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Pardo de Santayana, Manuel and Pieroni, Andrea and Puri, Rajindra K. (2010) The ethnobotany of Europe, past and present. In: Pardo de Santayana, Manuel and Pieroni, Andrea and Puri, Rajindra K., eds. *Ethnobotany in the New Europe: people, health, and wild plant resources*. Studies in Environmental Anthropology and Ethnobiology (14). Berghahn Books, Oxford, pp. 1-15.

### DOI

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## CHAPTER 1

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# The Ethnobotany of Europe, Past and Present

MANUEL PARDO-DE-SANTAYANA,  
ANDREA PIERONI AND RAJINDRA K. PURI

This book reports on an old and venerable discipline, the study of European wild food plants and herbal medicines, invigorated by a new generation of researchers pursuing modern ethnobotanical studies in new contexts. It offers new insights into the past and contemporary uses of wild plant resources, which despite decades in decline still play an important role for many rural communities. Recently, some of these wild plants and the practices associated with them have received renewed attention as symbols of local identities – or forms of intangible cultural heritage<sup>1</sup> – perceived to be under threat or as new resources for local economic growth. However, the future of these traditions is uncertain, as some are not practised any more and for others the resources themselves are under pressure due to continuing expansion and intensification of human environments. An important theme to emerge from these studies is the need for new theoretical and practical approaches that link the revaluation of plant-based cultural heritage with the conservation and use of biocultural diversity.

This book bridges biological and social science disciplines such as medicine, food science, human ecology, environmental science, history, anthropology and linguistics, and is intended to benchmark the development of the subject, for scientists and scholars active in the field, for those who make and implement policy, and generally for all those with an interest in biocultural diversity issues. Being at the interface of these various disciplinary perspectives, the researchers have made use of a variety of methods for obtaining information. Most of the data were provided by personal interviews and observations, but folk songs,

historical texts, ethnographies and literature were also surveyed and analysed.

The authors and studies presented here reflect work being conducted in many European regions, including Portugal, Albania, Norway and Malta, and provide an overview of current ongoing field studies in Europe. Highlighting the rich diversity of cultural traditions still found here, the findings demonstrate both the common European heritage of folk knowledge on wild and cultivated plants and the diversity of local knowledge found across Europe's many areas. These studies tell the story of the ongoing evolution of human-plant relations in Europe, one of the most bioculturally dynamic places on the planet.

This dynamism derives in part from a long history of interaction among Europe's forty-five countries, city-states and principalities, which contain a quarter of the world's population living on less than 7 per cent of its land, but speaking 239 languages (Gordon 2005). Language groups are further subdivided into regional dialects, and the unique embedding of local cultural heritage and specific ways of perception and management of natural resources have generated myriad 'senses of place' (what in France is called '*terroir*';<sup>2</sup> see Bérard et al. 2005). Europe's incredible diversity is in part due to the geographically fragmented nature of the continent – separated by high mountain ranges and seas, and with only rivers to unite particular regions – and the multiple historical trajectories of tribes, kingdoms, empires and nation-states that have been battling for control of regions, or indeed the whole continent, for thousands of years (Diamond 1998; Llobera 2004; Stacul, Moutsou and Kopnina 2005). Such geographical, linguistic and historical richness has led to a multitude of ecological conditions, agroecosystems, cultures and ethnobotanical traditions.

Europe is therefore considered a crossroads of civilization, where human migrations and displacements have played a major role not only today but also historically, and these exchanges of people have led to a constant exchange of ideas, customs and knowledge (Rietbergen 1998; Stacul, Moutsou and Kopnina 2005). These old population movements are reflected in many ethnic, linguistic and religious minorities which still survive today with their own characteristic knowledge systems, of which ethnobiological studies have investigated only a very few, such as the descendents of Greeks living in Calabria, Italy, investigated by Sabine Nebel and Michael Heinrich in chapter 8; the Albanian descendents/*Arbëreshë* of Lucania, also of southern Italy (Pieroni et al. 2002); and the old descendents of Romanian-speaking populations living in the Croatian northern part of Istria (Pieroni et al. 2003).

