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# ETHNOBOTANICAL KNOWLEDGE IN SOME RURAL COMMUNITIES OF NORTHERN SICILY (PALERMO, ITALY)

Abstract - Ethnobotanical knowledge in some rural communities of northern Sicily (Palermo, Italy). An ethnobotanical study was carried out to document the uses of wild plants among some local communities of Sicily (southern Italy). We recorded 48 taxa belonging to 45 genera included in 32 families. 30 taxa are used as medicinal plants, 22 taxa as food and 9 for handicraft use. In comparison with other ethnobotanical studies carried out in Sicily and other Italian territories, some uses of the plants reported by the local population in the study area are peculiarities. The analysis of data shows that the level of traditional knowledge on use of plants in province of Palermo is poor, highlighting a considerably advanced state of cultural erosion. The results of our investigation confirm the deep bond that rural communities of Sicily have with plants since ancient times.

**Keywords** - Ethnobotany, Rural communities, Biodiversity, Sicily, southern Italy.

Riassunto - Indagini etnobotaniche in alcune comunità rurali della Sicilia settentrionale (Palermo, Italia). In questo studio etnobotanico vengono presi in considerazione gli usi delle piante spontanee in alcune comunità della Sicilia (Italia meridionale). Complessivamente sono stati censiti 48 taxa appartenenti a 45 generi di 32 famiglie. 30 taxa sono utilizzati a scopo medicinale, 22 taxa per usi alimentari e 9 per usi artigianali. Alcuni usi riportati in questo studio hanno carattere di originalità se messi a confronto con quelli riportati in studi etnobotanici precedentemente effettuati nel territorio siciliano ed in altre regioni d'Italia. L'analisi dei dati mette in evidenza un basso livello di conoscenza sull'uso delle piante nella provincia di Palermo e uno stato avanzato di erosione culturale. I risultati del nostro studio confermano un rapporto consolidato nel tempo tra le popolazioni delle comunità rurali siciliane e l'uso delle piante.

Keywords - Etonobotanica, Comunità rurali, Biodiversità, Sicilia, Italia meridionale.

### INTRODUCTION

The island of Sicily, the largest and one of the most densely populated in the Mediterranean Sea, is an important floristic district (Fenaroli & Giacomini, 1958) and one of the most relevant biodiversity hotspots in the Mediterranean Basin (Médail & Quézel, 1999). Ethnobotany has experienced a period of growth in

the past twenty years and the interest for this discipline is evident in industrializing and non-industrialized nations (Alexiades, 2003; Quave et al., 2012). Several authors with particular references to human and veterinary popular medicine, vernacular names, and toponyms have highlighted ethnobotanical remarks on Central and Southern Italy, a territory strongly influenced by Roman and Greek domination (Guarrera & Leporatti, 2007; Guarrera et al., 2005; Guarrera et al., 2015). Other scientific papers emphasized the use of wild food plants as part of the Mediterranean diet (Guarrera & Savo, 2016). The agricultural and domestic-handicraft uses in folk traditions have been also taken as a reference to ethnobotanical applications in the Mediterranean area (Pieroni et al., 2004; Salerno et al., 2005).

The ethnobotanical knowledge in Sicily is vastly documented and the use of plants as food, medicine, domestic-handicraft, magical/ritual/superstitious, religious, agro-pastoral, veterinary, ludic and, luxury is widespread (Galt & Galt, 1978; Guggino, 1989; Lentini, 1991, 2000; Lentini & Venza, 2007; Lentini et al. 1988; Licata et al. 2016; Pitré, 1896, Tuttolomondo et al. 2014a, 2014b, 2014c). Nevertheless, there are some rural communities of the island, which are still insufficiently investigated. In these communities, a small number of people who continue to adopt a lifestyle balanced and integrated with the natural environment treasures the traditional knowledge. This has allowed them to accumulate an important heritage of knowledge, which has been preserved and handed down for generations. Modern society, however, addressed little attention to this significant inheritance of knowledge, which could be lost within a generation.

A case study of the small rural communities belonging to some municipalities of the province of Palermo (Sicily, southern Italy) is here illustrated.

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### MATERIALS AND METHODS

In the present investigation, we turned our attention to some small towns, surrounded by countryside, far from the big cities and the main lines of communication and trade. The study area lies entirely in the province of Palermo (western Sicily) and includes 5 municipalities: Bagheria, Casteldaccia, Santa Flavia, Misilmeri, and Villabate.

