

# Local plant resources in the ethnobotany of Theth, a village in the Northern Albanian Alps

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**Abstract** An ethnobotanical field study was carried out in one of the most remote and poorest areas of Europe: the village of Theth, which is located in the upper Shala Valley in the Northern Albanian Alps. In this study, seventy-nine botanical taxa known and used by the local population were recorded in interviews with thirty-two informants. Among the local food species recorded, the most highly sought after were *Prunus cerasifera* Ehrh. and *Cornus mas* L. fruits, which are used for producing home-made *raki*. A few elderly women in the village still gather wild greens (*Urtica*, *Chenopodium*, *Amaranthus*, and *Rumex* species), which are used as fillings for home-made pies (*byrekë* and *laknur*). Diverse vegetables (cabbage, turnips, tomatoes, peppers, and egg plants) are cultivated and harvested in spring and summer, and are conserved mainly via lacto-fermentation for consumption during the winter. Despite an almost total lack of medical assistance, the villagers of Theth gather only a few medicinal herbs on a regular basis, which they use internally to treat diverse minor ailments. These include the aerial parts of *Origanum vulgare* L., *Hypericum maculatum* Crantz, *Agrimonia eupatoria* L., and the roots of *Gentiana lutea* L. The

findings from this field study could eventually stimulate sustainable plant gathering and harvesting activities in Theth for small-scale trade of a few food, medicinal, and handicraft products.

**Keywords** Albania · Balkans · Ethnobotany · Local food · Medicinal plants

## Introduction

In-depth field ethnobotanical studies in remote European areas are crucial for a number of reasons: they enable the recording of Traditional Knowledge (TK) on plant uses and the inextricable links between natural and cultural environments (“bio-cultural diversity”, Maffi 2001); in accordance with the concepts of *terroir* (Deffontaines 2005), they enable the documentation and evaluation of intangible cultural heritage related to the knowledge of the nature and the universe (UNESCO 2003; Pieroni et al. 2005a); and they give rise to ideas for sustainable harvesting and gathering activities of local plant products in less-favoured marginal rural and mountainous areas.

The focus of the studies we have conducted during the last four years has been the Northern Albanian Alpine area bordering Montenegro, which has traditionally been inhabited by the Catholic Kelmendi and Shala tribes.

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Albania is located in the south-west of the Balkan Peninsula, and covers an area of 28,750 square kilometres, and, apart from its flat coastline, is primarily mountainous. Albania's population is younger than that of other European countries, with a third of its 3.1 million inhabitants under the age of 15, and 40% younger than 18 (Nuri 2002). A high proportion of Albanians live in rural areas: 58% in 2001, according to the Albanian National Institute of Statistics, INSTAT (quoted in World Bank 2003). The ancestors of the Albanians, the Illyrians, have preserved their own language and culture despite the establishment of Greek colonies in the 7th century BC, and subsequent centuries of Roman rule. Illyria became part of the Byzantine Empire in the division of 395 AD. In 1344 the country was annexed by Serbia, which in turn was occupied by the Turks in 1389. A national Albanian hero, Skanderbeg, led the resistance opposing the Ottomans, nevertheless in 1479 Albania was finally incorporated into the Ottoman Empire, in which it remained a poor rural province for several centuries. Albania achieved independence from the Ottoman Empire in 1912. In January 1946, the People's Republic of Albania was proclaimed, and Enver Hoxha became its president, remaining in power until his death in 1985. Albania initially followed Soviet-style economic policies, but in 1960/1961 it broke off diplomatic relations with the Soviet Union and aligned itself with China until 1978, when Albania completely isolated itself, politically and socially, from the rest of the world. After the collapse of Communism in Eastern Europe in the early 1990s, the Albanian population staged demonstrations and finally forced the government to agree to allow opposition parties and to establish a continuing democratisation process.

Albania is one of the poorest countries in Europe. According to the most reliable estimates, the Gross National Product (GNP) per capita in 1999 was US \$ 930. GDP per capita, once adjusted for Purchasing Power Parity (PPP), was estimated at US \$ 2,892 (Nuri 2002). Agriculture and forestry are the main sources of employment and income in Albania, however in recent years the construction, transport and service sectors have been growing. Remittances from emigrants form a crucial part of the economy; it has been estimated that approximately one third of Albanian families receive remittances from relatives living abroad (Carletto et al. 2006). Nevertheless,

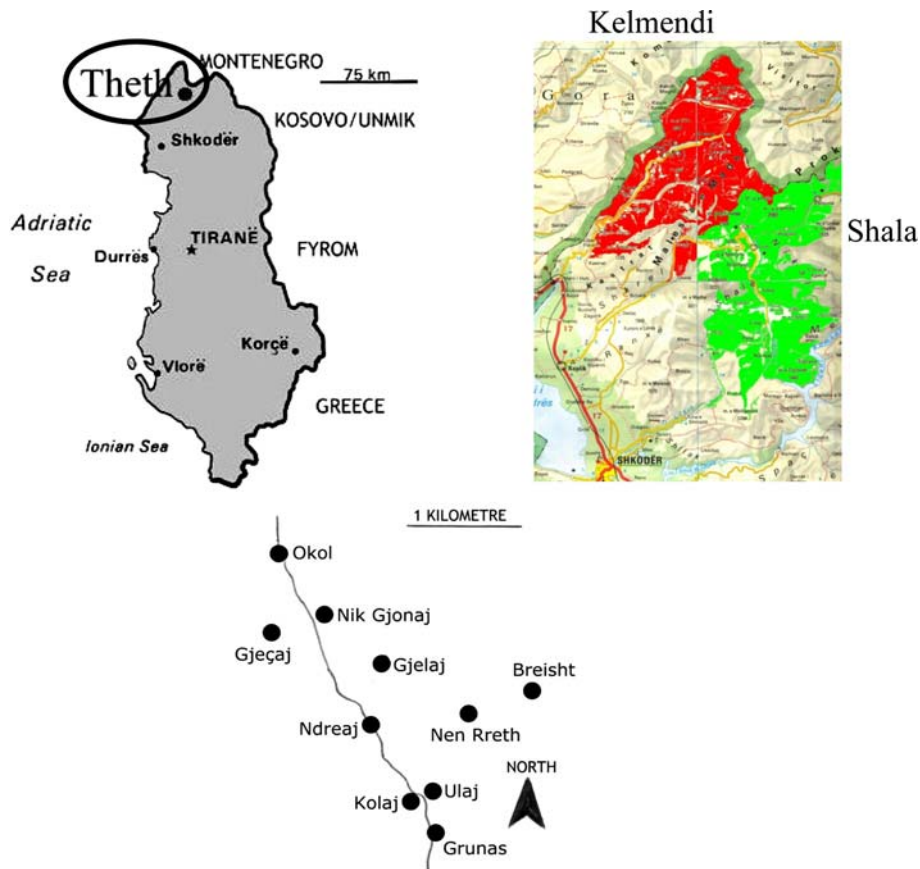
according to the World Bank, approximately 20% of the population live in very poor conditions, with 10% on less than US \$2 per day (World Bank 2003).

