

Traditional food uses of wild plants among the Gorani of South Kosovo



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ABSTRACT

A food ethnobotanical field study was conducted among the Gorani of South Kosovo, a small ethnic minority group that speaks a South-Slavic language and lives in the south of the country. We conducted forty-one semi-structured interviews in ten villages of the Kosovar Gora mountainous area and found that seventy-nine wild botanical and mycological taxa represent the complex mosaic of the food cultural heritage in this population. A large portion of the wild food plant reports refer to fermented wild fruit-based beverages and herbal teas, while the role of wild vegetables is restricted. A comparison of these data with those previously collected among the Gorani living in nearby villages within the territory of Albania, who were separated in 1925 from their relatives living in present-day Kosovo, shows that approximately one third of the wild food plant reports are the same. This finding demonstrates the complex nature of Kosovar Gorani ethnobotany, which could indicate the permanence of possible "original" Gorani wild plant uses (mainly including wild fruits-based beverages), as well as elements of cultural adaptation to Serbian and Bosniak ethnobotanies (mainly including a few herbal teas and mushrooms).

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1. Introduction

One of the most promising trajectories of current ethnobiological research concerns the cross-cultural comparison of folk food plant uses among contiguous ethnic or religious groups or among diasporas (de Madeiros et al., 2012). Data from these studies can contribute to the dialogue concerning crucial questions regarding how complex cultural and social components may influence the use and preference of plant ingredients in local cuisines, as well as the predominance of specific food processing techniques, assuming that the available plant ingredients are the same (i.e., that we refer to the same environment/foodscape). A number of studies conducted over the last decade have shown how commonalities and differences in food and medicinal plant perceptions and uses between diverse cultural groups may depend upon an interplay of socio-cultural, symbolic, and even politico-economical dynamics (Bellia & Pieroni, 2015; Dogan & Nedelcheva, 2015; Eyssartier, Ladio & Lozada,

2008; Ghorbani, Langenberger, & Sauerborn, 2012; Jiang & Quave, 2013; Menendez-Baceta et al., 2015; Mustafa et al., 2015; Pardo de Santayana et al., 2007; Pieroni et al., 2014; Pieroni, Ibrahimi, Abbasi, & Papajani-Toska, 2015; Pieroni, Giusti, & Quave 2011; Pieroni, Nedelcheva, & Dogan, 2015; Pieroni & Quave, 2005; Quave & Pieroni, 2015; Rexhepi et al., 2013; Zamudio, Kujawska, & Hilgert, 2010).

In our further search for ad-hoc case studies that could represent suitable arenas for ethnobotanical cross-cultural comparative analysis, our attention has shifted in recent years to Eastern European areas, where the past implementation of geo-political borders resulted in the separation of what once might have been more or less homogenous ethnic or religious groups (Sõukand & Pieroni, 2016). In order to test the hypothesis that continuity and change in folk food plant uses also depends upon cultural isolation determined by the establishment of artificial borders, we decided to assess to what extent the wild food plant uses recorded within a small ethnic minority population (Gorani), who live in a remote mountainous area of South Kosovo and are still relatively understudied (Dérens & Geslin, 2010), resemble those of their nearby peers, who have instead lived for the past 90 years within the

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borders of the neighboring Republic of Albania.

This case study is particularly significant since the Gorani community living in the mountainous Gora area was artificially separated in 1925, when the borders between Albania and the former Kingdom of the Serbs, Croats, and Slovenes (later Yugoslavia, and nowadays the Republic of Kosovo) were re-arranged following a decision by an international commission of the League of Nations, probably under pressure from Italy (Hasani, 2002). Nine Gorani villages that serve as home to a total of approximately 15,000 inhabitants remained within Albanian borders and in this way the two resulting Gorani populations (those remaining within the borders of the former Yugoslavia and those living within the borders of Albania) underwent very different acculturation processes, living apart from each other, especially during the Albanian Communist period (1946–1991) when the state borders between Albania and Yugoslavia became practically unbreachable.

The Yugoslavian Gorani, sharing the same language as the dominant Serbo-Croatian elites, although professing a different faith (Islam), became more integrated within the urban socio-economical network of the federal state of Yugoslavia. Despite the remoteness of their highest home villages, extensive labor-related migrations to several city centers of the former Yugoslavia (notably Prizren, Belgrade, and Subotica), especially as confectionary artisans and construction workers, put them in more frequent contact with the majority population. On the other hand, the Albanian Gorani (and esp. the women of the communities), as a result of their Slavic language and the tremendous isolation of their area, remained completely isolated within the Albanian state for many decades, despite complex cultural negotiations with the dominant Albanian culture and elites. Beginning in 1991, the Albanian and Kosovar Gorani populations could interact once again, and nowadays it is not uncommon to see a few intermarriages and daily exchanges across the border.

The main question raised in this work was whether wild food plants and mushrooms still play a role in the domestic arena within the Kosovar Gorani *food scape*, and, if so, to try to explain why. We also assessed how wild food plants are processed and consumed, what are their medicinal perceptions (if any), and lastly we compared the collected data with those we previously found among Gorani communities in Albania and with pre-existing food ethnobotanical literature concerning Albanians, Serbians, and Bosniaks living in surrounding countries.

Our overall aim was to develop a better understanding of cross-cultural dynamics of plant folk knowledge systems among marginalized communities living along borders.

2. Materials and methods

2.1. Ethnographic background

The Gorani are one of the ethnic minority groups living in southern Kosovo, within an area known as Gora, and now belonging to the District of Dragash (Albanian: Dragash). The Gorani represent a Muslim minority, who were “recently” islamized (approx. in the middle of the 19th century) in comparison to the other Muslim groups in the Balkan region. The Gorani live in thirty small villages/communities: nineteen located in Kosovo, nine in Albania, and two in Macedonia. They speak a unique language, which they defined as “našinski”, and which is a Torlakian transitional dialect between the Bulgarian/Macedonian language group and the Serbo-Croatian language (Browne, 1993). The Gorani people retain a strong sense of their specific cultural identity, and tend to refuse being considered part of the Serbian, Macedonian, or Bulgarian groups. In Kosovo, in the most

recent census, a few Gorani declared themselves to be Bosniaks (the Balkan ethnic group they may feel closest to, being both Slavic and Muslim), but this seems to have been due to very specific local political circumstances. The Gorani still marry only within their ethnic group. The majority of the Kosovar Gorani interviewed during this study are in favor of establishing an autonomous Gora municipality.

2.2. Study site

The ten Gorani villages in Kosovo that were considered in this study, as well as the two Albanian villages where previous fieldwork was conducted in the spring 2012 (Quave & Pieroni, 2014,2015), are presented in Fig. 1. The main part of the field research was conducted in the center of Restelica, which is the largest Gorani village and is considered the “capital” of the Gorani population in Kosovo, with approximately 4500 inhabitants and representing the most elevated municipality of the entire Balkans (1717 m). The other villages, apart from Brod (1695 m), are located at lower elevations (800–1300 m) and have an average population of a few hundred inhabitants.

Restelica, as well as the other Gorani villages in Kosovo, is nowadays well connected in terms of infrastructure to Prizren, the main (trilingual) urban center of South Kosovo. However, the fact that this area remained historically landlocked as a Slavic-speaking exclave within the territory of a prominently Albanian-speaking area, dictated that Gora built intense ties esp. to Serbian towns, while today Gorani integration within the Kosovar Albanian society remains problematic.

The Gora landscape is dominated by mountains that may reach approximately 2800 m and the climate is typically continental and characterized by very harsh winters, with heavy snowfalls. The Gora area is part of the Sharr (Šar Planina) mountain system and is very biodiverse, with approximately 2000 vascular plant species and approximately 150 endemic plant species, as well, relictual and rare plant species and plant communities (Krasniqi, 1982).

Moreover, this habitat is the home of a rich mammalian fauna, which includes lynx, bear, chamois, wolf, and roe deer.