## Ethnobotanical Studies in Europe: Past and Present

The history of the study of useful European plants dates back to ancient Greek times. One of the earliest works is *De Materia Medica*, published in AD 77 by the Greek surgeon Pedanius Dioscorides of Anazarbus, in which he compiled information about the use of six hundred plants in the Mediterranean. Later, from Medieval and Renaissance periods to the nineteenth century, scholars and explorers continued collecting and describing the indigenous uses of plants worldwide. For instance, the Swedish botanist Linnaeus, the founder of modern scientific botany, also published books such as *Flora Lapponica*, where he included not only plants of Lapland but also their local uses (Linnaeus 1737). Later, modern botanical and medical science itself was built on studies of Medieval Europeans' use of the food plants and medicinal herbs that graced the tables of both nobles and peasants (Atran 1990).

Since the nineteenth century, folklore studies in Central and Northern Europe have occasionally focused on traditional uses of plants (e.g., Marzell 1938; Butura 1979; Pettersson, Svanberg and Tunón 2001; De Cleene and Lejeune 2003; Allen and Hatfield 2004; Tunón, Pettersson and Iwarsson 2005) or the ethnolinguistics of useful plants (Marzell 1943; Borza 1968; Sejdiu 1984; Sella 1992; the last two referring to comprehensive works conducted in Kosovo and Albania, and North-western Italy, respectively).

While the development of ethnobiology and ethnobotany as interdisciplinary subjects is relatively recent in Europe, modern ethnobotanical studies focused on European territories have been growing very quickly, especially in southern European countries such as Italy and Spain. Moreover, the discipline is now turning its attention to long neglected regions such as the Balkans (Pieroni in chapter 2; Redzic 2006) and the East, including Poland, Lithuania, Romania and Bulgaria (de Boer in chapter 5; Bernáth 1999; Kathe, Honnef and Heym 2003; Ploetz and Orr 2004; Šeškauskaitė and Gliwa 2006; Łuczaj and Szymański 2007).

Many researchers in this book have linked the present use of plants to their historical roots, usually by studying the continuity of popular plant names and uses in archival material and literature, but also more recently through historical linguistic analysis of popular names (Pardo-de-Santayana, Blanco and Morales 2005; Nebel, Pieroni and Heinrich 2006). For instance, Torbjørn Alm and Marianne Iversen's study of the history of the use of *Rhododendron tomentosum* Harmaja by Sámi in Norway found continuity in vernacular names and medicinal uses from the early eighteenth to the twentieth centuries, with only a loss in use as a salt substitute (see chapter 13). The study of cognates to local plant names give us clues to the historical relationship between cultures, while the meaning of many plant names reveals their local uses and perceptions (Pardo-de-Santayana 2008). Sabine Nebel's comparison of names for edible greens

among *Grecanico* speakers in Calabria (Italy) and Ancient and Modern Greek literature shows remarkable continuity of language and traditions. For example, *Portulaca oleracea* L. (purslane) is called *andrâcla* in Gallicianò and *andrakla* in Greece. The uses of many of these wild plants are, in effect, living relics of ancient Greek culture (see chapter 8). Manuel Pardo-de-Santayana and Ramón Morales also use an historical-linguistic approach to link the Spanish use of plants known as *manzanilla* (chamomile) in drinking infusions back through the ages to Moorish practices in the twelfth and thirteenth centuries, and even further back to Dioscorides in ancient Greece (see chapter 14). Daiva Šeškauskaitė and Bernd Gliwa present a rare glimpse into Lithuanian ethnobotanical classification by tracing and indeed unravelling the origins of cognate local names for sycamore maple (*Acer pseudoplatanus* L.), plane tree (*Platanus* spp.), black poplar (*Populus nigra* L.), guelder rose (*Viburnum opulus* L.) and sacred wreaths made from harvested rye. They demonstrate the value, and dangers, of using folk texts and ethnographic data, such as songs, riddles and children's verses, as ethnobotanical evidence for reconstructing the etymology and symbolic history of botanical nomenclature (see chapter 12). Timothy Tabone found that the Maltese shock/fright-jaundice syndrome seems to have resulted from syncretism of the South Italian *mal d'arco* and the Spanish *susto*, probably a legacy of the centuries when these territories were under Spanish control (see chapter 4).

