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Vinagre C
Agrupamento de Escolas n.º 3 de Évora, Departamento de Paisagem, Ambiente e Ordenamento, ECT-Universidade de Évora, Rua Romão Ramalho, Évora, Portugal

Vinagre S
Departamento de Matemática, CIMA, ECT–Universidade de Évora

Carrilho E
Departamento de Paisagem, Ambiente e Ordenamento, ECT–Universidade de Évora

García D
Departamento de Producción Forestal y Pastos, Centro de Investigación Finca La Orden, CICYTEX, 06187 Guadajira (Badajoz). Spain

Vázquez FM
Departamento de Producción Forestal y Pastos, Centro de Investigación Finca La Orden, CICYTEX, 06187 Guadajira (Badajoz). Spain

Pinto-Gomes C
Departamento de Paisagem, Ambiente e Ordenamento, ECT, ICAAM/ICT, ECT–Universidade de Évora

Correspondence
Vázquez FM
Departamento de Producción Forestal y Pastos, Centro de Investigación Finca La Orden, CICYTEX, 06187 Guadajira (Badajoz). Spain

Ethnobotanical study in the protected landscape "Serra de Montejunto" (Portugal)

Vinagre C, Vinagre S, Carrilho E, García D, Vázquez FM and Pinto-Gomes C

Abstract
Since ancient times, the human being has been using plants for their benefit, as food, condiments, drugs and flavors, accumulating knowledge that allowed him to add other applications, whose memory, in some cases, could reach present time. In order to investigate the surviving contents of this collective memory, this work reports an ethnobotanical survey that was carried out in 2014 in the Protected Landscape "Serra de Montejunto", distributed in the western part of the Iberian Peninsula, which comprises approximately 5000 ha. Working with 78 informants, we obtained data on 191 useful plants, belonging to 62 botanical families. Local uses were identified and grouped into the following categories: aromatic, food, ornamental, combustible, diversion, construction, fertilizer, tools and articles and other uses.

Keywords: Ethnobotany, plant uses, Portugal, rural area, "Serra de Montejunto", sustainable uses

1. Introduction
For a long time, plants have represented a very important role for humanity [21, 1, 5]. The study of useful European plants dates back to ancient Greek times [24].
There are many ethnobotanical studies that have been conducted all over the world; however, in Portugal, ethnobotanical scientific research started after 2000, with a project for the current Portuguese Institute for Nature Conservation and Forestry titled "Aromatic and/or medicinal plants in the National Network of Protected Areas" [6, 15]. The Protected Landscape of "Serra de Montejunto" was not the subject of the inner project; therefore, to date, there have been no studies done in this area.
This work was conducted in a Portuguese protected area, globally named "Serra de Montejunto", located in the western part of the Iberian Peninsula (Portugal); and in order to fulfill the following objectives [22]: to conduct ethnobotanical interviews to obtain information about the plants used in the region, their local Portuguese names, their popular uses, if it is actually used and parts of the plant used; to characterize the local population who still have this kind of information; and to analyze the information and contrast the results with previous works [7, 9, 17]. We also intended to elaborate on an ethnoflora catalog, including uses and applications, in order to characterize the knowledge about the plants. In this work, we focused only on the general uses of plants not considered the medicinal items, than our will studied in independent work.

2. Territory Studied and Methodology
2.1 Territory Studied
The "Serra de Montejunto" has been a protected regional landscape since 1999 (Decreto N.º 11/99, 22 July), is comprised of 4897.39 ha, and stretches over 15 km with a northeast (NE) - southwest (SW) orientation, reaching a maximum altitude approximately of 666 m. This massif is a large anticline that rises abruptly about 500 m above the "Rio Tejo" basin in a SW extension of the "Serra dos Candeeiros" [14].
In a biogeographic context, according to [11, 28], this territory is a part of the Dividing Portuguese Sector integrated into the inner Mediterranean Region. According to the Rivas-Martinez Worldwide Bioclimatic Classification [30] and following the Monteiro-Henriques maps [20], the studied area is situated in the Mediterranean bioclimate, with a thermo to meso Mediterranean thermotype and subhumid to humid ombrotype.

These characteristics allow the existence of a great diversity of vegetation than produce great benefices of populations tend to be strongly dependent on the landscape and natural environment in which they live and work [6].

2.2 Methodology

All information was obtained through ethnobotanical semi-structured interviews, developed as informal and oriented conversations, so that all interviewees reported on the same subjects. In order to identify the plants, field walks were conducted with informants, or they were presented with portfolios with photographs produced by the authors.

The informants were people that currently or previously lived in the protected area. They were selected from people who knew of many popular uses in the region, from several representative zones in the study area. It's important to note: most of the informants were indicated by other local people as having the most knowledge on this subject. Whenever possible, more than one interview session was carried out to complete the information already obtained.

Seventy-eight people were interviewed: 55 were women, representing approximately 70% of interviewees. The age of the informants varied between 19 and 94 years (mean age: 68 years, approximately): almost 50% were retired. In 50 informants, none were scientifically literate: most had not gone beyond primary school, and some never went to school at all. Regarding the others, only four obtained a higher education.

All interviewees' acquired knowledge about plant uses through oral transmissions, most often from their parents or other relatives, but they used more than one source such as books (22), television, radio or the Internet (20) and personal experience (45).

The information obtained in the interviews was about wild or cultivated plants, which were obtained by themselves or their family, and never was obtained via purchased plants. The data collected for each of the plants were analyzed and grouped into the following nine categories: Aromatic – plants used to flavor food and houses/ Food – plants eaten fresh or used in the preparation of products for household consumption/ Ornamental – plants used mainly in the decoration of houses, gardens and religious events/ Combustible – plants used for firewood to ignite and sustain a fire, namely cooking and heating/ Diversion – plants used for entertainment/ Construction – plants used in building structures and furniture/ Fertilizer – plants used in agricultural production/ Tools and articles – plants used in manufacturing handicrafts and agricultural and domestic tools/ Other – plants used in other contexts not covered in previous categories.

Plants were identified using the following literature: [13, 18, 19, 10, 29, 12]. To compare the existing Portuguese local names, we used [31, 16, 2]. The nomenclature for plant names was confirmed using the database of the International Plant Names Index (http://www.ipni.org) and the online database Plants List (http://www.theplantlist.org).

3. Results and discussion

Fieldwork obtained 191 *taxa* of ethnoflora used by people from the Protected Landscape of "Serra de Montejunto". Table 1 indicates the plants with uses cited by at least three independent informants, following the reliability criterion of Le Grand and Wondergem [4], ordained by botanical families (62) in alphabetical order. For five examples – *Cistus, Quercus, Juncus, Fumaria* and *Rosa* – it was only possible to cite the genus. The other cases identified two or three *taxa* with same use-reports. With this study, 562 local Portuguese names were collected and 13,645 use-reports were referred to, which resulted in 594 names because 32 were repeats, with the population giving the same name for different plants; for example, "pinheirinha", "cavalinha", "tojo", "hortelã", "malvas" or "orquídea".

Table 1: Plants with folk uses reported by at least three informants.