Fortnightly we carried out field trips to evaluate the plant communities that lie in the study area, and to collect and identify trees, shrubs and herbaceous plants of potential ethnobotanical use. The identification of the species was carried out using the monograph "Flora d'Italia" (Pignatti, 1982) while the nomenclature is referred to Euro+Med PlantBase – The information resource for Euro-Mediterranean plant diversity (www.emplantbase.org). The list of taxa recorded in our study is reported in Tab. 1 along with the botanical name, the local name, the plant part used (as medicine, food and, craft), the ailments treated and the therapeutic effects, the preparation and administration, the modes of consumption and use.

For interviews, we referred to a standard methodology already used in other publications (Tuttolomondo *et al.* 2014a, 2014b, 2014c). First, we have collected information about name and surname of informants, gender, age, municipality, level of instruction and profession. In Tab. 1, we report the local name of the plants, the local use (craft, food, medicinal, veterinary and, dyeing), the part of the plant used (leaf, flower, stem, seed, tuber, bark, root, fruit, whole plant), the method of preparation and any curiosity.

The interviews were carried out directly in private homes, bars, squares, social clubs or by contacting certain people who had been identified by the local population as experts on plants and rural traditions (farmers, foresters, herdsmen or handicraftsmen).

The interviews were carried out through informal conversations in order to allow the informant to speak freely. It was often necessary to use the Sicilian dialect, especially with older people. In many cases, more than one person participated in the interview and frequently it was useful to show the photos of the plants surveyed to bring to mind names and ancient traditions almost forgotten.

At the beginning of the interview, we illustrated to informants the main aims of the survey and each of the participants has verbally expressed their consent.

For the collection of ethnobotanical data, the following questions were addressed:

- "which plants have you used in your lifetime and which do you continue to use today?
- "why do you collect these plants"?

- "which uses and/or properties can be associated with these plants? (handicraft, food, medicinal, ornamental, agricultural, ritual, religious, cosmetics, etc.):
- "which parts of the plant do you use? (leaf, stem, flower, fruit, branch, root, seed, tuber, bark, whole plant, etc.);
- "which preparation methods are used? (decoction, infusion, poultice, direct application, boiling, broth, juice, etc.).

During the survey, we interviewed 161 people, divided into four age range groups, but all of them belonging to the age range 50-90 years old. Finally, all the collected information was gathered, processed and packed in a summary, for a quick reading and rapid use.

The Cultural Importance Index (CI) was calculated according to Pardo-de-Santayana *et al.* (2007).

The dried specimens of plants collected during the survey are kept in the Herbarium SAF of the Department of Agricultural, Food and Forest Science, University of Palermo.

### RESULTS

We interviewed 161 people, of which 155 are men (96%) and 6 women (4%). The number of respondents per municipality was 41 in Bagheria (39 men and 2 women), 40 in Casteldaccia (37 men and 3 women), 20 in Santa Flavia (only men), 40 in Misilmeri (39 men and 1 woman), and 20 in Villabate (only men). The age of participants is between 50 and 90 years old, with an average age of 69.5 years. Most of the plants are collected by informants directly in the countryside, in hilly or mountainous areas, in fallow fields, between the hedges or in the woods while others, especially those used as food, are picked, and sometimes cultivated in family gardens for a more convenient and faster consumption.

The number of recorded taxa is 48 belonging to 45 genera included in 32 families (Tab. 2). The most represented families are *Asteraceae* (6 taxa), *Lamiaceae* (4 taxa) and, *Poaceae* (3 taxa). 30 taxa are used as medicinal plants, 22 taxa as food and 9 for handicraft use. Only two species are known for the veterinary use while *Rhus coriaria* is known as a natural plant dye. Some plants are known to have more than one use.

The number of plants cited for number of respondents and age groups is shown in Tab. 3.

The list of wild plants for food, medicinal and craft use most frequently cited and currently used by informants, the frequency (percentage of citations) and the Cultural Importance Index (CI) are reported in Tab. 4. The Cultural Importance Index of 12 species used as food varied between 0.61 and 0.86. The results of the CI index showed that *Asparagus albus*, *Borago offici*-

nalis, and Opuntia ficus-indica are the most important plants of the surveyed area from a cultural point of view in terms of food use. The informants consider O. ficus-indica also a valuable medicinal plant (CI 0.55) together with Ceterach officinarum (CI 0.56) and, Malva sylvestris (CI 0.59).

