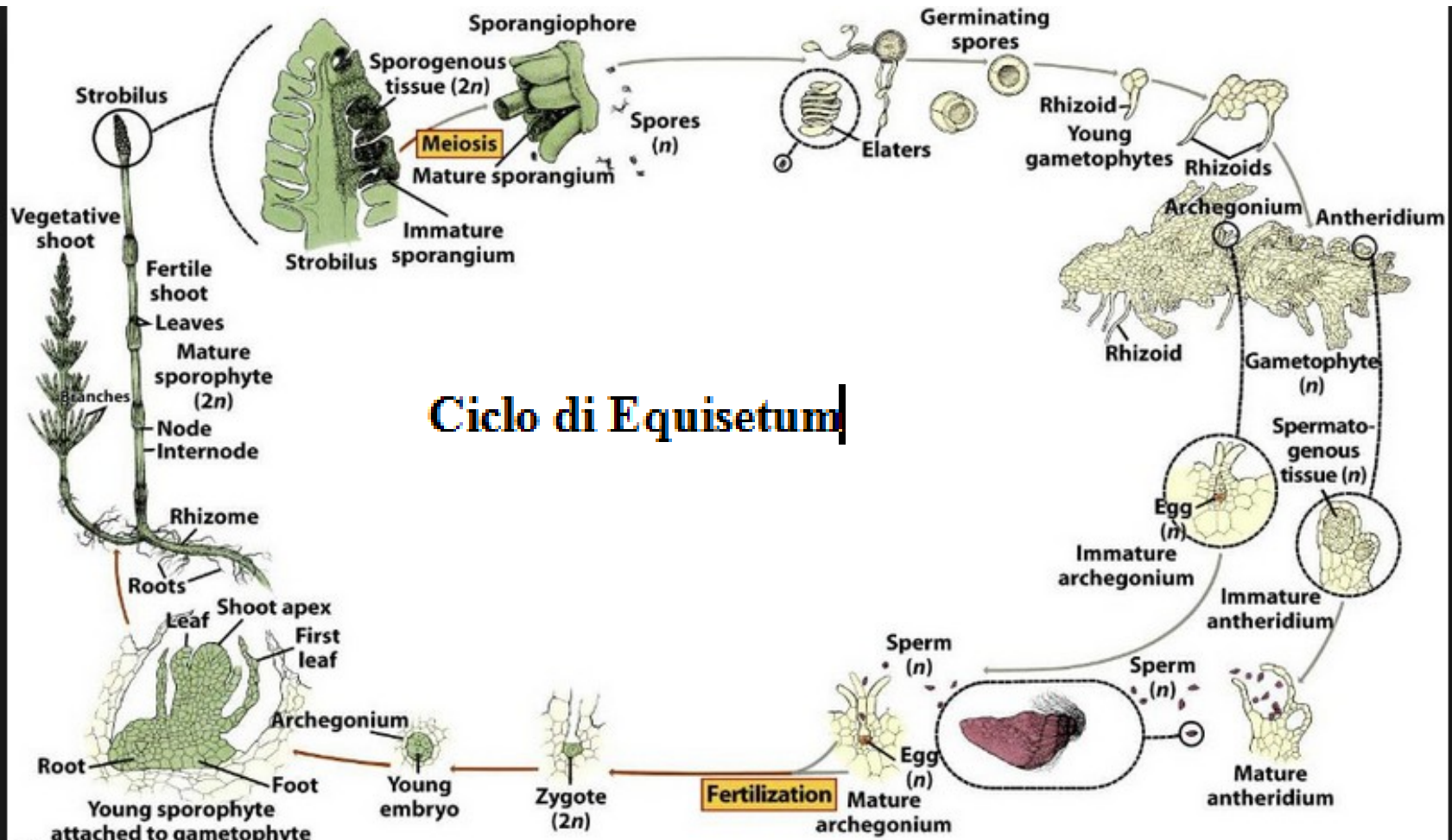












## Ciclo di Equisetum

Figure 17-40  
 Biology of Plants, Seventh Edition  
 © 2005 W. H. Freeman and Company





Equisetum arvense ed E. telmateia producono prima fusti fertili (con sporangi) privi di clorofilla, seguiti da fusti sterili verdi





