Influence of the cliff microclimate on the population ecology of soil predatory mites (Acari: Mesostigmata - Gamasina) from Romania

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In trophical soil web, predatory mites have an important role of transformation and transportation of the organic matter, being secondary and third consumers. They are very sensitive to any modifications of the bioedaphical substrate. Cliff habitats are characterized by specifically environmental conditions. This ecological study was made in 2010, near to a cliff area from Cheile Brebului, from Prahova district, Romania (N: 45° 12' 31,1"; E: 25° 44' 23,5"). In order to show the influence of the cliff microclimate on these invertebrates populations, some biotical (type of vegetation) and abiotical factors (type of soil, soil and air temperature, soil humidity and precipitation) were described. Thirtyfive species of predatory mites, from 10 genera and 11 families were identified. The different influence of the microclimate on structure and dynamics of mite communities from were highlighted using some populational parameters as: relative abundance, numerical density, dominance, constance and ecological significance index.

Correlations between these parameters and some abiotic factors were established. Species *Veigaia nemorensis, Veigaia planicola* and *Prozercon traegarhi* were dominant and constant (which represents 14, 4% from the total number of species), having a wide ecological plasticity and which easily adapt to characteristically cliff environment. The increased number of accessory and accidentally species (54, 3%) showed that the cliff is not a proper habitat for the predatory mites, their migrating from the adjacent forest ecosystems.

The specifically cliff microclimate (the poor vegetation, the sandy soil, the increased air and soil temperature, the decreased soil humidity) had determined a characteristically structure and dynamics of the mite populations.