Albania occupies only 0.27% of European territory and 5.8% of its entire area is protected in from of national parks and reserves. Although a small country, Albania is very bio-diverse, with 3,200 plant species (representing on third of the entire European flora), belonging to 165 families and 900 genera. Of these, 800 are Balkan and 150 are endemic ones (Hoda and Zotaj 2007). Moreover, Albania has been mentioned also for having very rich plant genetic resources (Hammer 1995).

The aim of this field study carried out in the upper Shala Valley was to record TK related to local plants resources, to compare these data with those we collected in previous years in upper Kelmend, and to eventually provide a few insights for a possible sustainable exploitation of a few local plant resources on the basis of the recorded TK.

## Methodology

The area investigated in this ethnobotanical field study is located in upper Shala Valley in the Northern Albanian Alps, and is one of the poorest (Betti 2003) and most remote areas in Europe. The area is contiguous to the Kelmend area, which was the focus of our previous field work (Pieroni et al. 2005b; Pieroni et al. 2006; Pieroni 2007; Pieroni, in press) (Fig. 1). The upper Shala Valley represents the upper valley of the homonym river and belongs to District of Shkodër; it is a largely mountainous region, with deep snowfalls in winter. The landscape is characterized by Alpine pastures and meadows, and beech (*Fagus sylvatica* L.) and pine (*Pinus nigra* Arn. and *P. mugo* Turra) forests in the highest areas, while hornbeam (*Ostrya carpinifolia* Scop. and *Carpinus betulus* L.) forests dominate the landscape at the lower altitudes. At 670 m asl, Theth is the highest village in the Shala Valley, and it is included in a local national park. It is spread along the upper valley and comprises from North to South the settlements of Okol, Nik Gjonaj, Gjecaj, Gjellaj, Ndreaj, Nen Rreth, Breisht, Ulaj, Kolaj, and Grunas (Fig. 1). The upper valley is dominated by the chain of Albanian Alps bordering Montenegro, whose pinnacles reach 2500 m above sea level.



**Fig. 1** The studied area

As of July 2007, only eighteen families were living permanently (i.e. also during the winter) in the settlements of Theth. According to our informants and to data gathered from the Shala Valley Project led by the archaeologist Michael Galaty (Galaty et al. 2005), the village consists of approximately 160 homes, which presumably were all once inhabited, and of which nowadays only approximately 60 are occupied during the summer. After the fall of Communism, most of the villagers moved to the closest and most important Northern Albania town on the plain, Shkodër, which has approximately 100,000 inhabitants, and is located on the homonym lake, three to four hours drive from Theth, or they migrated to Greece, Italy, the UK, or the USA. A few of the remaining families of Theth reside in Shkodër during the cold winter months and return to the village for the summer months.

Throughout the four centuries of Ottoman–Turkish presence in Albania, the people of Kelmend and

Shala were never completely dominated; hence they have retained their original Catholic religion, which they also secretly practiced during the Communist era (1944–1991) and during Enver Hoxha’s extreme form of dictatorship (1944–1985). They speak a very distinctive dialect of the northern Albanian language, Gheg, which is also spoken in Kosovo.

The economy of the upper Shala valley is predominantly based on self-sufficiency; each household has a few animals (generally one to two cows, one or two pigs, and perhaps a few sheep) and cultivates potatoes and white corn as staples, and a few additional vegetables.

Eco-tourism based on foreign excursionists is becoming an interesting economic activity during the summer, however the area still faces a major struggle with its communications with the outside world. Access to Shkodër is via two very rough routes, which are often impassable during the winter. Moreover, there is no regular reliable supply

of electricity as the upper Shala Valley still relies on a hydroelectric system that uses ancient machinery brought in during the sixties by the Chinese government. Providing schooling for the local children is a problem, and most importantly the area lacks any form of organized institutionalised health assistance.

The fieldwork in this study was conducted over a period of three weeks in July 2007. Thirty-two interviews were carried out with participants who had been selected using snowball sampling (Russell Bernard 2002), focusing particularly on the elderly people who have lived in Theth all their lives or at least the major part of them. This latter is especially the case of the women from the lower Shala Valley or other Northern Albanian Catholic regions, who came to Theth after marrying Shala males.

Specific information about local plant uses was sought using classical means of ethnobotanical investigation (Alexiades and Sheldon 1999; Cotton 1996), i.e. participants were asked first to free-list local plants they have used or still use in their cuisine, in folk medical practices, or in handicraft or other activities; to show or describe these plants; and to describe in depth the gathering activities and the related processes/transformations of these plants.

Prior Informed Consent (PIC) was obtained verbally before each interview began. Ethical guidelines adopted by the AAA/American Anthropological Association (1998) and by the ICE/International Society of Ethnobiology (1998) were rigorously followed.

Written notes were taken on all interviews, which were carried out with the help of an Albanian simultaneous translator. Digital pictures were taken of all plants quoted as being used and the related processes, and an archive of approximately 300 pictures was established.

