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Traditional uses of plants in North-Western Molise (Central Italy)

B. Menale, G. Amato, C. Di Prisco, R. Muoio

Orto Botanico di Napoli, Università degli Studi di Napoli Federico II, Via Foria 223, 80139 Napoli, Italy.
bruno.menale@unina.it

Riassunto. Nel corso di un'indagine etnobotanica condotta nel Molise nord-occidentale sono state raccolte informazioni sugli usi locali delle piante attraverso interviste condotte presso le comunità locali. L'indagine ha consentito di censire 80 specie di interesse etnobotanico in rappresentanza di 37 famiglie. 61 specie hanno uso medicinale, 23 uso alimentare e 14 usi diversi. Per ciascuna specie sono riportati gli usi, il nome comune, le parti utilizzate e le modalità di preparazione e di assunzione.

Abstract. In the course of an ethnobotanical investigation carried out in North-Western Molise (Italy), information on the use of plants was obtained by interviewing local inhabitants. Data on 80 species belonging to 37 families were gathered. 61 species refer to herbal remedies, both for humans and animals, 23 to use as food, 14 to other uses. For each species, vernacular name, popular use, used parts, preparation and assumption modality are indicated.

Key words: Ethnobotany, Italy, Medicinal plants, Molise

Introduction

Many ethnobotanical studies have been carried out in Italian areas, most of them devoted to medicinal plants (Barone 1963; Galt & Galt 1978; Tumino 1978; Barbagallo *et al.* 1979; Capasso *et al.* 1982; Cappelletti 1985; Antonone *et al.* 1988; Leporatti & Pavesi 1989; Lentini & Raimondo 1990; Raimondo & Lentini 1990; Lentini & Aleo 1991; De Feo *et al.* 1992; Ballero & Fresu 1993; De Feo & Senatore 1993; Guarrera 1999; Pieroni 2000; Leporatti & Corradi 2001; Pieroni *et al.* 2002a; Pieroni *et al.* 2002b; Pieroni & Heinrich 2002; Guarrera 2005). These investigations have shown that wild and cultivated plants are still used mainly in small villages, where depositories of such information are often older people, representing in many cases the majority of the village population. These people jealously store their knowledge on use of plants handed down to them throughout generations and often add their personal experience to the traditional background, so that ancient traditions otherwise destined to disappear keep alive.

As far as medicinal plants are concerned, the scientific research has proved the real effectiveness of active principles in many plants, and there are not few species that should be still investigated under this point of view.

The present paper is an ethnobotanical study of wild and cultivate plants used in some villages of Molise, a Central Italian Region full of ancient traditions and with numerous natural resources.

Study Area

Molise Region is located on South-Central Apennines (Fig. 1), with 55,4 % of its territory

Fig. 1 - Molise Region, Italy.

represented by mountains.

Flora of the Region is very rich in species, representing 45% of all wild species growing in the Italian territory. Molise coasts are characterized by typical littoral vegetation, e.g., beach grass (*Ammophila arenaria* (L.) Link), mouse tail (*Phleum pratense* L.), myrtle (*Myrtus communis* L.), lentisk (*Pistacia lentiscus* L.), rosemary (*Rosmarinus officinalis* L.), heather (*Erica arborea* L.), tamarisk (*Tamarix gallica* L.). Hills are covered by turkey oak (*Quercus cerris* L.), downy oak (*Quercus pubescens* Willd.), manna ash (*Fraxinus ornus* L.), hop hornbeam (*Ostrya carpinifolia* Scop.), maples (*Acer campestre* L., *Acer obtusatum* Waldst. & Kit. ex Willd.) and sorb (*Sorbus domestica* L.). Brushwood has species as eglantine (*Rosa canina* L.) and hawthorn (*Crataegus monogyna* Jacq.). Mountains vegetation is composed of woods of turkey oak (*Quercus cerris* L.), silver fir (*Abies alba* Mill.) and beech (*Fagus sylvatica* L.).

Methodology

The research has been done in Isernia and Campobasso districts (Fig. 1).

The investigation was carried out by interviewing 43 local older people living in the municipalities of Agnone, Belmonte, Castelverrino and Poggio Sannita (Mountain Community of Alto Molise), Bagnoli del Trigno and Salcito (Mountain Community of Trigno Medio Biferno), Pesche and Pescolanciano (Mountain Community of Centro Pentria).