Some researchers focus on the contemporary uses of wild plants, not just because of their continuity with past practices or re-emergence in new markets, but also because of their important dietary functions. In general, wild greens are nutritious due to their high content of minerals and vitamins (Ansari et al. 2005; Pardo-de-Santayana et al. 2007). Maria Barão and Alexandra Soveral Dias (chapter 9) show that the consumption of common golden thistle (*Scolymus hispanicus* L.) among poor farmers in Alentejo, Portugal, has a long history, also stretching back to ancient Roman times, and has now become popular among tourists. Underlying the use of this particular thistle, though, is the fact that it manages to maintain its high nutritional value regardless of the quality of the soils in which it grows. Local farmers have recognized this uniqueness and thus ignore all other thistles that grow in the area.

Other social aspects such as gender relations are also of special interest across Europe. Although deep knowledge of wild greens is said to be characteristic of women in many countries (Howard 2003), to gather and prepare thistles in Portugal is a man's work (Barão and Soveral Dias, chapter 9). A very unusual example is provided by Andrea Pieroni about women who become men in the Albanian Alps: in this archaic form of transgenderism there is convergence of the ethnobiological knowledge of 'typical' men, concerning fodder and ethnoveterinary plants, wild fruits,

and the ethnomycological knowledge of women, concerning weedy food and medicinal plants (see chapter 2).

One of the main goals of these newer ethnobotanical studies has been to document the dynamics of traditional knowledge about plants primarily gathered by rural communities. This is a key part of European biocultural heritage, which due to migration from rural areas and many deep social, economic and cultural changes since the last world war, in the West, and the break up of the Soviet Bloc, in the East, has suffered significant erosion. In fact, most young people today prefer the new ways of life, and their lack of interest in traditional plant use has led to a loss of this rich heritage (Pardo-de-Santayana and Gómez Pellón 2003; Pieroni 2003; Vallès, Bonet and Agelet 2004).

## **The Dynamism of the European Ethnobotanical Heritage**

Europe's folk botany has always been dynamic and changing. Consider, for example, all the new plants and plant products introduced by explorers, traders and colonizers during the 'Age of Discovery and Mercantile Capitalism' (Crosby 1972). Many of these, such as the tomato, the capsicum, the potato and beans, have since achieved a kind of culinary keystone status for the cuisines of Europe, and at a more general level have come to symbolize these cultures (Fernández Pérez and González Tascón 1990). In spite of such monumental changes, many communities continued to hold on to old recipes and traditions, while others adopted and enculturated these exotic plants and remedies into their diets and pharmacopoeias in new and creative ways (Teti 1995; Nabhan 2004). Now, in the twenty-first century, in the age of the European Union (EU) and globalization, European folk botany is once again dynamically responding to changing economic, political and cultural contexts.

Widespread socioeconomic changes – modernization, industrialization, mechanization of agriculture – beginning in post-Second World War reconstruction across Europe, and following the dissolution of the Soviet Bloc in the east, have led to radical transformations in the lifestyle of rural societies (Abrahams 1996), which often relied on knowledge of plants to secure many of their basic needs (Gómez Pellón 2004). Accompanying this shift, from a rural, agriculturally –based, subsistence economy to a market-oriented one, has been a rapid erosion of ethnobotanical knowledge (Pardo-de-Santayana and Gómez Pellón 2003), and practices which many of the authors have described and endeavoured to explain for their particular field sites.

Some of this erosion is due to the simple fact that there are fewer farmers; across Europe pensions, tourism income and EU or member-state subsidies have become the main sources of income for rural regions

(Pérez Díaz 1996–2003; López Pérez 2003; Psaltopoulos, Balamou and Thomson 2006). This has led to less dependence on wild plants for food and medicine, and also less direct contact with nature, so many of the species are not gathered any more, or at best only seldom. In fact, several of the plant-use traditions described in this book are no longer practised, or persist only in the memory of the elderly. Those who do still collect wild plants often have less time to do so and thus cannot range as far as their parents or grandparents might have in the past. Furthermore, many of the species once collected are now difficult to find due to modifications of habitat, such as watercress (*Rorippa nasturtium-aquaticum* (L.) Hayek, syn: *Nasturtium officinale* R. Br. in W.T Aiton). Anja Christanell and colleagues discovered in Austria that species too labour intensive to process or difficult to find are usually rejected (see chapter 3). Exacerbating the problem is a concomitant rejection of communal social institutions that once bound local communities together and insured transmission of traditional botanical knowledge (Gómez Pellón 2004).