In the case of plants of medicinal use, the CI index varied between 0.40 and 0.59 (Tab. 3). The Cultural Importance Index of five species used for handicraft varied between 0.40 and 0.56. The results of the index showed that Agave americana (CI 0.40), Ampelodesmos mauritanicus (CI 0.56), Chamaerops humilis (CI 0.48), Juncus inflexus (CI 0.53), and Olea europea var. sylvestris (CI 0.49) are most frequently cited by informants and widely used for the preparation of crafts (Tab. 3). As reported in Tab. 1, the edible bitter shoots of Asparagus albus and A. acutifolius are used to prepare many dishes, including omelets and risotto. The leaves and the sprouts of *Beta vulgaris* are used as food to prepare omelets and a vegetable soup. Alternatively, the leaves are boiled and then passed in a pan with garlic and extra virgin oil (EVO). The entire plant or the leaves and/or the young shoots of Borago officinalis, collected in winter-spring, are boiled and seasoned with oil, salt and pepper or combined to soups and to omelets. Another very common food use is that of Foeniculum vulgare. The buds, leaves, flowers and fruits (improperly called seeds) are the most commonly parts of the wild fennel that are used for cooking. The leaves are used fresh and chopped to flavor soups, salads and to prepare the traditional Sicilian dish "pasta con le sarde" (pasta with sardines). The seeds are mainly used as ingredient to flavor the sausages and the table olives. The wild fennel is also useful for the preparation of a decoction used as a digestive and diuretic.

The prickly pears are picked and eaten fresh but also used for the preparation of liqueurs and jams. Particular is the use as a dish of cladodes of *Opuntia ficus-indica* to serve (Sicilian dialect: "consare") salads. Local population to prepare a decoction with diuretic and refreshing properties uses the flowers of *O. ficus-indica*. The flesh of cladodes is applied on the wounds and on skin ulcer to promote healing.

The medicinal plants are mostly used to treat inflammatory disorders and for the local treatment of wounds, burns and skin scars. These uses are closely linked to the profession of respondents, mostly farmers and shepherds, who are more exposed to risks carrying out their activities outdoors and in every season of the year.

The leaves of *Dittrichia viscosa* with hemostatic and healing properties are applied directly to wounds. A decoction, to drink 2-3 times a day, is prepared with the leaves and roots of *Ceterach officinarum* Willd. to expel kidney stones.

The leaves and the flowers of Malva sylvestris are used

for the treatment of toothache (direct application) or as a decoction for the inflammations of the oropharyngeal cavity or against digestive and urinary disorders. The juice of leaves of *Urtica urens*, pounded in a mortar, was widely used for the treatment of hemorrhoids and acne; however, the entire plant can be used to pre-

Species for craftwork, albeit fewer in number, have been cited by many respondents, this is probably due to the great importance recognized to these plants from which the local population had to always get all the useful tools for work and home life.

pare a decoction useful for rheumatism.

The fibers obtained from the leaves of Agave americana have been in the past an excellent support for the construction of ropes, nets, baskets, hats and carpets. The fresh or dried leaves of Ampelodesmos mauritanicus were used to straw chairs, pack brooms (used to clean household floors and specially to remove the ash from the furnace before its first use, after being soaked in water), to achieve fastenings for the grape plants or other cultivated plants. With the art of weaving the leaves of A. mauritanicus were used along with the branches of Olea europaea subsp. europaea to make the famous "panari" (baskets). Instead, the culms, once dried, were mowed and cleared of sheathing leaves, cut to size and used to build domestic rolling shutters. For centuries, the leaves of *Chamaerops humilis* have provided the material to make bags, ropes, hats, fans and, most importantly, brooms, obtained by weaving the more mature leaves and from which the name in Sicilian dialect "scupazzo" (broom).

The interwoven stems of *Juncus inflexus* were used for the realization of the so-called "fascedde", i.e. flexible and resistant containers even at high temperatures used for the production of ricotta or other cheeses.

### DISCUSSION

In the investigated area, informants no longer remember most of the uses of plants, which is indicative of a loss of local ethnobotanical knowledge. Another aspect, which can affect a loss of data, is that a very limited number of women participated in the interviews. As reported in the in-depth analysis edited by the Directorate-general for internal policies of the European Union, Committee on Regional Development (Azevedo, 2015), Sicily has one of the highest unemployment rates in Italy affecting mainly women and young people. Traditionally, in the small villages of Sicily, men still went out to work and women took care of the home and of the day-to-day operations (Cornelisen, 2001). In some areas of the Sicilian hinterland, ordinary people consider as inappropriate the attendance of bars, social clubs or squares by women, in an archaic view of the female condition.