Botanical family, scientific name	Local portuguese names	FC[a]	RFC[b]	Part(s) used	Popular use	UR[c]	CI[d]
Aceraceae							
Acer monspessulanum L.	Zelha, ácer-de-montpellier, bordo-de-montpellier	3	0.04	Branches, trunk	Combustible – combustible	3	0.04
Adiantaceae							
Adiantum capillus-veneris L.	Avenca, avenca-das-fontes, capilária	41	0.53	Aerial part, whole plant	Ornamental – interior, gardens, bride branches, clothes	69	0.88
Amaryllidaceae							
Allium ampeloprasum var. *porrum* (L.) J. Gay	Alho-francês, alho-porro, porros-bravos	59	0.76	Stalk	Food – food	59	0.76
Allium cepa L.	Cebola	78	1.00	Bulb, onion skin	Aromatic – condiment Food – food, preserves, to cook prawns Other – disinfectant	214	2.74
Allium sativum L.	Alho, alho-comum	78	1.00	Bulb	Aromatic – condiment Food – food	169	2.17
Allium schoenoprasum L.	Cebolinho, cebolinha-miúda, cebolinha-galega	20	0.26	Leaves	Aromatic – condiment	20	0.26
Narcissus papyraceus Ker Gawl.	Narciso, mija-burro, narciso-do-barrocal	11	0.14	Bunches	Ornamental – interior, religious (church)	15	0.19
Anacardiaceae							
Pistacia lentiscus L.	Aroeira, lentisco-verdadeiro, daroeira	16	0.21	Branches, bunches, leaves, trunk, whole plant	Ornamental – interior, gardens, religious (church), cemetery Combustible – combustible Fertilizer – fertilizer Tools and articles – brooms Other – prayers	18	0.23
Apiaceae							
Apium graveolens L.	Aipo, aipo-hortense, rabaças, salsa-do-monte	9	0.12	Leaves, stalk	Food – food	9	0.12

Coriandrum sativum L.	Coentros, coentro, coriandro	72	0.92	Aerial part	Aromatic – condiment Food – food, decorative	80	1.03
Daucus carota subsp. *sativus* (Hoffm.) Schübl. & G. Martens	Cenoura	78	1.00	Leaves, root	Aromatic – condiment Food – food, jam	232	2.97
Ferula communis L.	Canafrecha, férula	18	0.23	Stem	Diversion – diversion Other – to sharpen knives, hiking	25	0.32
Foeniculum vulgare Mill.	Funcho, fiôlho	12	0.15	Aerial part, leaves, seeds	Aromatic – condiment Food – liqueur	13	0.17
Petroselinum crispum (Mill.) A.W. Hill	Salsa	78	1.00	Aerial part	Aromatic – condiment Food – decorative	107	1.37
Apocynaceae							
Vinca major L.	Vinca, pervinca, pervinca-maior, congossa-maior	14	0.18	Bunches, whole plant	Food – decorative Ornamental – interior, gardens Diversion – diversion Tools and articles – brooms	22	0.28
Aquifoliaceae							
Ilex aquifolium L.	Azevinho, pica-folha, visqueiro, xardo, zebro	14	0.18	Bunches, whole plant	Ornamental – interior, gardens, religious (church)	17	0.22
Araliaceae							
Hedera helix L.	Hera, hera-comum, hera-dos-montes, hera-trepadora	59	0.76	Bunches, leaves, whole plant	Ornamental – interior, gardens, parties, religious (processions) Diversion – diversion Other – hair, clothes (dark colors)	82	1.05
Hedera hibernica (G. Kirchn.) Bean	Hera, hera-comum, hera-dos-montes, hera-trepadora	59	0.76	Bunches, leaves, whole plant	Ornamental – interior, gardens, parties, religious (processions) Diversion – diversion Other – hair, clothes (dark colors)	82	1.05
Asparagaceae							
Agave americana L.	Piteira, piteira-de-boi, piteira-brava, pita	20	0.26	Leaves, whole plant	Ornamental – gardens Other – strings	20	0.26
Asparagus aphyllus L.	Espargo-bravo-maior, corruda-maior, espargueira	5	0.06	Bunches, stem, whole plant	Food – food Ornamental – interior, gardens, religious (church, processions)	7	0.09
Ruscus aculeatus L.	Gilbardeira, erva-dos-vasculhos, azevinho-menor, flor-do-natal	52	0.67	Bunches, fruit, whole plant	Ornamental – interior, gardens, religious (church) Diversion – diversion Tools and articles – to clean houses (walls and ceilings)	58	0.74
Aspleniaceae							
Asplenium onopteris L.	Avenca-negra, feto-negro, feto-real	48	0.62	Bunches, whole plant	Ornamental – interior, gardens, religious (church, processions), cemetery	56	0.72
Ceterach officinarum Willd.	Douradinha, doiradinha, erva-de-ouro	4	0.05	Bunches	Ornamental – interior Diversion – diversion	4	0.05
Asteraceae							
Arctium minus Bernh.	Bardana, bardana-ordinária, pegamasso-menor	4	0.05	Flower, root	Diversion – diversion	8	0.10
Artemisia dracunculus L.	Estragão, estragão-francês	6	0.08	Aerial part	Aromatic – condiment	6	0.08
Coleostephus myconis (L.) Rchb.f.	Olhos-de-boi, pampilho, pampilho-de-micão, malmequer	60	0.77	Bunches, flower, leaves	Food – food Ornamental – religious (Ascension Day) Diversion – diversion	62	0.79
Cynara cardunculus L.	Cardo-do-coalho, cardo, cardo-coalhador	23	0.29	Flower	Food – coagulant	23	0.29
Cynara humilis L.	Alcachofra, alcachofra-brava, alcachofra-de-são-joão	52	0.67	Flower	Diversion – diversion	52	0.67
Helianthus annuus L.	Girassol, helianto	7	0.09	Bunches, seeds, whole plant	Food – food Ornamental – interior, gardens	8	0.10
Lactuca sativa L.	Alface, alface-hortense	78	1.00	Leaves	Food – food, decorative	95	1.22
Leucanthemum sylvaticum (Brot.) Nyman	Margarida-branca, bem-me-quer, margarida-maior	21	0.27	Aerial part, bunches, leaves	Ornamental – religious (Ascension Day) Diversion – diversion	23	0.29
Matricaria recutita L.	Camomila, margaça, margacinha, matricária	36	0.46	Aerial part, flower	Other – hair, tasty tea	44	0.56
Scolymus hispanicus L.	Cardo, cangarinha, cardo-de-ouro, cardo-bordão	45	0.58	Leaves	Food – food	45	0.58
Sonchus oleraceus L.	Serralha, serralha-branca, serralha-macia	3	0.04	Leaves	Food – food	3	0.04
Boraginaceae							
Borago officinalis L.	Borragem, erva-da-borragem, borago, chupa-mel	13	0.17	Aerial part, flower, fruit, leaves	Food – food Diversion – diversion Other – tobacco	14	0.18

