



Ethnobotany in Albania - a transition from folk knowledge to cultural popular studies (1946-1991)

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ABSTRACT

Albania can be considered a country rich in biocultural diversity as a reflection of its high biologic diversity alternated with a vibrant multicultural history. This paper is a historical review of ethnobotanical data on wild and cultivated plants, including the uses and values of medicinal plants, collected through a bibliographic search of various sources written and published in the second phase of ethnobiology (1950-1991) (corresponding to the period of the socialist state). The second and the third phase (1950-1970; 1971-1991), namely as "the autochthonous ethnobiology of socialism" was developed during the period of communism in the history of Albania and corresponds to the emic and systemic phase. The studies of this period were dominated by the studies of traditional culture and folklore, ethnic culture, popular culture, which is often translated into English as "popular culture studies", taken to mean the totality of ideas, perspectives, attitudes, images, and social organization. This review aims to explore how ethnobotanical knowledge was collected, created, and used during the socialist period, not intending to be an exhaustive review of all the materials on this subject.

Keywords: Historical Ethnobotany; Folk Beliefs; Medicinal Plants; Traditional Knowledge; Albanian Plant Names.

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SIGNIFICANCE STATEMENT

This paper is a historical review of ethnobotanical notes about wild and cultivated plants, including medicinal plants' use and values, collected through the review of texts spanning a period from 1950 to 1991 and partly after the 2000s, following three proposed phases of the development of ethnobiology in Albania. This review presents an important and valuable historical source on how ethnobotanical cultural knowledge was collected, created, and used in Albania, or the "*autochthonous ethnobiology of socialism*" during the communist period in Albania's history. This review can contribute to the understanding of the state of ethnobotany in Albania, subject to the Marxist doctrine of historical and dialectical materialism, where the people were the subject producers of culture or "mass culture" and the importance of "ethnos" in the scientific study of plant knowledge and practices.

INTRODUCTION

The history of ethnobiology is related to the development of theories and methodologies in other scientific disciplines, which served to support the holistic approach of ethnobiological studies (Bajrami *et al.* 2024). According to Clement (1998), the history of ethnobiology comprises three phases or periods: pre-classic, classic, and post-classic. The first phase (1860-1899) coincides with the birth of the scientific disciplines of ethnobotany and ethnozoology; during the second phase (1950-1980) an emic approach was adopted from anthropology and cognitive psychology; the third phase (1981-1992) was focused on the importance of the conservation of natural resources (Clement 1998). Additionally, Hunn (2007) recognized four phases: pre-classic (until the 1950s); cognitive ethnobiology (1950–1970); ethnoecology (1970–1980), and the rights of indigenous people (indigenous ethnobiology (1990- to this day). Consequently, a fifth phase was proposed, which is known as conservation ethnobiology (Wyndham *et al.* 2011). In this phase, the importance of ethnobiological studies in the face of climate change and the need to preserve cultural biodiversity took priority (Bajrami *et al.* 2024; Hidayati *et al.* 2015; Wolverton 2013; Wyndham *et al.* 2011). Additionally, in line with theoretical developments in evolutionary theory (The Extended Evolutionary Synthesis) and the theory of Cultural Evolution (CE) during the 1980s, an evolutionary approach permeated ethnobiology. In short, researchers were interested in the factors that influenced cultural evolution and the adaptive nature of culture in humans (Bajrami and Qirjo 2019; Bajrami *et al.* 2019). Therefore, a sixth phase of ethnobiology was proposed, namely, evolutionary ethnobiology (Albuquerque and Medeiros 2013; Albuquerque and Ferreira Junior 2017; Albuquerque *et al.* 2022; Santoro *et al.* 2018). Furthermore, some authors proposed a need for another sixth phase of ethnobiology, in which a call for anti-oppressive ethnobiology due to colonialism and postcolonialism legacy is essential to challenge inherited practices and worldviews embedded in several scales, at personal and institutional levels (McAlvay *et al.* 2021; Soldati and Almada 2024).

Albania can be considered a country rich in biocultural diversity, with an index value of 0.432 (Damo *et al.* 2012). Positioned in the Mediterranean and the Balkan peninsula, although relatively small, Albania is characterized by diverse ecosystems and habitats, with two distinct biogeographical regions, namely, Mediterranean and Alpine, and includes ca. 3650 plant taxa and ca. 1300 animal taxa (Vangjeli 2021). Albanian history is related to the intertwining of the most powerful empires in world history, such

as the Roman and Ottoman Empires (Frashëri 1964; Fischer and Schmidt 2022). Additionally, Albania is home to various religious communities, including Muslims, Christians (Orthodox and Catholic), the Bektashi Order, and 9 official ethnic minorities, such as Greeks, Vlachs, Egyptians, Romani, etc. Characterized historically by religious tolerance and at some point, during the communist regime, declared the world's first "atheist state" beginning in 1967, Albania's cultural diversity in terms of languages, beliefs and, customs are an aggregation of various variables and components related to history and geographical trajectories intersections and also the intricate interrelationships between people, culture and biodiversity. For these reasons, the history of ethnobiology in Albania has specific characteristics.

In the two latest studies (Bajrami 2023; Bajrami *et al.* 2024), the authors outlined four phases of the development of ethnobiology in Albania. The first phase spans from the late 18th century (1796) to the early decades of the 20th century (1940); the historic period (1945-1991) includes two phases, emic (1950-1971) and systemic (1971-1990). During this period, the "autochthonous ethnobiology of socialism" was developed. Lastly, the fourth phase, or the "post-communist ethnobiology" (after the 2000s), is marked by a dynamic collaboration between local and foreign researchers.

The first phase of studies in ethnobiology in Albania was rooted in the numerous observations of travelers, explorers, missionaries, naturalists, anthropologists, botanists, etc., primarily focusing on the identification and use of plants (Saraçi and Damo 2021a). This phase corresponds to Ambrosio's first three phases (Ambrosio 2014) (Table 1), in which most ethnobiological knowledge was transmitted orally, while written sources were limited, sporadic, and nonexistent in Albanian. This phase also mirrors the cultural influence of the Ottoman Empire: Albania was the last country to gain independence from the Ottoman Empire, from its conquest in the late 14th century to the early twentieth century independence (Pacukaj 2013). The medical hierarchy during the Ottoman Empire comprised the position of *cerrahs* (surgeons) and Albanian *cerrahs* (in Alb. xherahët) specialized in one or several body organs or medical techniques and used several plants during their work (Minga 2009; Bajrami 2023). The early ethnobotanical knowledge is included in historical, geographical, anthropological, ethnographic, botanical texts, etc., of this period, mostly serving as data about the place, culture, and language and later as valuable notes in the works by Cozzi (1909, 1914), Durham (1909, 1928), Doda and Nopçë's manuscript from 1914 (2007), and Zojzi's articles (1937a,b). Durham, with her studies on the tradition of medicinal plant uses, can be considered

a pioneer of ethnobotanical studies in Albania (Saraçi and Damo 2021a). Before this period, publications about Albania were scarce, including ethnobotanical notes. However, it is important to notice that in some of the earliest Albanian dictionaries (Bardhi 1635; Da Lecce 1702), there are folk names of plants that are of interest to ethnobotany and ethnolinguistics. An unpublished and intriguing material from this period is a botanical dictionary by Mjeda, compiled in the years 1901-1903, which contains the Albanian names of 312 plants. One hundred and twenty of the names of wild plants were presented for the first time as collected from the people (Quku 1984). It is important to notice that this phase corresponds with the three first phases proposed by Hunn (2007) and Ambrosio (2014) (Table 1) and was characterized by a descriptive approach and discovery of useful plants in Albanian culture.