In comparison with other ethnobotanical studies carried out in Sicily and other Italian territories, some uses of the plants reported by the local population in the study area are peculiarities. For example, the latex secreted by Euphorbia dendroides, a toxic plant, directly applied on the skin, is so urticant that it can be used to burn lees and warts. Portulaca oleracea subsp. oleracea is a succulent plant whose edible, delicious leaves are crunchy and slightly mucilaginous, with a tangy lemony and peppery flavor. It is used in salad in many recipes. Local people, unlike Sardinians, prefer to use the fruits of Myrtus communis to flavor meatbased dishes rather than using leaves. Among the informants, references to the use of Asparagus albus have been more frequent than A. acutifolius. This is due to a wider and more frequent distribution of A. albus in Mediterranean maquis vegetation of the investigated areas and an easier identification of this plant due to the white color of the stems. The analysis of data shows that the level of traditional knowledge on use of plants in province of Palermo is poor, highlighting a considerably advanced state of cultural erosion.

that still are custodians of a tradition of use of plants as medicines, food and handicrafts. This heritage of knowledge, handed down from generation to generation, however, is at risk of extinction due to new migration flows by young people, especially in the regions of southern Italy, who being deprived of employment opportunities, look for work in other European countries. For this reason, the age group between 50 and 90 years constitutes in this survey the largest source of information on traditional uses of plants. However, the results of our investigation confirm the deep bond that rural communities of Sicily have with plants since ancient times.

### CONCLUSIONS

In recent years, there has been an increasing number of people, who rediscover or use for the first time the natural plant resources as a possible remedy to diseases and as a source of food. The recovery of ancient traditions becomes even easier because of the progressive urban abandonment and the rediscovery of the importance of agriculture and the value of plant genetic resources. In this social context, it is fundamental to refer to ethnobotanical uses by small communities

Table 1. Questionnaire for collection of data on plants, uses and method of preparation. Cr = craft; Fo = Food; Me = Medicinal; Ve = Veterinary; Ti = Dyeing; Le = Leaf, Fl = Flower; St = Stem; Se = Seed; Tu = Tuber; Ba = Bark; Ro = Root; Fr = Fruit; Ep = whole plant.

Plant Data Collection																
			Use				Plant part used						Method of preparation	Curiosity		
Cr	Fo	Me	Ve	Ti	Other	Le	Fl	St	Se	Tu	Ва	Ro	Fr	Wp		
	Cr	Cr Fo	Cr Fo Me				Use	Use	Use	Use Plan	Use Plant part	Use Plant part used	Use Plant part used	Use Plant part used	Use Plant part used	Use Plant part used Method of preparation

Table 2. List of taxa recorded in 5 rural communities of Sicily.

Plant part Modes of use used (craft)	1 1	Leaves Ropes, baskets, hats, rugs	Rush seat chair, Leaves brooms, laces for grape plants	1 1	1	1	Leaves Baskets		I	1		I
Modes of consumption	1 1	ł	I	1 1	Omelettes, Risotto	Omelettes, Risotto	i	Fodder	Omelettes, Soups, Boiled and then passed in a pan with extra virgin olive oil	Boiled and used as a vegetable or as a condiment in soups	Boiled, used as it is or sauté	Condiment, in brine, ingredient of caponata (sweet-and-sour Sicilian dish made of fried aubergines, capers, olives and celery), spaghetti with tuna sauce
Plant part used (food)	1 1	ł	I	1 1	Green shoots	Green shoots	ł	Aerial part	Aerial part	Aerial part	Aerial part	Flower buds
Preparation and administration	Cataplasm Infusion	Cataplasm	I	Infusion Decoction	Decoction	Decoction	i	Decoction	I	l	!	I
Ailments treated/ therapeutic effect	Haemostatic Burns	Rheumatism	I	Digestive Vermifuge	Diuretic	Diuretic	ł	Refreshing	!	!	!	I
Plant part used (medicine)	Leaves	Leaves	l	Aerial part	Green shoots	Green shoots	ł	Seed	l	1	1	I
Local name	Erba vavusa	Zabbara	Disa	Erva bianca	Sparaci	Sparaci	Purrazza	Biada	Giri	Vurrani	Cavulicieddi	Chiappara
Botanical name/, Family	Acantbus mollis L. (Acanthaceae)	Agave americana L. (Agavaceae)	Ampelodesmos mauritanicus (Poir.) T. Durand & Schinz (Poaceae)	Artemisia arborescens (Vaill.) L. (Asteraceae)	Asparagus acutifolius L. (Asparagaceae)	Asparagus albus L. (Asparagaceae)	Asphodelus ramosus L. subsp. ramosus var. ramosus (Asphodelaceae)	Avena fatua L. (Poaceae)	Beta vulgaris L. subsp. vulgaris (Chenopodiaceae)	Borago officinalis L. (Boraginaceae)	Brassica fruticolosa Cirillo (Brassicaceae)	Capparis spinosa L. subsp. spinosa var. spinosa (Capparidaceae)