Changes in culture – shared beliefs, values and meanings of plants and plant traditions – are also responsible for changes in gathering practices, as when wild edible plants come to be considered as symbols of poverty or backwardness, often because of their importance during times of food scarcity (González Turmo 1997). Many authors demonstrate how modernization downgrades and devalues wild resources, especially among the youth who are very conscious of fitting into the new, modern Europe (see Christanell et al., chapter 3; Tardío, chapter 10; Carvalho and Morales, chapter 7).

Despite all these changes, continuity in plant use across Europe can sometimes be startling. Globalization may be making Europe smaller, in terms of faster communication and reduced travel times, and the EU may be attempting to unify and streamline economic and political systems (see Stacul, Moutsou and Kopnina 2005), particularly those of Eastern European and former communist countries, but that does not imply a necessary homogenization of culture (Llobera 2004; Vaishar and Greer-Wootten 2006), or, in this case, plant use. In fact, EU policy supports decentralized ‘regionalism’ within nations, through the EU Common Agricultural Policy (CAP) and Rural Development schemes (Nogués 2004; EU 2006a, b). In the face of increased global competition for tourists and other markets, regional identities, characterized by regional foods, music, artefacts and products, are seen by some politicians and businessmen as critical marketing tools for local economic growth (Tellstrom, Gustafsson and Mossberg 2005).

Although most chapters describe declining gathering practices of food and medicinal plants, some of these practices are not only not disappearing; they are becoming more popular. This is often a result of the new regionalism and the accompanying tourism that demands local

authenticity in food, wine, architecture and even landscape. Across Europe's many small markets, numerous local, plant-based products are appearing. For instance, there are infusions, such as rock tea (*Jasonia glutinosa* (L.) DC.) in Spain, elderflower wine (*Sambucus nigra* L.) in Central European countries such as Germany, Austria and Slovenia (A. Pieroni, pers. observ.), and gourmet liqueurs and marmalades made from wild fruits such as elderberries (*Sambucus nigra*), blackberries (*Rubus* spp.), blackthorn berries (*Prunus spinosa* L.) or wild apples (*Malus sylvestris* (L.) Mill.) (e.g., Bonet and Vallès 2002; Pardo-de-Santayana, Blanco and Morales 2005; Pardo-de-Santayana, Tardío and Morales 2005; Pieroni et al. 2005). In restaurants and cafés one can find salads made from commonly gathered wild greens such as wild chicory (*Cichorium intybus* L.), wild asparagus (*Asparagus acutifolius* L. and other *Asparagus* species), bladder campion (*Silene vulgaris* (Moench) Garcke) and wall rocket (*Diplotaxis muralis* (L.) DC.) (Picchi and Pieroni 2005; Tardío, Pardo-de-Santayana and Morales 2006). The common golden thistle (*Scolymus hispanicus*) is now in great demand in Spain and Portugal (see Barão and Dias, chapter 9; Tardío, chapter 10; Carvalho and Morales, chapter 7.)

Economic diversification has been a good strategy for mountainous and remote areas where it is too risky to be specialized in only one resource (e.g., Andersson and Ngazi 1998). A combination of some cash income from activities such as farming, selling by-products like cheese and jam, or providing beds for tourists and other off-farm labour, and subsidies, has become a successful strategy across Europe today (Van Lier 2000).

On the other hand, political and other crises may have the effect of increasing dependence on wild foods. This appears to be especially true in the post-communist countries, which can be said to have been in transition and in some cases in crisis since the end of the Cold War (Ekström et al. 2003). Elsewhere, the war in the former Yugoslavian countries, or the collapse of the state health system in Albania or Bulgaria (see chapters 2 and 5), for instance, have pushed people to use many of their wild resources that had been previously abandoned. Not only does the use of wild plants prevail, but also the ideas, concepts and beliefs about illness and remedies that underpin these uses are maintained. This is the case with the Doctrine of Signatures, still prevalent in the Albanian population surveyed by Pieroni and his research team (see chapter 2).

