

***In situ* populations variability by isoenzyme spectra assessed on two fern species**

Cristian Banciu, Florentina Aldea, Florenta Helepciuc, Liliana Cristina Soare

Romanian Academy, Institute of Biology Bucharest
Splaiul Independentei 296, 060031, Bucharest, Romania

Ferns are an important group of vascular plants characterized by a great variety of shapes, living in all areas of the world that have aroused the interest of many research teams, thanks to their special ability to adapt and the significance of applications, as ornamental plants and biotechnological properties.

In this context, studies aiming conservation of ferns that habitates in the various regions of Romania have attracted particular interest, one of them being the protected area of Valsan Valley. For these reasons, our research has focused on species: *Asplenium trichomanes* and *Asplenium scolopendrium*. For this purpose, in a first stage we considered very useful their genetic characterization using biochemical markers.

Comparative studies were performed on 10 samples from two populations of each species were compared. By analyzing the isoenzymatic spectra of main enzymes that are sensitive to changes in environmental conditions (peroxydase, esterases, alkaline phosphatases and the total protein) were made comparative estimates of the variability of plants in their natural habitat. We could see the existence of differences in the isoenzymatic spectra at intra and interpopulational level.