Ceratonia siliqua L. (Cesalpinaceae)	Carrubba	-	1	!	Fruits	Fodder, starter for improve wine fermentation	1	1
Ceterach officinarum Willd. (Aspleniaceae)	Spaccapetri	Leaves, Roots	Kidney stone	Decoction	I	I	l	I
Chamaerops humilis L. (Arecaceae)	Scupazzu	1	I	I	1	I	Leaves	Broms, strings to hang up caciottas, Rush seat chair
Cichorium intybus L. var. intybus (Asteraceae)	Cicoria	1	!	1	Aerial part	Soups, salads	1	1
Citrus limon (L.) Burm. fil. (Rutaceae)	Limiuni	Lemon peel	Digestive	Infusion	Fruits	Lemon squash, fruit, juice, to season salads, to prepre the "limoncello", "granita". The lemon peel is also used as an ingredient in the preparation of jams and tarts.	I	l
Coridothymus capitatus (L.) Rchb. (Lamiaceae)	Timu	Leaves	Refreshing lotion	Decoction	Branches	To flavor meat and poultry	1	:
Crataegus azalorus L. var. azarolus (Rosaceae)	Azzaluaru	1	ł	I	Fruits	Previously used as fresh fruit, more rarely in recent times	I	ı
Cynana cardunculus L. subsp. cardunculus var. cardunculus (Asteraceae)	Carduna	I	I	I	Stem and leaves	Boiled, in salads, fried	1	I
Cynodon dactylon (L.) Pers. (Poaceae)	Ramigna	Roots	Diuretic, anti- inflammatory of urinary tract	Decoction	ł	I	I	1
Dittrichia viscosa (L.) Greuter (Asteraceae)	Brucara	Leaves	Haemostatic, cicatrize (also for animals)	Direct application on skin	I	I	1	1
Equisetum arvense L. (Equisetaceae)	Cura i cavaddu	Aerial part	Diuretic, anti- inflammatory	Decoction	1	1	1	1
Euphorbia dendroides L. (Euphorbiaceae)	Lattuni	Latex	Warts and lees treatment	Direct application on skin	I	1	l	I
Euphorbia rigida M. Bieb. (Euphorbiaceae)	Rizzitieddu	Leaves	Rheumatism	Cataplasm	1	I	1	1
Ferula communis L. (Apiaceae)	Ferla	!	1	1	l	i	Stems	To make the roof of the huts

I	1	1	"fuscelle" o "fascedde" (local name), i.e. perforated conical basket for fresh and hard-paste cheese process	٠ ١	l	l	Baskets "panara" (local name)	I	l	l
I	1	l	Stems	I	l	i	Branches	I	1	l
Leaves are used to flavor soups, table olives and salads, pasta with sardines. The seeds are mixed with the meat to flavor the sausages	1	1	I	To flavor various dishes, to prepare the liquor "allorino"	I	Fresh fruit	I	Fresh fruit, to prepare liqueur and jams, after removing the thorns, the cladodes are used as a serving dish for salads	Condiment for salads, pizza sauce, meat with tomato, eggplant prepared as "sfincione" (Sicilian pizza)	1
Shoots, Seed	1	ł	I	Leaves	l	Fruits	l	Fruits	Leaves, flowers	l
Decoction	Oil	Oil	I	Infusion	Decoction	l	l	Decoction	l	Infusion
Digestive, diuretic	Burns, wounds	Burns, wounds	ŀ	Digestive	Toothache, inflamed gums	1	1	Digestive, refreshing lotion	l	Sedative
Seeds	Flower	Flower	I	Leaves	Leaves, Flowers	l	1	Fruit, flowers	1	Flowers
Finucchieddu	Piricò	Piricò	Juncu	Addauro	Marva	Mirtu	Agghiastru	Ficurinia	Rienu	Paparina
Foeniculum vulgare Mill. subsp. vulgare (Apiaceae)	Hypericum perfoliatum L. (Clusiaceae)	Hypericum perforatum L. subsp. perforatum (Clusiaceae)	Juncus inflexus L. (Juncaceae)	Laurus nobilis L. (Lauraceae)	Malva sylvestris L. subsp. sylvestris (Malvaceae)	Myrtus communis L. (Myrtaceae)	Olea europaea L. var. sylvestris (Mill.) (Oleaceae)	Opuntia ficus-indica (L.) Mill. (Cactaceae)	Origanum heracleoticum L. (Lamiaceae)	Papaver rhoeas L.var. rhoeas (Papaveraceae)