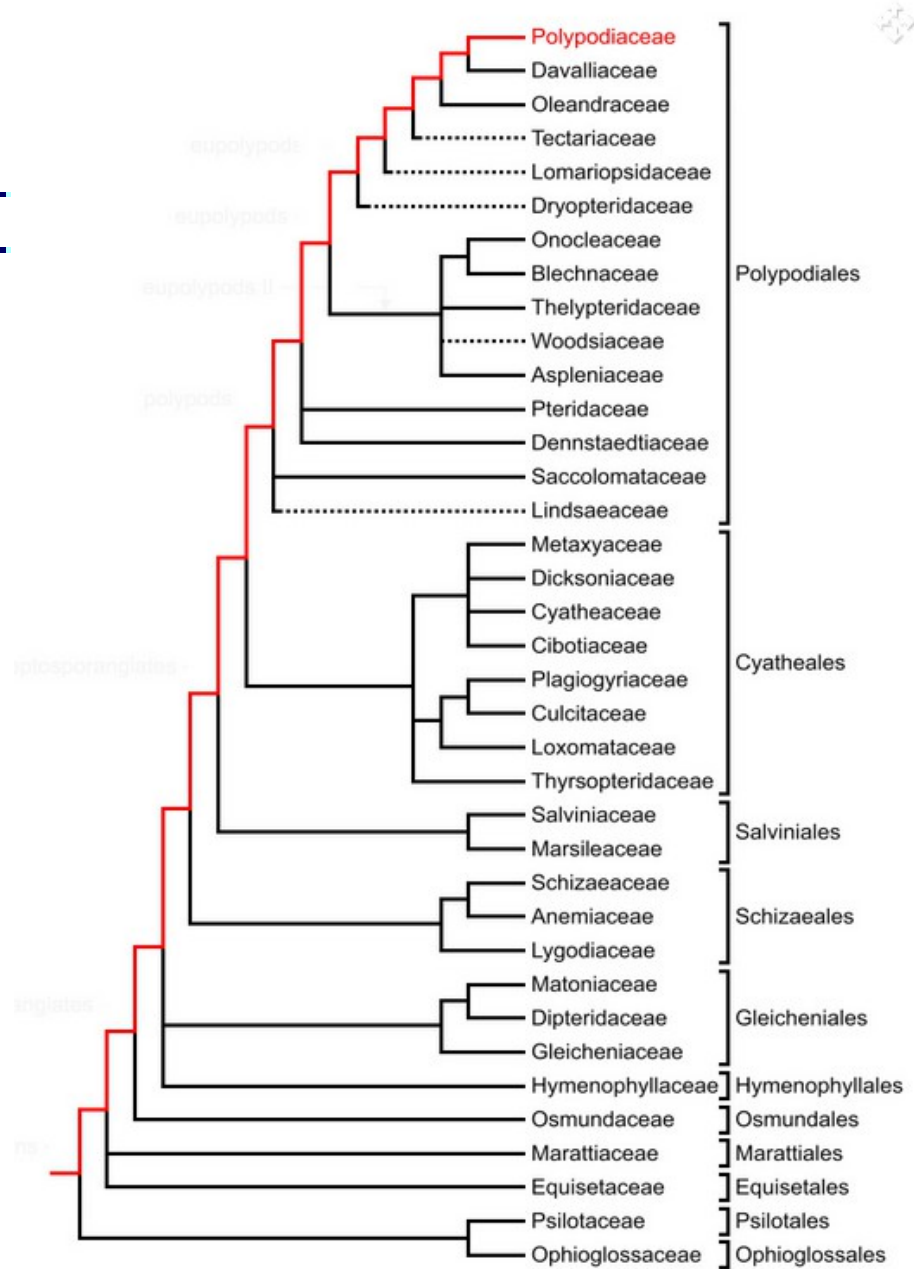


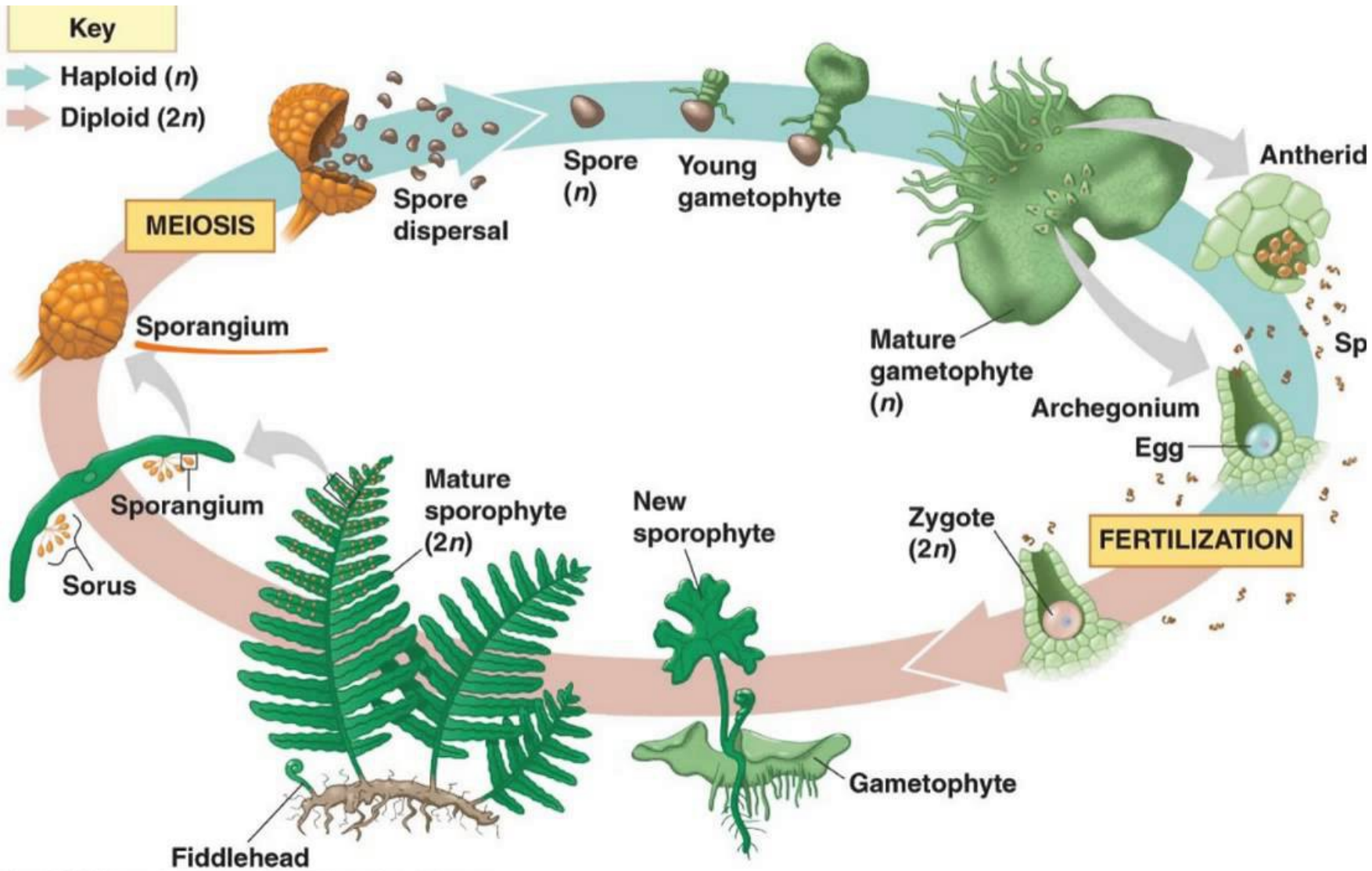


## Tips For Cleaning Camp Cookware



# FELCI







0.2 mm





**Protallo di felce**