The second and third phases (1950-1970; 1971-1991) were developed during the communist era in Albania's history, namely the "autochthonous ethnobiology of socialism" which corresponds with the emic and systemic phase (Bajrami *et al.* 2024). Despite improvements in sanitation, healthcare, and the building of hospitals, most of the population counted on traditional medicine and traditional healers (Bajrami 2023). During this phase, abundant

empirical evidence of Albanian tradition and people's culture from a historical perspective, especially on material culture (among them ethnobiological knowledge and practices), social organization, or mythology and beliefs, was collected (Abazi and Doja 2016), and numerous articles and books were published. Such studies have been dominated by studies of traditional culture and folklore, or ethnic culture, folk culture, or better people's culture, to comply both with socialist era terminology, which is often rendered in English as "studies of popular culture", taken to mean the totality of ideas, perspectives, attitudes, images and other phenomena that are deemed to be preferred within the mainstream of Albanian culture (Abazi and Doja 2016).

Finally, in the fourth phase, or the post-communist ethnobiology (after the 2000s), collaboration efforts between Albanian researchers and foreigners were important in documenting traditional ecological knowledge, and several ethnobiological studies were conducted, in line with the conservation ethnobiology approach (Bajrami *et al.* 2024). In this article, we will focus on the "autochthonous ethnobiology of socialism" in Albania. We aim to explore how ethnobotanical cultural knowledge was collected, created, and used during the socialist period.

Bảng 1. Major phases in the history of Ethnobiology according to different authors.

Phase	Clement (1998)	Hunn (2007)	D'Ambrosio (2014)	McAlvay et al. (2021)	Bajrami et al. (2024)
I	Pre-classical	Pre-classical (until the 1950s);	Pre-colonial. Before 15th century	Utilitarianism	I. Pre- classical
II	Pre-classical	First steps	Colonial. 15th to late 19th centuries	Cognitive Ethnobiology 20th century	(Late the 17th century-1940), The collection and documentation of folk names of plants and some traditional knowledge about their use
III	Economic usages (1860-1899) Recollection of additional information (1900-1931) First syntheses (1932-1953)	First steps	Formative Late 19th century to 1940s	Ethnoecology 20th century	
IV	Emic knowledge (1954-1968) Classification (1969-1980)	Cognitive ethnobiology (1950 – 1970);	Emic (classical) 1950's to mid. 1970's	Indigenous Ethnobiology. The late 20th and early 21centuries	II. Emic (1950-1970) Special importance to ethnocultural, discovering, preserving, documenting, evaluation of traditions, protection, and development study of folk medicine, considered as a merit of communist ideology
V	Associations (1981- 1992)	Indigenous rights (indigenous ethnobiology) (1970 - 1980);	Systemic classical Late 1970s to 1991	Interdisciplinarity in an Era of Rapid Environmental Change 21centuries	III. Systemic (1971-1990) A turning point from the empirical use of plants by the people towards the scientific study of the values of their use, but as “mass studies” under the politic leadership.
VI	Resources and their management (1993 onwards)	Ethnoecology (1990 onwards)	Contemporary (post-classical) 1992 to present	Decolonizing ethnobiology	IV. Post-communist ethnobiology

MATERIAL AND METHODS

This article is a review of ethnobotanical studies carried out in Albania in the Communist (1946-1990) and partly post-Communist (1991-currently) periods, aiming to present some data on plant use and to demonstrate how socioeconomic and political changes have shaped the dynamics of plant use studies.

For the review presented in this paper, we conducted a bibliographic search on different written sources in the second phase of ethnobiology (1950 - 1991) (which corresponds to the socialist state period) and “post-communist ethnobiology” (after the 2000s), to find materials that have ethnobiological (ethnobotanical) knowledge. This article is based on a review of 80 different types of texts (such as journal papers, reports, and books), from 36 authors (referring to the first author) that include, ethnobotanists, naturalists, anthropologists, botanists, pharmacists, physicians, veterinarians, linguists, agronomists, biologists, etc.

For the period from 1950 to 1970, which corresponds to the emic period, 14 texts from 9 authors were examined, while for the systemic period (1971-1991), 22 texts from 11 authors were considered. For the post-communist ethnobiology period (after the 2000s), 42 papers from 16 authors are mentioned. To complete the full panorama of the development of ethnobotany in Albania, several important works of the first phase (10 texts by 7 authors) have been mentioned.

The reviewed texts (1950-1990) are non-digital hard copies, and no selection criteria were applied. These texts were found in university libraries and depositories, whether public or private collections. The ethnobotanical material of the post-communist phase is selected from digital hard-copy and electronic sources.

Various publications of the autochthonous ethnobiology of socialism period have been reviewed since the first issue of the Bulletin of the Institute of Sciences in 1947 and onwards, as well as in other bulletins of the natural and social sciences, scientific journals, complete texts, etc. In this article, some of the materials and published studies that belong to the second phase are presented.

Although this study aims to provide an extensive literature review for the second phase of Albanian ethnobotany studies that have been presented, it is not intended to be an exhaustive review of all the materials on this subject. The list of texts is certainly not exhaustive but includes all the texts known to us that have studied ethnobotanical knowledge and met the aims of our study.

RESULTS AND DISCUSSION

The “autochthonous ethnobiology of socialism” in Albania

The establishment of the Communist regime in Albania in 1945 was followed by the adoption of an agrarian reform law, expropriating without compensation and confiscating “exorbitant” capital goods, including all vineyards, orchards, gardens, pastures, and forests larger than the legally defined limit of big landowners (Civici 2002).

Political instruments of communist propaganda permeated science, and a new cultural knowledge was created to seize an authentic, traditional, and popular culture as an official ideology. From the communist point of view, people’s culture had to turn into an ideal projection of the fixed idea of the communists as builders of a new emancipated world, a New Man, and a new culture, including the transformation of all sides of the cultural process, the meaning of people’s culture and the code that served to catalog, analyze and interpret cultural production (Abazi and Doja 2016). Within this ideological framework and the need for legitimization of the new regime, this period attached special importance to ethnoculture, preserving and documenting national traditions, and material and spiritual culture created over generations. According to Kokalari *et al.* (1977a), during this period, the evaluation of traditions, their discovery, protection, and development, as well as the evaluation and study of folk medicine, gained prominence for the first time in our history, considered a merit of the communist regime and the Party. The Marxism-Leninism method, particularly the theory of class struggle, was deployed to explain and interpret scientific facts involving history, and strict political control was used, and as such, the instrumentalization of national history and culture followed.

