



EQUISETALES
ХВОЦИ

Clubmoss



Horsetail



Fern



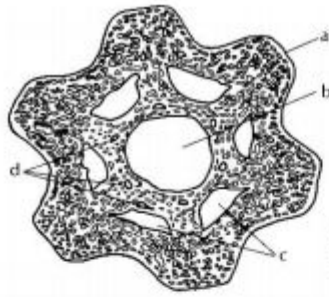
Задание:

1. Рассмотреть слайды, обратить внимание на строение хвоща, жизненный цикл (слайд 5) и эволюцию стробила (слайд 11).
2. Подписать части хвоща (слайд 4)
3. Зарисовать в тетради цикл развития и подписать стадии

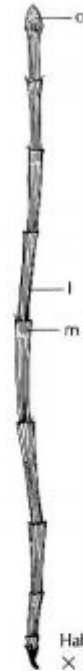


Подписать части

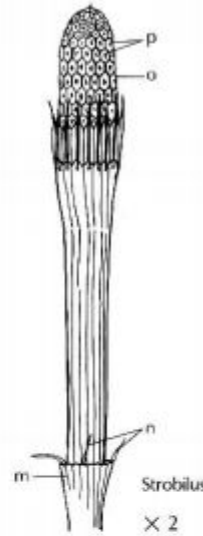
Horsetails & Scouring Rushes



Equisetum variegatum
Variegated Scouring Rush
stem cross section
× 34

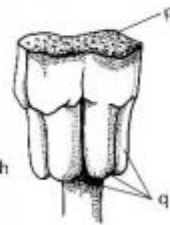


Habit
× ½

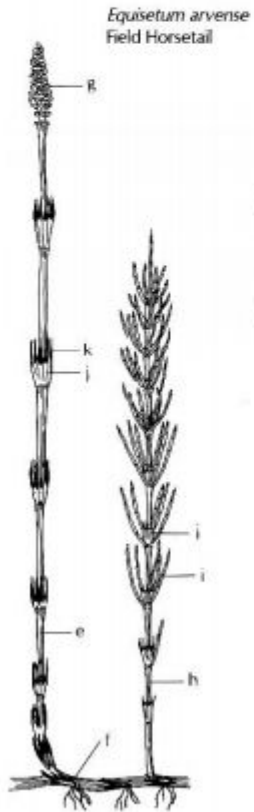


Strobilus
× 2

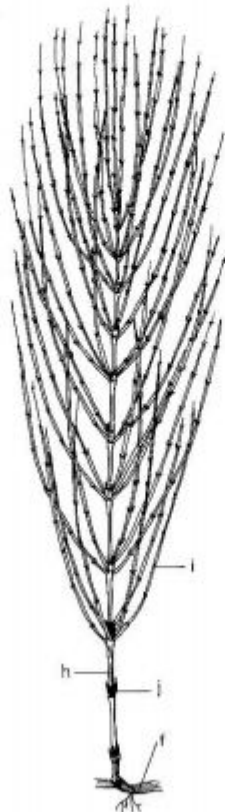
Equisetum laevigatum
Smooth Scouring Rush



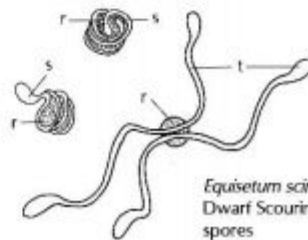
Equisetum hyemale
Common Scouring Rush
sporophyll
× 20