Quoted plant items were collected and identified using the standard work on Albanian Flora (Paparisto and Qosia 1988–2000) for the wild species, and “Mansfeld’s encyclopedia of agricultural and horticultural crops (except ornamentals)” (Hanelt 2001) for cultivated trees. Voucher specimens of the recorded wild taxa were collected and deposited at the Herbarium of the Laboratory of Pharmacognosy at the University of Bradford (PSGB).

## Results and discussion

### The ethnobotany of Theth

In Table 1, we report all local plants known and quoted by the informants. Seventy-nine taxa were recorded, mainly for their use as food (39%) or medicine (26%). Cultivated plants are harvested in Theth in areas that are very close to the houses dispersed along the upper Shala valley, while wild plants are both gathered in the surroundings of the village, and in the higher Alpine pastures (i.e. *Vaccinium myrtillus* L.).

On comparing the data with a few South-European ethnobotanical checklists (Guarrera 2006; Tardío et al. 2006), and with all Balkan ethnobotanical works published so far in English or in German (Truhelka 1894; Glück 1894; Lilek 1896; Kulinović 1900; Kemp 1935; Pieroni et al. 2003; Pieroni et al. 2005b; Redzic 2006; Jarić et al. 2007), we noted a few uncommon ethnobotanical findings in this survey. Among them is the fermentation and distillation of the fruits of *Cornus mas* L. for producing a very popular local version of *raki*, which is also considered to have important medicinal properties as an anti-rheumatic when both drunk and applied externally. Also unusual is the ongoing gathering activity of the toxic fruits of *Colchicum autumnale* L., which are dried and sold in the lower Shala Valley and in Shkodër to intermediaries or traders associated with pharmaceutical companies; and the practice of burning the dried fruiting body of *Fomes fomentarium* (L.:Fr.) Kickx in order to keep bees away when honey is collected. The continuation of the gathering activity of the highly toxic *Colchicum autumnale* L. in Theth, which was apparently even more extensive during the Communist era, raises important research questions about the dynamic nature of TK, and how new acquired “exogenous” information on plants, which probably comes from urban environments and is related to immediate economic interests, may have extensively “distorted” pre-existing more sophisticated knowledge systems and probably original ethno-toxicological knowledge as well (Maiga et al. 2005).

### Wild vegetables

Elderly women in the upper Shala Valley still gather diverse greens (such as *Chenopodium*, *Amaranthus*,

**Table 1** Local plants used in the upper Shala Valley

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Acer</i> spp. (Aceraceae)	Paj	Maple	Wild	Wood	HAN: Used to make variety of household and agricultural tools.
<i>Achillea millefolium</i> L. (Asteraceae)	Lule e bardhe/ Mifileçet	Yarrow	Wild	Aerial parts while flowering	MED: Gathered, dried and sold in the past as a medicinal plant. Specific use unknown.
<i>Agrimonia eupatoria</i> L. (Rosaceae)	Bar gjarpri/Bara majasil	Agrimony	Wild	Aerial parts while flowering	MED: Used externally to treat snake bites. In decoctions or macerated in raki and drunk for treating skin diseases or coughs.
<i>Amaranthus lividus</i> L. and <i>A. retroflexus</i> (Amaranthaceae)	Nena e butë	Amaranth	Wild	Leaves	FOO: Boiled and used with cream and/or butter as stuffing for <i>byrekë</i> and <i>laknur</i> (pies). On the odd occasion raw in mixed salads.
<i>Allium cepa</i> L. (Alliaceae)	Qep	Onion	Cultivated	Young whole plant	FOO: Generally eaten raw with cheese and other dairy products, accompanied with drinks of <i>raki</i> .
<i>Allium porrum</i> L. (Alliaceae)	Prasi	Leech	Cultivated	Stems	FOO: Eaten raw
<i>Allium sativum</i> L. (Alliaceae)	Hudra	Garlic	Cultivated	Leaf juice	MED: Applied in the ears to heal ear-ache.
<i>Brassica rapa</i> L. (Brassicaceae)	Rrepsha	Turnip	Cultivated	Young whole plant	FOO: Generally eaten raw with cheese and other dairy products, accompanied with drinks of <i>raki</i> .
<i>Brassica oleracea</i> L. (Brassicaceae)	Lakna	Cabbage	Cultivated	Roots	FOO: Eaten cooked as a vegetable. More often it is consumed after lacto-fermentation ( <i>rrepa e regjui</i> )
<i>Capsicum annuum</i> L. (Solanaceae)	Spec	Pepper	Cultivated	Leaves	FOO: Eaten cooked as a vegetable. More often, fermented into sauerkraut ( <i>lakna e regjui</i> ) and eaten with pork meat during the winter as a strengthening food.
<i>Carlina acanthifolia</i> All. (Asteraceae)	Thera	Acanthus-leaved thistle	Cultivated	Aerial parts	VET: As fodder for increasing milk production.
<i>Carpinus betulus</i> L. (Betulaceae)	Shkoza	Hornbeam	Wild	Fruit	FOO: Eaten raw in salads or fried in oil. Fermented in sheep's milk for at least two weeks and consumed. The resulting dairy product resulting is known as <i>shitenë</i> .
<i>Castanea sativa</i> Mill. (Fagaceae)	Gështenja	Chestnut	Wild	Aerial parts	VET: As fodder for horses.
				Wood	HAN: Used to make a variety of agricultural tools. Burnt for fuel.
				Wood	HAN: Used to make a variety of agricultural tools, e.g. barrels for lacto-fermenting vegetables, for preserving cheese in salted water, or for fermenting grapes, cherry plums or Cornelian cherries, before they are distilled into <i>raki</i> .

Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Centaureum erythraea</i> Rafn. (Gentianaceae)	Bar i etheve/Bar perethë/Lule tarfonë	Centaury	Wild	Aerial parts	MED: Infusions to treat fevers and convulsions. In the past the herb was also dried and sold.
<i>Cerasus avium</i> (L.) Moench and <i>C. vulgaris</i> Mill. (Rosaceae)	Qershia	Wild cherry	Wild and semi-domesticated	Fruit	FOO: Eaten raw.
<i>Chenopodium album</i> L. (Chenopodiaceae)	Nena e egër/Nena e vrrinit/Nena shqçerçi	Fat hen	Wild	Leaves	FOO: Boiled and used with cream and/or butter as stuffing for <i>byrekë</i> and <i>laknurr</i> (pies). On the odd occasion eaten raw in mixed salads.
<i>Chenopodium bonus-henricus</i> L. (Chenopodiaceae)	Nena/Nena e butë	Good King Henry	Wild	Leaves	FOO: Boiled and used with cream and/or butter as stuffing for <i>byrekë</i> and <i>laknurr</i> (pies).
<i>Colchicum autumnale</i> L. (Colchicaceae)	Gjrokul	Autumn crocus	Wild	Fruit	MED: Gathered, dried and sold (at approximately 20 USD per kg) as a medicinal plant. Exact use unknown.
<i>Cornus mas</i> L. (Cornaceae)	Thana	Cornelian cherry	Wild	Fruit	FOO/MED: Eaten raw, also as a food medicine to relieve intestinal troubles in children. Macerated in barrels for 1–2 months, then distilled to produce raki ( <i>raki thami</i> ). This is considered the best raki. It is also used medicinally to relieve rheumatism (both drunk and rubbed on externally). Cherries are also boiled for half an hour in water and macerated to produce vinegar.
<i>Corylus avellana</i> L. (Betulaceae)	Lethi	Hazelnut	Wild	Kernels Branches Leaves	FOO: Eaten raw. HAN: Used to make baskets. MED: Gathered, dried and sold in the city markets, especially in the past. Specific use unknown.
<i>Cotinus coggygia</i> Scop. (Anacardiaceae)	Shqemja	Smoke tree	Wild	Leaves	OTH: Used to tan sheep leather in the past. Also gathered, dried and sold in the past for this purpose.
<i>Cucumis sativus</i> L. (Cucurbitaceae)	Kastravec	Cucumber	Cultivated	Fruit	FOO: Eaten raw in salads. More often the whole fruits are incised longitudinally and lacto-fermented in barrels with water and salt. Eventually hot chillies are added and the cucumbers are consumed throughout the year.
<i>Cydonia oblonga</i> Mill. (Rosaceae)	Ftoin	Quince	Cultivated	Fruit Leaves	FOO: Eaten raw. MED: Infusion to treat stomach ache or coughs.

Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Fagus sylvatica</i> L. (Fagaceae)	Ahu	Beech	Wild	Branches Wood	HAN: Used to make brooms. HAN: Used to build fences, and several types of agricultural tools. Burnt for fuel.
<i>Ficus carica</i> L. (Moraceae)	Fiq	Fig	Cultivated	Leaves Pseudo-fruits	VET: Used for bedding for cows and sheep.
<i>Fomes fomentarius</i> (L.:Fr.) Kickx (Polyporaceae)	Eshka	Tinder bracket fungus	Wild	Fruiting body	FOO: Eaten raw only in the lower Shala Valley. VET: Burnt to keep bees away while gathering honey.
<i>Fragaria vesca</i> L. (Rosaceae)	Dratha/Lulestryde	Wild strawberry	Wild	Fruit Leaves	FOO: Eaten raw or in jams. MED: Gathered, dried and sold in the past as a medicinal plant. Specific use unknown.
<i>Fraxinus excelsior</i> L. (Oleaceae)	Frasher	Ash	Wild	Wood	OTH: Fuel
<i>Gentiana lutea</i> L. (Gentianaceae)	Sanza	Gentian	Wild	Roots	MED: Macerated in <i>raki</i> and drunk as a treatment for heart diseases. Gathered, dried and sold to the city markets, especially in the past.
<i>Helleborus</i> sp. ? (Ranunculaceae)	Shpaz	Christmas rose	Wild	Aerial parts	MED: Gathered, dried and sold to the city markets.
<i>Hordeum vulgare</i> L. (Poaceae)	Elb	Barley	Cultivated	Seeds	FOO/VET: In the past only, harvested for use in soups or as fodder for animals.
<i>Hypericum maculatum</i> Crantz (Hypericaceae)	Balsam/Caj verdhë/ Caj kuq	Imperforate St. John's wort	Wild	Aerial parts while flowering Aerial parts	MED: Infusion ( <i>caj</i> ) of the dried aerial parts used to treat abdominal pains, especially in children. Also gathered, dried and sold to the city markets. MED: Dried and ground, and applied with salt and tobacco leaves to heal wounds.
<i>Juglans regia</i> L. (Juglandaceae)	Arra	Walnut	Semi-cultivated	Leaves (and unripe fruit) Kernels	OTH: Decoction (2–3 h). Applied on women's hair to dye it black. Gathered, dried and sold to the city markets, especially in the past FOO/MED: Eaten raw, or roasted and eaten to treat coughs.
<i>Juniperus communis</i> L. (Cupressaceae)	Dlin	Juniper	Wild	Fruit	MED: Gathered, dried and sold in the past as a medicinal plant. Specific use unknown.
<i>Lycopersicon esculentum</i> Mill. (Solanaceae)	Domate	Tomato	Cultivated	Fruit	FOO: Consumed raw, or lacto-fermented with salted water and consumed during the winter.
<i>Malus domestica</i> Borkh. (Rosaceae)	Molla	Apple	Cultivated	Fruit	FOO: Eaten raw.

Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Morus alba</i> L.	Mana e bardhë	White mulberry	Cultivated	Fruit	FOO: Eaten raw. On rare occasions fermented and distilled into <i>raki</i> .
<i>Morus nigra</i> L.	Mana e zezë	Black mulberry	Cultivated	Fruit	FOO: Eaten raw. On rare occasions fermented and distilled into <i>raki</i> .
<i>Orcis morio</i> L. (Orchideaceae)	Salepi	Wild orchid	Wild	Tubers	FOO: Gathered, dried and sold (especially in the past). Use unknown.
<i>Organum vulgare</i> L. (Lamiaceae)	Çaj/Çaj malit	Wild oregano	Wild	Aerial parts while flowering	FOO/MED: Infusion ( <i>caj</i> ). Drunk regularly throughout the year as a “social beverage” and also specifically for treating sore throats and colds (especially in children). Also gathered, dried and sold to the city markets.
<i>Ostrya carpinifolia</i> Scop. (Betulaceae)	Mëllëze	European hop-hornbeam	Wild	Wood	OTH: Fuel
<i>Petasites hybridus</i> (L.) P. Gaertn. (Asteraceae)	Labuda	Butterbur	Wild	Leaves	OTH: Used as a hat during the summer
<i>Phaseolus vulgaris</i> L. (Fabaceae)	Fasulja/Grosh	Bean	Cultivated	Fruit and seeds	FOO: Eaten cooked, especially in soups.
<i>Pinus nigro</i> Turra and <i>P. nigra</i> Am. (Pinaceae)	Pisha	Black and mountain pines	Wild	Wood	HAN/OTH: Used to make a variety of agricultural tools. Burnt for fuel.
<i>Plantago major</i> L. (Plantaginaceae)	Deicç	Plantain	Wild	Leaves	MED: Used externally as an haemostatic on wounds. In infusions for treating abdominal pains. In the past, gathered, dried and sold to the city markets.
<i>Populus nigra</i> L.	Plepi	Black poplar	Wild	Wood	HAN: Used to make variety of agricultural tools.
<i>Prunus domestica</i> L. ssp. <i>domestica</i> , ssp. <i>insititia</i> (L.) Bonier et Layens, and ssp. <i>syriaca</i> (Borkh.) Janchen ex Mansfeld (Rosaceae)	Kumbull	Plum	Cultivated	Fruits	FOO/ MED: Eaten raw, and occasionally fermented to produce <i>raki</i>
<i>Prunus cerasifera</i> Ehrh. (Rosaceae)	Kumbull/Kaisit	Cherry plum	Cultivated	Fruit	FOO/MED: Eaten raw, but especially fermented (up to three weeks) and distilled to produce <i>raki</i> . Most of the <i>raki</i> produced in the upper Shala Valley (around 200 litres per household each year) comes from cherry plums. <i>Raki</i> is also used as an antiseptic on wounds.



Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Prunus spinosa</i> L. (Rosaceae)	Kumbull i eger	Sloe	Wild	Fruit	FOO: Eaten raw as a snack.
<i>Pyrus communis</i> L. (Rosaceae)	Dardhe	Pear	Cultivated	Fruit	FOO: Eaten raw.
<i>Quercus</i> sp. (Fagaceae)	Lis	Oak	Wild	Wood	OTH: Fuel.
<i>Rubus idaeus</i> L. (Rosaceae)	Mjedër	Raspberry	Wild	Fruit	FOO: Eaten raw or made into jams.
<i>Rubus ulmifolius</i> Schott (Rosaceae)	Manaferra	Bramble	Wild	Fruit	FOO: Eaten raw or made into jams.
<i>Rumex longifolius</i> DC. (Polygonaceae)	Ëpjeta/Nena elpjet	Northern dock	Wild	Leaves	FOO: Boiled and used with cream and/or butter as stuffing for pies ( <i>byrekë</i> and <i>laknur</i> ).
<i>Salix alba</i> L. (Salicaceae)	Shelna	White willow	Wild	Stems	HAN: Used to produce homemade baskets ( <i>kosh</i> ).
<i>Salix purpurea</i> L. (Salicaceae)	Mirina	Purple willow	Wild	Stems	HAN: Baskets.
<i>Sambucus nigra</i> L. (Caprifoliaceae)	Shtog	Elder	Wild	Flowers	MED: Gathered, dried and sold in the past as a medicinal plant. Use unknown.
<i>Sanguisorba officinalis</i> L. (Rosaceae)	–	Great burnet	Wild	Aerial parts	VET: Dried and macerated in <i>raki</i> . The macerate is applied externally to treat mastitis in cows.
<i>Satureja montana</i> L. (Lamiaceae)	Trumza/Caj i egër	Wild savory	Wild	Aerial parts	FOO/VET: Gathered, dried and sold as a medicinal plant. Use unknown. Considered a melliferous plant by beekeepers.
<i>Secale cereale</i> L. (Poaceae)	Theker	Rye	Cultivated	Seeds	FOO: Cultivated as fodder in the past.
<i>Sempervivum tectorum</i> L. (Crassulaceae)	Bar veshit	Houseleek	Wild	Leaf juice	MED: Applied into the ear to treat earache.
<i>Solanum melongena</i> L. (Solanaceae)	Patlinxhani	Egg plant	Cultivated	Fruit	FOO: Consumed cooked (roasted, fried) or lacto-fermented in salted water.
<i>Solanum tuberosum</i> L. (Solanaceae)	Kertolla	Potato	Cultivated	Tubers	FOO: Eaten fried and boiled. In winter used in <i>kacinaq</i> , a polenta-like dish prepared by boiling corn flour and potatoes, and adding cheese, cleared butter ( <i>tyne</i> ) or cream, and pork meat.
<i>Sisymbrium officinale</i> (L.) Scop. (Brassicaceae)	Ilsepika	Hedge mustard	Wild	Aerial parts	MED: Used in infusions (caj) for treating rheumatism.
<i>Teucrium chamaedrys</i> L. (Lamiaceae)	Caj e egër/Teukla	Germander	Wild	Aerial parts	MED: Used in infusions for treating stomachache and/or fevers. Dried and sold to the city markets.
<i>Thymus serpyllum</i> L. (Lamiaceae)	Caj e egër/Lisën	Wild thyme	Wild	Aerial parts	MED: Gathered, dried and sold in the past as a medicinal plant. Use unknown.

Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Tilia cordata</i> L. (Tiliaceae)	Blini	Lime	Wild	Flowers	MED: Infusion (caj) used to heal coughs, colds and sore throats. Also gathered, dried and sold to the city markets.
<i>Trifolium</i> spp. (Fabaceae)	–	Clover	Wild	Aerial parts while flowering	MED: Gathered, dried and sold in the past as a medicinal plant. Specific use unknown.
<i>Tussilago farfara</i> L. (Asteraceae)	Thundërmushkë	Coltsfoot	Wild	Leaves	MED: Gathered, dried and sold in the past as a medicinal plant. Specific use unknown.
<i>Ulmus laevis</i> Pall. (Ulmaceae)	Bul	Elm	Wild	Wood	OTH: Fuel
<i>Urtica dioica</i> L. (Urticaceae)	Hithër	Nettle	Wild	Leaves	FOO: Boiled and used as filling for pies ( <i>burek</i> and <i>lakaur</i> ) with fresh butter ( <i>burrofrëska</i> ) or cleared butter ( <i>thynë</i> ). Once gathered, dried and sold to the city markets MED: Rubbed on externally to treat arthritis. Leaves gathered and sold to the markets in the past.
<i>Vaccinium myrtillos</i> L. (Rosaceae)	Boronica	Bilberry	Wild	Roots	MED: Gathered and sold to the markets in the past. Specific use unknown.
<i>Vitis vinifera</i> L. (Vitaceae)	Rush	Grape	Cultivated	Fruit	FOO/MED: Eaten raw or in infusions ( <i>caj</i> ). Also as eaten as dried fruit for treating sore throats or for relieving digestive troubles. FOO/VET: Used mostly for producing grape raki, which is usually drunk during the winter after having been preserved in barrels buried in earth. Also used to produce wine, vinegar, and raki distillate. While grape <i>raki</i> ( <i>raki rushiit</i> ) is favoured in the lower Shala Valley, in the upper Shala Valley cherry plum raki is more popular by far. Vinegar is also used medicinally to treat bloat in sheep, in which case a suspension of vinegar and ground jasper [ <i>gur gjukat</i> ] is given to the animals.

Table 1 continued

Botanical taxa and families	Recorded Northern Albanian folk names	English names	Ethnoecological status	Parts used	Traditional uses
<i>Zea mays</i> L.	Kollomoq	Corn	Cultivated	Seeds  Cobs  Cobs after kernels have been removed	FOO: White varieties used to be ground in the local mill and the flour produced was used to the local bread ( <i>buk kollomoqit</i> ). MED: Roasted and consumed. Also as a medicinal food for treating diarrhoea. VET: As fodder for increasing milk production in cows.

FOO: food use(s); HAN: handicraft use(s); MED: medicinal use(s); OTH: other use(s); VET: veterinary use(s)

and even *Rumex* species), that they term *nena*. These wild vegetables are generally cooked and mixed with various dairy products to be used as fillings in the typical Albanian pies, *byrekë* and *laknur*, which are also well known in other Balkan countries and especially in Turkey.

We recorded a similar pattern in Kelmend (Pieroni, in press) and also among historical Albanians living in Southern Italy, whose ancestors migrated there mainly in the 15th and 16th Centuries (Pieroni et al. 2002).

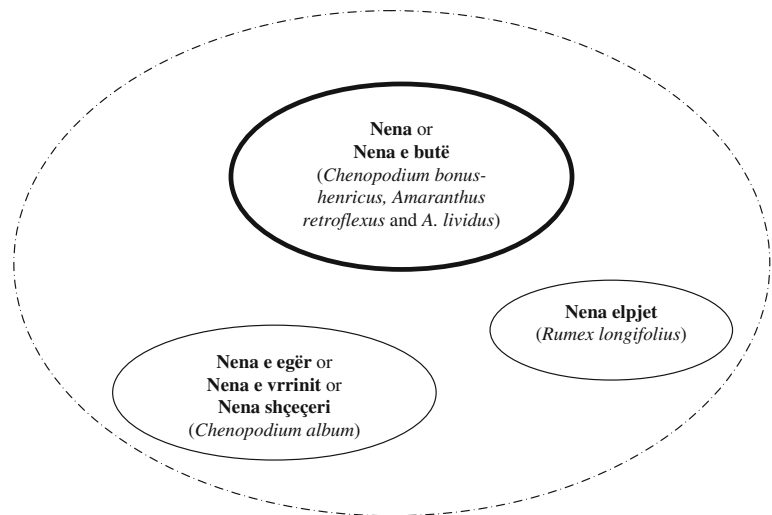
In Theth, Good King Henry (*Chenopodium bonus-henricus* L.) and the amaranth species *Amaranthus retroflexus* L. and *A. lividus* L. represent what are known in ethnotaxonomy as prototypes (Fig. 2). They are in fact simply called *nena*, or *nena e butë*, which literally means “true” *nena*. The other members of this “*nena* group” (*Chenopodium album* L.—fat hen, and *Rumex longifolius* DC.—Northern dock) are classified by the locals with the folk specifics *nena e egër* (“wild” *nena*, with “wild” simply meaning, as in other South European folk taxonomical systems, “similar to”), or *nena elpjet*. These are seen as being inferior to *nena e butë*, and they are gathered and processed in the local cuisine only if the prototypes are unavailable.

Younger generations of women in Theth seems to be reluctant to continue the old customs, especially those in families who have migrated to Shkodër in recent years, where cultivated leafy vegetables are widely available in the markets. Furthermore, those who live in Theth only in the summer months are maintaining these traditional practices less vigorously than those who live in Theth all year long. These findings highlight the issue of the erosion of TK due to phenomena associated with urban migration (Pieroni and Vandebroek 2007). Moreover, whereas in other southern European areas (Pardo de Santayana et al. 2005; Ghirardini et al. 2007) it appears that cultural attachment to local culinary traditions and the appreciation of specific dishes in urban circuits may be sufficient to partially stop the erosion of TK, these may not be enough to preserve Theth’s heritage related to the consumption of wild food plants.

Fermented vegetables: a sign of sedentarization processes?

As in other Eastern European areas (Maurizio 1927 and 1933; Luczaj and Szymański 2007), in Theth

**Fig. 2** Cognitive categorisation of the folk generic “nena” in Theth



most vegetables are preserved for consumption during the winter via lacto-fermentation. Cucumbers (Fig. 3), cabbages, tomatoes, turnips, and sometimes egg plants are harvested, stored in barrels of salt water, and left to ferment. Near the end of this process, chilli peppers are added. Green capsicum fruits however are fermented in fresh sheep’s milk (for at least ten days) and then consumed.