As mentioned earlier, during the communist period in Albania (1946-1991), the second phase of ethnobiology was developed. Regarding botanical studies, this period could be called the autochthonous period of botany because botanical studies were conducted by local authors. Ethnobiology during this period was characterized by the same feature; by analogy, it could be called the autochthonous ethnobiology of socialism. Despite the ideological aspects and the strict control of science by the regime, a considerable volume of traditional knowledge and practices was gathered during this period, including significant ethnobiological information, reflected in various publications and materials archived in different institutions.

The period from 1950 to 1990, which corresponds to the socialist state period, referring to Hunn’s

(2007) and D'Ambrosio's (2014) classifications, the development of ethnobiology in Albania can be divided into two phases: emic (1950-1970) and systemic (1971-1991). To illustrate the proposed phase divisions within this article, only a part of the materials and published studies will be presented. Various publications in the field can be found from the first issue of the Bulletin of the Institute of Sciences in 1947 and onwards, in other bulletins for natural and social sciences, incomplete texts, etc.

The emic phase (1950-1970)

During dialectological and botanical explorations in the emic phase, phyto-folkloric material (folk plant names, wild and cultivated, folk parts of plants names, folk agricultural practices names, etc.) was also collected regarding the use of plants, especially ethnolinguistic material on the popular names of plants, using empirical anthropological methods. The first publication dealing with the medicinal flora of our country is by Popa (1952). A series of works were carried out during this period by various researchers, including Mitrushi (1952, 1955), Lako (1960, 1965), Ndoja (1964), Demiri (1958), Nuri and Misiri (1970), Papadhopulli (1968), Oktrova (1970), etc. Mitrushi, considered the pioneer researcher of Albanian botany, in his study "Emrat shqip të drurëvet e të shkorretet" ["Albanian folk names of trees and shrubs"] published in three parts (Mitrushi 1952, 1953a,b), provides popular names for a considerable number of plants, mostly collected by him in various regions of the country, some also taken from various dictionaries of the time. In addition to presenting various synonyms for plant names, the author gives their ethnobotanical usage for several plants. In this regard, this work can be considered as the first ethnobotanical study in this period. Mitrushi's work culminates in the book "Drurët dhe shkurret e Shqipërisë" ["Trees and shrubs of Albania"] (Mitrushi 1955), the first of its kind in our country, describing 330 species of trees and shrubs, accompanied by popular names and information of interest regarding their use. Additionally, the book "Fjalorth latinisht – shqip i emrave të bimëve të florës shqiptare" ["Latin- Albanian vocabulary of plants of Albanian flora"] (Lako 1965), a significant work by the author for collecting and verifying popular names of plant species, led to a more advanced stage in ethnolinguistic studies related to Albanian plant names. Albanian legends about flowers are thought to be numerous, but unfortunately, they have been scarcely collected, and the merit of Lako (1960) lies in the fact that he published a small volume with some of them, collected during field research.

In the emic phase, quite interesting data were collected and recorded, especially by Franciscan

researchers, but some of it remains in manuscript form. Such material, which was not allowed to be published and remained in manuscript form in the archives of the communist state, and part of it lost, is Benedict Dema's glossary. In the period 1962-1966, Dema, as a churchwarden of the Bajza parish (Shkodra), gathered rich ethnobotanical and medicinal material in the field, which he compiled into two manuscript volumes. Seized by the communist regime of the time, the manuscript titled "Mjeki" ["Medicines"] was partially appropriated and published by another author in the seventies (Ndoja 2013). After the manuscripts were retrieved from the State Archive, Volume I "Fjalor i shtjelluem i gjuhës shqipe – Mjeki" ["Explanatory dictionary of Albanian language-Medicines"] (Dema 2015) and Volume II "Fjalor i shtjelluem i gjuhës shqipe – Bimë e frymorë (Flora e fauna)" ["Explanatory dictionary of Albanian language- Flora and Fauna"] (Dema 2017) were published. Dema, with his works, provides not only popular names for plants, animals, and various diseases but also extensive material on their use in folk medicine. The collection of traditional cultural knowledge recorded by Dema and published around 50 years after the time of recording, constitutes a valuable contribution to the field of Albanian ethnobotany.

The systemic phase (1971-1991)

The systemic phase (1971-1991) can be considered a turning point from the empirical use of plants by the people to the scientific study of the values of their use. The 11th Plenum of the Central Committee of the Labour Party of Albania (January 1971) can be regarded as the impetus for directing studies towards a more scientific aspect. It provided guidance for more in-depth study and further development of popular medicine. Shortly after the plenum, it was particularly emphasized the need for the medicinal plants of our country to be recognized, studied, and more widely utilized for the benefit of health and the economy by healthcare specialists as well as the entire population (Goda *et al.* 1972). For this purpose, the Institute of Popular Medicine was established in 1977, creating conditions for organized scientific study based on experimental laboratory and clinical analysis of the popular experience of treatment. Popular medicine was considered a field of study for all healthcare workers (Kokalari and Sima 1976) and a perpetual and invaluable source for enriching therapeutic metadata (Kokalari *et al.* 1977a).

The 1976 Constitution abolished private ownership, plot ownership, and animal ownership (Civici 2002), resulting in a shortage of food and medical resources. The popular use of spontaneous plants was a way ("hidden harvest" and "reserve

resource”) to survive under the conditions of state propaganda in providing the well-being of the people in the conditions of Albania’s political and economic isolation during this period. In this context of propaganda, if the people were the subject producers of culture, the research process also required activation of the so-called “mass studies” (Alb. *studime nga masat*) under the leadership of local party committees and state bodies (Abazi and Doja 2016). This task had to be undertaken as a continuous collective action of teachers, agronomists, veterinarians, physicians, midwives, and even villagers, farmers, and stockbreeders in every district and every locality (Kostallari 1972, Abazi and Doja 2016).

During the systemic period, numerous publications on medicinal plants were released (Goda *et al.* 1972; Shtepani 1973; Joti and Dhroso 1973, 1980; Dizdari 1973; Dizdari and Ndoja 1975; Goda *et al.* 1975; Kastrati *et al.* 1976; Papadhopulli 1976, 1987; Kokalari, 1976; Kokalari and Sima 1976; Goda *et al.* 1977; Kokalari *et al.* 1977a,b; Demiri 1979; Kokalari *et al.* 1980; Kokalari *et al.* 1984; Kokalari and Naçi 1987; Sima 1988; Piperi and Kajno 1990). Among them, Shtepani’s publication (1973) stands out as a practical manual for plant and animal uses. Dizdari and Ndoja (1975) have provided a comprehensive synthetic summary of the folk medical practices of Northern Albania, traced for years by the authors themselves for about 30 groups of diseases and 150 different indications for which 1150 treatment methods have been described using about 160 medicinal plants. The book “Bimët e egra e të dobishme e të dëmshme të vendit tonë” [Wild, useful and harmful plants in our country] (Demiri 1979) is a comprehensive and practical scientific work that combines encyclopedic synthesis with scientific and ethnobotanical data on the utilitarian values of wild plants.

