

Ecological succession of spider assemblages (Araneae) in a limestone quarry from Romania

Friday, 8 March 2024 14:10 (15 minutes)

Background. Ecological succession is one of the basic and important concepts in ecology, yet poorly understood in many aspects, especially when concerning ground-dwelling invertebrates. These organisms are a key component of terrestrial ecosystems and can be a reliable tool for ecological restoration.

Aim. The aim of the current study was to highlight the mechanisms underlying secondary succession in terms of species composition, diversity, and abundance.

Methods. We applied the SFT (Space for Time substitution) approach (sensu [1]) and carried out field campaigns in a limestone quarry in centre Romania, where we selected different aged sites to build a chronosequence from the first stage of succession to the climax stage, which was considered the forest habitats surrounding the impacted area.

Results. Altogether, we identified 22 species of spiders belonging to 10 families. Based on the correspondence analysis (CA) we observed that the first three stages of succession are more similar compared to the climax stage. In terms of diversity, despite no significant differences between the stages of succession, there are clear differences in terms of composition.

Conclusion. The greatest change occurred between the first and second year, indicating a rapid evolution of the assemblages during this interval. However, in the T4 stage, the assemblage structure remained relatively stable, suggesting an adaptation or resistance to environmental changes in this forest habitat.

Co-author: STĂNCIUGELU, Maria (Brukenthal National Museum, Natural History Museum, Sibiu)

Presenter: Dr TĂUȘAN, Ioan (Lucian Blaga University of Sibiu)

Session Classification: Natural Sciences – Be innovative and shape the future in your field