There are also cultural reasons for increased attention to some wild plant resources. Along with an emphasis on developing regional economies, or perhaps because of it, regional identities have also grown in strength and importance. Since local and regional identities are always in part composed of natural symbols, it is not surprising that wild plant products and the shared knowledge and values surrounding them would also attract more attention as regional identities began to be asserted (Wu 2003). In Scotland, Clottie trees, once worshipped, have become tourist



attractions precisely because they are emblematic (see chapter 11), and in Austria the blessing of flowers in Catholic celebrations has also been popularized for tourists (see chapter 3).

Identity markers often arise to maintain social boundaries (Barth 1969; Cohen 2000), and so wild plants also can persist when they symbolically distinguish two competing or entangled peoples or regions. For instance, Alm and Iverson describe how Norwegians consider *Rhododendrum tomentosum* a pleasant, scented plant and call it with the borrowed name *rosmarin*, equating it with the herb rosemary, while Sámi people say that it smells very bad. The authors suggest that this distinction helps to highlight ethnic differences and maintains the plant tradition as well (see chapter 13). Thus the maintenance or revival of plant use, the reassertion of regional and cultural identities, and even the renewed interest in ethnobotany, have emerged together in many European countries.

Many of the studies in this book clearly demonstrate that the reasons for still gathering wild plants are rarely ever entirely economic. People have emotional reasons, such as a love of nature, a desire to conserve an old tradition or a way of remembering their parents; social reasons, such as the obligation to give gifts, share or barter products with friends and relatives; gastronomical reasons, such as the enjoyment of homemade delicacies; or health reasons, gained from the supposed healthiness of wild and self-cultivated plants and a preference for self-medication. Finally, earning a small amount of money on the side can be a motivator to maintain wild plant use (see Christanell et al., chapter 3), while Christine Wildhaber reports that cultivating organic vegetables in allotment gardens can be a way to save money (see chapter 16).

Studies on European homegardens have also shown the importance of environmental, health, educational, emotional and recreational reasons for taking care of a garden. An activity that was traditionally for obtaining food now has multiple functions and is thus receiving more attention from European researchers (Vogl, Vogl-Lukasser and Puri 2004; Buckingham 2005; British Homegardens Project 2008; Wildhaber, chapter 16).

## European Ethnobotany in the Future

The authors and research reported in this book only begin to scratch the surface of what is happening in Europe today, in terms of the variation of changing human–environment relationships that involve the use of wild and medicinal plants, and the techniques and methods being developed by researchers to document and explain these new relationships. Much more research needs to be conducted to cover the vast array of experiments in living being carried out on hundreds of farms, among small communities and even in urban neighbourhoods across the continent. Research may

reveal patterns of change and new innovations, and even serve as conduits to link all these variable areas.

One of the key areas for ethnobiological research today is the interaction between autochthonous populations and newcomers, often from other parts of Europe but increasingly from other continents. Researchers are interested to know what happens to the traditional knowledge and practices of migrants when they settle in new ecological and cultural contexts. Do migrating people bring their plants with them, and does that go some way to alleviating the stress of moving or the unfamiliarity of a new home? Do they have to rely on new plants to maintain old traditions, and if so how do they choose these new plants? Or do they create trade networks and establish new markets to provide traditional plant resources? Are traditions hybridized or just lost over time? Simultaneously, migrant groups living in Europe face varying difficulties in maintaining and transmitting their traditional practices to new generations and this raises very relevant issues for public health and nutrition policies. Answering these questions will go a long way toward better understanding the dynamics of ethnobotanical knowledge systems as well as the importance of the environment for migrants more generally (e.g., Pieroni and Vandebroek 2007; Pieroni et al., chapter 6).

Finally, in the context of Europe's dynamic past and present, the sustainable use of plant resources into the future is a common interest of many of the authors. Since many of these are wild plants, their conservation and sustainable use is problematic. With land being squeezed for expanding cities, housing, roads and pasture, where are wild plants going to survive? Who controls wild plants? Can public policies regulate these resources?

In Bulgaria, Hugo de Boer reports that quota systems for regulating medicinal plant collection by professional harvesters have shown promising initial results. However, since many of the species gathered are locally abundant and easily accessible, harvesters are often unaware of the risk of overharvesting the more rare species. Identifying local specialists as key informants has been shown to be valuable for detecting local declines in the more uncommon medicinal plants (see chapter 5).