Brassicaceae							
Brassica napus L.	Nabo, nabiça, colza	76	0.97	Leaves, root	Food – food	84	1.08
Brassica oleracea L.	Couve	75	0.96	Leaves	Food – food Other – base for baking cornbread	81	1.04
Raphanus raphanistrum subsp. *microcarpus* (Lange) Thell.	Saramago, labrêsto, labrêsto-branco, rábano-silvestre	11	0.14	Leaves	Food – food	11	0.14
Raphanus sativus L.	Rabanete, rábano, rábão, rabiças	27	0.35	Root	Food – food, decorative Ornamental – interior	37	0.47
Rapistrum rugosum (L.) All.	Ineixas, aneixas, aneixa	24	0.31	Leaves	Food – food	24	0.31
Rorippa nasturtium-aquaticum (L.) Hayek	Agrião, agrião-da-água, agrião-das-fontes, agrião-dos-rios, mastruço-dos-rios, rabaça-dos-rios	70	0.90	Aerial part	Food – food, cakes	72	0.92
Buxaceae							
Buxus sempervirens L.	Buxo, buxo-comum, buxeira	4	0.05	Bunches, whole plant	Ornamental – interior, gardens	6	0.08
Cactaceae							
Opuntia maxima Mill.	Figueira-da-índia, cato-dos-figos-da-índia, figueira-da-barbária	11	0.14	Fruit, latex, leaves, whole plant	Food – food, jam Ornamental – gardens	13	0.17
Campanulaceae							
Campanula rapunculus L.	Rapôncio, responços, raponços, rapúncio, campainha-rabanete	16	0.21	Leaves	Food – food	16	0.21
Caprifoliaceae							
Lonicera etrusca Santi	Madressilva, chucha-moleiros, madressilva-caprina, chucha-mel, chupa-mel	45	0.58	Bunches, flower, whole plant	Aromatic – air freshener Ornamental – interior, gardens Diversion – to suck flowers	52	0.67
Lonicera implexa Aiton	Madressilva, chucha-moleiros, chucha-mel, chupa-mel	45	0.58	Bunches, flower, whole plant	Aromatic – air freshener Ornamental – interior, gardens Diversion – to suck flowers	52	0.67
Lonicera periclymenum L.	Madressilva, madressilva-das-boticas, madressilva-esverdeada	12	0.15	Bunches, whole plant	Aromatic – air freshener Ornamental – interior, gardens	14	0.18
Sambucus nigra L.	Sabugueiro, sabugo, sabugueiro-negro, sabugueiro-preto	19	0.24	Bunches, flower, leaves, trunk, whole plant	Ornamental – interior, gardens, religious (church) Diversion – diversion	21	0.27
Viburnum tinus L.	Folhado, folhado-comum, viburno, laurestim	4	0.05	Whole plant	Ornamental – gardens Other – shadow	7	0.09
Chenopodiaceae							
Beta vulgaris subsp. *cicla* (L.) Schübl. & G. Martens	Acelgas, acelga, celga	16	0.21	Leaves	Food – food	16	0.21
Beta vulgaris subsp. *vulgaris* L.	Beterraba, beterraba-hortícula, beterraba-forrageira	23	0.29	Leaves, root	Food – food, jam	23	0.29
Spinacia oleracea L.	Espinafre	63	0.81	Aerial part, leaves	Food – food	63	0.81
Cistaceae							
Cistus spp.	Sargaço, sanganho, estevas	5	0.06	Branches	Fertilizer – fertilizer	5	0.06
Crassulaceae							
Sedum album L.	Arroz-dos-telhados, arroz-das-paredes, pinhões-de-rato, cachos-de-rato	55	0.71	Leaves	Diversion – diversion	55	0.71
Sempervivum tectorum L.	Cato, saião-curto, sempre-vivas, sempre-vivas-dos-telhados	12	0.15	Whole plant	Ornamental – gardens	12	0.15
Umbilicus rupestris (Salisb.) Dandy	Umbigo-de-vénus, conchelos, caracóis-das-paredes, sobreirinho-dos-telhados, coucelos, conchilros	49	0.63	Leaves	Diversion – diversion	49	0.63
Cucurbitaceae							
Citrullus lanatus (Thunb.) Matsum. & Nakai	Melancia, melancieira	54	0.69	Fruit	Food – food, jam	59	0.76
Cucumis melo L.	Melão, meloeiro	59	0.76	Fruit	Food – food, jam	73	0.94
Cucumis sativus L.	Pepineiro, pepino	78	1.00	Fruit	Food – food Other – cosmetic	89	1.14
Cucurbita maxima Duchesne	Abóbora, aboboreira	78	1.00	Fruit, seeds	Food – food, jam, appetizer Ornamental –interior Diversion – diversion	250	3.21
Cucurbita pepo L.	Courgette, aboborinha	69	0.88	Fruit	Food – food	69	0.88
Cupressaceae							
Cupressus lusitanica Mill.	Cedro, cedro-de-goa,	39	0.50	Branches, bunches,	Ornamental – interior, gardens,	80	1.03