Spring Habit
× ½

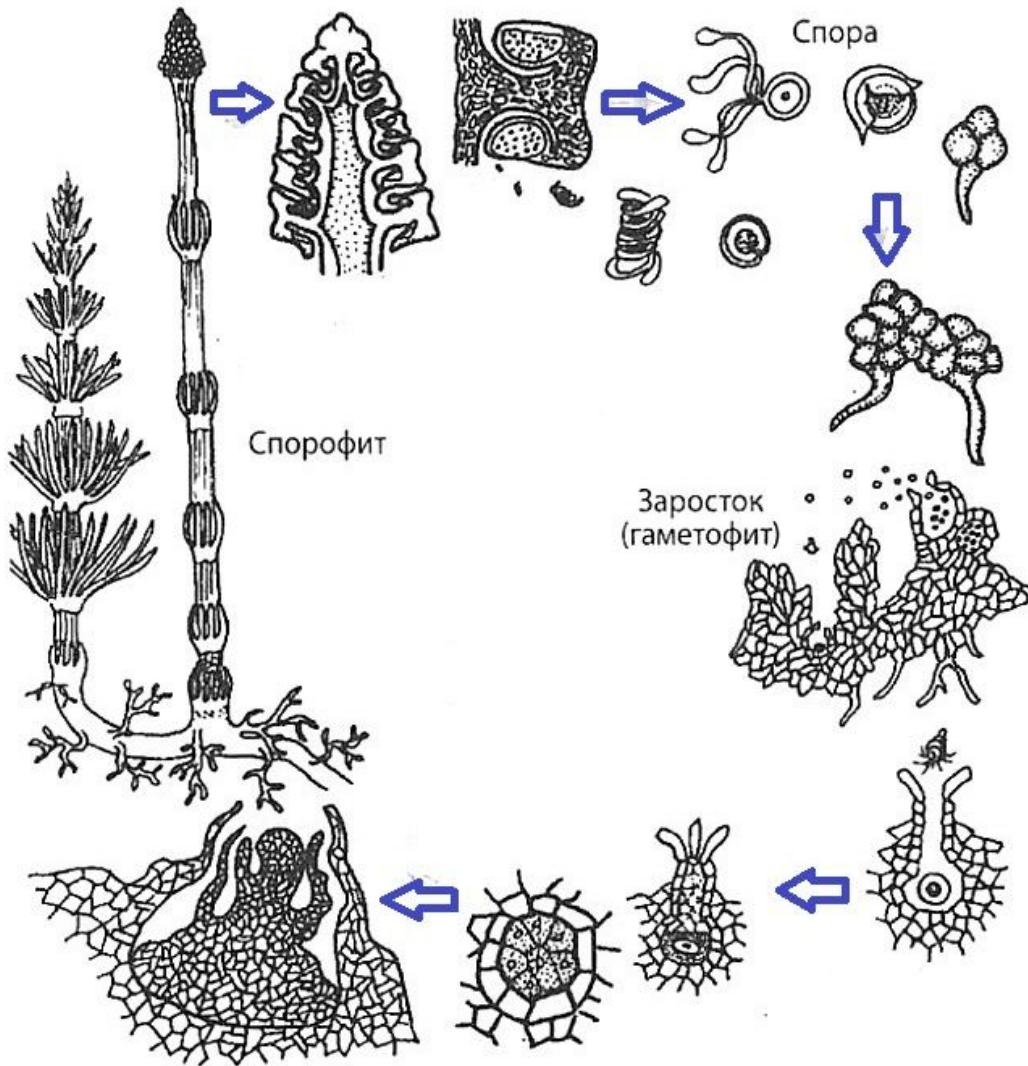


Summer Habit
× ½



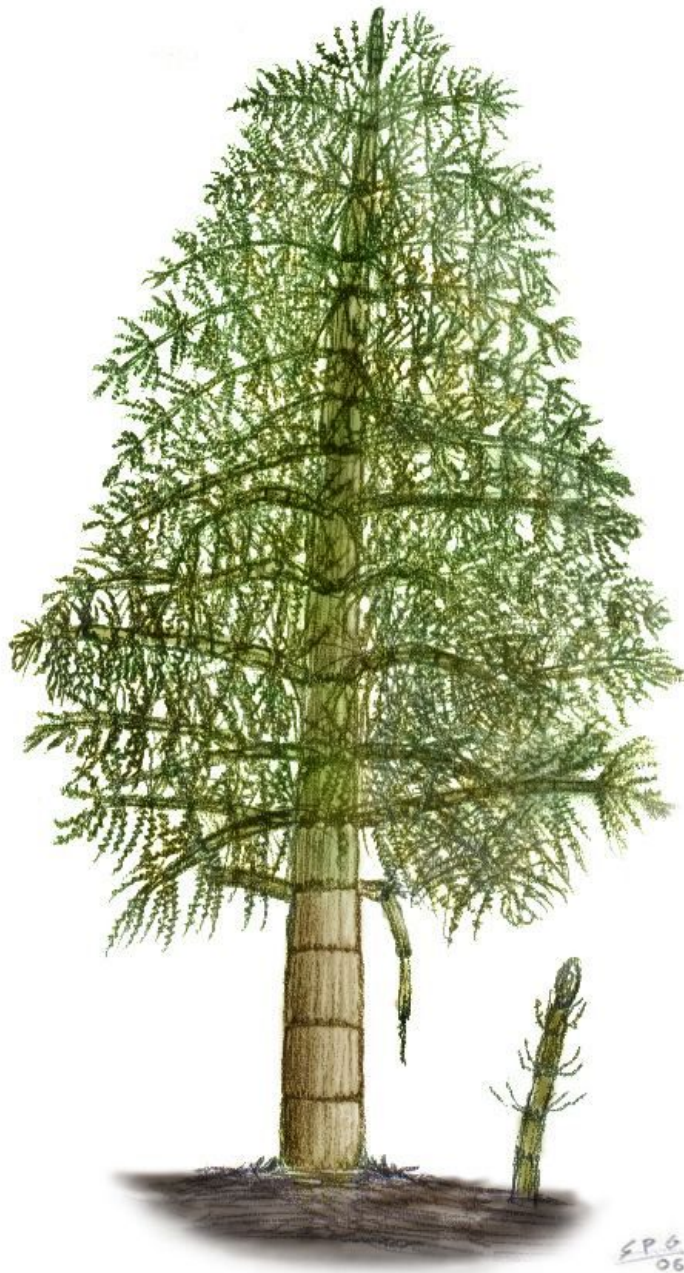
Equisetum scirpoides
Dwarf Scouring Rush
spores
× 107