In order to avoid mistakes in the identification of species and considered that the same vernacular name is often referred to more species sometimes botanically quite different, interviewed people were asked to show wild and cultivated plants reported by them to have folk uses. Thus, only reports for which the informant was able to indicate and collect the plants were taken into account. For each plant we required to furnish vernacular name, folk use (i.e., medicinal, veterinary, textile, food), used parts, gathering period, related recipes, the preparation and the possible association with other plants in its use.

Each specimen has been identified. The nomenclature of the plants is according to Tutin *et al.* (1964-1980) and Pignatti (1982). Plants families were classified according to Cronquist (1981) and Strasburger (1995).

Results and Conclusions

The high number of interviews allowed to confirm the reported uses and led to the identification of 80 species, belonging to 37 families. The most represented families are Asteraceae (13 species), Fabaceae (8), Rosaceae (6) and Poaceae (6).

The investigated species are listed in Table 1, that reports indication of family, number of citations, local names of plants, the part of plant used, ways of preparing remedies, and popular uses.

As Table 1 shows, wild and cultivated plants of ethnobotanical interest are very numerous and with very different ways of use in the studied area. In general, interviewed people showed to have a good knowledge of use of plants. Most plants grow in the wild, but they are easily found also near houses.

Among the identified species, 61 are used as herbal remedies, both for humans and animals, 23 as food, 14 for other uses (e.g., basketwork, repellent, magical).

As far as medicinal plants are concerned, a single plant is used for each remedy. Herbal remedies are generally used for the treatment of common and minor ailments, the used plants mainly having digestive, diuretic, laxative, lenitive and cicatrizing properties. Most common modalities of preparation include decoction, infusion and local applications.

Some drugs are utilized in the fresh state, while others are stored in the dry state and used throughout the year. The most used parts to make remedies are the leaves (30 cases), followed by flowers (13) and fruits (12).

Frequently, the same species is used for various therapeutic purposes; in particular *Malva sylvestris* L., *Ficus carica* L. and *Matricaria chamomilla* L. (Table 1). There are few reports on the use of plants for animal diseases, while the same plant is frequently used for different purposes (i.e., medicinal, textile, food). Of significance are the applications of *Chenopodium bonus-henricus* L., *Beta vulgaris* L., *Arctium lappa* L., *Carlina acaulis* L. and *Sonchus oleraceus* L., used both as food and medicinal. Also, *Clematis vitalba* L. is used both as food and to make baskets. Noteworthy, many plants are employed as repellent for the insects, thanks to their strong smell. Sometimes a dying application has been reported, as for *Rubus ulmifolius* L. and *Genista tinctoria* L. Some plants are not used anymore to this end, but nowadays the memory of their applications is still alive (e.g., *Robinia pseudoacacia* L., *Sonchus oleraceus* L. and *Sambucus ebulus* L.).

Medicinal uses of most species examined in the present work generally confirm previous reports (Gracza & Szasz 1968; Goldberg *et al.* 1969; Valnet 1976; Boni & Patri 1977; AA.VV. 1979; Shipochliev *et. al.* 1981; Schönfelder & Schönfelder 1982; Chiej 1983; Borio 1985; Al-Hindawi *et al.* 1989; Della Loggia *et al.* 1994; Chevallier 1996; Guidi 1996; Firenzuoli 2000; Graf 2000; Chiasson *et al.* 2001; Lavagna *et al.* 2001; Lin *et al.* 2002; Panizzi *et al.* 2002; Herold *et al.* 2003; Juteau *et al.* 2003; Fuchs *et al.* 2005; Uncini Manganelli *et al.* 2005). No previous report is available for therapeutic properties of the following species here studied: *Arctium lappa* L., as antalgic, *Arundo donax* L., as cicatrizer, *Cynodon dactylon* L., as expectorant, *Digitalis purpurea* L., as antirheumatic, *Ficus carica* L., as lenitive and antispasmodic, *Rumex crispus* L., as antiodontalgic, *Sonchus oleraceus* L., as diuretic and laxative, and *Viscum album* L., as antiodontalgic.