We note that lacto-fermenting vegetables is very popular in the upper Shala Valley, whereas in our previous fieldwork conducted in the upper Kelmend, we observed that only sauerkraut made from cabbage was produced for consumption during the winter months. This probably indicates that the Shala people are less attached to their traditional pastoral activities. Their use of conservation practices involving lacto-fermentation and their connections to a sedentary way of life as opposed to a transhumant lifestyle seem to offer evidence of sedentarization processes that have probably affected a few traditional pastoral communities in the Northern Albanian Alps. Although Albania is mainly a agricultural/sedentary and not a pastoral migratory country (Shkurti 1997), the situation in the Northern Albanian Alps is more complex and agricultural activities may have become predominant only recently. These shifts appear more clearly if we consider Table 2, in which we compare the consumption of the most common local food products in both the upper Kelmend and the upper Shala Valley. In Theth, the consumption of a few traditional dairy products is beginning to disappear, perhaps for the following reasons:



**Fig. 3** Old woman showing home-made lacto-fermented cucumbers

- In the upper Shala Valley fewer than five families still have herds and continue to take their animals to the high alpine pastures and hamlets during the

**Table 2** Most common local food products consumed in upper Kelmend and in Theth

Product	Upper Shala Valley (Theth) (fieldwork conducted in 2007)	Upper Kelmend (Lëpushë) (fieldwork conducted in 2004 and 2005: Pieroni et al. 2005a, b; Pieroni, in press)
<i>Djathë'</i> (=cheese)	Very common	Very common
<i>Mazë'</i> (=cream)	Rare	Very common
<i>Kos</i> (=yogurt) and <i>kos kolum</i> (=thickened yogurt)	Common	Very common
<i>Mishavin</i> (=finely grated cheese with salt added, and left to ferment anaerobically in a barrel sealed with cleared butter [ <i>tylënë'</i> ]))	No longer in use. Informants remembered that this was done in the past.	Common
<i>Kartolla</i> (=potatoes)	Very common	Very common
<i>Lakër e regjun</i> , <i>lakna ta regjun</i> (=Sauerkraut)	Common	Common
<i>Kastravec të regjun</i> (Preserved [lacto-fermented] cucumbers)	Very common	Rare
<i>Fasulja</i> (=beans)	Very common	Rare
<i>Raki kumbullit</i> (Plum and cherry plum distillate)	Very common	Very common
<i>Raki rushit</i> and <i>raki thanit</i> (Grape and Cornelian cherry distillate)	Very common	Rare
<i>Mosht</i> and <i>ven</i> (most and wine)	Common	Very rare
<i>Qep</i> (=fresh onions)	Very common	Very common

summer, whereas the alpine pastures of Kelmend are instead still inhabited by more than 100 households during the summer. This is probably also partly due to the fact that the inhospitable natural environment surrounding most lower Kelmendi villages allows only limited agricultural activities.

- Historical and cultural factors have impacted differently on the dynamics in the local traditional agro-pastoral economies of the two areas during the last decades. For example, accordingly with our informants, the Shala Valley has constantly received large numbers of Albanian tourists and occasionally foreign guests of the Albanian Government even during the Communist period, while for decades the upper Kelmend was “off-limits” for all Albanians, hence its residents have had very little contact with the rest of the country.
- Waves of migrants during the recent years have moved from the upper Shala Valley to Shkodër, and to a lesser extent to central Italy, whereas in upper Kelmend most migrants went abroad and especially to the USA (Zezza et al. 2005). As a result, regular visits back to the area of origin and the subsequent contact with and hybridisation of culinary traditions have been and probably still

are very intense in Shala, whereas they are very limited in the upper Kelmend.

#### Plums, mirabelle plums, and cherry plums

In Theth the most common activity at the end of July and August is the harvest of the fruit of diverse *Prunus* species, which are fermented for approximately two weeks in barrels built from the wood of black poplars and chestnuts (Fig. 4), and then distilled to obtain *raki*. The most common home-made *raki* in Theth is made from plums (*Prunus domestica* L. ssp. *domestica*) and cherry plums (*Prunus cerasifera* Ehrh. fruits), however grapes and Cornelian cherries (*Cornus mas* L.) are also used. *Raki* made from the latter is believed to be especially valuable because of its ascribed anti-rheumatic medicinal properties.

In fact, each household in Theth produces between 200 and 300 litres of plum *raki* a year. In Northern Albania, *raki* is more than a appetizer or a digestive. It is drunk regularly during meals, and on social occasions it is used to welcome guests, show hospitality and celebrate special events. The specific flavour of Northern Albanian *raki*, which makes it



**Fig. 4** Cherry-plums for producing *raki* before and after harvesting

very different from the Slavic *slivovitz* or Turkish *raki*, is mainly due to the peculiar ingredients used in its production, namely cherry plums, yellow plums/mirabelle [*Prunus domestica* L. ssp. *syriaca* (Borkh.) Janchen], and—occasionally—a few plums and damsons (*Prunus domestica* L. ssp. *domestica*, ssp. *insititia* (L.) Bonier et Layens).

#### Medicinal plants

Despite the complete lack of any medical assistance in Theth, it is interesting to note the very restricted folk phytopharmacopoeia of the village, with only eighteen taxa that are used in treating diverse diseases. Only a few medicinal herbs are gathered from the wild on a regular basis and used internally to treat diverse ailments. These include the aerial parts of common oregano (*Origanum vulgare* L.), which are used in infusions to treat sore throats; the aerial parts of mountain St. John's Wort (*Hypericum maculatum* Crantz), which are used in infusions for treating abdominal pains, especially in children; and the roots of *Gentiana lutea* L., which are macerated in *raki* and taken to treat heart diseases. We had

already recorded all of these plants and their related folk uses in our previous study conducted in the upper Kelmend (Pieroni et al. 2005b), however this study did uncover some uncommon (and occasional) medicinal uses of local plants, including the use of leech (*Allium porrum* L.) juice, which is applied in the ears for treating earache, the use of quince (*Cydonia oblonga* Mill.) leaves in infusions to treat stomach aches and coughs, the use of agrimony (*Agrimonia eupatoria* L.) in decoctions or alcoholic macerations for treating skin inflammation, and the use of hedge mustard (*Sisymbrium officinale* L.) in infusions for treating rheumatism.