**FELCI: sporangi disposti in sori (di forma diversa)**





**FELCI: sori nudi o coperti da un indusio (membranella protettiva)**



**FELCI: forme diverse dell'indusio: peltato o reniforme**



**FELCI: forma diversa delle foglie (intere, semplicemente pennate, 1-3-pennate etc.)**













400 x 300

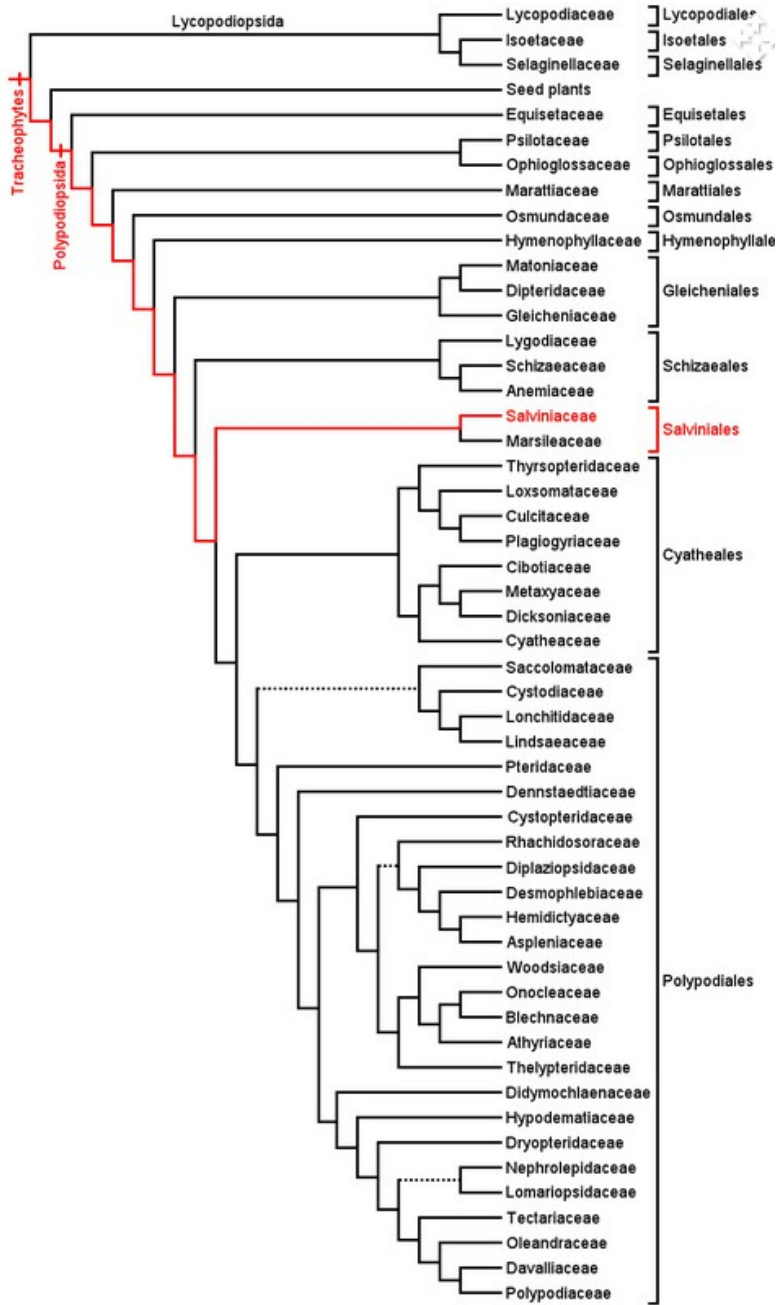