The present study shows that further ethnobotanical investigations are worthy to be carried out in Molise Region, where most of knowledge on popular pharmacopoeia is still to discover or to recover.

Table 1 – Ethnobotanical data of plants studied

Botanical name	Cit.*	Local name	Part used	Preparation	Popular use
			Fam. Apiaceae		
Anethum graveolens L.	1	Finocchietto	Seeds	Raw	To increase milky secretion, as flavour.
			Fam. Asteraceae		
Achillea millefolium L.	1	Erba dei tagli, delle formiche	Flowery top	Decoction	Compresses dipped in the decoction used as disinfectant and as cicatrizer.
Arctium lappa L	1	Pungicariell	Roots	Decoction	Menstrual pains, as depurative and diuretic.
			Stem	Raw	Stems eaten before flowering.
Artemisia absinthium L.	1	Assenzio	Whole plant	Raw	Bunch of the plants hanged at the windows as insects repellent.
Calendula officinalis L.	2	Erba di San Giuseppe	Flower heads	Applied locally	Lenitive in wounds and bites.
			Leaves	Applied locally	
Matricaria chamomilla L.	8	Camomilla	Flower heads	Infusion	As sedative, digestive; for gastritis. Compresses dipped in the infusion used for eye inflammations; as analgesic and lenitive.
Carlina acaulis L.	1	Rapanica	Flower heads	Raw	Thornless flower heads eaten in salad.
			Roots	Decoction	Roots used for preparing a decoction with diuretic and depurative action.
Cichorium intybus L.	1	Ceccheura	Leaves	Decoction	As hypoglycaemic.
			Roots	Decoction	As digestive.
Picris hieracioides L.	1	Tanni	Stem	Raw	As food.
Sonchus oleraceus L.	1	Cascigno	Leaves	Raw	As diuretic and laxative. In salads or cooked.
Tanacetum vulgare L.	1	Foglia di S. Maria	Leaves	Raw	As lenitive against burns.
Taraxacum officinale Weber	2	Tarassaco	Dried leaves	Decoction	Both parts use as diuretic and laxative.
			Roots	Decoction	
Tragopogon pratensis L.	1	Barba di capra	Flower heads	Raw	As food.
			Stem	Raw	
Tussilago farfara L.	1	Cuopp'	Leaves	Decoction	As antitussive.

Table 1 - (continued)