It turns out that many of the wild plants studied are in fact found in managed areas, and their status as wild is now questioned by some (Van den Eynden 2004). We must take into consideration that there is a gradient between plants that grow wild and those that are cultivated. Some wild plants may be tolerated in gardens or fields, lightly promoted through weeding out competitors, managed more heavily through pruning, or finally transplanted into better conditions. In fact, the role of homegardens in increasing biodiversity, including agrobiodiversity, needs to be more seriously considered, both in terms of the potential benefits to the farmer and the effect it has on regional levels of biodiversity and ecosystem

services that benefit the wider public (Eyzaguirre and Linares 2001; British Homegardens Project 2008: see Wildhaber, chapter 16). This is the case of trees or shrubs, which grow in homegardens or on village lands, and thorny bushes, which typically grow in hedgerows that mark boundaries. Finally, other taxa are grown in meadows and receive special inputs such as natural fertilizers (see McCune, chapter 15). Thus wild plants appear to be found in a variety of habitats, some more anthropogenic than others.

The status of wild versus cultivated is critical, because tenure is often closely tied to management, and concepts of ownership have been changing across Europe for more than a decade now, especially in the Eastern countries (Abrahams 1996; Ortega Valcárcel 2004). Trees, for instance, in many regions have an owner, except for those growing far away from villages or cattle-grazing grounds. These single or communal owners are responsible for the planting, protection, grafting, pruning and exploitation of their wood (San Miguel 2004). Recognizing tenure, individual or communal, and thus responsibility for plants in both legal and social contexts, will be critical in promoting conservation and development initiatives in Europe in the coming years.

Jenny McCune's chapter focuses on the interest of using ethnobiological tools in the study of grassland management by livestock farmers and its relation with the conservation status of these environments. She suggests that they have deep, site-specific knowledge of grassland flora and animal fodder species that can greatly assist in conservation efforts of state agencies (see chapter 15). There are other cases where overharvesting may in fact be problematic for certain species, such as *sahlep* in Albania (Pieron, chapter 2), *Artemisia granatensis* Boiss. in Spain (Pardo-de-Santayana and Morales, chapter 14), medicinal plants in Bulgaria (de Boer, chapter 5), or mushrooms in general (Christanell et al., chapter 3). On the other hand, people sometimes cultivate or transplant wild herbs that are scarce or threatened into homegardens to avoid over-exploitation.

Across Europe, the related fields of economic botany, ethnobotany, ethnopharmacology, food anthropology, agriculture and organic farming are emerging as important and overlapping endeavours with unique resources at their disposal: old botanic gardens and plant collections, even older archives, new centres for research and public awareness (such as the Eden Project), and a variety of academic institutions with growing interdisciplinary and often international programmes.<sup>3</sup>

We offer here an initial glimpse into an exciting and growing field of European ethnobotany, and a call for scientists and students to join us in unravelling a small part of this grand experiment that is Europe in the twenty-first century, this dynamic diversity so characteristic of Europe's past, present and probable future.

## Notes

1. The UNESCO Convention for the Safeguarding of Intangible Cultural Heritage, signed at the 32nd Session of UNESCO in Paris on 17 October 2003, includes knowledge and practices concerning nature and the universe, ethnobiology and ethnosciences (Pieroni, Price and Vandebroek 2005). It is a crucial turning point for recognizing all orally transmitted traditional knowledge (TK) systems as an integral part of the worldwide cultural heritage that has to be protected and sustained.
2. *Terroir* is a French term, originally referring to the special characteristics of food production within a given, unique, biocultural locality. *Terroir* is considered the sum of the effects that the local environment and the immaterial heritage of the local culture has on the production, processing/technology and manufacture of a specific food product.
3. There are programmes at Canterbury, Kent (Department of Anthropology), Vienna (Institute of Organic Farming, BOKU), Wageningen (Department of Social Sciences), Madrid (Universidad Autónoma de Madrid), Bra ((Slow food) International University of Gastronomic Sciences), and Uppsala (Department of Evolutionary Biology), to name but a few.

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