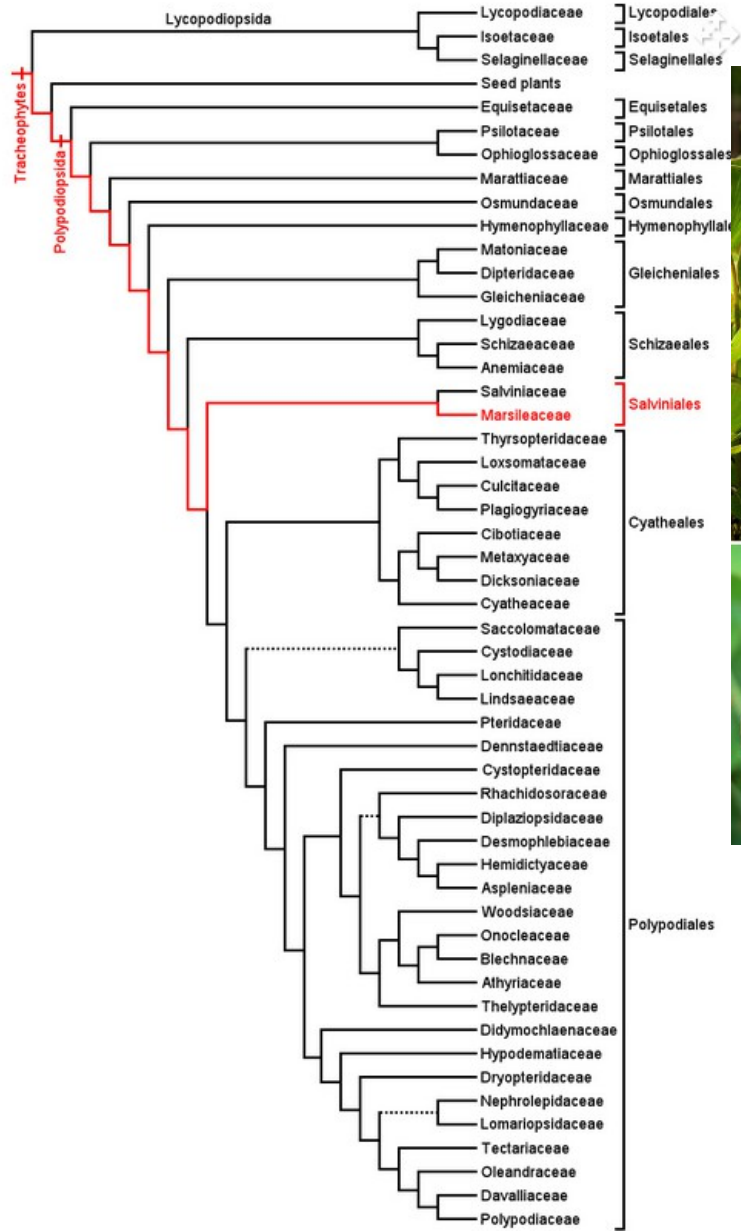


**SALVINIACEAE e  
MARSILEACEAE**



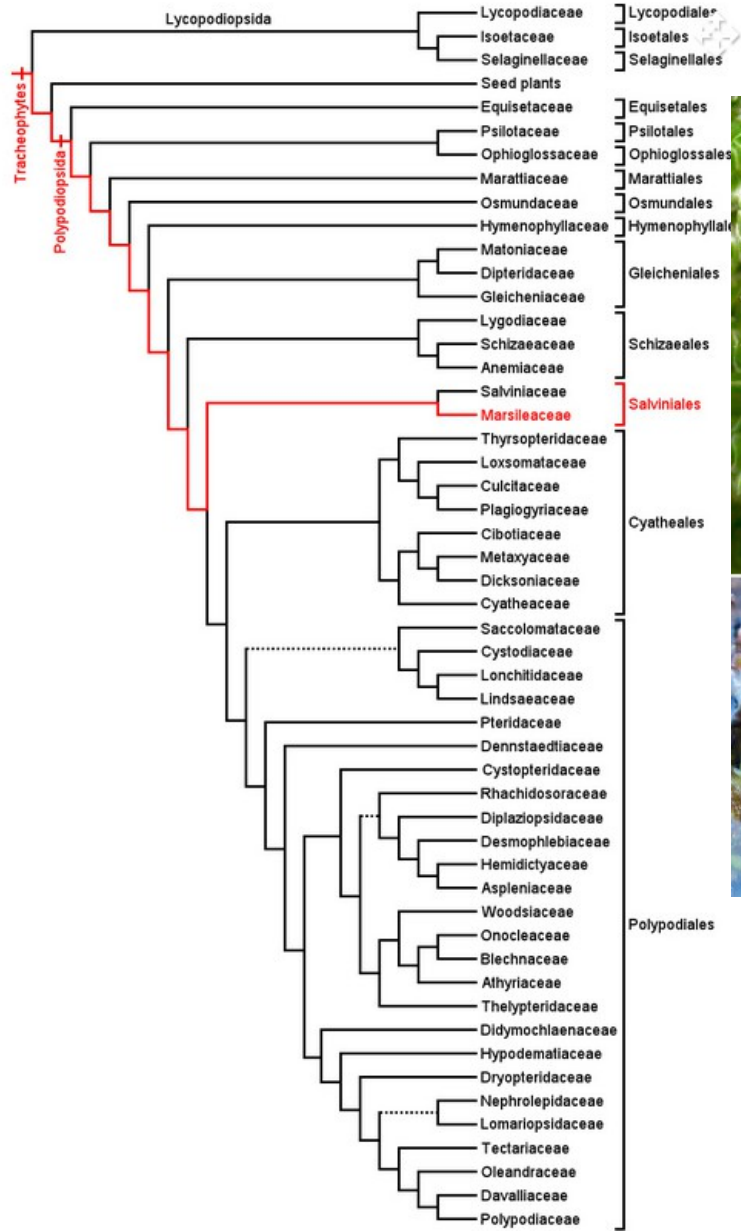


**SALVINIA** (dedicata a Salvini)  
Una delle più pestifere piante invasive