Botanical name	Cit.*	Local name	Part used	Preparation	Popular use
			Dried heads	Infusion	As expectorant (compresses dipped in the infusion applied on the thorax).
			Fam. Boraginaceae		
Borago officinalis L.	1	Verràina	Leaves	Decoction	As decongestant for calves.
				Raw	Boiled leaves used as side dishes.
			Fam. Caprifoliaceae		
Sambucus ebulus L.	1	Ebbio	Fruits	Raw	Fruits squeezed to obtain a tincture as ink.
Sambucus nigra L.	3	Scarcatulo	Leaves	Infusion	Compresses dipped in the infusion used against parotitis; chopped leaves used as insects repellent.
			Fruits	Raw	Marmalade used as laxative.
			Stems	Without pith	As toy, to built “zipolo”.
			Fam. Chenopodiaceae		
Beta vulgaris L.	2	Abrata	Leaves	Raw	Boiled leaves used as food as laxative.
Chenopodium bonus-henricus L.	1	Spinaci selvatici	Leaves	Raw	Boiled leaves dressed with oil and salt and used as antianaemic due to the high iron content.
			Fam. Crassulaceae		
Sedum telephium L.	1	Erba della Madonna	Leaves	Raw	Fresh leaves used as cicatrizer.
			Fam. Cupressaceae		
Juniperus communis L.	1	Genebbolo	Cones	Raw	For flavouring foods and liqueurs.
			Leaves	Decoction	As diuretic.
			Fam. Fabaceae		
Cytisus scoparius L.	1	Ginestra	Flowery top	Infusion	As diuretic and laxative.
Genista tinctoria L.	1	Ginestrella	Flowers	Raw	Squeezed flowers used to obtain a yellow tincture used for dying cloths.
Glycyrrhiza glabra L.	1	Liquirizia	Roots	Decoction	As laxative.
Lathyrus sylvestris L.	1	Cicerchia	Leaves	Raw	As food.
Onobrychis viciaefolia L.	1	Lupinella	Whole plant	Raw	As hay both fresh and dry.
Ononis spinosa L.	1	Cessavuove	Roots	Infusion	As diuretic and depurative.
Robinia pseudoacacia L.	1	Ostia prena	Flowers	Raw	In salads.
Vicia faba L.	2	Fava	Seeds	Raw	Traditionally broad beans offered to the family that was in mourning and eaten the first day in Lent.
			Fam. Fumariaceae		
Fumaria officinalis L.	2	Fumaria	Aerial part	Infusion	As diuretic.
			Latex	Raw	Against warts.
			Fam. Gentianaceae		
Gentiana cruciata L.	1	Genzianella	Roots	Raw	To flavour liqueurs.
			Fam. Grossulariaceae		
Ribes uva-crispa L.	1	Uva spina	Fruits	Raw	As diuretic.
Ribes vulgare Lam.	1	Uva di San Giovanni	Fruits	Raw	As laxative.
			Fam. Juglandaceae		
Juglans regia L.	1	Noce	Fruits	Raw	For preparing a digestive liqueur.
			Seeds	Raw or dried	In pastry-making confectionery.
			Fam. Lamiaceae		
Melissa officinalis L.	1	Melissa	Leaves	Infusion	Against cold.
				Raw or dried	To flavour foods.
Mentha x *piperita* L.	1	Menta	Leaves	Infusion	As expectorant.
Thymus pulegioides L.	1	Timo	Leaves	Infusion	As depurative.
			Fam. Liliaceae		
Allium sativum L.	2	Aglio	Bulbs	Raw	For bee-sting as emollient.
				Chopped	As hypotensive.
				Cooked	For intestinal pains, as pediatric vermifuge; against chilblain.
Asparagus officinalis L.	1	Sparago	Roots	Decoction	As diuretic and depurative.
Muscari comosum L.	1	Erba delle serpi	Bulbs	Raw	In salads.
				Cooked	In sauces, in sweet and sour.
			Fam. Loranthaceae		
Viscum album L.	1	Vischio	Fruits	Raw	Against toothache.
			Fam. Malvaceae		
Althaea officinalis L.	1	Malvone	Whole plant	Decoction	As antiinflammatory.
Malva sylvestris L.	8	Malva	Roots	Decoction	Against cold.
			Leaves	Decoction	Against cold, as laxative, as hemollient of udders.
				Raw	Applied locally against bites.
			Flowers	Decoction	Used together with leaves as digestive, antispasmodic and antiacne.
			Fam. Moraceae		
Ficus carica L.	3	Fichera	Dried Fruits	Decoction	As antispasmodic and antitussive.
			Latex	Raw	Used together with olive oil against sunburn.

Table 1 - (continued)

