

Morphological and anatomical studies of *Trifolium repens* L. and *Trifolium montanum* L. (Fabaceae) from Sharri Mountain, Kosovo

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The subjects of our research were two species, *Trifolium repens* L. and *Trifolium montanum* L. The aim was to assess the level of morphological and anatomical variability among populations from different habitats (meadows, roadsides, subalpine slopes) and different altitudes (861–1950 m) in Brezovica (Sharri Mountain, Kosovo). The investigation covered 26 morphological and anatomical traits in populations from 12 -10 locations. One part of the collected plant material was dried and placed in herbarium, whereas the other part was preserved in alcohol of 70% for preparation of microscope slides. A comparative-morphometric method was used to evaluate the morphological variability of individuals and populations. For examination of variability of stomatal apparatus, trichome length, vascular bundle diameter, palisade and sponge cell lengths, SWIFT M10L SERIES microscope with a measurement software, was used. From the results obtained during this research, it can be concluded that there is a significant difference among populations for most micro- and macro-morphological traits. There is also a tendency towards a reduction of most of the average values of the investigated parameters (total plant height, total leaf length, leaf petiole length, peduncle length, fruit weight, number of flowers in an inflorescence, stomata length on the upper leaf surface, and diameter of collateral bundle) in relation to altitude increase. However, trichome length showed consistency and was not affected by habitat and altitude changes. The results also lead to a proposal for taxonomic revision of this taxon.

Kimete Lluga-Rizani – Introduction

Prof. Lluga-Rizani works in University of Prishtina, Faculty of Sciences, Department of Biology since 1989. She is member of Kosovo National Secretariat for Climate changes. She is Instructor in Center for Sustainable Energy within University of Prishtina. During her experience she worked as Coordinator for Quality Assurance within the Faculty of Mathematical and Natural Sciences. She was a head of Study Council in Department of Biology and a member of Doctorate Council and a Board Member of Faculty of Mathematical Natural Sciences. She was also a member of the Scientific Committee of International Symposium in Tirana, Albania on Biodiversity Conservation and Sustainable Use for Rural Development.

Prof. Lluga-Rizani has a long-term scientific experience in anatomy and morphology of plants with focus in *Trifolium* genus, Fabaceae family and other species of plants of economic value. Recently she is working in apple, tomato and cucumber cultivars with a focus to study their anatomical and morphological structure and their physico-chemical contents as a potential natural defense mechanisms that can contribute to combat various pathogens (the results in process to be published).

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