	cedro-do-buçaco			fruit, trunk, whole plant	religious (church), bottles decoration Combustible – combustible Construction – construction		
Cupressus sempervirens L.	Cipreste, cipreste-comum, cipreste-dos-cemitérios	7	0.09	Trunk, whole plant	Ornamental – gardens Combustible – combustible	7	0.09
Cyperaceae							
Cyperus longus L.	Junca, junça, junça-ordinária, junça-longa	63	0.81	Bunches, stem	Ornamental – interior, religious (processions) Tools and articles – baskets Other – strings, carpets, to seal barrels corks	73	0.94
Davalliaceae							
Davallia canariensis (L.) Sm.	Cabrinha, feto-dos-carvalhos	48	0.62	Bunches, whole plant	Ornamental – interior, gardens, religious (church, processions), cemetery	56	0.72
Dennstaedtiaceae							
Pteridium aquilinum (L.) Kuhn	Feto, feto-dos-montes, feto-bravo	68	0.87	Branches, bunches	Fertilizer – fertilizer Other – baskets of cherries and other fruits, to cover potatoes, shadow in the vegetable gardens, to scare flies	114	1.46
Equisetaceae							
Equisetum arvense L.	Pinheirinha, cavalinha, cavalinha-dos-campos, erva-cavalinha, rabo-de-cavalo	41	0.53	Aerial part	Diversion – diversion	65	0.83
Equisetum telmateia Ehrh.	Pinheirinha, cavalinha, rabo-de-cavalo	41	0.53	Aerial part	Diversion – diversion	65	0.83
Ericaceae							
Arbutus unedo L.	Medronheiro, ervedeiro, êrvodo	64	0.82	Aerial part, bunches, fruit, trunk, whole plant	Food – food, jam, liqueur Ornamental – interior, gardens Combustible – combustible	114	1.46
Calluna vulgaris (L.) Hull.	Torga, urze, queiroga	67	0.86	Branches, bunches, leaves, trunk, whole plant	Ornamental – interior, gardens Combustible – combustible Diversion – diversion Fertilizer – fertilizer Tools and articles – brooms, forks and needles Other – to shuck corn	85	1.09
Erica scoparia L.	Urze-das-vassouras, erica	26	0.33	Branches, trunk	Fertilizer – fertilizer Tools and articles – brooms Other – to shuck corn	29	0.37
Euphorbiaceae							
Euphorbia characias L.	Leite-latrigueira, malateira-maior, trovisco-macho	24	0.31	Aerial part, latex	Tools and articles – brooms	24	0.31
Fabaceae							
Acacia dealbata Link	Acácia, mimosa, acácia-dealbata	36	0.46	Bunches, trunk, whole plant	Ornamental – interior, gardens, parties, religious (church) Combustible – combustible Construction – construction Tools and articles – tool handles	48	0.62
Acacia longifolia (Andrews) Willd.	Acácia, acácia-de-folhas-longas	36	0.46	Bunches, trunk, whole plant	Ornamental – interior, gardens, parties, religious (church) Combustible – combustible Construction – construction Tools and articles – tool handles	48	0.62
Cytisus grandiflorus (Brot.) DC.	Giesta, giesta-das-sebes, giesteira-das-sebes	68	0.87	Aerial part, branches, bunches, flower	Ornamental – interior, religious (processions) Combustible – combustible Fertilizer – fertilizer Tools and articles – brooms Other – strings, to kill flies	85	1.09
Genista triacanthos Brot.	Tojo-molar, tojo-gatinho, ranha-lobo, tojo-gatanho-menor	43	0.55	Branches	Combustible – combustible Fertilizer – fertilizer Other – to scorch pigs	81	1.04
Lathyrus sativus L.	Chícharo, chícharo-comum, chícharão, arrelique	53	0.68	Seeds	Food – food	53	0.68
Lathyrus spp.	Cizirão	48	0.62	Whole plant	Fertilizer – fertilizer	48	0.62
Lupinus albus L.	Tremoceiro, tremoceiro-branco, tremoço, tremoço-branco	74	0.95	Seeds, whole plant	Medicinal – circulatory Food – food, appetizer Fertilizer – fertilizer	84	1.08
Lupinus luteus L.	Tremoceiro-amarelo, tremocilha, tremocilha-amarela, tremoço-amarelo, tremoço-ratinho	31	0.40	Whole plant	Fertilizer – fertilizer	31	0.40
Phaseolus vulgaris L.	Feijoeiro, feijoeiro-vulgar, feijão	78	1.00	Fruit, pericarp, seeds	Food – food	81	1.04

Pterospartum tridentatum (L.) Willk.	Carqueja, carqueija, carqueijeira	44	0.56	Aerial part, branches, flower, trunk	Aromatic – condiment Combustible – combustible Other – to scorch pigs, tasty tea	73	0.94
Trifolium angustifolium L.	Trevo-de-folhas-estreitas, rabo-de-gato, revo-massaroco, vasculho	5	0.06	Bunches	Ornamental – interior Tools and articles – to clean houses (walls and ceilings)	7	0.09
Ulex airensis Esp.Santo, Cubas, Lousã, C.Pardo & J.C.Costa	Tojo	60	0.77	Branches, flower, whole plant	Combustible – combustible Fertilizer – fertilizer Other – to scorch pigs, contemplation, to scare away animals, carpets	121	1.55
Ulex jussiaei Webb	Tojo, tojo-durázio	60	0.77	plant	Combustible – combustible Fertilizer – fertilizer Other – to scorch pigs, contemplation, to scare away animals, carpets	121	1.55
Ulex minor Roth	Tojo, tojo-molar, tojo-branco, tojo-gatanho-menor	60	0.77	Branches, flower, whole plant	Combustible – combustible Fertilizer – fertilizer Other – to scorch pigs, contemplation, to scare away animals, carpets	121	1.55
Vicia faba L.	Faveira, fava	78	1.00	Flower, fruit, seed coat, seeds	Food – food, appetizer	95	1.22
Fagaceae							
Castanea sativa Mill.	Castanheiro, castanheiro-comum, castanho	76	0.97	Fruit, leaves, trunk, whole plant	Food – food, appetizer Combustible – combustible Construction – construction Tools and articles – tool handles Other – shadow	149	1.91
Quercus coccifera L.	Carrasco, carrasqueiro	64	0.82	Branches, leaves, trunk, whole plant	Ornamental – gardens Combustible – combustible Diversion – diversion Fertilizer – fertilizer Tools and articles – tool handles Other – supports for the vegetable gardens and gardens, to shuck corn	105	1.35
Quercus rotundifolia Lam.	Azinheira, azinheira-da-bolota-doce, azinho	30	0.38	Fruit, trunk, whole plant	Ornamental – interior, gardens Combustible – combustible	31	0.40
Quercus spp.	Carvalhos	46	0.59	Branches, bunches, fruit, trunk, whole plant	Ornamental – interior, gardens Combustible – combustible Diversion – diversion	47	0.60
Quercus suber L.	Sobreiro, sobro, chaparro	49	0.63	Bark, trunk, whole plant	Combustible – combustible Tools and articles – baskets, corks, lids and bungs, buoys, gutters for winepress Other – beehives	72	0.92
Geraniaceae							
Erodium cicutarium (L.) L'Hér.	Bico-de-cegonha, erva-agulha, repimpim	12	0.15	Flower, fruit	Diversion – diversion	12	0.15
Geranium purpureum Vill.	Erva-de-são-roberto, erva-roberta	46	0.59	Aerial part	Other – tasty tea	61	0.78
Hypericaceae							
Hypericum perforatum L.	Hipericão, pelicão, plicão, milfurada, erva-de-são-joão, hipiricão-do-gerês, piricão	58	0.74	Aerial part, flower, leaves, whole plant	Ornamental – gardens	77	0.99
Iridaceae							
Gladiolus illyricus W.D.J. Koch	Gladíolos, espadana-dos-montes, espadana-dos-montes-das-folhas-largas	13	0.17	Bunches	Ornamental – interior, religious (church, processions)	15	0.19
Iris albicans Lange	Lírio, lírio-branco	36	0.46	Bunches, flower	Ornamental – interior, religious (church, processions)	53	0.68
Iris foetidissima L.	Lírio, lírio-fétido, iris-fétida	34	0.44	Bunches, flower	Ornamental – interior, religious (church, processions)	51	0.65
Iris xiphium Desf. var. *lusitanica* (Ker Gawl.) Franco	Lírio, lírio-amarelo-dos-montes, maios-amarelos, maios	36	0.46	Bunches, flower	Ornamental – interior, religious (church, processions)	53	0.68
Iris xiphium L. var. *xiphium*	Lírio, maios-roxos	37	0.47	Bunches, flower	Ornamental – interior, religious (church, processions)	54	0.69
Juglandaceae							
Juglans regia L.	Nogueira, nogueira-comum, nogueira-europeia, noz	78	1.00	Fruit, leaves, nutshell, trunk	Food – food, jam, appetizer, decorative Combustible – combustible Diversion – diversion	182	2.33