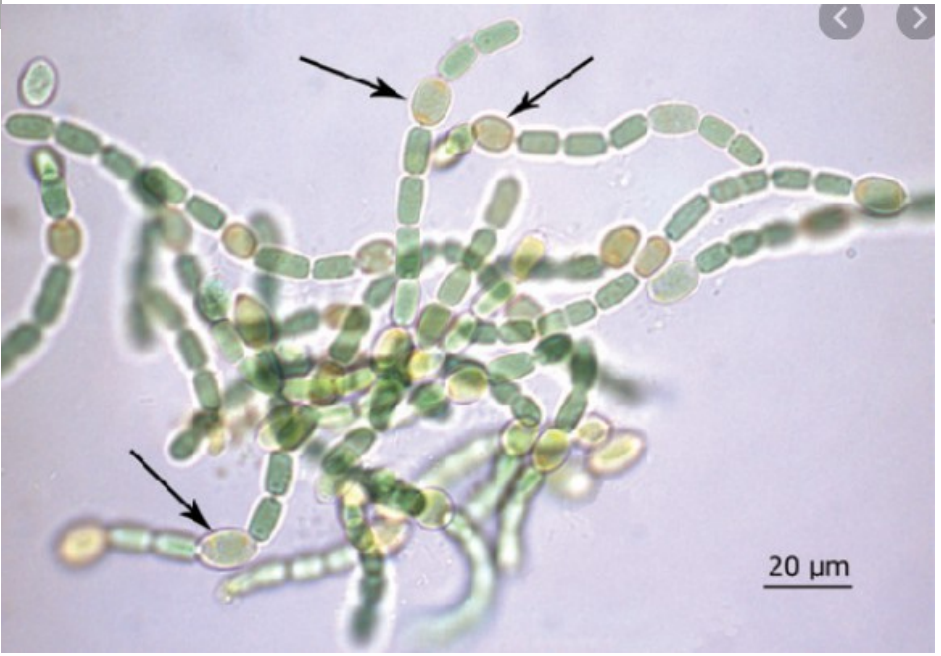
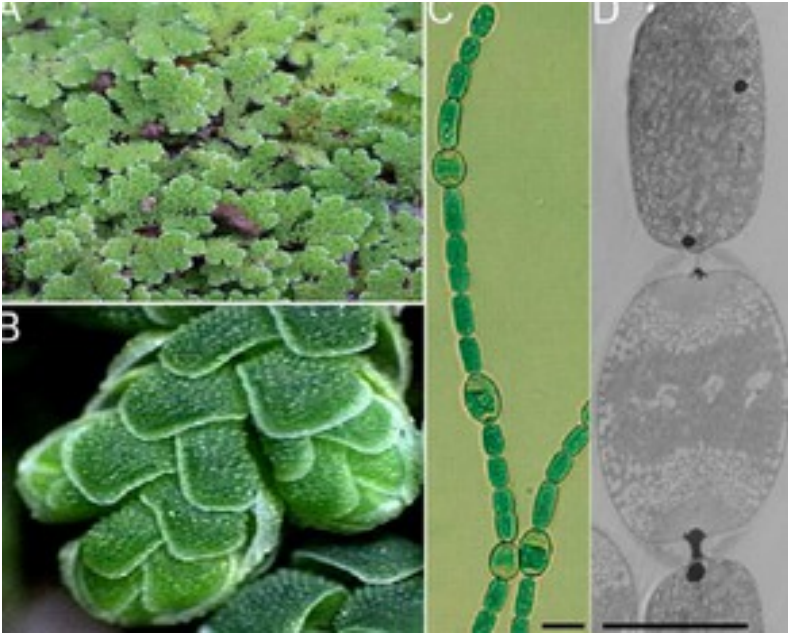


# MARSILEA





**AZOLLA**











**FINE DELL'OTTAVA LEZIONE**