The Gorani territory was traditionally considered to be the most economically disadvantaged area within the former Yugoslavia and today it is still the poorest territory of Kosovo. The traditional economy of the Gora villages of the last century was based on cattle pastoralism and remittances of migrants, who worked and still work as laborers in diverse Balkan city centers. Nowadays, a significant portion of the youngest and middle generations have migrated for work to Italy (Siena and surrounding area, Tuscany), Austria (Vienna), and Serbia (Belgrade), while a number of young male community members still move only seasonally as construction workers to Serbia, Montenegro, and Macedonia. Today, the remittances sent home from relatives living in towns, and especially from abroad, represent the main household income for most Gorani families.

2.3. Field study and data collection

In-depth, semi-structured interviews concerning food plant uses (including herbal teas), as well as *folk nutraceuticals* (i.e. plant ingredients which are consumed and at the same time considered “healthy”, see Pieroni & Quave, 2006, pp. 101–129) were conducted with forty-one informants (between 26 and 82 years of age) during the winter 2015. Informed consent was always verbally obtained prior to conducting interviews and researchers adhered to the Code of Ethics of the International Society of Ethnobiology (ISE, 2008).

The main interviewees (thirty-five) were represented by mid-aged and elderly men, mainly farmers, shepherds, or retired

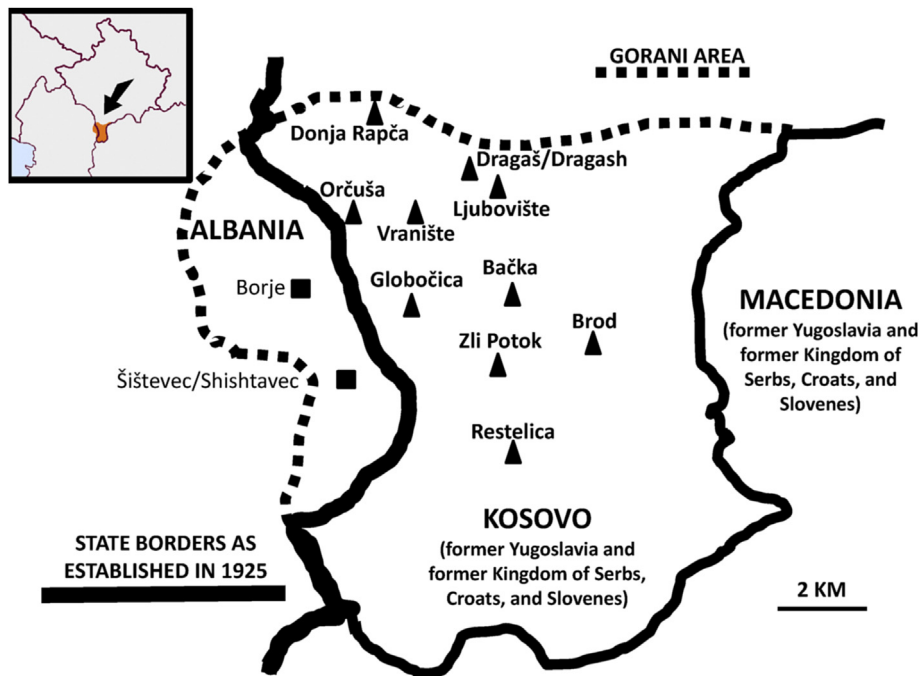


Fig. 1. Map of the study site showing the visited Gorani villages.

workers, who still manage some work close to nature, while we encountered a few barriers in recruiting female study participants. These difficulties were especially pronounced in the village of Restelica, where in recent years a radicalization of the professed Islam led to a few community members embracing Salafism (Schmidinger, 2013), resulting in restrictions in the freedom of movement of the women in the village.

Informants, who agreed to participate in our studies, were asked about the food customs and folk use of cultivated and wild plants in the local cuisine, to show the mentioned (dried) plants or to precisely describe them and their habitats. The reported Gorani folk plant names were linked to those referred to in previous studies conducted in the same Gora territory, and for which voucher specimens for wild taxa were collected (Mustafa et al., 2015; Quave & Pieroni, 2015). As in these prior studies, taxonomic identification, botanical nomenclature, and family assignments followed *Flora Europaea* (Tutin et al., 1964), The Plant List database (2013), and the Angiosperm Phylogeny Group III (Stevens, 2012). Fungi nomenclature followed instead *Index Fungorum* (2015) and in this case identification was only possible on the basis of the folk name and description. Given the fact that the Gorani language does not have any robust written tradition (literature), i.e. this language does not retain precise written standards, we used the Latin and not the Cyrillic alphabet for the transliteration of the Gorani folk plant names.

2.4. Data analysis

Collected data were compared with field ethnobotanical data previously gathered among the Gorani living on the Albanian side of the Gora area (Quave & Pieroni, 2015) and with those collected among Northern Albanians (Pieroni & Quave, 2014a). Also, the collected data were compared with the existing Serbian and Bosniak ethnobotanical literature (Jarić et al., 2015, 2007; Menković et al., 2011; Pieroni, Giusti, & Quave, 2011; Redžić, 2006; Šarić-Kundalić, Dobeš, Klatte-Asselmeyer, & Saukel, 2011, 2010; Savikin et al., 2013; Zlatković, Bogosavljević, Radivojević, & Pavlović, 2014).

3. Results

3.1. The traditional Gorani food system

As with many traditional Balkan pastoralist economies, the Gorani food system in southern Kosovo is characterized by a high consumption of dairy products (esp. cheese, yogurt and yogurt ricotta). Apart from these products, the most culturally salient customs of the Gorani cuisine are related to the frequent culinary uses of potato and rye (in the past, now substituted by wheat and corn, whose flours are acquired from villages situated at lower elevations or from city markets) as traditional staple crops.

The main Gorani traditional foods also include landraces of beans, beef-based sausages (*sudžuk*) and dried cured meat (*pastrma*), sheep/mutton meat (esp. during festivities), and several kinds of savory pies (*börek*, *pita* in Gorani), which is the Ottoman baked filled pastry made with several thin dough (phyllo) layers and various possible fillings: wild leafy vegetables, pumpkin, potato, cabbage, spinach, cheese, yogurt ricotta, or even only minced meat.

Among the Gorani, the home-made preparation of lacto-fermented vegetables for the winter and spring (mainly cabbage, cucumbers, ripe and unripe tomatoes, red beet, and carrots, but also crab apples and elderflowers), as well as fermented fruits-based “sodas”, normally drunk in the summer and the autumn, are also very popular. In both cases, the sour or carbonated taste of the resulting beverage is often associated with their perceived health benefiting properties and with their identification as panaceas.

Wild food plants represent a crucial domain of the traditional Gorani food system, not only in terms of the number of taxa, but also in terms of the frequency of consumption, especially during the spring, summer, and autumn months.

3.2. Wild plant uses

Seventy-nine folk taxa, of which seventy-seven could be botanically identified, represent the remarkable wild-food based

gastronomic cultural heritage of the Gorani of Kosovo. The recorded wild food plants, as well as the very few reports concerning mushroom uses and cultivated food plants used in unusual ways, are reported in Table 1; in the same table, we indicated also the frequency of quotation of all the recorded taxa, as well as the overlaps with the data that we previously collected among Albanian Gorani.

The most commonly quoted recorded plants are used in fermented beverages, which are often considered to be healthy, or are used for treating specific diseases. In particular, two types of plant based fermented beverages were very common quoted by the Kosovar Gorani: wild fruit “sodas” and vegetable-based lacto-fermented beverages, whose folk culinary knowledge is mainly (but not exclusively) retained by women.