Botanical name	Cit.*	Local name	Part used	Preparation	Popular use
			Fam. Oleaceae		
Olea europaea L.	1	Olivo	Leaves	Decoction	As hypotensive.
			Fam. Onagraceae		
Epilobium angustifolium L.	1	Epilobio	Flowers	Decoction	Both parts used as antidiarrhoeic.
			Roots	Decoction	
			Fam. Papaveraceae		
Chelidonium majus L.	1	Erba dei porri	Latex	Raw	Applied locally against worts.
Papaver rhoeas L.	2	Papagno	Flowers	Decoction	Both parts used as children sedative.
			Seeds	Decoction	
			Fam. Pinaceae		
Abies alba Mill.	1	Abete bianco	Branches	Raw	Fixed on the entrance door because witches before entering in the house should have counted all the needles. Used to built torches called “ndocce” to burn during Christmas’ night eve.
			Fam. Plantaginaceae		
Plantago major L.	2	Cinghnierv	Leaves	Decoction	As antidiarrhoeic.
				Raw	Applied locally against bites and burnings.
			Fam. Poaceae		
Arundo donax L.	1	Cannizz	Stem	Raw	Pith applied on wounds as disinfectant and cicatrizer.
Avena sativa L.	2	Ciuffeliella	Aereal parts	Decoction	As substitute of mother’s milk.
Cynodon dactylon L.	5	Gramegna	Roots	Decoction	Against stomach disease, as expectorant.
Triticum dicoccum L.	1	Farro	Leaves	Raw	Used against equine colics.
			Seeds	Cooked	As food.
Triticum monococcum L.	2	Farretta	Seeds	Raw	Baths in the soaked seeds water used to cancel skin rush due to allergy.
Zea mays L.	2	Randign	Stylus	Decoction	As diuretic, against bladder diseases.
				Raw	Wrapped in a warm cloth and put on the breast to relieve respiratory pains; dried, minced and smoked as tobacco substitute.
			Fam. Polygonaceae		
Rumex acetosa L.	1	Erba brusca	Leaves	Raw	In salads.
				Raw	Leaves used for skin problems (i.e., acne and greasy skin) and bites.
Rumex crispus L.	1	Lambuazz	Leaves	Decoction	Mouthwashes done against toothache.
			Fam. Ranunculaceae		
Clematis vitalba L.	1	Vtecchie	Buds	Cooked	In omelettes.
			Stem	Raw	To make baskets.
			Fam. Rhamnaceae		
Rhamnus frangula L.	1	Frangola	Bark	Decoction	As laxative.
			Fam. Rosaceae		
Crataegus oxyacantha L.	1	Cerasella	Flowers	Infusion	As sedative, as hypotensive.
Malus sylvestris Mill.	3	Melo	Fruits	Decoction	Against cold and cough.
Prunus avium L.	2	Cerase	Fruits	Raw	To prepare a liqueur.
			Stalks	Decoction	As diuretic.
Prunus cerasus L.	2	Amarena	Fruits	Decoction	As laxative.
Rosa canina L.	1	Cacavoska	Leaves	Decoction	As antidiarrhoeic.
			Hips	Decoction	Against cold.
Rubus ulmifolius Schott	3	Mbriachella di bosco	Fruits	Raw	As dying.
			Leaves	Raw	Applied locally as antiseptic.
			Fam. Rutaceae		
Ruta graveolens L.	1	Ruta	Flowery top	Raw	As insects repellent.
			Fam. Salicaceae		
Salix spp.	1	Veteca	Branches	Raw	To make baskets.
			Fam. Scrophulariaceae		
Digitalis purpurea L.	1	Dtaile	Leaves	Infusion	As diuretic.
				Raw	Applied locally as antirheumatic.
Verbascum thapsus L.	1	Barbasso	Flowery top	Decoction	Compresses dipped in the solution used for disinfecting animal wounds.
			Fam. Solanaceae		
Capsicum annuum L.	2	Riavrill	Fruits	Raw	As aperitif, as cardiotonic.
Lycopersicon esculentum Mill.	1	Pomodoro	Leaves	Raw	As insects repellent.
Solanum tuberosum L.	3	Patata	Tubers	Raw	Slices applied locally against burns.
			Fam. Taxaceae		
Taxus baccata L.	1	Tasso	Leaves	Soaked	Lotion used against louses.
			Fam. Tiliaceae		
Tilia cordata Mill.	1	Teglia	Flowers	Decoction	As antitussive.

Table 1 - (continued)

Botanical name	Cit.*	Local name	Part used	Preparation	Popular use
			Fam. Ulmaceae		
Ulmus minor Mill.	1	Olmo	Bark	Raw	Applied locally as cicatrizer.
			Fam. Urticaceae		
Urtica caudata Vahl.	5	Ortica	Buds	Decoction	As diuretic, as depurative; to reinforce hairs.
			Roots	Decoction	Compresses dipped in the solution used against rheumatism.
			Leaves	Raw	Applied locally as antirheumatic.
				Raw	As food for young turkeys.
				Soaked	Water used as fertilizer.
			Fam. Valerianaceae		
Valeriana officinalis L.	1	Valeriana	Rhizome	Decoction	As sedative.
			Fam. Verbenaceae		
Lippia citriodora L.	1	Citronella	Aerial parts	Raw	As insects repellent.
Verbena officinalis L.	1	Erba crucetta	Flowery tips	Infusion	As antitussive, as expectorant.

* Number of citations of the same species by interviewed people

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