



Faculty of Sciences

BIO1241 Complements of plant biology

[55h+30h exercises] 7 credits

This course is taught in the 1st and 2nd semester

Teacher(s): Jean-Marie Kinet, Stanley Lutts
Language: French
Level: First cycle

Aims

To allow the student to acquire a global view of the plant kingdom, looking at characters these organisms have in common and at their diversity on a morphological point of view as well as in their biology. Particular emphasis is put on the mechanisms of angiosperm reproduction

Main themes

Specific characters of plants are first detailed. The major groups - bryophytes, pteridophytes, spermatophytes - are then studied, exploiting morphological and physiological data. Emphasis is put on the evolution of the life cycles. Classification of organisms in each each group is considered as accessory, the main goal being to situate, in the evolution process, known or important organisms and to understand the evolutionary steps which culminated with the emergence and success of the angiosperms. Essential physiological adaptations linked to the colonization of terrestrial ecosystems by plants as well as their morphological and anatomical implications are described. Evolution of these properties are analysed in relation to the main pedoclimatic changes since Carboniferous period and emphasis is put on the critical influence of the stationnary life habit of plants upon the emergence of evolutionary specificities to cope with environmental changes.

The structure, maintenance and fonctionning of the shoot apical meristem are studied. Regulation of floral transition and of the morphogenesis, development and fonctionning of the reproductive structures (inflorescence, flowers, seeds, fruits) is reviewed. Flower organography is detailed with the aim to initiate the student to the practical use of a flora and the identification of plants commonly growing in our countries.