The former ones are prepared by fermenting fresh wild berries and fruits (including juniper cones, referred to as ‘berries’) to produce non-alcoholic (or very low-alcohol), non-salted, gassy fruit beverages, which are drunk for their refreshing qualities and also perceived health benefits (e.g. juniper berry “soda” for kidney-related diseases). These beverages are created in an anaerobic environment using sealed bottles, while sugar and even lemon juice (acquired in past decades) are sometimes added during the fermentation process to regulate the acidity and increase gas production (CO₂). Most of the wild fruits used as starting ingredients for these food products belong to the Rosaceae family, which are known to contain high levels of plant phenolics and tannins and to exhibit remarkable antioxidant properties. The latter ones are instead prepared by fermenting diverse plant parts in salted brine solutions to produce pickled vegetables and, as precious by-products, sour beverages, which are locally considered proper *folk nutraceuticals* (as defined in Pieroni & Quave, 2006, pp. 101–129).

Another portion of the most commonly cited wild plants refers instead to herbal teas, half of which are drunk daily as recreational beverages and panaceas for general health. The most popular are teas based on the dried aerial parts of wild *Sideritis*, *Origanum*, *Hypericum*, *Crataegus*, *Urtica*, *Thymus*, *Mentha* and *Matricaria* spp., as well as those based on *Rosa canina* pseudofruits and *Orchis* spp. tubers.

The role of wild leafy vegetables in the folk cuisine of the Gorani of Kosovo is restricted.

This finding may be due in part to the main limitation of the study, i.e. the prevalence of male informants in the sample, as normally wild vegetables represent a prototypical folk knowledge domain of women. However, a similar trend concerning the use of very few species of wild leafy vegetables emerged also from previous field studies we conducted during the past fifteen years among other Balkan mountain pastoralists (most notably Albanians of North and North-East Albania, Pieroni & Quave, 2014b).

Among Kosovar Gorani, only nettles (*Urtica dioica*), dock (*Rumex patientia*), sorrel (*Rumex acetosa* and *R. acetosella*), and, more rarely, sow thistles (*Sonchus oleraceus*) are still commonly gathered in the spring and used as filling for börek.

Moreover, it is worth mentioning the crucial cultural importance of Good King Henry (*Chenopodium bonus-henricus*), whose leaves are ignored as food ingredient, but whose roots represents for Gorani the indispensable “secret” ingredient for preparing the home-made sweet *halva*. The Gorani have been well known in fact all over the Balkans during the last two centuries for this sweet product as they have represented the main prestigious confectionary artisans in several former Ottoman and, later, Yugoslavian city centers.

3.3. Cross-cultural comparison of wild food plant uses

3.3.1. Kosovar Gorani vs. Albanian Gorani

We conducted an analysis of the overlap between the wild food ethnobotany of the Gorani of Kosovo and that of the Albanian Gorani, whose data were previously recorded in 2012 during a field study that included a similar number of total informants (Quave & Pieroni, 2015).

This comparison does not consider mushroom taxa, since they were not the focus of the field study conducted on the Albanian side.

Forty use reports were shared between the two communities, while thirty reports were mentioned only by Kosovar Gorani and thirty-six only by Albanian Gorani.

The fact that approximately only one third of the wild plant reports were mentioned by both communities may demonstrate that their ninety-year-long separation (including sixty-five years of *complete* separation) has partially affected folk wild food plant uses and the main divergence concerns the domain of herbal teas.

On the other hand, the high frequency of citations we observed for wild fruit-based fermented beverages (highly cited in Table 1), which were also recorded among Albanian Gorani (Quave & Pieroni, 2015), may possibly indicate one important element of the core of the traditional Gorani plant food system. This food system seems to have been remarkably linked to the gathering of fruits from the wild and to a deep knowledge of the environmental resources provided by the mountain pastures and forest ecosystem.

Finally, the fact that in the Albanian study female informants were well represented in the study (unlike the Kosovar Gorani women, with whom access was limited), however, could represent an important limiting factor for in-depth analysis of the differences between the two data sets.

3.3.2. Gorani vs. Albanians

If we compare the findings of the present study with the wild plant foods used by contiguous populations, i.e. Albanians in North and NE Albania, the differences are remarkable, especially because of the specific Gorani *know-how* concerning the fermentation of a diverse array of plant materials, while North Albanians mainly know only the fermentation processes for cabbage, cucumbers, and tomatoes. In a recent investigation (Quave & Pieroni, 2015) we statistically assessed the major differences between the ethnobotanies of Gorani and Albanian populations in Albania, which also concerned specific plants: *Achillea millefolium* and *Sambucus ebulus* (culturally vital to Albanians but not to Gorani) and *Hypericum perforatum*, *Orchis mascula* and *Salix alba* (culturally very salient to Gorani but not to Albanians).

3.3.3. Gorani vs. other Slavic populations (Serbians and Bosniaks)

Moreover, according to our field data, a significant number of herbal uses we recorded overlap with the Serbian and Bosniak ethnobotanical literature. From our field observations and interviews it emerged that in the 1990s a significant number of herbal uses in the former Yugoslavia spread all over the country, via a number of popular literature sources as well as other media. The important migration waves of Gorani from Kosovo towards several former Yugoslavian (mainly Serbian) cities over the past three decades may have then facilitated the adoption of these exogenous, Slavic customs concerning specific herbal uses of wild plants. This was especially the case in the lower elevation villages of Gora, where historically the migration links to Serbia have been more intense.

On the other hand, typical examples of this trend could be found in the folk herbal use of the dried aerial parts of *Taraxacum*, *Malva*, *Artemisia*, and *Achillea* spp., still ignored among the Albanian

Table 1

Local food and food-medicinal uses of wild plants and mushrooms in the study area (including unusual food uses of cultivated plants).