					Other – hair, clothes (dark colors), disinfectant (with rue)		
Juncaceae							
Juncus spp.	Junco	63	0.81	Bunches, stem	Ornamental – interior, religious (processions) Tools and articles – baskets Other – strings, carpets, to seal barrels corks	73	0.94
Lamiaceae							
Calamintha nepeta (L.) Savi	Erva-azeitoneira, erva-das-azeitonas, nêveda	41	0.53	Aerial part	Aromatic – condiment	41	0.53
Lavandula angustifolia Mill.	Alfazema, lavanda, lavândula	47	0.60	Bunches, flower, whole plant	Aromatic – air freshener Ornamental – interior, gardens	55	0.71
Lavandula luisieri (Rozeira) Rivas Mart.	Rosmaninho, rasmono	33	0.42	Bunches, flower, whole plant	Aromatic – air freshener Ornamental – interior, gardens, religious (church, Ascension Day)	45	0.58
Melissa officinalis L.	Erva-cidreira, melissa, limonete, chá-de-França, citronela	72	0.92	Aerial part, leaves	Other – tasty tea	106	1.36
Mentha piperita L.	Hortelã-pimenta, hortelã-apimentada, hortelã	38	0.49	Aerial part, leaves	Aromatic – condiment Other – tasty tea	54	0.69
Mentha pulegium L.	Poejo, poêjo, poejos, hortelã-pimenta-mansa	15	0.19	Aerial part, leaves	Aromatic – condiment Food – liqueur	22	0.28
Mentha spicata L.	Hortelã, hortelã-comum, hortelã-verde-dos-açores	74	0.95	Aerial part, leaves	Aromatic – condiment Food – decorative Other – tasty tea	113	1.45
Ocimum basilicum L.	Manjericão, manjericão-grande, manjerico-de-folha-grande	28	0.36	Aerial part, leaves	Aromatic – condiment Food – decorative	29	0.37
Origanum majorana L.	Manjerona, manjarona	5	0.06	Aerial part	Aromatic – condiment	5	0.06
Origanum virens Hoffmanns. & Link	Orégão, orégão-comum, oregãos, orégos, ourégão	73	0.94	Aerial part	Aromatic – condiment	78	1.00
Rosmarinus officinalis L.	Alecrim, alecrim-da-terra, alecrinzeiro	75	0.96	Aerial part, branches, bunches, flower, trunk, whole plant	Aromatic – condiment, air freshener Food – decorative Ornamental – interior, gardens, parties, religious (church, processions, Ascension Day) Combustible – combustible Diversion – diversion Other – hair, tasty tea, to burn in thunderstorms	175	2.24
Salvia officinalis L.	Sálvia, salva, salva-comum, salva-das-boticas	3	0.04	Leaves	Aromatic – condiment	3	0.04
Satureja hortensis L.	Segurelha, segurelha-anual	71	0.91	Aerial part	Aromatic – condiment Food – decorative	72	0.92
Thymus sylvestris Hoffmans. & Link	Tomilho, sal-da-terra, serpão-do-monte	26	0.33	Aerial part	Aromatic – condiment Food – liqueur	33	0.42
Lauraceae							
Laurus nobilis L.	Loureiro, loureiro-comum, sempreverde, louro	78	1.00	Branches, leaves, trunk	Aromatic – condiment, insecticide Combustible – combustible Other – to cover potatoes	87	1.12
Lythraceae							
Punica granatum L.	Romãzeira, romeira	40	0.51	Fruit	Food – food, liqueur	41	0.53
Moraceae							
Ficus carica L.	Figueira, figueira-comum, bebereira	78	1.00	Branches, fruit, latex, leaves, trunk, whole plant	Food – food, jam, liqueur, appetizer Combustible – combustible Diversion – diversion Tools and articles – brooms Other – shadow	168	2.15
Myoporaceae							
Myoporum laetum G.Forst.	Miósporos, mióporo	57	0.73	Branches, bunches, whole plant	Ornamental – interior, gardens, religious (processions) Tools and articles – brooms Other – shadow	76	.97
Myrtaceae							
Eucalyptus globulus Labill.	Eucalipto, eucalipto-comum	77	0.99	Branches, flower, fruit, leaves, trunk, young shoots	Aromatic – air freshener, insecticide Combustible – combustible Construction – construction Tools and articles – tool handles Other – to cover potatoes, disinfectant, wooden prop in middle of clothesline	266	3.41
Myrtus communis L.	Murta, murteira, murtinho, mirto	66	0.85	Branches, bunches, fruit, leaves, whole plant	Aromatic – air freshener Food – liqueur Ornamental – interior, gardens, parties, religious (processions)	92	1.18

					Fertilizer – fertilizer Other – carpets		
Oleaceae							
Fraxinus angustifolia Vahl	Freixo, freixo-comum, freixo-de-folhas-estreitas	21	0.27	Leaves, trunk	Combustible – combustible Tools and articles – tool handles	36	0.46
Jasminum fruticans L.	Jasmim, jasmim-do-monte, jasmineiro-do-monte, giestó	6	0.08	Aerial part, whole part	Ornamental – gardens Other – tasty tea	7	0.09
Olea europaea L. var. *europaea*	Oliveira	77	0.99	Branches, flower, fruit, leaves, olive oil, trunk, whole plant	Aromatic – condiment Food – food, decorative Ornamental – interior, gardens, religious (Ascension Day) Combustible – combustible Other – shadow, olive oil lamps	322	4.13
Olea europaea L. var. *sylvestris* (Mill.) Rouy ex Hegi	Zambujeiro, zambujo, oliveira-brava	32	0.41	Fruit, olive oil, trunk, whole plant	Aromatic – condiment Combustible – combustible Tools and articles – tool handles Other – grafts	42	0.54
Orchidaceae							
Barlia robertiana (Loisel.) Greuter	Orquídea, salepeira-grande	5	0.06	Bunches, flower	Ornamental – interior, religious (church) Diversion – diversion	7	0.09
Ophrys fusca Link	Moscardo-fusco, moscardo-maior, orquídea	3	0.04	Bunches, flower	Diversion – diversion	3	0.04
Ophrys lutea Cav.	Erva-vespa, moscardo, orquídea	4	0.05	Bunches, flower	Diversion – diversion	4	0.05
Ophrys scolopax Cav.	Flor-dos-passarinhos, orquídea	5	0.06	Bunches, flower	Diversion – diversion	5	0.06
Ophrys tenthredinifera Willd.	Orquídea	5	0.06	Bunches, flower	Ornamental – interior Diversion – diversion	6	0.08
Oxalidaceae							
Oxalis pes-caprae L.	Erva-praga, erva-pata, erva-azeda-amarela, erva-canária, trevo-azedo	55	0.71	Bunches, root, stem	Food – food Ornamental – interior Diversion – diversion	63	0.81
Paeoniaceae							
Paeonia broteri Boiss. & Reut.	Rosa-albardeira, rosa-de-lobo, erva-de-santa-clara, erva-casta	41	0.53	Bunches, flower, whole plant	Ornamental – interior, gardens, religious (processions) Diversion – diversion Other – contemplation	47	0.60
Papaveraceae							
Fumaria spp.	Cãezinhos, catarinas, fumária	38	0.49	Aerial part	Diversion – diversion	39	0.50
Papaver rhoeas L.	Papoila, papoila-das-searas, papoila-vermelha, papoila-vulgar, papoila-ordinária	73	0.94	Bunches, flower	Ornamental – interior, religious (Ascension Day) Diversion – diversion	98	1.26
Passifloraceae							
Passiflora caerulea L.	Flor-da-paixão, passiflora, martírios, maracujá-azul, cruz-de-cristo	8	0.10	Whole plant	Ornamental – gardens	8	0.10
Pinaceae							
Pinus pinaster Aiton	Pinheiro-bravo, pinheiro-marítimo	63	0.81	Branches, fruit, leaves, resin, trunk, whole plant	Ornamental – interior Combustible – combustible Diversion – diversion Construction – construction Other – glues, shadow	137	1.76
Pinus pinea L.	Pinheiro-manso	77	0.99	Branches, fruit, leaves, resin, seeds, trunk, whole plant, young shoots	Food – food, appetizer Ornamental – interior, gardens Combustible – combustible Diversion – diversion Construction – construction Tools and articles – musical instruments Other – glues, shadow, to bleach clothes (on the leaves)	315	4.04
Poaceae							
Arundo donax L.	Canas, cana, canavieira, caneira	77	0.99	Root, spark	Ornamental – interior, gardens Combustible – combustible Diversion – diversion Construction – construction Tools and articles – musical instruments Other – supports for the vegetable gardens and gardens, to move the bread in the oven, to kill snakes, wooden prop in middle of clothesline, to pick fruit	140	1.79