In Albania, during the years 1971-1991, work on cultural heritage in the field of medicine was organized throughout the entire country. With the establishment of the Institute of Popular Medicine in 1977, studies in this field became its focus, and commendable efforts were made to document and study traditional prescriptions and practices. Thanks to the work and scientific research in this field, many pharmacies and other units currently feature a variety of plants with high curative values and effectiveness in treating numerous diseases. According to Kokalari *et al.* (1977a), in the Korça region alone, from an incomplete collection of traditional knowledge about popular medicine, over 225 plant sources and more than 36 animal sources are counted as primary medicinal substances. In 1988, the former Institute of Forestry and Pastures conducted a national inventory of all wild medicinal plant species gathered in Albania.

Post-communist ethnobiology in Albania

A portion of the diverse ethnobiological tradition (ethnobotany, ethnomedicine, ethnopharmacology) identified and collected during the communist period was not published, and some of it was released after that era, such as the materials collected by Ndoja (1995), for example. Since the 1990s, globally, the science of ethnobotany has gained increasing importance within the scientific community, and ethnobotanical issues have also become a focus of attention for a broader audience. In Albania, despite the rich traditional knowledge about plants, numerous ethnobotanical studies have been conducted, especially after the 2000s. In the studies of this period, which can be termed post-communist ethnobiology, the beginning of collaborative work between Albanian and foreign researchers is observed, a collaboration that had been almost entirely interrupted for more than 50 years. Studies such as “Bimët spontane të florës shqiptare të përdorshme si perime dhe bimë për erëza” [“Spontaneous plants of the Albanian flora used as vegetables and spices”] (Bianco *et al.* 2001), or that of Dinga *et al.* (2001) on plants in Albanian culture can be mentioned as some of the early works of this period. In addition to contributing to the study of ethnocultural aspects, some anthropologists, such as Tirta (2004), also contributed to ethnobiological knowledge and practices.

Ethnobotanical studies following contemporary ethnobotanical/ ethnobiological methodologies began in 2004-2005 (Pieroni *et al.* 2005). The authors emphasized that no ethnobotanical research had been conducted in Albania until their study during the summer of 2004 and 2005 in the village of Lëpushë, in the Northern Albanian Alps. However, subsequent studies in Albania, mainly in the Alps region (Pieroni *et al.* 2005; Pieroni *et al.* 2006; Pieroni 2007, 2008, 2010, 2017; González-Tejero *et al.* 2008; Hadjichambis *et al.* 2008; Pieroni and Quave 2014; Quave and Pieroni 2014; 2015), and also in other areas such as Peshkopia, Mokra, and Prrenjas (Pieroni *et al.* 2014a,b,c), Prespa National Park (Tomasini and Theilade 2019) revised this conclusion and extended the roots of ethnobotanical knowledge in Albania almost 100 years earlier. Most of the mentioned works were conducted by foreign researchers. Additionally, after the 2000s several articles based on ethnobotanical field research and theoretical approaches regarding ethnobiology and native perspective belonged to local authors (Dinga *et al.* 2001; Damo and Icka 2010; Damo *et al.* 2010, 2011, 2012; Papajani *et al.* 2014; Saraçi and Damo 2013; Saraçi and Zdruli 2017; Icka and Damo 2018; Stillo *et al.* 2018; Bajrami and Qirjo 2019; Icka

et al. 2019; Saraçi and Damo 2021a,b,c; Bajrami 2022, 2023; Bajrami et al. 2022; Bajrami et al. 2023).

After the fall of the communist regime, the Albanian biocultural heritage has suffered significant erosion, mostly due to the high emigration rate, and a portion of the cultural knowledge possessed by various communities has been permanently lost, despite some documentation from previous studies. While traditional knowledge tends to disappear permanently if not properly documented, analyzed, and disseminated, ethnobiological/ethnobotanical studies allow the "rediscovery" of their last traces in areas not explored until now, constituting most of the country's territory. The results of ethnobiological studies can serve not only as a written testimony to the richness of local knowledge held by Albanians but can also be used for sustainable management and use of biological natural resources and their ecosystems, from which communities benefit socially, culturally, economically, and ecologically.

CONCLUSION

Albania experienced intensive cultural and landscape changes during collectivization and industrialization during the Communist period, leading to vast losses of traditional knowledge (TK). There has been scattered literature on useful plants used in Albania, most of which has been books on medicinal plants.

During Socialist Albania, in the emic period (1950-1970), ethnobotanical research was conducted almost exclusively within an ethnographic framework that was considered a subsidiary field within historical studies, and therefore subject to the Marxist doctrine of historical and dialectical materialism. During the systematic period (1971-1991), studies on the use of plants were not carried out simply in an ethnographic context but also in a dynamic and useful way, to change reality, focusing especially on plants' medicinal value and use for the people's benefit. Useful wild plants have always been a part of human life and have been considered a "hidden harvest" and "reserve resource" and have had crucial importance at the time of shortage of food and medical drugs in the period of socialist collectivism. It is worth noting that comparative studies do not characterize this period.

After the 1990s and especially after the 2000s, knowledge and practices about plants have been actively investigated by both local and foreign researchers. This is related to globalism processes affecting Albanian culture and the need to identify, document, and promote native biocultural diversity, but most importantly, because of the high rate of migration, which has caused a massive process of depopulation of the villages since the 1990s and

persists to this day.

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DATA AVAILABILITY

The data used to support the findings of this study are available from the corresponding author upon reasonable request.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

CONTRIBUTION STATEMENT

Conceived of the presented idea: AS, AB, RD Carried out the data analysis: AS, RD

Wrote the first draft of the manuscript: AS, RD, AB Review and final write of the manuscript: AS, RD, RB Supervision: AS

REFERENCES

- Abazi E, Doja A (2016) **From the communist point of view: Cultural hegemony and folkloric manipulation in Albanian studies under socialism.** *Communist and Post-Communist Studies* 49:163–178. doi: [10.1016/j.postcomstud.2016.04.002](https://doi.org/10.1016/j.postcomstud.2016.04.002).
- Albuquerque UP, do Nascimento ALB, Neto EMFL, Santoro FR, Soldati G.T, de Moura JMB, Jacob MCM, de Medeiros PM, Gonçalves PHS, da Silva RF, Ferreira Junior WS (2022) **Brief introduction to evolutionary ethnobiology.** 1st ed. NUPEEA, Recife, PE, Brazil.
- Albuquerque UP, Ferreira Junior WS (2017) **What do we study in evolutionary ethnobiology? Defining the theoretical basis for a research program.** *Evolutionary Biology* 44:206-215. doi: [10.1007/s11692-016-9398-z](https://doi.org/10.1007/s11692-016-9398-z).
- Albuquerque UP, Medeiros P (2013) **What is evolutionary ethnobiology?** *Ethnobiology and Conservation* 2:6. doi: [10.15451/ec2013-8-2.6-1-04](https://doi.org/10.15451/ec2013-8-2.6-1-04).
- Bajrami A (2019) **Cultural selection and human food preferences.** *Journal of Biological Research* 92:7641. doi: [10.4081/jbr.2019.7641](https://doi.org/10.4081/jbr.2019.7641).