Plant ingredient (botanical taxon and family, used plant parts, and voucher specimen code)	Recorded local names	Traditional preparation and (eventual) perceived medicinal value/treated disease	Frequency of citation	Same or similar use recorded among the Gorani of Albania
Apple (<i>Malus domestica</i> Borkh., Rosaceae) (Fruits) CAME-26236	<i>Jaboka</i>	(Gassy) beverage (<i>sok</i>)	0.15	yes
Ash (<i>Fraxinus excelsior</i> L., Oleaceae) (Bark)	<i>Javor</i>	Tea: drunk for relieving skin burns	0.05	no
Barley (<i>Hordeum vulgare</i> L., Poaceae) (Grain)	<i>Jecmen</i>	Roasted, in decoction: recreational	0.17	no
Basil (<i>Ocimum basilicum</i> L., Lamiaceae) (Leaves)	<i>Basilik, Bosijak</i>	Tea: colds/flu	0.07	no
Bearberry (<i>Arctostaphylos uva-ursi</i> (L.) Spreng., Ericaceae) (Aerial parts) PRN-02/Pz/2013	<i>Brusnica, Groždze, Medvege uvin</i>	Tea: prostatitis	0.20	yes
Bilberry (<i>Vaccinium myrtillus</i> L., Ericaceae) (Fruits) PRN-87/Pz/2013	<i>Borovnica, Čeršune, Groždze, Zelenj čaj</i>	(Gassy) beverage (<i>sok</i>); fermented and distilled in <i>raki</i> : drunk against colds/flu	0.71	yes
Blackberry (<i>Rubus fruticosus</i> L., Rosaceae) (Fruits) PRN-65/Pz/2013	<i>Kapina, Kupina</i>	Consumed raw: diarrhoea; (gassy) beverage (<i>sok</i>)	0.39	yes
Blackberry (<i>Rubus fruticosus</i> L., Rosaceae) (Leaves)		Tea: sore throats, cough	0.44	no
Cabbage (<i>Brassica oleracea</i> L.) (Leaves)	<i>Kupus</i>	Lacto-fermented (in brine): the resulting liquid portion (<i>juva</i>) is drunk as a panacea, against respiratory and kidney problems	0.71	yes
Caesar's mushroom (<i>Amanita caesarea</i> (Scop.) Pers., Amanitaceae) (Fruiting body)	<i>Jačerka</i>	Cooked in various ways	0.05	no
Carrot (<i>Daucus carota</i> L., Apiaceae) (Roots)	<i>Sangarepa</i>	Lacto-fermented (in brine): the resulting liquid portion (<i>juva</i>) is drunk as a panacea, against respiratory and kidney problems	0.37	no
Catnip (<i>Nepeta cataria</i> L., Lamiaceae) (Flowering aerial parts)	<i>Mačkina trava, Strašnica</i>	Tea: stress, fears, digestive discomforts	0.29	yes (partially)
Centaury (<i>Centaurium erythraea</i> Rafn, Gentianaceae) (Flowering aerial parts) GEO-020047	<i>Kantarion crveno</i>	Tea: stomach-ache, digestive discomforts	0.24	no
Chamomile (<i>Matricaria chamomilla</i> L., Asteraceae) (Flowering tops) PRN-43/Pz/2013	<i>Kamelica, Kamilica</i>	Tea: recreational/panacea, stomach-aches (esp. those affecting children)	0.22	yes
Chantarelle (<i>Cantharellus cibarius</i> Fr., Cantharellaceae) (Fruiting body)	<i>Lisičerka</i>	Cooked in various ways	0.10	no
Cherry (<i>Prunus avium</i> (L.) L., Rosaceae) (Fruits)	<i>Trešnja</i>	(Gassy) beverage (<i>sok</i>)	0.07	no
Cherry plum (<i>Prunus cerasifera</i> Ehrh., Rosaceae) (Fruits) CAME-26298	<i>Divlja šliva, Dženarika</i>	(Gassy) beverage (<i>sok</i>): respiratory disorders; dried, and consumed as a blood depurative	0.80	yes
Cherry plum (<i>Prunus cerasifera</i> Ehrh., Rosaceae) (Unripe fruits)		As a rennet to curdle milk	0.05	no
Coltsfoot (<i>Tussilago farfara</i> L., Asteraceae) (Flowers)	<i>Podbel</i>	Tea: cough	0.10	no
Cornelian cherries (<i>Cornus mas</i> L., Cornaceae) (Fruits) CAME-26279	<i>Drenina</i>	(Gassy) beverage (<i>sok</i>)	0.88	yes
Cowslip (<i>Primula veris</i> L., Primulaceae) (Flowers) PRN-56/Pz/2013	<i>Jaglika, Jagorčenina, Gorolja</i>	Tea: cough	0.20	yes
Crab apple (<i>Malus sylvestris</i> Mill., Rosaceae) (Fruits) CAME-26288	<i>Divjačica, Divja jaboka, Planinska jabuka</i>	(Gassy) beverage (<i>sok</i>); fermented to produce home-made vinegar, drunk as a panacea and against obesity (normally diluted with water and sugar); lacto-fermented (in brine): the resulting liquid portion (<i>juva</i>) is drunk as a panacea, against respiratory and kidney problems	0.85	yes (partially)
Dandelion (<i>Taraxacum officinale</i> F.H. Wigg., Asteraceae) (Flowers) PRN-84/Pz/2013	<i>Maslačak</i>	Tea: diuretic; syrup: panacea	0.15	yes
Dandelion (<i>Taraxacum officinale</i> F.H. Wigg., Asteraceae) (Young leaves)		Salads	0.05	no
Dock (<i>Rumex patientia</i> L. and possibly other <i>Rumex</i> spp., Polygonaceae) (Leaves) CAME-26285	<i>Šavel, Štavel</i>	Filling for <i>börek</i> (<i>pita</i>)	0.95	yes
Dog rose (<i>Rosa canina</i> L., Rosaceae) (Pseudofruits) PRN-67/Pz/2013	<i>Šipun, Šipunka</i>	Tea: recreational/panacea, sore throats; (gassy) beverage (<i>sok</i>); syrup	0.92	yes
Elder tree (<i>Sambucus nigra</i> L., Adoxaceae) (Inflorescences) PRN-69/Pz/2013	<i>Bos</i>	Lacto-fermented (in brine); the resulting liquid portion is drunk, against respiratory disorders; tea or syrup: flu, cough	0.37	yes (partially)
Fat hen (<i>Chenopodium album</i> L., Amaranthaceae) (Leaves)	<i>Divja laboda</i>	Filling for <i>börek</i> (<i>pita</i>)	0.22	no
Field mushroom (<i>Agaricus campestris</i> L., Agaricaceae) (Fruiting body)	<i>Pečurka, Šumski Šampignon</i>	Cooked in various ways	0.05	no
Fir (<i>Abies</i> spp., Pinaceae) (Resin)	<i>Cetina</i>	Tea: cough	0.07	no
Fir (<i>Abies</i> spp., Pinaceae) (Unripe cones)		Syrup: cough	0.29	no
Garlic (<i>Allium sativum</i> L., Amaryllidaceae) (Bulbs)	<i>Belj luk</i>	Consumed: hypertension	0.34	no
Gentiana (<i>Gentiana lutea</i> L., Gentianaceae) (Roots) PRN-34/Pz/2013	<i>Čemerika, Lincura</i>	Tea: digestive discomforts	0.39	yes

(continued on next page)

Table 1 (continued)