A few other local botanical species are still gathered, dried, and sold to the markets in Shkodër, in what seems to be the vestiges of a lively and widespread practice in the Alps during the Communist period of gathering wild medical plants for the pharmaceutical market. This activity is now in regression and only the younger members of a few families collect plants from the wild in order to gain some cash. The most profitable activity is the collection of sahlep (wild orchid bulbs, especially *Orchis morio* L.), which are sold to the Shkodër

market, from which they are probably shipped to Istanbul. This activity raises serious bio-conservation concerns about the long-term effects of this exploitation, which seems to be very remunerative: dried saffron bulbs fetch around 50 Euro/kg and dried *Colchium autumnale* L. fruits fetch 30 Euro/kg.

Albania is already one of the Europe's leading exporters of medicinal plants (Schippmann et al. 2002), hence we believe that the opportunity is there for the people in Theth to become involved in this activity in a localized and small-scale way.

#### Ethnoveterinary phytotherapy

After having recorded a few ethnoveterinary practices that are still being actively practised in upper Kelmend (Pieroni et al. 2006), it was quite surprising to observe that in Theth, traditional animal husbandry and ethnoveterinary practices related to the care of cows, sheep and goats are apparently disappearing. In the entire upper Shala Valley we counted only four families that still had herds, which they moved from Theth to Shkodër during the winter, and to the summer hamlets located in the highest pastures in the Alps for approximately six weeks in July and August. Now most of the summer settlements in the Shala Alps are inhabited by shepherds who come from other mountainous areas in Albanian, particularly Kelmend. As a consequence, almost all Theth's original ethnoveterinary heritage seems to be lost, and we could record only one traditional practice of treating animals with natural products that is apparently still used. This involves using a suspension of vinegar and the ground mineral jasper (*gur gjuku*), which is believed to be effective in treating sheep with bloated stomachs.

#### Handicraft plants

The production of home-made baskets (*kosh*) from branches of hazelnut (*Corylus avellana* L.) and willow species use in daily agricultural work still survives in Theth (Fig. 5).

This is a very interesting activity, which integrates well with the emerging eco-tourism in the area. If coupled with the sustainable harvesting of local food and medicinal plants and the manufacture of related local products, it could offer interesting earning prospects for this less-favoured mountainous area.

Local plant resources in Theth: what are the prospects for the future?

In Table 3 we have listed products based on local plants that could be part of an interesting and diversified “package” offered to future foreign visitors in the area. Much of the future of Theth will surely depend on the capacity of local authorities and international aid agencies to cooperate in concentrating their efforts to improve the transportation, electricity and communications facilities in the area, as well as organising a proper system of health provision to replace the one that apparently existed during the Communist period but has since collapsed.

The development of eco-tourism, as well as the implementation of the “Balkans Peace Park Project” (BPPP 2007) could have an immense impact on Northern Albania. The BPPP in the upper Shala Valley could attract foreign visitors, who would have a substantial influence on the daily lives and the future prospects of the people of Theth, especially if local communities and could be convinced to join NGOs and institutional actors and actively participate in the BPPP's planning and realisation. This park would offer a much needed alternative for the young and dynamic members of the community, who at present seem to believe that their future lies in escaping from the mountains and finding labour opportunities by migrating to Shkodër, or (clandestinely) to Athens or Florence. In time, they may decide it is more attractive to remain in their village and let the world come to them. There could in fact be a very promising potential in the Albanian mountains for trekkers, agro-tourism, and for the sustainable gathering and organic cultivation of high-quality plant products, which could be sold to niche markets in Shkodër, Tirana, and maybe throughout Western Europe as well.

#### Conclusion

The ethnobotanical data collected in Theth show that the community is undergoing a very challenging transition from what was once a traditional agro-pastoralist society to what is now a rather dispersed community that is fast disappearing as a consequence of major socio-economic problems that have arisen



**Fig. 5** Home-made baskets made of branches of hazelnut and willow species

following the fall of the Communism. Little Traditional Knowledge regarding current harvesting of staple plants (apart from corn and potatoes) and the gathering of medicinal, veterinary, or toxic plants (i.e. *Colchicum autumnale* L.) was recorded in this study, which may suggest that the socio-political

developments confronting Northern Albania over the last 15 years have had a negative impact on the original Theth's intangible cultural heritage and its self-sufficiency strategies.

On the other hand, the people of Theth have retained a few traditions surrounding their use of

**Table 3** Local plant-based products, which are already sold, or could be sold in the markets of Shkodër or in local agro-tourism ventures

Products	Local plant resources	Currently sold in the city market	Potential for small-scale trade in the near future
Cherry plum <i>raki</i>	Fermented and distilled <i>Prunus cerasifera</i> Ehrh. fruits	*	+++
Cornelian cherry <i>raki</i>	Fermented and distilled <i>Cornus mas</i> L. fruits		++
Cornelian cherry vinegar	Fermented <i>Cornus mas</i> L. fruits		++
<i>Caj</i>	Dried <i>Origanum vulgare</i> L. flowering tops	*	+++
<i>Caj verdhe</i>	Dried <i>Hypericum maculatum</i> Crantz flowering tops	*	++
<i>Kosh</i>	Homemade baskets made of branches of <i>Corylus avellana</i> , <i>Salix alba</i> and <i>Salix purpurea</i>		++

+++ : high potential; ++ : middle potential; \* : low potential



local plant resources. In this study, seventy-nine taxa and a few quite uncommon uses were recorded. If these were to be re-evaluated, they could be used in the framework of eco-tourism activities, which may include the sustainable gathering and harvesting of local plants for the small-scale trade of a few food, medicinal, and handicraft products.

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