l		Dye	l	1		1	1	l	1	I	1
I	1 1	Leaves, Stems	I	I	1 1	l	I	1	1	I	1
I	 Salads	1	Fresh fruits jams	I	Flavoring 	Salad, soup	Refreshing, the leaves are boiled, fried or used in salads	1	1	ŀ	!
l	 Leaves	1	Fruits	I	Leaves	Aerial part	Aerial part	i	I	I	:
Decoction	Decoction Direct application on skin	Infusion	Direct application on skin	The oil obtained from the infusion of the leaves is done to smell	Decoction Direct application	l	l	Decoction	Poultice	Decoction	Poultice
Diuretic, digestive, anti-inflammatory of urinary tract	Diuretic; depurative Care of pimples and bee stings	Febbrifuge	Treating of abscesses, Care of pimples and wounds	Vermicide, hemorrhoids	Febrifuge, digestive Toothache	I	I	Articolar pains	Treating of hemorrhoids	Refreshing lotion; digestive	Treating of hemorrhoids
Aerial part	Whole plant	Leaves	Leaves	Whole plant	Leaves	1	1	Whole plant	Leaves	Aerial part	Leaves
Erva ru viantu	Purciddana	Summaccu	Riviattu	Ruta	Sarvia	Cardedda	Pisciacani	Camedrio	\	Агансина	Scuparina
Parietaria judaica L. (Urticaceae)	Portulaca oleracea L. subsp oleracea (Portulacaceae)	Rbus coriaria L. (Anacardiaceae)	Rubus ulmifolius Schott (Rosaceae)	Ruta chalepensis L. (Rutaceae)	Salvia officinalis L. (Lamiaceae)	Sonchus oleraceus L. (Asteraceae)	Taraxacum officinale Weber ex Wiggers (Asteraceae)	Teucrium flavum L. (Lamiaceae)	17 to 1 to	Ornca arens L. (Orncaceae)	Verbascum sinuatum L. (Scrophulariaceae)

Table 3. Number of plants most frequently cited by informants per informant's age range.

Informant's age range	n° of informants	n° of plants cited
50-60	31	31
61-70	55	35
71-80	46	49
81-90	29	28
	161	143

Table 4. List of wild plants for food use (A), medicinal use (B) and, craft use (C) most frequently cited and currently used by informants, frequency (percentage of citations) and, Cultural Importance Index (CI).

Taxa	n° of citation (on 161 informants)	Frequency	CI
A. Food use			
Asparagus albus	139	86.33	0.86
Opuntia ficus-indica	136	84.47	0.84
Borago officinalis	135	83.85	0.84
Beta vulgaris subsp. vulgaris	134	83.22	0.83
Foeniculum vulgare subsp. vulgare	128	79.50	0.79
Origanum heracleoticum	123	76.39	0.76
Cichorium intybus var. intybus	122	75.77	0.76
Citrus limon	119	73.91	0.74
Laurus nobilis	116	72.04	0.72
Cynara cardunculus subsp. cardunculus var. cardunculus	109	67.70	0.68
Brassica fruticolosa	101	62.73	0.63
Salvia officinalis	98	60.86	0.61
B. Medicinal use			
Malva sylvestris	95	59.00	0.59
Ceterach officinarum	91	56.52	0.56
Opuntia ficus-indica	89	55.27	0.55
Dittrichia viscosa	86	53.41	0.53
Urtica urens	83	51.55	0.52
Laurus nobilis	79	49.06	0.49
Cynodon dactylon	77	47.82	0.48
Rubus ulmifolius	75	46.58	0.46
Acanthus mollis	64	39.75	0.40
C. Craft use			
Ampelodesmos mauritanicus	91	56.52	0.56
Juncus inflexus	86	53.41	0.53
Olea europaea var. sylvestris	79	49.06	0.49
Chamaerops humilis	77	47.82	0.48
Agave america	64	39.75	0.40

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