Plant ingredient (botanical taxon and family, used plant parts, and voucher specimen code)	Recorded local names	Traditional preparation and (eventual) perceived medicinal value/treated disease	Frequency of citation	Same or similar use recorded among the Gorani of Albania
Good King Henry (<i>Chenopodium bonus-henricus</i> L., Amaranthaceae) (Roots)	Čuen	Decoction, as an emulsifying agent for producing the sweet dessert <i>halva</i> (made by mixing eggs, sugar, and this decoction)	0.73	yes
Hawthorn (<i>Crataegus</i> spp., Rosaceae) (Flowering tops)	(Beli) Glog	Tea: hypertension	0.24	yes
Hawthorn (<i>Crataegus</i> spp., Rosaceae) (Fruits)		Consumed raw; (gassy) beverage (<i>sok</i>); tea: recreational/panacea, cold, blood depurative	0.29	yes (partially)
Horsetail (<i>Equisetum arvense</i> L., Equisetaceae) (Aerial parts)	Koinskirep	Tea: diuretic, prostatitis	0.12	yes
PRN-07/Pz/11				
Houseleek (<i>Sempervivum tectorum</i> L., Crassulaceae) (Inflorescences)	Čuvarkuče, Grčke piliča, Kašel, Simičika, Sml	Tea: cough	0.17	no
PRN-71/Pz/2013				
Houseleek (<i>Sempervivum tectorum</i> L., Crassulaceae) (Leaves)		Yogurt starter ^a	0.07	yes
Jerusalem artichokes (<i>Helianthus tuberosus</i> L., Asteraceae) (Tubers)	Oraške	Consumed raw as a snack	0.05	yes
Juniper (<i>Juniperus communis</i> L., Cupressaceae) (Cones)	Kleka, Smreka	Fermented beverage (prepared by leaving the cones in water, and sometimes adding lemon juice): kidney problems, cystitis, thirst; tea: stomach-ache, cardiac and nervous diseases, diuretic	0.78	yes (partially)
PRN-39/Pz/2013				
Lemon balm (<i>Melissa officinalis</i> L., Lamiaceae) (Aerial parts)	Matorka	Tea: recreational/panacea, cough, digestive discomforts, mild tranquilizer, emmenagogue	0.17	yes (partially)
PRN-42/Pz/2013				
Lime tree (<i>Tilia</i> spp., Malvaceae) (Flowers)	Lipa	Tea: recreational/panacea	0.10	no
Maize (<i>Zea mays</i> L., Poaceae) (Grains → Flour)	Kukuruz	Fermented in water to obtain <i>boza</i> (beverage)	0.29	yes
Mallow (<i>Malva sylvestris</i> , Malvaceae) (Flowering tops)	Crni sles	Tea: sore throat	0.32	no
PRN-44/Pz/2013				
Millet (<i>Panicum miliaceum</i> L., Poaceae) (Grains → Flour)	Prosok	Fermented in water to obtain <i>boza</i> (beverage) ^a	0.24	no
Mint (<i>Mentha</i> spp., Lamiaceae) (Leaves)	Bosilek, Nane	Tea: recreational/panacea, sore throat, cough, fever, stomach-ache, digestive discomforts	0.37	yes
Morel (<i>Morchella</i> spp., Morchellaceae) (Fruiting body)	Smarčak	Cooked in various ways	0.05	no
Mountain tea (<i>Sideritis scardica</i> Griseb., Lamiaceae) (Flowering aerial parts)	Livacki čaj, Šarplaninski čaj, Planinski čaj	Tea: recreational/panacea, cardiotonic, stomach-ache	0.60	no
Mullein (<i>Verbascum</i> sp., Scrophulariaceae) (Flowering aerial parts)	Bobljak	Tea: respiratory and cardiac diseases	0.12	no
PRN-89/Pz/2013				
Nettle (<i>Urtica dioica</i> L., Urticaceae) (Leaves)	Kopriva	Filling for <i>börek</i> (<i>pita</i>) or variously cooked; tea: recreational/panacea, diuretic, prostatitis	0.95	yes
PRN- 85/Pz/2013				
Onion (<i>Allium cepa</i> L., Amaryllidaceae) (Bulbs)	Kromit	Consumed: constipation	0.24	no
Orache (<i>Atriplex hortensis</i> L., Amaranthaceae) (Leaves)	Laboda	Filling for <i>börek</i> (<i>pita</i>)	0.24	yes
Pear (<i>Pyrus communis</i> L., Rosaceae) (Fruits)	Hruška	(Gassy) beverage (<i>sok</i>)	0.24	yes
Plum and damson (<i>Prunus domestica</i> L. Rosaceae) (Fruits)	Sliva	(Gassy) beverage (<i>sok</i>); dried, and boiled long in water (<i>oshaf</i>): constipation; concentrated juice (without sugar, <i>peštil</i>), compote: digestive, laxative	0.73	yes
Plum and damson (<i>Prunus domestica</i> L. Rosaceae) (Unripe fruits)	Divlia sliva, Dženarika	(Gassy) beverage (<i>sok</i>); fermented to obtain vinegar	0.24	no
Porcini (<i>Boletus</i> spp., Boletaceae) (Fruiting body)	Vrgan	Cooked in various ways	0.10	no
Potato (<i>Solanum tuberosum</i> L., Solanaceae) (Young leaves)	Kompir	Filling for <i>börek</i> ^a	0.05	no
Puffball (<i>Bovista</i> spp., Agaricaceae) (Fruiting body)	Bela lutika	Cooked	0.07	no
Ramson (<i>Allium ursinum</i> L., Amaryllidaceae) (Leaves)	Medvedži luk	Salad: blood depurative	0.05	no
Raspberry (<i>Rubus idaeus</i> L., Rosaceae) (Fruits)	Malina	Consumed raw; (gassy) beverage (<i>sok</i>); tea: recreational/panacea	0.46	no
PRN-66/Pz/2013				
Raspberry (<i>Rubus idaeus</i> L., Rosaceae) (Leaves)		Tea: recreational/panacea	0.29	no
Red beet (<i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> convar. <i>vulgaris</i> var. <i>vulgaris</i> , Amaranthaceae) (Roots)	Cvekla	Lacto-fermented (in brine): the resulting liquid portion (<i>juva</i>) is drunk as a panacea, against respiratory and kidney problems	0.27	no
Sloe (<i>Prunus spinosa</i> L., Rosaceae) (Fruits)	(Crni) Glog	(Gassy) beverage (<i>sok</i>)	0.27	yes
CAME-26260				
Sorrel (<i>Rumex acetosa</i> L., <i>R. acetosella</i> L., and <i>R. pulcher</i> L., Polygonaceae) (Leaves)	Kiselica	Filling for <i>börek</i> ; yogurt starter	0.68	yes (partially)
Sour cherry (<i>Prunus cerasus</i> L., Rosaceae) (Fruits)	Višnja	(Gassy) beverage (<i>sok</i>)	0.24	no
Sow thistle (<i>Sonchus oleraceus</i> L., Asteraceae)	Šušlak	Filling for <i>börek</i> (<i>pita</i>)	0.05	yes
St. John's Wort (<i>Hypericum perforatum</i> L., Hypericaceae) (Flowering aerial parts)	Hajdučka trava, Kantarion	Tea: recreational/panacea, cough, digestive discomforts	0.93	yes
PRN-36/Pz/2013				

Table 1 (continued)

Plant ingredient (botanical taxon and family, used plant parts, and voucher specimen code)	Recorded local names	Traditional preparation and (eventual) perceived medicinal value/treated disease	Frequency of citation	Same or similar use recorded among the Gorani of Albania
Tomatoe (<i>Solanum lycopersicum</i> L.) (Unripe and ripe fruits)	<i>Patlidžan</i>	Lacto-fermented (in brine): the resulting liquid portion (<i>juva</i>) is drunk as a panacea, against respiratory and kidney problems	0.54	yes (partially)
White nettle (<i>Lamium album</i> L., Lamiaceae) (Aerial parts)	<i>(Mrtva) Bela kopriva</i>	Tea: kidney problems	0.05	no
Wild garlic (<i>Allium</i> sp., Amaryllidaceae) (Bulb)	<i>Divlj luk, Zmjln luk</i>	Yogurt starter ^a ; consumed raw or cooked	0.05	no
Wild orchids (<i>Orchis morio</i> L. and possibly other <i>Orchis</i> spp., Orchidaceae) (Tubers)	<i>Kukaica, Koren, Salep</i>	Decoction (in water or milk; from the dried and powdered tubers): sore throat, cough, male impotence, to promote birth of male babies, for marrying the youngest girls of the village, reconstituent for kids, recreational/panacea	0.85	yes (partially)
Wild oregano (<i>Origanum vulgare</i> L., Lamiaceae) (Flowering aerial parts)	<i>Šumski čaj</i>	Tea: recreational/panacea, cough	0.98	yes
Wild pear (<i>Pyrus pyrastrer</i> (L.) Buirgsd., Rosaceae) (Fruits)	<i>Divja kruška, Planinska kruška</i>	(Gassy) beverage (<i>sok</i>); fermented to produce home-made vinegar, drunk as a panacea, diluted with water and sugar	0.46	yes (partially)
Wild thyme (<i>Thymus serpyllum</i> L. Lamiaceae) (Flowering aerial parts)	<i>Majčina dušnica</i>	Tea: recreational/panacea, mild tranquilizer	0.46	yes (partially)
Wormwood (<i>Artemisia absinthium</i> L., Asteraceae) (Leaves)	<i>Pelin</i>	Tea: appetite stimulant	0.41	no
Yarrow (<i>Achillea millefolium</i> L., Asteraceae) (Flowering aerial parts)	<i>Belisles</i>	Tea: cough	0.07	no
Unidentified taxon (Aerial parts)	<i>Plavačamice</i>	Tea: diarrhoea	0.05	–
Unidentified taxon (Aerial parts)	<i>Kolačić, Kolačovca</i>	Yogurt starter ^a	0.05	–

^a Disappeared use.

Gorani, but popular on the Kosovar side of Gora. Interestingly, these same taxa represent important cultural markers of Serbian and Bosniak herbal ethnobotanies (Jarić et al., 2015,2007;; Menković et al., 2011; Pieroni et al., 2011; Redžić, 2006; Šarić-Kundalić et al., 2011,2010; Savikin et al., 2013; Zlatković et al., 2014).

These comparisons suggest that the few divergences observed between Kosovar and Albanian Gorani ethnobotanies, especially in the domain of home-made wild plant-based herbal teas, may be explained by the partial Serbian acculturation that the Gorani in Kosovo (in the former Yugoslavia) went through. In other words, the original bulk of the Gorani wild food plant-based traditions may have been influenced by the herbal customs acquired from surrounding Slavic populations within the former Yugoslavia.