- Bajrami A, Qirjo M (2019) **The role of learning in niche construction and traditional ecological knowledge.** [In Albanian: **Roli i të mësuarit në konstruksionin e nishit dhe dijeve tradicionale ekologjike**]. *Buletini i Shkencave të Natyrës. Universiteti i Tiranës* 27:94-102.
- Bajrami A, Sokoli E, Qirjo M (2019) **Adaptive problems related to survival: The paleoethnobotany of human ancestors.** [In Albanian: **Që prej Darvinit: Nga mendja tek kuptimi evolucionar i kulturës**]. *Buletini i Shkencave të Natyrës Universiteti i Tiranës* 27:281-293.
- Bajrami A (2022) **From nature to man: Environmental anthropology in the Anthropocene.** *Journal of Biological Research* 95:10377. doi: [10.4081/jbr.2022.10377](https://doi.org/10.4081/jbr.2022.10377).
- Bajrami A, Miri F, Rexhepi B (2022) **Adaptive problems related to survival: The paleoethnobotany of human ancestors.** [In Albanian: **Problemet e mbijetesës: Paleoethnobotanika e paraardhësve tanë**]. *Buletini i Shkencave të Natyrës Universiteti Tiranës* 32:137-147.
- Bajrami A (2023). **Current status of ethnobotany in Albania.** *European Journal of Medicine and Natural Sciences* 6:9-17. doi: [10.26417/k7re4h37](https://doi.org/10.26417/k7re4h37).
- Bajrami A, Mesiti A, Mahmutaj E, Hoda P (2023) **The New Normal: Ethnobiology of cities and urban ecological knowledge.** *Journal of Natural Sciences Universiteti i Tiranës* 34:139-148.
- Bajrami A, Saraçi A, Rexhepi B, Damo R (2024) **Phase 5: Status of ethnobiology and study perspectives in Albania.** Oral presentation at the XX International Botanical Congress IBC 2024, Madrid, Spain.
- Bardhi F (Blanchum F) (1635) **Dictionarium Latino Epiroticum – Cum nonnullis usitatoribus loquendi formulis.** Romæ.
- Bianco VV, Damo R, Roshanji N, Mero G (2001) **Piante spontanee della flora albanese utilizzabili come ortaggi e piante da condimenti.** Università degli studi di Bari, Bari, Italia.
- Civici A (2002) **Albanie. Du collectivisme absolu à une parcellisation égalitariste radicale.** Politiques foncières et réformes agraires (Cahier de propositions APM), Part II, p. 33-37.
- Clement D (1998) **The historical foundations of ethnobiology.** *Journal of Ethnobiology* 18:161-187.
- Cozzi E (1909) **Malattie Morte Funerali nelle Montagne d'Albania.** *Anthropos* Vienna 4:903-918.
- Cozzi E (1914) **Credenze e superstizioni nelle montagne dell'Albania.** *Anthropos* Vienna 9:449-476.
- D'Ambrosio U (2014) **Theoretical reflections on ethnobiology in the third millennium.** *Contributions to science* 10:49-64. doi: [10.2436/20.7010.01.188](https://doi.org/10.2436/20.7010.01.188).
- Da Lecce OFM (2009) **Dittionario Italiano – Albanese (1702) - Botim kritik.** Prepared by Gurga G. Botime Françeskane, Shkodër.
- Damo R, Icka P (2010) **The necessity of ethnobotany in preserving biocultural diversity.** [In Albanian: **Etnobotanika domosdoshmëri për ruajtjen e diversitetit biokulturor**]. *Buletini Shkencor (Seria e shkencave të zbatuara)*, Universiteti “Fan. S. Noli”, Korçë 20:47-64.
- Damo R, Icka P, Damo P (2011) **Portulaca oleracea, bad weed with high nutritional value.** [In Albanian: **Portulaca oleracea bar i keq me potencial ushqyes të lartë**]. *Buletini Shkencor (Seria e shkencave të zbatuara)*, Universiteti “Fan S. Noli”, Korçë 22:31 – 52.
- Damo R, Icka P, Nasto Th (2010) **Ethnobotanical studies today will be too late tomorrow.** [In: Albanian: **Studime etnobotanike sot, nesër shumë vonë**]. Simpozium Ndërkombëtar: Biodiversiteti - Ruajtja dhe përdorimi i qëndrueshëm i tij faktorë për zhvillimin e qëndrueshëm rural, Tiranë. Proceedings Book, pp. 181 – 187.
- Damo R, Icka R, Ismaili M (2012) **Biocultural diversity in Albania, Macedonia and Kosovo.** *SEEU Review* 8:100-109.
- Dema B (2015) **Explanatory dictionary of the Albanian language (Medicines).** [In Albanian: **Fjalor i shtjelluem i gjuhës shqipe – Mjekji**]. Vëllimi I. SKK, Tiranë.
- Dema B (2017) **Explanatory dictionary of the Albanian language (Flora and Fauna).** [In Albanian: **Fjalor i shtjelluem i gjuhës shqipe – Bimë e frymorë (Flora e fauna)**]. Vëllimi II. ISKK, Tiranë.
- Demiri M (1958) **Data from folk medicine.** [In Albanian: **Material nga mjekësia popullore**]. *Buletini i Universitetit Shtetëror të Tiranës, Seria Shkencat Natyrore* 2:150-152.
- Demiri M (1979) **Wild useful and harmful plants in our country.** [In Albanian: **Bimët e egra të dobishme e të dëmshme të vendit tonë**]. Botim i Shtëpisë së Propagandës Bujqësore, Tiranë, Shqipëri.
- Dinga L, Topuzi L, Onuzi A, Kongjika S (2001) **Plants**