Avena barbata Pott ex Link	Balanco, balanco-bravo, aveia-barbada	54	0.69	Flower	Diversion – diversion	54	0.69
Briza maxima L.	Bole-bole-maior, chocalheira-maior, campainhas-do-diabo	14	0.18	Bunches, flower	Ornamental – interior, religious (Ascension Day) Diversion – diversion	14	0.18
Cymbopogon citratus (DC.) Stapf	Chá-príncipe, erva-príncipe, erva-limão	39	0.50	Aerial part, leaves	Other – tasty tea	57	0.73
Hordeum murinum subsp. *leporinum* (Link) Arcang.	Cevada-das-lebres, cevada-dos-ratos, falsa-cevada	7	0.09	Bunches, fruit	Ornamental – interior, religious (Ascension Day) Diversion – diversion	9	0.12
Hordeum vulgare L.	Cevada-santa, cevada	7	0.09	Flour, seeds, stem	Food – food Other – mattresses and straw mattresses	9	0.12
Secale cereale L.	Centeio	31	0.40	Flour, seeds, stem	Food – food Other – mattresses and straw mattresses, saddles, to protect other cereals	43	0.55
Triticum aestivum L.	Trigo, trigo-mole	76	0.97	Bran, bunches, flour, seeds	Food – food Ornamental – religious (Ascension Day) Other – to see the bread baking (bran)	195	2.50
Zea mays L.	Milho, milho-grosso	75	0.96	Corn kernel, ear, flour, fruit, husk, silk	Food – food, appetizer Ornamental – interior Combustible – combustible Diversion – diversion Other – mattresses and straw mattresses, tobacco	276	3.54
Polygonaceae							
Rumex conglomeratus Murray	Labaça-ordinária, labaça, alabaça, regalo-da-horta	9	0.12	Flower, leaves, root, seeds	Food – food	9	0.12
Polypodiaceae							
Polypodium cambricum L.	Polipódio, fentelho, sardinhas, feto-das-pedras, feto-doce	40	0.51	Bunches	Ornamental – interior Diversion – diversion	44	0.56
Polypodium interjectum Shivas	Polipódio, fentelho, sardinhas, feto-doce	40	0.51	Bunches	Ornamental – interior Diversion – diversion	44	0.56
Portulacaceae							
Portulaca oleracea L.	Beldroegas, beldroega	10	0.13	Aerial part	Food – food	10	0.13
Rosaceae							
Crataegus monogyna Jacq.	Pilriteiro, espinheiro, pirliteiro	14	0.18	Branches, flower, fruit, leaves, trunk, whole plant	Food – food Ornamental – interior, gardens, religious (church), bride branches Combustible – combustible	21	0.27
Cydonia oblonga Mill.	Marmeleiro, gamboeiro	78	1.00	Epicarp, flower, fruit, leaves, seeds, trunk, whole plant	Food – food, jam, liqueur Combustible – combustible Other – grafts, sticks, to explore water rods	181	2.32
Eriobotrya japonica (Thunb.) Lindl.	Nespereira, nespereira-do-japão, nêsperas	78	1.00	Branches, fruit, leaves, trunk, seeds, whole plant	Medicinal – circulatory Food – food, jam, liqueur Ornamental – interior, parties, religious (church, processions) Combustible – combustible Other – shadow	143	1.83
Fragaria vesca L.	Morangueiro, morango, morangueiro-bravo, morangueira-vulgar, fragária, erva-dos-morangos	70	0.90	Fruit, leaves	Food – food, jam, liqueur, decorative	112	1.44
Malus domestica Borkh.	Macieira, maceira, maçãzeira	78	1.00	Branches, fruit, trunk	Food – food, jam, liqueur Combustible – combustible Diversion – diversion Other – to mature other fruits	180	2.31
Prunus avium (L.) L.	Cerejeira, cerdeira, cerdeiro, cereja	78	1.00	Fruit, fruit peduncles, resin, seeds, trunk, whole plant	Food – food, jam, liqueur Combustible – combustible Diversion – diversion Tools and articles – tool handles Other – glues	227	2.91
Prunus cerasus L.	Ginjeira, ginjeiro, ginja	77	0.99	Fruit, fruit peduncles, trunk	Food – food, jam, liqueur Combustible – combustible	223	2.86
Prunus domestica L.	Ameixeira, ameixieira, ameixoeira	78	1.00	Fruit, trunk	Food – food, jam, liqueur, appetizer Combustible – combustible	168	2.15
Prunus persica (L.) Batsch	Pessegueiro, pêssego	78	1.00	Fruit, trunk	Food – food, jam, liqueur, preserves Combustible – combustible	157	2.01
Prunus spinosa L. subsp.	Abrunheiro, abrunheiro-	47	0.60	Branches, fruit,	Food – food, jam, liqueur	60	0.77