Схема жизненного цикла хвоща

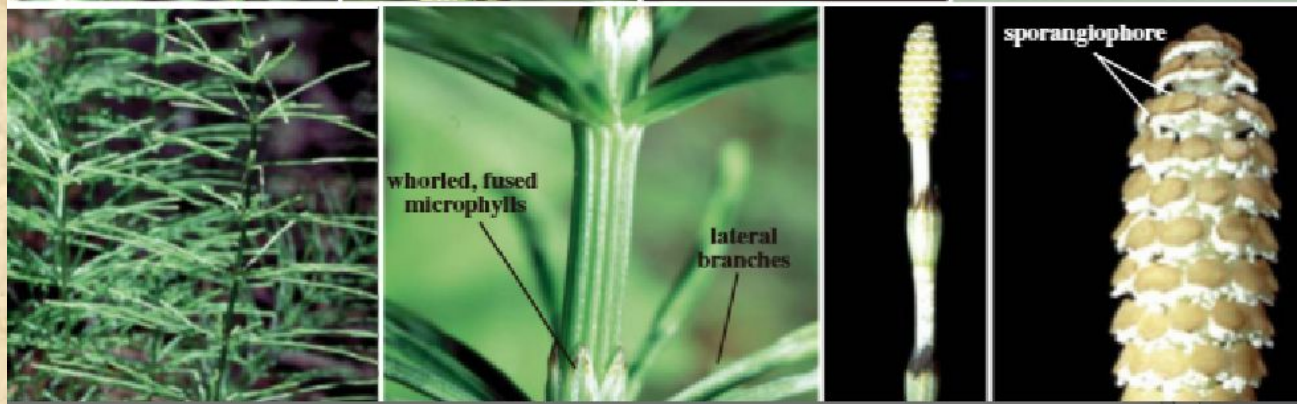
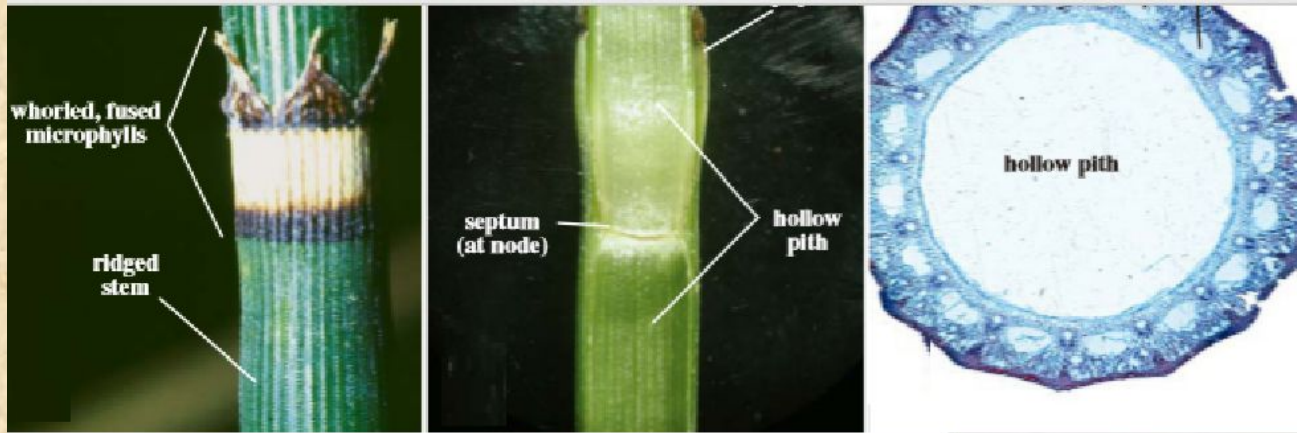