- in the Albanian culture.** In: Ricciardi L, Myrta A, De Castro F (eds). *Options Mediterraneennes*: Serie A. *Seminaires Mediterraneens (CIHEAM)* 47:183-196.
- Dizdari R, Ndoja H (1975) **Data from folk medicine of Northern Albania.** [In Albanian: **Të dhëna nga mjekësia popullore e Shqipërisë së Veriut**]. *Botim i Drejtorisë së Arsimit Shëndetësor, Tiranë, Shqipëri.*
- Dizdari R (1973) **Partial data from the history of folk medicine in Northern Albania.** [In Albanian: **Pjesë nga historiku i mjekësisë popullore në Shqipërinë e Veriut**]. *Kumtari i Muzeut Popullor të Shkodrës. Muzeu Popullor i Shkodrës*, 81-90.
- Doda BE, Nopcsa F (2007) **Albanisches Bauernleben in oberen Rekatat dei Dibra (Makedonien).** LIT, Vienna.
- Durham E (1909) **High Albania.** Phoenix Press, London.
- Durham E (1928) **Some tribal origins, laws and customs of the Balkans: illustrated by the author.** George Allen & Unwin, Ltd., London.
- Fischer B & Schmidt O (2022) **A Concise History of Albania.** University Printing House, Cambridge, UK.
- Frashëri K (1964) **The History of Albania: A Brief Survey.** Tiranë.
- Goda P, Sima Z, Durrësi S, Rizo P (1975) **Medicinal Teas: Species.** [In Albanian: **Çajrat mjekësore: specie**]. *Shtëpia Botuese "8 Nëntori"*, Tirana, Shqipëri.
- Goda P, Sima Z, Demiri M (1972) **Handbook of medicinal plants: botanical description, collection process, chemical composition, therapeutical uses.** [In Albanian: **Vademekum i bimëve mjekësore: përshkrimi botanik, grumbullimi, përbërja kimike, përdorimi terapeutik**]. *Shtëpia Botuese e Librit Politik, Tiranë, Shqipëri.*
- Goda P, Xhillari V, Skënderi G (1977) **Health can be protected using plants.** [In Albanian: **Shëndeti mbrohet edhe me bimë**]. *Shtypshkronja "Mihal Duri"*, Tiranë, Shqipëri.
- González-Tejero MR, Casares-Porcel M, Sánchez-Rojas CP, Ramiro-Gutiérrez JM, Molero-Mesa J, Pieroni A, Giusti ME, Censori E, De Pasquale C, Della A, Paraskeva-Hadjichambi D, Hadjichambis A, Houman Z, El-Demerdash M, El-Zayat M, Hmamouchi M, El Johrig S (2008). **Medicinal plants in the Mediterranean area: Synthesis of the results of the project Rubia.** *Journal of Ethnopharmacology* 116:341–357. doi: [10.1016/j.jep.2007.11.045](https://doi.org/10.1016/j.jep.2007.11.045).
- Hadjichambis ACH, Paraskeva-Hadjichambi D, Della A, Elena GM, De Pasquale C, Lenzarini C, Censori E, Gonzales-Tejero MR, Sanchez-Rojas CP, Ramiro-Gutierrez JM, Skoula, M, Johnson Ch, Sarpaki A, Hmamouchi M, Jorhi S, El-Demerdash M, El-Zayat M, Pieroni A (2008) **Wild and semi-domesticated food plant consumption in seven circum-Mediterranean areas.** *International Journal of Food Sciences and Nutrition* 59:383-414. doi: [10.1080/09637480701566495](https://doi.org/10.1080/09637480701566495).
- Hidayati S, Franco FM, Bussmann RW (2015) **Ready for phase 5 - current status of ethnobiology in Southeast Asia.** *Journal of Ethnobiology and Ethnomedicine* 11:17. doi: [0.1186/s13002-015-0005-7](https://doi.org/10.1186/s13002-015-0005-7).
- Hunn E (2007) **Ethnobiology in four phases.** *Journal of Ethnobiology* 27(1):1–10. doi: [10.1186/s13002-015-0005-7](https://doi.org/10.1186/s13002-015-0005-7).
- Icka P, Damo R. (2018) **Horseradish (*Armoracia rusticana*) and wheat of Qabesë (*Trigonella foenum-graecum*) two undervaluated local varieties.** *Journal of Agriculture and Animal Production Science for Rural Development*. VIII:17-24.
- Icka P, Halilaj H, Bajrami A, Damo R. (2019) **Ethnobotanical review of herbal tea plants in Albania and Kosovo.** Oral presentation at the World Conference on Sustainable Life Sciences (WOCOLS 2019), Budapest, Hungary.
- Joti Dh, Dhroso Q (1973) **Vegetables in folk medicine.** [In Albanian: **Perimet në Mjekësinë Popullore**]. *Shtëpia e Propagandës Bujqësore, Tiranë, Shqipëri.*
- Joti Dh, Dhroso Q (1980) **Fruit trees in folk medicine.** [In Albanian: **Drufrutorët në Mjekësinë Popullore**]. *Shtëpia e Propagandës Bujqësore, Tiranë, Shqipëri.*
- Kastrati J, Dizdari R, Ndoja H (1976) **Data from folk medicine of Northern Albania.** [In Albanian: **Të dhëna nga mjekësia popullore e Shqipërisë së Veriut**]. *Buletini i shkencave, Universiteti "Luigj Gurakuqi" Shkodër* 2:183-187.
- Kokalari P (1976) **Studies on folk medicine.** [In Albanian: **Punime mbi mjekësinë popullore**]. *Universiteti i Tiranës, Fakulteti i Mjekësisë, Tiranë, Shqipëri.*
- Kokalari P, Sima Z (1976) **Folk medicine as a field of study for health professionals.** [In Albanian: **Mjekësia popullore fushë studim për të gjithë punonjësit e shëndetësisë**]. *Shëndetësia popullore* 3.
- Kokalari P, Sima Z, Koçi M (1977a). **Folk medicine**

