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150 years of Ecology – lessons for the future

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contents (average of 12.83%) compared to summer pastures (*dzailoo*) with average pH values of 6.03 and average organic matter contents of 21.05%. Additionally, summer pastures show higher above-ground biomass, and higher species richness and diversity. Our results support the hypothesis that winter pastures, which are located near settlements, suffer from over-utilisation, while the more distant summer pastures are subjected to much lower grazing pressure.

Keywords: animal husbandry, biomass, classification, grazing management, montane and alpine steppes and meadows, ordination, plant communities.

Session 2-P9 - Dynamics of Collembolan communities in correlation with vegetation and temperature changes during 20 years of succession

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The successional dynamics of collembolan communities of a rubble and debris dump in Bremen, Germany were studied for a period of twenty years from 1980 till 2000 in two experimental plots. One plot (SUC) was left undisturbed for natural secondary succession, the other one (REC) was recultivated with rotary-tilling and sowing of grass. The mean density varied between 3800 and 118667ind. m^{-2} in SUC and between 5667 and 91942 ind. m^{-2} in REC. In the two sites individual numbers peak occurred in the first decade, thereafter it decreased. Number of species increased from 9 to 29 in SUC and from 17 to 32 in REC and the alpha diversity calculated as number of species, Shannon-Wiener and Simpson-index increased in both comparable sites of different successional age. Within the second decade in the two sites, yearly species turnover rate profoundly decreased between 1990 and 1994 indicating the lowest change with 100% complete similarity in species composition. In the earlier years, the change in species composition presumably was slower and more irregular. With 66%, the dominance similarity (Renkonen index) of collembolan communities in the two sites was greatest six years after the beginning of succession.During twenty years of succession, total abundance and species composition were considerably affected by vegetation cover and annual mean temperature. Negative correlation of total abundance with annual mean temperature was found profoundly in REC more than in SUC. Positive correlation of total abundance with vegetation cover was found in the initial years of succession in the two sites.

Session 2-P10 - Protection of caves in Serbia

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This study reviews current state and legal framework of karst protection in Serbia. Limestone terrains in Serbia cover 8,414 km^2 or 9.5% of its territory. Caves are protected as follows: within general nature protection, within protection of speleological objects as parts of larger protected regions, and as natural monuments. Conservation measures are given together with the list of legally protected caves. Main threats to speleological objects and implementation problems are discussed. Concerning their scientific, natural and cultural values, caves and other speleological objects require more practical protection and advanced research.

END OF SESSION 2