- uchitel.pro/хвоци

Каламиты – ископаемые хвощевидные



EQUISETALES









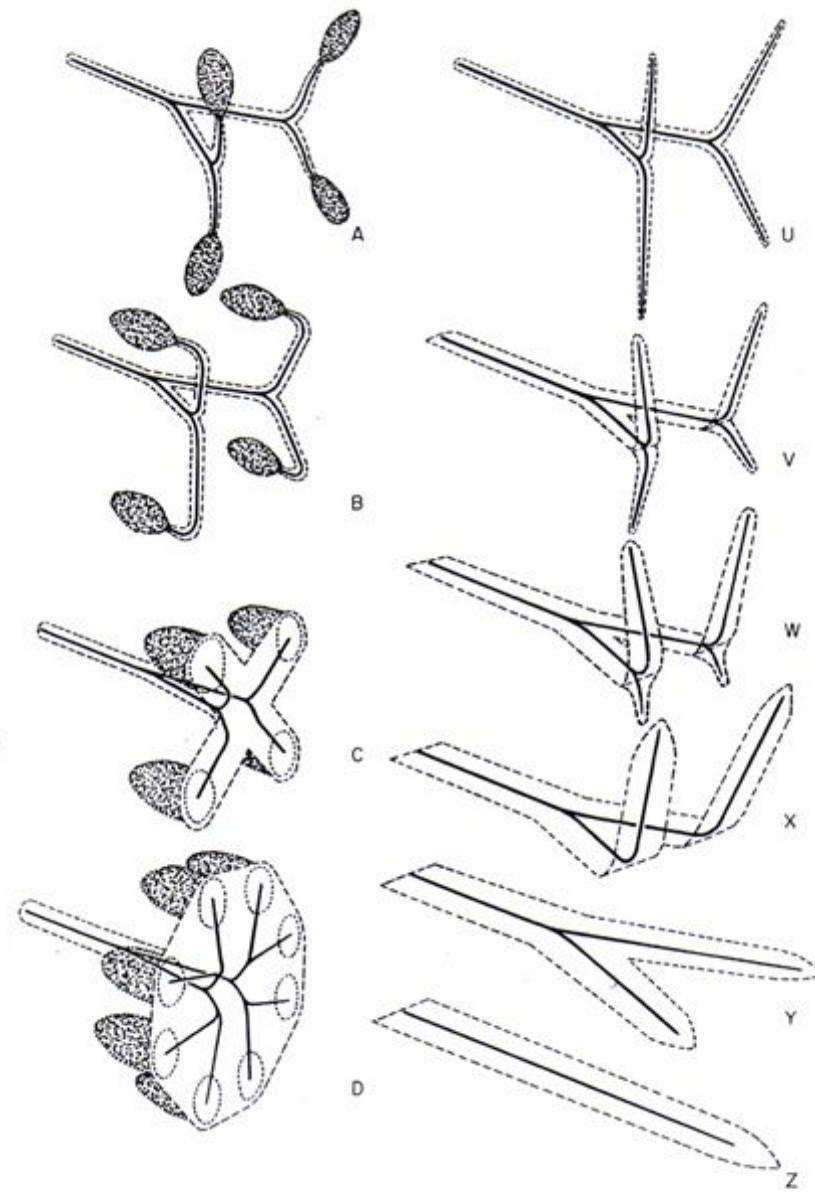


Figure 11. Diagram illustrating the suggested evolutionary stages of the *Equisetum* appendages: A–D sporangiophores, U–Z leaf. Broken lines indicate the outline of the appendage, stippled areas the sporangia and solid lines the vascular supply. A and U are the primitive appendages orientated in their probable planes of growth on a vertical shoot and differ from one another only in the presence or absence of sporangia. D and Z represent the morphology of sporangiophore and leaf of modern *Equisetum* respectively. B–C and V–Y are the suggested intermediate evolutionary steps.