- and materialism. [In Albanian: **Mjekësia popullore dhe baza e saj materialiste**]. *Buletini i shkencave mjekësore* 1:3-12.
- Kokalari P, Thaçi D, Braho S (1984). **Vegetables and fruits in folk medicine**. [In Albanian: **Perimet dhe frutat në mjekësinë popullore**]. Shtëpia Botuese "8 Nëntori, Tiranë, Shqipëri.
- Kokalari P, Naçi Th (1987) **Apitherapy in folk medicine**. [In Albanian: **Apiterapia në mjekësinë popullore**]. Shtëpia Botuese "8 Nëntori, Tiranë, Shqipëri.
- Kokalari P, Sima Z, Xinxo P (1977b) **Medicinal plants in the family**. [In Albanian: **Bimët mjekësore në familje**]. Drejtoria e Arsimit Shëndetësor, Tiranë, Shqipëri.
- Kokalari P, Xinxo P, Sima Z (1980) **Medicinal plants in the family**. [In Albanian: **Bimët mjekësore në familje**]. 2nd revised ed. Drejtoria e Arsimit Shëndetësor, Tiranë, Shqipëri.
- Kostallari A (1972) **Kanun rights in Albania and some issues related to Kanun's study regarding the war on remnants of the past**. [In Albanian: **Mbi shtrirjen e shtresëzimit e së drejtës kanunore në Shqipëri dhe mbi disa çështje që lidhen me studimin e saj e me organizimin e luftës kundër mbeturinave të së vjetrës**]. *Etnografia shqiptare* 4:18-25.
- Lako N (1960) **Flower legends of Albanian flora**. [In Albanian: **Legjenda lulësh të florës shqiptare**]. Shtëpia e botimeve Naim Frashëri, Tiranë, Shqipëri.
- Lako N (1965) **Latin- Albanian dictionary of plants in Albanian flora**. [In Albanian: **Fjalorth latinisht – shqip i emrave të bimëve të florës shqiptare**]. Universiteti Shtetëror i Tiranës, Fakulteti i Shkencave të Natyrës, Tiranë, Shqipëri.
- McAlvay AC, Armstrong CG, Baker J, Elk LB, Bosco S, Hanazaki N, Joseph L, Martínez-Cruz TE, Nesbitt M, Palmer MA, Almeida WCP, Anderson J, Asfaw Z, Borokini IT, Cano-Contreras EJ, Hoyte S, Hudson M, Ladio AH, Odonne G, Peter S, Rashford J, Wall J, Wolverton S, Vandebroek I (2021) **Ethnobiology phase VI: decolonizing institutions, projects, and scholarship**. *Journal of Ethnobiology* 41:170-191.
- Minga Gj (2009) **The history of healthcare and Albanian medicine**. [In Albanian: **Historia e kujdesit shëndetësor dhe mjekësisë Shqiptare**]. Tiranë, Shqipëri.
- Mitrushi I (1952) **Albanian names of trees and shrubs**. [In Albanian **Emrat shqip të drurëve e të shkorretet**]. *Buletin për shkencat natyrore* 3:56-75.
- Mitrushi I (1955) **Trees and shrubs of Albania**. [In Albanian: **Drurët dhe shkurret e Shqipërisë**]. Tiranë, Shqipëri.
- Mitrushi I (1953a). **Albanian names of trees and shrubs**. [In Albanian: **Emrat shqip të drurëve e të shkorretet**]. *Buletin për shkencat natyrore* 1:63-76.
- Mitrushi I (1953b) **Albanian names of trees and shrubs**. [In Albanian: **Emrat shqip të drurëve e të shkorretet**]. *Buletin për shkencat natyrore* 2:75-90.
- Ndoja H (1964) **The use of bee glue (propolis) in folk medicine**. [In Albanian: **Përdorimi i zanit të bletës (popolisut) në mjekësinë popullore**]. *Buletini i Shkencave, Universiteti "Luigj Gurakuqi" Shkodër*, III (4):397-403.
- Ndoja H (1995) **Folk medicine is an ancient culture that serves health (recipes)**. [In Albanian: **Mjekësia popullore, kulturë e lashtë në shërbim të shëndetit (receptura)**]. Apollonia.
- Ndoja L (2013) **Otherness of intellectual work during communism in Albania (1944-1990)**. [In Albanian: **Tjetërsimi i veprës intelektuale gjatë komunizmit në Shqipëri (1944-1990)**]. ISKK, Tiranë, Shqipëri.
- Nuri Q, Misiri N (1970) **The honeybee products and our health**. [In Albanian: **Bleta, produktet e saj dhe shëndeti ynë**]. Shtëpia Botuese "Naim Frashëri", Tiranë, Shqipëri.
- Oktrova A (1970) **Nutritional values of vegetables**. [In Albanian: **Vlerat ushqyese të perimeve**]. Instituti i Lartë Shtetëror i Bujqësisë, Tiranë, Shqipëri.
- Pacukaj S (2013) **The Independence of Albania**. *Mediterranean Journal of Social Sciences* 4(11):763-769. doi: [10.5901/mjss.2013.v4n11p763](https://doi.org/10.5901/mjss.2013.v4n11p763).
- Papadhropulli G (1968) **Toxicology of poisonous plants**. [In Albanian: **Toksikologjia e bimëve helmuese**]. Shtëpia Botonjësë "Naim Frashëri", Tiranë, Shqipëri.
- Papadhropulli G. (1976) **Medicinal plants in Albania: collection, processing and cultivation**. [In Albanian: **Bimët mjekësore të Shqipërisë: grumbullimi, përpunimi, kultivimi**]. Shtëpia Botuese "8 Nëntori", Tiranë, Shqipëri.
- Papadhropulli G (1987) **Medicinal and aromatic plants in Albania**. [In Albanian: **Bimët mjekësore dhe aromatike të Shqipërisë**]. Shtëpia Botuese "8 Nëntori", Tiranë, Shqipëri.
- Papajani V, Ibrahliu A, Miraçi M, Rustemi A (2014) **Ethnobotanical study of medicinal plants traditionally used in Fieri district, Albania**.