insititioides (Fic. & Coutinho) Franco	bravo, abrunho			trunk, whole plant	Ornamental – gardens Combustible – combustible Other – grafts		
Pyrus communis L.	Pereira, pereira-mansa, pereira-comum	78	1.00	Fruit, leaves, trunk	Food – food, jam, liqueur, preserves Combustible – combustible Diversion – diversion	176	2.26
Rosa spp.	Roseiras, roseira, rosas	75	0.96	Bunches, flower, petals, whole plant	Ornamental – interior, gardens, bride branches Other – cosmetic, contemplation, to wash the face	169	2.17
Rubus idaeus L.	Framboeseiro, framboeseira, framboesa	17	0.22	Fruit	Food – food, jam, liqueur	31	0.40
Rubus ulmifolius Schott	Silva, silvas, amoras-silvestres	75	0.96	Fruit, leaves	Food – food, jam, liqueur	133	1.71
Rutaceae							
Citrus limon (L.) Osbeck	Limoeiro, limão	78	1.00	Fruit, juice, leaves, lemon skin, trunk	Aromatic – condiment Food – food, jam, liqueur, drinks, coagulant, decorative Combustible – combustible Other – tasty tea	312	4.00
Citrus sinensis (L.) Osbeck	Laranjeira, laranjeira-doce, laranja-doce, laranja	78	1.00	Branches, flower, fruit, juice, leaves, mesocarp, orange skin, trunk	Aromatic – condiment Food – food, jam, liqueur, drinks, decorative Ornamental – interior, bride branches Combustible – combustible Other – tasty tea, solvent (orange skin)	319	4.09
Ruta chalepensis L.	Arruda, arruda-dos-calcários, erva-das-bruxas, erva-da-graça	21	0.27	Branches, fruit, whole plant	Aromatic – air freshener, insecticide, to scare animals Ornamental – gardens Other – evil eye, to cover potatoes, disinfectant (with leaves of walnut tree), witches, to burn to give luck	28	0.36
Salicaceae							
Populus nigra L.	Choupo, choupo-negro, álamo, álamo-negro	46	0.59	Trunk, whole plant	Combustible – combustible Construction – construction Other – shadow	59	0.76
Salix alba L.	Salgueiro-branco, vimeiro-branco	6	0.08	Flower, trunk	Combustible – combustible Diversion – diversion Other – strings Tools and articles – baskets	6	0.08
Salix atrocinerea Brot.	Salgueiro, borrazeira-preta, vimeiro-preto	6	0.08	Flower, trunk	Combustible – combustible Diversion – diversion Other – strings Tools and articles – baskets	6	0.08
Salix babylonica L.	Salgueiro-chorão, vimeiro-chorão, chorão	5	0.06	Whole plant	Ornamental – gardens Other – shadow	9	0.12
Salix viminalis L.	Vimeiro-comum, salgueiro-comum, vime, vimes	64	0.82	Stem, whole plant	Ornamental – interior, gardens Tools and articles – baskets and saddlebags, chairs, little bungs for barrels Other – strings, to shuck corn	116	1.49
Scrophulariaceae							
Antirrhinum linkianum Boiss. & Reut.	Bocas-de-lobo, bocas-de-lobo-das-paredes, erva-de-zorra	15	0.19	Bunches, flower	Ornamental – interior, religious (church) Diversion – diversion	21	0.27
Digitalis purpurea L.	Campainhas, dedaleira, flor-do-cuco, raposas, meias-do-cuco, erva-dedal, digital, abeloura	27	0.35	Branches, bunches, flower, whole plant	Ornamental – interior, religious (processions) Diversion – diversion Tools and articles – brooms Other – contemplation	30	0.38
Solanaceae							
Capsicum annuum L.	Pimento-comum, pimento, pimenteiro	67	0.86	Fruit	Aromatic – condiment Food – food	90	1.15
Capsicum frutescens L.	Piripiri, malagueta, pimenteiro-de-caiena	77	0.99	Fruit	Aromatic – condiment	81	1.04
Lycopersicon esculentum Mill.	Tomateiro, tomate	78	1.00	Fruit	Aromatic – condiment Food – food, jam, decorative	244	3.13
Physalis peruviana L.	Fisális, alquequenge-amarelo, tomatinho-de-capuz	33	0.42	Fruit, whole plant	Food – food, jam, liqueur, decorative Ornamental – interior, gardens	73	0.94
Solanum melongena L.	Beringela	14	0.18	Fruit	Food – food	18	0.23
Solanum tuberosum L.	Batateira, semilheira, batata	78	1.00	Tuber	Food – food Diversion – diversion Other – cosmetic	106	1.36

Thymelaeaceae							
Daphne gnidium L.	Trovisco, trovisco-fêmea, trovisqueiro	29	0.37	Bark, branches	Tools and articles – brooms Other – strings	35	0.45
Tiliaceae							
Tilia cordata Mill.	Tília, tília-de-folhas-pequenas	66	0.85	Aerial part, flower, leaves	Other – tasty tea	73	0.94
Tropaeolaceae							
Tropaeolum majus L.	Chagas, capuchinhas, mastruço-do-perú	5	0.06	Bunches, flower	Diversion – diversion	5	0.06
Ulmaceae							
Ulmus minor Mill.	Ulmeiro, ulmeiro-de-folhas-lisas, ulmo, olmo, negrilho, mosqueiro, lamegueiro	3	0.04	Trunk	Combustible – combustible Construction – construction	4	0.05
Urticaceae							
Parietaria judaica L.	Alfavaca-de-cobra, alfavaca, parietária, erva-das-paredes, erva-dos-muros	35	0.45	Aerial part, leaves	Other – to wash bottles	64	0.82
Urtica membranacea Poir. ex Savigny	Urtiga-de-cauda, urtigas, urtiga	16	0.21	Aerial part, leaves, whole plant	Food – food Diversion – diversion Fertilizer – fertilizer	32	0.41
Verbenaceae							
Aloysia citrodora Paláu	Lúcia-lima, bela-luísa, doce-lima, limonete	72	0.92	Aerial part, leaves	Other – tasty tea	90	1.15
Vitaceae							
Vitis vinifera L.	Videira, videira-europeia, vinha, parreira, cepa	76	0.97	Branches, bunches, fruit, leaves, trunk, vinegar, wine	Aromatic – condiment Food – food, jam, liqueur, appetizer, drinks Ornamental – religious (Ascension Day) Combustible – combustible Other – clothes (vinegar dark colors), to line baskets	299	3.83
Xanthorrhoeaceae							
Aloe arborescens Mill.	Aloé, aloés, foguetes-de-natal	11	0.14	Whole plant	Ornamental – gardens	11	0.14
Aloe vera (L.) Burm.f.	Aloé-vera, aloé, aloé-dos-barbados, babosa	45	0.58	Leaves, sap, whole plant	Ornamental – gardens	68	0.87

[a] The number of informants that referred the *taxa*.
[b] RFC=FC/N, where N is the total number of informants.
[c] Use-reports of the *taxa*.
[d] CI=UR/N.