Interestingly, mushrooms species were only reported by very few interviewees in the villages of lower Gora, where there have been and still continue to be very intense waves of male seasonal migrations to Serbia. It is plausible that folk knowledge of wild mushrooms in this instance is perhaps the result of an acculturation process that the Gorani went through via contacts to Serbian mainstream culture.

4. Discussion

4.1. Isolation and the conservation of a wild food plants based cuisine

The occurrence of a complex Gorani wild food plant knowledge system, especially in the most elevated village of Restelica, may be linked to the topographic and cultural isolation of this ethnic group within Kosovo both now and in past decades within the former Yugoslavia.

While in many other parts of Europe the disappearing domain of

wild food plants in folk cuisines has been often linked to industrialization and urbanization phenomena (Łuczaj et al., 2012), in our study area these trends may have been mitigated by the fact that Gorani have retained a strong sense of their unique cultural identity. They in fact still intermarry only with other Gorani and during the St. George festivities (Djurdjevden, 6 May); a number of young Gorani men living in the diaspora abroad come back to their home villages for a few days to “choose” and, later, marry their brides. This shows how, despite many decades of cultural exchanges within the federal states of Yugoslavia and the similarity of their language to the Serbian one, this group has managed to remain remarkably closed to outsiders.

The isolation of the Gorani could of course be related to their highly disputed ethnogenesis, for which Balkan and local historians still disagree (Schmidinger, 2013): for some, Gorani origins can be traced to the medieval heretic sect of the (Christian Orthodox) Bogomils, who escaped persecution by fleeing to the upper South Balkan mountains (and only later were islamized: Dokle, 2011); for others they represent late islamized Macedonians/Bulgarians (Courthiade, 2000), while a few others even believe that they are the descendants of Middle Eastern populations, which arrived in the Balkans during the 11th–13th centuries.

As a matter of fact, the Gorani still represent a marginalized and, sometimes, “hidden” community, despite the fact that the Kosovar Parliament reserves one seat for their representative (Council of Europe, 2013; Volčić & Erjavec, 2011). Additionally, in the Gorani area, Kosovar Albanian institutions partially co-exist together with a few “parallel” Serbian public services (i.e. Serbian schools and Serbian post offices that pay Serbian pensions). Consistent with this extremely delicate situation, a portion of Gorani children attend Serbian schools (Božić, 2010), while others attend Bosniak schools; in Restelica this actually takes place in the same physical building,

but at a different time of day.

All of these complex inter-ethnic situations may have contributed to reinforcing the isolation of the Gorani community and thus retaining their own culinary traditions and their folk *know-how* concerning traditional environmental resources and wild food plants as well. We also observed this phenomenon among the Gorani of NE Albania (Quave & Pieroni, 2015), where their cultural isolation from neighboring Albanians, however, has been even more dramatic, due to the tremendous differences between Albanian and Gorani history, customs, and language and to the lack of a Slavic high culture in Albania to be used as a reference point.

4.2. Disappeared food plant uses

Although the Gorani food system seems to still rely on many wild plants, we found also that a few plant ingredients are well remembered by the study participants, but not anymore used nowadays.

These concern especially wild plants used as yogurt starters, potato leaves, and millet.

Houseleek (*Sempervivum tectorum*), sorrel, and an unidentified wild garlic played an important role in the home-made production of yogurt until the recent past (Eighties). This finding should be further investigated and compared with those from other pastoralist societies in the Near East and Central Asia, since the link between yogurt making and these species could explain the archaic cultural value of these food items, which are prepared and consumed in various ways in several folk pastoralist cuisines of the Balkans and the Middle East (Ahmad & Askari, 2015; Kaval, Behçet, & Çakılcıoğlu, 2015; Pieroni, 2010; Polat, Cakılcıoğlu, Uluşan, & Paksoy, 2015; Quave & Pieroni, 2015).

The loss of plant based yogurt starters may be due to a decreased mobility of the Gorani pastoralist activities, i.e. less permanence during the summer in temporary settlements in upper mountain pastures, where shepherds lived close to typical Alpine plant ingredients.

In our field study, interviewees recalled also the past culinary use of young potato leaves (previously boiled) as a vegetable filling ingredient for börek.

We had previously recorded this very novel food use in other elevated villages on the Macedonian side of the same Gora mountains (Pieroni et al. 2013), as well as in the remote and marginalized nearby mountainous area of Gollobordo in NE Albania (Pieroni et al., 2014). We explain the existence of this “potato leaf cuisine”, which was previously never recorded (to our knowledge) in other contemporary food ethnographic studies, with the hypothesis that in isolated high elevation mountain villages, after very long and cold winters, potatoes leaves (introduced mid-19th century) may represent one of the very few leafy ingredients available as emergency foods. Archival ethnographic records in Europe sometimes contain notes on the culinary use of young aerial parts of potatoes in past centuries, such as in Estonia for making soups during the famine periods of the mid-19th century and the food shortages of WWII (Kalle & Sõukand, 2012).

Additionally, the traditional preparation of the home-made lacto-fermented sweet beverage *boza*, nowadays prepared from corn meal, was until the recent past locally prepared from millet only. According to our informants, millet disappeared from the local landscapes in the Seventies, roughly two decades later than in Southern Europe.

Boza is still artisanally and traditionally produced and sold throughout the Balkans by diasporic Gorani confectioners.

4.3. A future for the Gorani wild food cuisine?

The valorization of the Gorani “gastronomic” cultural heritage could help local stakeholders to establish eco-touristic activities in the Gora area, still absent at the moment, aimed at both appreciating the beauty of the mountain landscape and biodiversity as well as the local cultural customs. Culturally sensitive eco-tourism could help to reduce their isolation and would provide some possible sources of economic development, while external recognition on the other hand could also raise awareness of the importance of traditional food plant-centred heritage among community members. This could be especially important in light of the efforts that the international community is putting in place in Kosovo for fostering true reconciliation among the diverse ethnic communities and for promoting sustainable rural development projects in its most disadvantaged areas. The potential outcomes of these efforts will be particularly welcome in Balkan areas, such as the Gora, that retain a tremendous potential in terms of food biocultural diversity, i.e. the complex interrelations between local language, customs, *sociabilities*, and local biodiversity within the food domain. The fascinating Gorani gastronomic cultural heritage, which still relies on many wild plant resources, could represent, for example, a potent factor for promoting the development of both small-scale markets of specialty food and herbal products, as well as for enhancing new, sustainable hospitality initiatives (Essedra, 2012; Pieroni & Quave, 2014a).

5. Conclusion

The field study that we conducted among the Gorani of South-Kosovo showed a remarkable level of traditional knowledge concerning the folk use of wild botanical and mycological taxa. A large portion of the wild food reports refer to fermented wild fruit-based beverages and herbal teas, while the role of wild vegetables is restricted.

A comparison of these data with those previously collected among the Gorani living in nearby villages within the territory of Albania, showed that approximately half of the wild food plant uses are the same.

This finding illustrates the complex nature of the Kosovar Gorani ethnobotany, which involve two core elements: 1) wild food plant utilizations, which we may consider as part of an “original” bulk of the Gorani ethnobotany, since they are frequently quoted in the study area and they also occur on both (Albanian and Kosovar) sides of the Gora. These mainly pertain to fermented wild fruits-based preparations; 2) wild plant uses that – according to the comparison with the Serbian/Bosniak ethnobotanical literature - could have been acquired from the surrounding Slavic neighbors (to whose cultural domains the Kosovar Gorani heavily referred to during the former Yugoslavian times). These mainly concern a few herbal teas and mushrooms.