- Proceedings of the 8th CMAPSEEC, Durrës, Albania, pp. 123-133.
- Pieroni A, Ibraliu A, Abbasi AM, Papajani V (2014a) **An ethnobotanical study among Albanians and Aromanians living in the Rraicë and Mokra areas of Eastern Albania.** *Genetical Resources and Crop Evolution* 62:477–500. doi: [10.1007/s10722-014-0174-6](https://doi.org/10.1007/s10722-014-0174-6).
- Pieroni A (2008) **Local plant resources in the ethnobotany of Theth, a village in the Northern Albanian Alps.** *Genetical Resources and Crop Evolution* 55:1197–1214. doi: [10.1007/s10722-008-9320-3](https://doi.org/10.1007/s10722-008-9320-3).
- Pieroni A (2017) **Traditional uses of wild food plants, medicinal plants, and domestic remedies in Albanian, Aromanian, and Macedonian villages in South-Eastern Albania.** *Journal of Herbal Medicine* 9:81–90. doi: [10.1016/j.hermed.2017.05.001](https://doi.org/10.1016/j.hermed.2017.05.001).
- Pieroni A (2007) **People and mountains in Kelmend: Documentation of a field study on traditional knowledge in the northern Albanian Alps.** Wageningen University: RUBIA Project/WUR.
- Pieroni A (2010) **People and plants in Lëpushë. Traditional medicine, local foods and post-communism in a northern Albanian village.** In: Pardo de Santayana M, Pieroni A, Puri R (eds) *Ethnobotany in the New Europe. People, Health and Wild Plant Resources*, Berghahn, New York/Oxford, pp. 16-50.
- Pieroni A, Cianfaglione K, Nedelcheva A, Hajdari A, Mustafa B, Quave CL (2014b) **Resilience at the border: traditional botanical knowledge among Macedonians and Albanians living in Gollobordo, Eastern Albania.** *Journal of Ethnobiology and Ethnomedicine* 10:1. doi: [10.1186/1746-4269-10-31](https://doi.org/10.1186/1746-4269-10-31).
- Pieroni A, Dibra B, Grishaj Gj, Grishaj I, Maçai SGj (2005) **Traditional phytotherapy of the Albanians of Lëpushë, Northern Albanian Alps.** *Fitoterapia* 76:379–399. doi: [10.1016/j.fitote.2005.03.015](https://doi.org/10.1016/j.fitote.2005.03.015).
- Pieroni A, Giusti ME, de Pasqual C, Lenzarin C, Censorii E, Gonzáles-Tejero MR, Sánchez-Rojas CP, Ramiro-Gutiérrez JM, Skoula M, Johson C, Sarpaki A, Della A, Paraskeva-Hadijchambi D, Hadjichambis A, Hmamouchi M, El-Jorhi S, El-Demerdash M, El-Zayat M, Al-Shahaby O, Houmani Z, Scherazed M (2006). **Circum-Mediterranean cultural heritage and medicinal plant uses in traditional animal healthcare: a field survey in eight selected areas within the RUBIA project.** *Journal of Ethnobiology and Ethnomedicine* 2:16. doi: [10.1186/1746-4269-2-16](https://doi.org/10.1186/1746-4269-2-16).
- Pieroni A, Nedelcheva A, Hajdari A, Mustafa B, Scaltriti B, Cianfaglione K, Quave CL (2014c) **Local Knowledge on Plants and Domestic Remedies in the Mountain Villages of Peshkopia (Eastern Albania).** *Journal of Mountain Science* 11(1):180-194. doi: [10.1007/s11629-013-2651-3](https://doi.org/10.1007/s11629-013-2651-3).
- Pieroni A, Quave CL (2014) **Wild Food and Medicinal Plants Used in the Mountainous Albanian North, Northeast, and East: A Comparison.** In: Pieroni A, Quave CL (eds). *Ethnobotany and biocultural diversities in the Balkans - Perspectives on Sustainable Rural Development and Reconciliation*. Springer, New York, NY, pp.183-194.
- Piperi R, Kajno K (1990) **Medicinal flora in Korçë.** [In Albanian: *Flora mjekësore e Korçës*. Drejtoria e Arsimit Shëndetësor, Tiranë, Shqipëri.
- Popa K (1952) **Medicinal plants in our country.** [In Albanian: *Bimët mjekësore të vendit tonë*]. Shtëpia Botonjësë "Naim Frashëri", Tiranë, Shqipëri.
- Quave CL, 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. doi: [10.2993/0278-0771-34.1.28](https://doi.org/10.2993/0278-0771-34.1.28).
- Quave CL, Pieroni A (2015) **A reservoir of ethnobotanical knowledge informs resilient food security and health strategies in the Balkans.** *Nature Plants* 1:14021. doi: [10.1038/nplants.2014.21](https://doi.org/10.1038/nplants.2014.21).
- Quku M (1984) **The ethnobotanical dictionary of Ndre Mjeda.** [In Albanian: *Një fjalorth botanik i Ndre Mjedës*]. *Studime filologjike* 3:155-172.
- Santoro FR, Nascimento ALB, Soldati GT, Ferrera Junior WS, Albuquerque UP (2018) **Evolutionary ethnobiology and cultural evolution: opportunities for research and dialogue.** *Journal of Ethnobiology and Ethnomedicine* 14:1. doi: [10.1186/s13002-017-0199-y](https://doi.org/10.1186/s13002-017-0199-y).
- Saraçi A, Damo R (2013) **Contrastive ethnolinguistic features of *Rosa canina* phitonyms.** *Anglisticum Journal (IJLLIS)* 2:133-140.
- Saraçi A, Damo R (2021a) **A historical overview of ethnobotanical data in Albania (1800s-1940s).** *Ethnobiology and Conservation* 10:08. doi: [10.15451/ec2020-10-10.08-1-23](https://doi.org/10.15451/ec2020-10-10.08-1-23).
- Saraçi A, Damo R (2021b) **Biocultural diversity as an opportunity to vitalization of ethnobotanical knowledge (Linguistic diversity in Albania and traditional ecological knowledge).** [In

Albanian: **Diversiteti biokulturor si mundësi e rijetëzimit të njohurive etnobotanike (Diversiteti lingvistik në Shqipëri dhe njohuritë tradicionale ekologjike)**. Konferenca Shkencore – Politikat gjuhësore mbi pakicat kombëtare: arritje dhe perspektiva” 12 Nëntor 2021, Universiteti “Fan S. Noli”, Korçë, Shqipëri.

Saraçi A, Damo R (2021c) **Semantic reflections of human/animal genitalia in Albanian plant names.** *Analele Universității din Craiova. Seria Științe Filologice. Lingvistică, (Annals of the University of Craiova. Series Philology. Linguistics)*. Anul XLIII, Nr. 1-2:425-445. doi: [10.52846/aucssflingv.v43i1.34](https://doi.org/10.52846/aucssflingv.v43i1.34).

Saraçi A, Zdruli K (2017) **Ethnolinguistic notes over the tradition of naming and usage of the plants in the southeastern part of Albania.** Proceedings of the Third International Conference “Education across Borders” Education and Research across Time and Space (1100th Death Anniversary of St. Clement of Ohrid) pp. 220-224.

Shtepani R (1973) **Flora and fauna of our country, use possibilities for food and medicine for people and animals in the field.** [In Albanian: **Flora dhe fauna e vendit tonë, mundësitë e përdorimit të tyre për ushqim dhe mjekim për njerëzit dhe kafshët në kushte fushore**]. Tiranë, Shqipëri.

Sima Z (1988) **Medicinal plants.** [In Albanian: **Bimët mjekësore**]. *Shkenca dhe Jeta* 5:28-32.

Stillo P, Icka P, Damo R (2018) **Armoracia rusticana Gaertn., Mey. & Scherb. A neglected multi-useful species.** *Buletini i Shkencave të Natyrës* Universiteti i Tiranës, 26:312-322.

Tirta M (2004) **Mythology among Albanians.** [In Albanian: **Mitologjia ndër shqiptarë**]. Geer, Tiranë, Shqipëri.

Tomasini S, Theilade I (2019) **Local knowledge**

of past and present uses of medicinal plants in Prespa National Park, Albania. *Economic Botany*, 73(2):217–232. doi: [10.1007/s12231-019-09454-3](https://doi.org/10.1007/s12231-019-09454-3).

Vangjeli J (2021) **Excursion Flora in Albania.** [In Albanian: **Flora ekskursioniste e Shqipërisë**]. Albanian Academy of Sciences, Tirana, Albania.

Wolverton S (2013) **Ethnobiology 5: Interdisciplinarity in an Era of Rapid Environmental Change.** *Ethnobiology Letters* 4:21-25. doi: [10.14237/eb1.4.2013.11](https://doi.org/10.14237/eb1.4.2013.11).

Wyndham FS, Lepofsky D, Tiffany S (2011) **Taking stock in ethnobiology: Where do we come from? What are we? Where are we going?** *Journal of Ethnobiology* 31:110–127. doi: [10.2993/0278-0771-31.1.110](https://doi.org/10.2993/0278-0771-31.1.110).

Zojzi Rr (1937a). **About "Forsythia europaea Degen et Baldacci" in Albanian ‘Boshter’.** [In Albanian: **Rreth "Forsythia europaea Degen et Baldacci" Shqip ‘Boshter’**]. *Leka, Zoja e Paperlyeme, Shkodër* 6:259-261.

Zojzi Rr (1937b) **About botanical tracing in Northern Albania.** [In Albanian: **Rreth rmimeve botanike në Shqipninë e verit**]. *Leka, Zoja e Paperlyeme, Shkodër* 6:261-267.

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