

INTRODUCTORY LECTURE

Plants and traditional knowledge. Ethnobotanical research on Stara Planina mountain

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Ethnobotanical studies conducted in southeastern Europe are of key importance for stimulating local development and for investigating the dynamics of traditional ecological plant knowledge in one of the most significant European ‘hotspots’ for biocultural diversity. Many local communities traditionally use available plant resources in primary health care, meaning they play an important role in preserving traditional phytotherapeutic knowledge.

The range of medicinal plants in Serbia encompasses approximately 700 species, which is 10.7% of the country’s total flora (3662 species). This ethnobotanical study was conducted in the Stara Planina mountain region (southeastern Serbia). Its specific geographical position, the diversity of the geological substrate, its altitude, and the historical development of flora and vegetation have impacted significantly on the diversity of the plant world there.

The aim of this research was to provide important ethnobotanical information on the knowledge and wide range of medicinal plant use in the Stara Planina region and to identify important plant resources for future pharmacological research. In addition, it was intended to highlight their importance and role in contemporary health care and in improving the economic status of the local population.

Following a qualitative anthropological approach, 51 people were questioned using semi-structured interviews. Through this research, it was established that the informants are familiar with 157 medicinal species, which are used to treat various health problems or for food, or they collect them for other purposes, such as to sell them. Furthermore, research showed the greatest diversity of species comes from the Asteraceae, Lamiaceae and Rosaceae families, while plants from the Alliaceae, Cornaceae, Gentianaceae, Hypericaceae, Juglandaceae, Rosaceae, Lamiaceae, Adoxaceae and Asteraceae families have the maximum use value (UV=1). The majority of the recorded species are wild, but some are cultivated (species of the genus *Allium*, *Calendula officinalis*, *Cydonia oblonga*, *Hyssopus officinalis*, *Ocimum basilicum*, *Phaseolus vulgaris*, *Ruta graveolens*, *Salvia officinalis*, *Tanacetum parthenium* and *Zea mays*), while *Sempervivum tectorum*, *Morus nigra*, *Juglans regia*, and *Mentha x piperita* are found as both wild and cultivated species. The most

common use of medicinal plants according to the informants is to treat gastrointestinal, respiratory, cardiovascular, genitourinary and skin problems. The aerial parts, root, flowers, fruit or whole plant are used in the various methods of preparation mentioned (infusions, decoctions, oils, balsams, juices, syrups, and 'travarica' brandy), with infusion the predominant dosage form.

Qualitative and quantitative analysis of herbal plants in the entire flora of Stara Planina mountain revealed that this region has extremely good botanical potential. However, it has an extremely unfavourable demographic structure, reflected in the small number of inhabitants, who are mainly elderly. For this reason, there is a danger that the traditional knowledge and skills, spanning several centuries, associated with ethnomedicine will be lost.

The results of this study may be important for rural development programmes in southeastern Serbian, which includes the Stara Planina region, with the aim of encouraging strategies for the management of natural resources in the area. Documentation on traditional knowledge of this region's medicinal plant resources should be stored by official agencies at the national level to prevent it being lost and forgotten.

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Basil in ethnomedicine and modern scientific trends

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Plants have been a very important source of medicinal products since the earliest times. One of the very important plant species is basil (*Ocimum basilicum* L.), which has broad utilitarian value and all plant organs may be used. Basil is an aromatic and medicinal plant used in traditional medicine for treatment of diverse ailments, including fever, stomachache, throat ache, cough, tooth pain and neurological disorders. Due to the broad use of basil in phytopharmacy, cosmetics and culinary arts, both plantation farming and preservation of natural populations are considered highly important. Basil is also commonly used in religious rituals. The biological activity is based on numerous secondary metabolites, including polyphenols, flavonoids and terpenes. The essential oils are characterized by very pleasant smell and antioxidant, antimicrobial, fungicidal, antiviral and insecticide effects. Due to the medicinal properties of basil, it is a subject of intensive research in fields of phytomedicine and phytopharmacy. In order to achieve the highest possible biomass