It would be interesting to examine how younger generations of Kosovar Gorani descendants could re-articulate this dynamic knowledge on wild food plants in the future, considering that a significant number of them now live in Austria and in Italy, where, we can hypothesize that new wild plant uses may be adopted, possibly substituting “traditional” ones (de Madeiros et al., 2012; Kujawaska & Pieroni, 2015), although the first data on the social life of children of the Gorani (Restelica) diaspora in Tuscany (central Italy) show that this group remains fairly isolated within its new environment (Fia, 2006).

Further cross-cultural food ethnographic studies among diasporic groups and along cultural borders both in SE Europe and beyond could remarkably contribute to a better understanding of the dynamics of change in food “traditions” in multi-cultural and

multi-religious border areas.

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References

- Ahmad, A. A., & Askari, A. A. (2015). Ethnobotany of the Hawraman region of Kurdistan Iraq. *Harvard Papers of Botany*, 20, 85–89. <http://dx.doi.org/10.3100/hpib.v20iss1.2015.n8>.
- Bellia, G., & Pieroni, A. (2015). Isolated, but transnational: The global nature of Waldensian ethnobotany, Western Alps, NW Italy. *Journal of Ethnobiology and Ethnomedicine*, 11, 37. <http://dx.doi.org/10.1186/s13002-015-0027-1>.
- Božić, G. (2010). The ethnic division of education and the relations among non-serb minorities in Kosovo. *Canadian Slavonic Papers*, LII, 273–298. <http://dx.doi.org/10.1080/00085006.2010.11092650>.
- Browne, W. (1993). Serbo-croat. In B. Comrie, & G. G. Corbett (Eds.), *The Slavonic languages* (pp. 306–387). London: Routledge.
- Council of Europe (Advisory Committee on the Framework Convention for the Protection of National Minorities). (2013). *Third opinion on Kosovo*. http://www.coe.int/t/dghl/monitoring/minorities/3_FCNMdocs/PDF_3rd_OP_Kosovo_en.pdf Accessed 25.02.16.
- Courthiade, M. (2000). Les Roms, Ashkalis et Gorans de Dardanie/Kosovo. *Les Annales de l'Autre Islam*, 7, 255–280.
- Dérens, J. A., & Geslin, L. (2010). *Voyage au pays des Gorani (Balkans, début du XX^e siècle)*. Paris: Éditions Cartouche.
- Dogan, Y., & Nedelcheva, A. (2015). Wild plants from open markets on both sides of the Bulgarian-Turkish border. *Indian Journal of Traditional Knowledge*, 14, 351–358.
- Dokle, N. (2011). *Bogomilizmi dhe etnogeneza e torbeshëve të Gorës së Kukësit*. Prizren: Pena.
- ESSEDRA. (2012). <http://www.essedra.com/> Accessed 19.02.16.
- Eyssartier, C., Ladio, A. H., & Lozada, M. (2008). Cultural transmission of traditional knowledge in two populations of North-western Patagonia. *Journal of Ethnobiology and Ethnomedicine*, 4, 25. <http://dx.doi.org/10.1186/1746-4269-4-25>.
- Fia, C. (2006). *Albanesi, cossovari e molti altri nella scuola di Monteroni D'Arbia*. Monticiano, Italy: Gorée.
- Ghorbani, A., Langenberger, G., & Sauerborn, J. (2012). A comparison of the wild food plant use knowledge of ethnic minorities in Naban River Watershed National Nature Reserve, Yunnan, SW China. *Journal of Ethnobiology and Ethnomedicine*, 8, 17. <http://dx.doi.org/10.1186/1746-4269-8-17>.
- Hasani, H. (2002). Migrations of the populations of the Sar mountain Župa Gora. *Journal of The Geographical Institute "Jovan Cvijić"*, 51, 33–44.
- Index Fungorum. (2015). <http://www.indexfungorum.org/> Accessed 25.12.15.
- ISE (International Society of Ethnobiology). (2008). *The ISE Code of Ethics*. <http://www.ethnobiology.net/what-we-do/core-programs/ise-ethics-program/code-of-ethics/> Accessed 21.11.15.
- Jarić, S., Maćukanović-Jocić, M., Djurdjević, L., Mitrović, M., Kostić, O., Karadžić, B., et al. (2015). An ethnobotanical survey of traditionally used plants on Suva Planina mountain (south-eastern Serbia). *Journal of Ethnopharmacology*, 175, 93–108. <http://dx.doi.org/10.1016/j.jep.2015.09.002>.
- Jarić, S., Popović, Z., Maćukanović-Jocić, M., Djurdjević, L., Mijatović, M., Karadžić, B., et al. (2007). An ethnobotanical study on the usage of wild medicinal herbs from Kopaonik Mountain (Central Serbia). *Journal of Ethnopharmacology*, 111, 160–175. <http://dx.doi.org/10.1016/j.jep.2006.11.007>.
- Jiang, S., & Quave, C. L. (2013). A comparison of traditional food and health strategies among Taiwanese and Chinese immigrants in Atlanta, Georgia, USA. *Journal of Ethnobiology and Ethnomedicine*, 9, 61. <http://dx.doi.org/10.1186/1746-4269-9-61>.
- Kalle, R., & Söukand, R. (2012). Historical ethnobotanical review of wild edible plants of Estonia (1770s–1960s). *Acta Societatis Botanicorum Poloniae*, 81, 271–281. <http://dx.doi.org/10.5586/asbp.2012.033>.
- Kaval, I., Behçet, L., & Çakılcioglu, U. (2015). Survey of wild food plants for human consumption in Geçitli (Hakkari, Turkey). *Indian Journal of Traditional Knowledge*, 14, 183–190.
- Krasniqi, F. (1982). Promene u flori i vegetacije Kosova poslednjih decenija i mere njihove zaštite. *Makedonska Akademija na Naukite i Umetnostite*, III, 59–67.
- Kujawska, M., & Pieroni, A. (2015). Plants used as food and medicine by Polish migrants in Misiones, Argentina. *Ecology of Food and Nutrition*, 54, 255–279. <http://dx.doi.org/10.1080/03670244.2014.983498>.
- Łuczaj, L., Pieroni, A., Tardío, J., Pardo-de-Santayana, M., Söukand, R., Svanberg, I., et al. (2012). Wild food plant use in 21st century Europe: The disappearance of old traditions and the search for new cuisines involving wild edibles. *Acta Societatis Botanicorum Poloniae*, 81, 359–370. <http://dx.doi.org/10.5586/asbp.2012.031>.
- de Medeiros, P. M., Soldati, G. T., Alencar, N. L., Vandebroek, I., Pieroni, A., Hanazaki, N., et al. (2012). The use of medicinal plants by migrant people: Adaptation, maintenance, and replacement. *Evidence-Based Complementary and Alternative Medicine*, 807452. <http://dx.doi.org/10.1155/2012/807452>.
- Menéndez-Baceta, G., Aceituno-Mata, L., Reyes-García, V., Tardío, J., Salpeteur, M., & Pardo De Santayana, M. (2015). The importance of cultural factors in the distribution of medicinal plant knowledge: A case study in four basque regions. *Journal of Ethnopharmacology*, 161, 116–127. <http://dx.doi.org/10.1016/j.jep.2014.12.007>.
- Menković, N., Šavikin, K., Tasić, S., Zduñić, G., Stešević, D., Milosavljević, S., et al. (2011). Ethnobotanical study on traditional uses of wild medicinal plants in Prokletije Mountains (Montenegro). *Journal of Ethnopharmacology*, 133, 97–107. <http://dx.doi.org/10.1016/j.jep.2010.09.008>.
- Mustafa, B., Hajdari, A., Pieroni, A., Pulaj, B., Koro, X., & Quave, C. L. (2015). A cross-cultural comparison of folk plant uses among Albanians, Bosniaks, Gorani and Turks living in south Kosovo. *Journal of Ethnobiology and Ethnomedicine*, 11, 39. <http://dx.doi.org/10.1186/s13002-015-0023-5>.
- Pardo de Santayana, M., Tardío, J., Blanco, E., Carvalho, A. M., Lastra, J. J., San Miguel, E., et al. (2007). Traditional knowledge of wild edible plants used in the northwest of the Iberian Peninsula (Spain and Portugal): A comparative study. *Journal of Ethnobiology and Ethnomedicine*, 3, 27. <http://dx.doi.org/10.1186/1746-4269-3-27>.
- Pieroni, A. (2010). People and plants in Lëpushë. Traditional medicine, local foods, and post communism in a north Albanian village. In M. Pardo de Santayana, A. Pieroni, & R. Puri (Eds.), *Ethnobotany in the new Europe. People, health and wild plant resources* (pp. 16–50). Oxford: Berghahn.
- Pieroni, A., Cianfaglione, K., Nedelcheva, A., Hajdari, A., Mustafa, B., & Quave, C. L. (2014). Resilience at the border: Traditional botanical knowledge among Macedonians and Albanians living in Gollobordo, Eastern Albania. *Journal of Ethnobiology and Ethnomedicine*, 10, 31. <http://dx.doi.org/10.1186/1746-4269-10-31>.
- Pieroni, A., Giusti, M. E., & Quave, C. L. (2011). Cross-cultural Ethnobiology in the western Balkans: Medical ethnobotany and ethnozoology among Albanians and Serbs in the Pešter plateau, sandžak, South-Western Serbia. *Human Ecology*, 39, 333–349. <http://dx.doi.org/10.1007/s10745-011-9401-3>.
- Pieroni, A., Ibraliu, I., Abbasi, A. M., & Papajani-Toska, V. (2015). An ethnobotanical study among Albanians and Aromanians living in the Rraicë and Mokra areas of Eastern Albania. *Genetic Resources and Crop Evolution*, 62, 477–500. <http://dx.doi.org/10.1007/s10722-014-0174-6>.
- Pieroni, A., Nedelcheva, A., & Dogan, Y. (2015). Local knowledge of medicinal plants and wild food plants among Tatars and Romanians in Dobruja (South-East Romania). *Genetic Resources and Crop Evolution*, 62, 605–620. <http://dx.doi.org/10.1007/s10722-014-0185-3>.
- Pieroni, A., & Quave, C. L. (2005). Traditional pharmacopoeias and medicines among Albanians and Italians in southern Italy: A comparison. *Journal of Ethnopharmacology*, 101, 258–270.
- Pieroni, A., & Quave, C. L. (2006). Functional foods or food-medicines? On the consumption of wild plants among Albanians and Southern Italians in Lucania. In A. Pieroni, & L. L. Price (Eds.), *Eating and healing: Traditional food as medicine* (pp. 101–129). Binghamton, NY, USA: Haworth Press.
- Pieroni, A., & Quave, C. L. (2014a). *Ethnobotany and biocultural diversities in the Balkans. Perspectives on sustainable rural development and reconciliation*. New York: Springer.
- Pieroni, A., & Quave, C. L. (2014b). Wild food and medicinal plants used in the mountainous albanian North, Northeast, and East: A comparison. In A. Pieroni, & C. L. Quave (Eds.), *Ethnobotany and biocultural diversities in the Balkans. Perspectives on sustainable rural development and reconciliation* (pp. 183–194). New York: Springer.
- Pieroni, A., Rexhepi, B., Nedelcheva, A., Hajdari, A., Mustafa, B., Kolosova, V., et al. (2013). One century later: The folk botanical knowledge of the last remaining Albanians of the upper Reka Valley, mount Korab, western Macedonia. *Journal of Ethnobiology and Ethnomedicine*, 9, 22. <http://dx.doi.org/10.1186/1746-4269-9-22>.
- Polat, R., Cakilcioglu, U., Ulsan, M. D., & Paksoy, M. Y. (2015). Survey of wild food plants for human consumption in Elaziğ (Turkey). *Indian Journal of Traditional Knowledge*, 1, 69–75.
- Quave, C. L., & Pieroni, A. (2014). Fermented foods for food security and food sovereignty in the Balkans: A case study of the Gorani people of northeastern Albania. *Journal of Ethnobiology*, 34, 28–43. <http://dx.doi.org/10.2993/0278-0771-34.1.28>.
- Quave, C. L., & Pieroni, A. (2015). A reservoir of ethnobotanical knowledge informs resilient food security and health strategies in the Balkans. *Nature Plants*, 14021. <http://dx.doi.org/10.1038/nplants.2014.21>.
- Redžić, S. (2006). Wild edible plants and their traditional use in the human nutrition in Bosnia-Herzegovina. *Ecology of Food and Nutrition*, 45, 189–232. <http://dx.doi.org/10.1080/03670240600648963>.
- Rexhepi, B., Mustafa, B., Hajdari, A., Rushidi-Rexhepi, J., Quave, C. L., & Pieroni, A. (2013). Traditional medicinal plant knowledge among Albanians, Macedonians and Gorani in the Sharr mountains (Republic of Macedonia). *Genetic Resources and Crop Evolution*, 60, 2055–2080. <http://dx.doi.org/10.1007/s10722-013-9974-3>.
- Söukand, R., & Pieroni, A. (2016). The importance of a border: Medical, veterinary, and wild food ethnobotany of the Hutsuls living on the Romanian and Ukrainian sides of Bukovina. *Journal of Ethnopharmacology*, 185, 17–40. <http://dx.doi.org/10.1016/j.jep.2016.03.009>.
- Šarić-Kundalić, B., Dobeš, C., Klatte-Asselmeyer, V., & Saukel, J. (2010). Ethnobotanical study on medicinal use of wild and cultivated plants in middle, south

