

Traditional use of cultivated plants in Mt. Tara (Western Serbia) - an ethnobotanical survey

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Introduction

Plants still have significant role in nowadays life. Collecting knowledge about plant species and their use in various segments of human life is of great importance for the cultural heritage preservation and conservation of plant diversity. However, traditional knowledge regarding usage of plants is decreasing in many parts of the world.

Serbia is located in the north-central region of the Balkan Peninsula. Some recent data indicated the existence of 4246 taxa in Serbian flora (Niketić et al., 2018) of which 1000–1500 species are used as foodstuffs, spices, food preservatives, medicinal plants, natural dyes or additives (Dajić Stevanović et al., 2014).

Lately, ethnobotanical investigations in Serbia were intensified (e.g., Janačković et al., 2019; Matejić et al., 2020; Marković et al., 2021). However, there are still ethnobotanically unexplored regions in Serbia. Therefore, our intention was to perform the survey on traditional use of plants at Mt. Tara, lacking in previous ethnobotanical reports. Herein, we present only data regarding usage of common cultivated plant species.

Materials and methods

Study area

Tara Mt. is located in the very west of Serbia and coverage area confined by the Drina river between Višegrad and Bajina Bašta cities. Area of the National park (proclaimed in 1981.) covers around 19200 ha and coverage most of the Tara Mt. The investigated area covers 8 settlements, 4 villages and 1 city.

Ethnobotanical survey

The survey was conducted in 2015 during spring and summer. The group of local inhabitants (56) was interviewed by semi-structured questionnaires. For recording permission from the respondents were obtained. All used plants cited by respondents have been taken into account, even when mentioned just once. Nationality of the informants is assumed to be Serbian. Informants are mostly engaged in cattle-breeding and agriculture. The plants collected were determined using professional literature (Josifović, 1970–1986). Different local names were establish according to Simonović (1959). Voucher specimens were deposited in the Herbarium of the University of Belgrade - Faculty of Biology (BEOU).

Results and discussion

There are 19 cultivated plant species recorded, primarily used for medicinal purposes. Infusion was the most common type of preparation. Leaves of *Petroselinum crispum* Nym. (Apiaceae) are used for kidney disorders, which was also documented by Živković et al. (2020, 2021). Also, this plant is used in diabetes treatment (Jarić et al., 2015), for gynecological infections (Živković et al., 2021) and prostate problems (Matejić et al., 2020). We documented usage of leaves and flowers of *Ribes nigrum* L. (Grossulariaceae) for better kidney filtration and in treatment of rheumatism. It was shown that fruits of this plant is used for respiratory diseases (Šavikin et al., 2013) and leaves for detoxification (Jarić et al., 2015). Leaves and flowers of *Callendula officinalis* L. (Asteraceae) are used for skin

disorders (eczema, wounds, burns), for the treatment of hemorrhoids, peripheral circulation, lung diseases and for the heart. Some similar data was obtained by Šavikin et al. (2013) and Živković et al. (2020). Aerial parts of *Foeniculum vulgare* Mill. (Apiaceae) are used to treat urinary tract disorders as well as for nerves. Živković et al. (2020) and Matejić et al. (2020) documented usage of this plant for digestive complaints. We found that roots of *Helianthus tuberosus* L. (Asteraceae) are used in treatment of lung diseases, diabetes (also documented Jarić et al., 2015), intestines and blood vessels. Seeds of *Linum usitatissimum* L. (Linaceae) are used for stomach ulcer, while Živković et al. (2020) documented usage of this plant in treatment of cough. Seeds of *Avena sativa* L. (Poaceae) are used in treatment of prostate and bladder diseases as well as against *Escherichia coli*, while Matejić et al. (2020) documented its usage for digestive system disorders. Fruits of *Fagopyrum esculentum* Moench. (Polygonaceae) are used in lowering the blood sugar level, which is a new data for Balkan. Tubers of *Solanum tuberosum* L. (Solanaceae) are used as compresses to reduce swelling (joint inflammation, fractures), while Živković et al. (2021) documented its usage as antipyretic. Roots of *Beta vulgaris* L. (Amaranthaceae) are used for treatment of anemia which is in accordance with Živković et al. (2020). Fruits and leaves of *Cydonia oblonga* (Rosaceae) are used for kidney disorders and diarrhea. Bulb of *Allium cepa* L. (Amaryllidaceae) are used against cough. Fruits of *Phaseolus vulgaris* L. (Fabaceae) are used in kidney disorders as well as for treatment of diabetes. Documented usage for all three abovementioned plants are in agreement with Matejić et al. (2020). We found that seeds of *Cucurbita pepo* L. (Cucurbitaceae) stimulates serotonin production. Matejić et al. (2020) have shown that fruits and seeds of this species are used for treatment of digestive system disorders and against parasites, while Šavikin et al. (2013) have shown usage for treatment of benign prostate hyperplasia. *Prunus cerasus* L. (Rosaceae) leaves are used for better eyesight and for the heart, while Jarić et al. (2015) documented usage of this plant as aperitif and diuretic. We found that seeds of *Prunus domestica* L., *P. armeniaca* L., and *P. amygdalus* Stokes (Rosaceae) are used for strengthening the immune system.

Other recorded purposes include usage of fruits of *F. esculentum* to make bread, and *Capsicum annuum* L. (Solanaceae), *C. oblonga* and *A. cepa* for dyeing.

Conclusion

We documented new data regarding usage of cultivated plants. The ethnobotanical heritage of the Mt. Tara needs to be documented and preserved.

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