- and west Bosnia and Herzegovina. *Journal of Ethnopharmacology*, 131, 33–55. <http://dx.doi.org/10.1016/j.jep.2010.05.061>.
- Šarić-Kundalić, B., Dobeš, C., Klatte-Asselmeyer, V., & Saukel, J. (2011). Ethnobotanical survey of traditionally used plants in human therapy of east, north and north-east Bosnia and Herzegovina. *Journal of Ethnopharmacology*, 133, 1051–1076. <http://dx.doi.org/10.1016/j.jep.2010.11.033>.
- Šavikin, K., Zdunić, G., Menković, N., Živković, J., Čujić, N., Tereščenko, M., et al. (2013). Ethnobotanical study on traditional use of medicinal plants in South-Western Serbia, Zlatibor district. *Journal of Ethnopharmacology*, 146, 708–810. <http://dx.doi.org/10.1016/j.jep.2013.02.006>.
- Schmidinger, T. (2013). *Gora. Slawischsprachige Muslime zwischen Kosovo, Albanien, Mazedonien und Diaspora*. Vienna: Wiener Verlag.
- Stevens, P. F. (2012). *Angiosperm phylogeny website, version 13*. <http://www.mobot.org/MOBOT/research/APweb/> Accessed 03.12.15.
- The Plant List. (2013). <http://www.theplantlist.org/> Accessed 28.11.15.
- Tutin, T., Heywood, V., Burges, N., Valentine, D., Walters, S., & Webb, D. (1964). *Flora Europaea*. Cambridge: Cambridge University Press.
- Volčić, Z., & Erjavec, K. (2011). Hidden minorities in Kosovo: "We feel like ghosts in our own community". *Dve Domovini*, 33, 123–139.
- Zamudio, F., Kujawska, M., & Hilgert, N. I. (2010). Honey as medicinal and food resource. Comparison between polish and multiethnic settlements of the Atlantic forest, Misiones, Argentina. *The Open Complementary Medicine Journal*, 2, 58–73. <http://dx.doi.org/10.2174/1876391X01002020058>.
- Zlatković, B. K., Bogosavljević, S. S., Radivojević, A. R., & Pavlović, M. A. (2014). Traditional use of the native medicinal plant resource of Mt. Rtanj (Eastern Serbia): Ethnobotanical evaluation and comparison. *Journal of Ethnopharmacology*, 151, 704–713. <http://dx.doi.org/10.1016/j.jep.2013.11.037>.