Next, we present the botanical analyses from Table 1

- The botanical families with the most *taxa* were: *Fabaceae* (15), *Lamiaceae* (14), *Rosaceae* (14), *Asteraceae* (11), *Poaceae* (9), *Solanaceae* (6), *Brassicaceae* (6), *Apiaceae* (6) and *Cucurbitaceae* (5). This data agrees with other ethnobotanical studies carried out with this same method in Portugal [7, 9, 27] and Spain [26]. This can be explained by the representativeness of these families in the Mediterranean flora because they include some common plants, and due to the properties being used in pharmacology, food additives and the traditional consumption of fruits and seeds;
- The botanical families with the most frequent use-reports were: *Rosaceae* (1,981), *Fabaceae* (1,097), *Lamiaceae* (831), *Poaceae* (797), *Rutaceae* (659), *Solanaceae* (612), *Cucurbitaceae* (540), *Amaryllidaceae* (477), *Apiaceae* (466) and *Pinaceae* (452);
- The plant parts used were: aerial parts, bark, branches, bunches, bulb, corn kernel, ear, epicarp, husk, flowers, fruit peduncles, fruits, juice, latex, leaves, lemon skin, mesocarp, olive oil, onion skin, orange skin, pericarp, petals, resin, root, sap, seed coat, seeds, silk, spark, stalk, stem, tuber, trunk, vinegar, wine, whole plant and young shoots;
- Twenty-eight *taxa* were only used in the past. All other plants are still used today;
- The plants were grouped into nine categories (see Table 2), with 81 in the ornamental category, 80 in the food category, 54 in the diversion category, 48 in the combustible category, 37 in the aromatic category, 28 in the tools and articles category, 16 in the fertilizer category, ten in the construction category and 69 in the other category (plants in contexts not covered in previous categories). It is important to note that most plants are included in more than one category;
- The number of subcategories varied between one, in combustible, fertilizer and construction categories, and 48, in other category, in a total of 100 subcategories. Several *taxa* appear more than one time in a category. The Table 2 shows the number of *taxa* for each category and subcategories;

For categories, Table 1 shows the following

- Ornamental category: the interviewees reported using 81 plants mainly in the decoration of houses, gardens and religious events. Some plants required little care in backyards or in indoor pots. At religious events, they were used in churches, in processions and on Ascension Day. There were 13 *taxa* (from nine different families) cited only in this category and five botanical families were reported only for this purpose: *Aquifoliaceae, Buxaceae, Davalliaceae, Iridaceae* and *Passifloraceae*;
- Food category: this is a prominent category of plant use, with 80 *taxa* used directly (e.g., food, appetizer,

decorative) or in the preparation of products for household consumption (e.g., coagulant, jam, jelly, liqueur). Of all the plants reported in this category, 18, which belong to 11 botanical families, were used exclusively for food, and four (*Campanulaceae, Chenopodiaceae, Lythraceae* and *Portulacaceae*) were only in this category;

- Diversion category: 54 *taxa* were reported. There were nine *taxa*, belong to six botanical families, cited only in this category, and one of these botanical families (*Tropaeolaceae*) was reported only for this purpose. Note that, taking into account nature entertainment today, this is the category with the most *taxa* that are not currently used;
- Combustible category: 48 *taxa* were reported for firewood to ignite and sustain a fire, namely cooking and heating; however, these plants are used less frequently in cooking. Only one species, *Acer monspessulanum* L., and consequently one botanical family (*Aceraceae*), was included only in this use-category;
- Aromatic category: 37 *taxa* were used to flavor food (condiment) and houses (air freshener), and sometimes as insecticide, and the interviewees reported that they dried and stored the plants for use all year long. A few plants (five) were mentioned only in this category (*Allium schoenoprasum* L., *Artemisia dracunculus* L., *Calamintha nepeta* (L.) Savi, *Origanum majorana* L. and *Salvia officinalis* L.);
- Tools and articles category: 28 plants used in manufacturing handicrafts and agricultural and domestic tools were mentioned. The uses most often cited for this purpose were brooms, tool handles and baskets. There were no unique plants in this category;
- Fertilizer category: 16 *taxa* used in agricultural production were mentioned. Three of these *taxa* (*Cistus* spp., *Lathyrus* spp. and *Lupinus luteus* L.) were used solely for this purpose, and are used less frequently today;
- Construction category: the informants reported ten plants used in building structures and furniture. They belong to eight botanical families (*Cupressaceae, Fabaceae, Fagaceae, Myrtaceae, Pinaceae, Poaceae, Salicaceae* and *Ulmaceae*), and there are no unique plants in this category;
- Other category: there were no unique plants in this category; the 69 plants covered here were mentioned in previous categories;
- Approximately 27.0% of botanical families were reported in only one category and approximately 34.3% of *taxa* were reported in only one category.

Table 2: Number of *taxa* for each category and subcategories.

Category (*taxa*)	Number of subcategories	Subcategories (*taxa*)
Ornamental (81)	10	bottles decoration (1), bride branches (4), cemetery (3), clothes (1), gardens (51), interior (63), parties (7), religious (Ascension Day) (10), religious (church) (22) and religious (processions) (19)
Food (80)	10	appetizer (10), cakes (1), coagulant (2), decorative (16), drinks (2), food (69), jam (26), liqueur (23), preserves (3) and to cook prawns (1)
Diversion (54)	2	diversion (52) and to suck flowers (2)
Combustible (48)	1	combustible (48)
Aromatic (37)	4	air freshener (9), condiment (29), insecticide (3) and to scare animals (1)
Tools and articles (28)	13	baskets (5), baskets and saddlebags (1), brooms (10), buoys (1), chairs (1), corks (1), gutters for winepress (1), lids and bungs (1), little bungs for barrels (1), forks and needles (1), musical instruments (2), to clean houses (walls and ceilings) (2) and tool handles (8)
Fertilizer (16)	1	fertilizer (16)
Construction (10)	1	construction (10)
Other (69)	48	base for baking cornbread (1), baskets of cherries and other fruits (1), beehives (1), carpets (6), clothes (dark colors) (4), contemplation (6), cosmetic (3), disinfectant (4), evil eye (1), glues (3), grafts (3), hair (5), hiking (1), mattresses and straw mattresses (3), olive oil lamps (1), prayers (1), to bleach clothes (on the leaves) (1), to burn in thunderstorms (1), to burn to give luck (1), to cover potatoes (4), to explore water rods (1), to kill flies (1), to kill snakes (1), to line baskets (1), to mature other fruits (1), to move the bread in the oven (1), to pick fruit (1), to protect other cereals (1), to scare away animals (3), to scare flies (1), to scorch pigs (5), to seal barrels corks (2), to see the bread baking (bran) (1), to sharpen knives (1), to shuck corn (4), to wash bottles (1), to wash the face (1), saddles (1), shadow (10), shadow in the vegetable gardens (1), solvent (1), strings (8), supports for the vegetable gardens and gardens (2), sticks (1), tasty tea (13), tobacco (2), witches (1) and wooden prop in middle of clothesline (2)

- In the Tables 2 and 3, the data concerned to *taxa*. In the first, we present the botanical *taxa* with the most use-reports, in decreasing order. It is seen that the 14 *taxa* mentioned (6.5% of the total) correspond to approximately 25.5% of the total use-reports in the Table 1. The 14 *taxa* with highest CI are shown in the Table 3. According to the Table 3, CI ranges from 0.04, for *taxa* mentioned only by three informants and with only three use-reports (*Acer monspessulanum* L., *Sonchus oleraceus* L., *Phyllanthus niruri* L., *Prunella vulgaris* L., *Salvia officinalis* L., and *Ophrys fusca* Link), and 4.13 for *Olea europaea* L. var. *europaea*. Note that only four of plants with CI equal to 0.04 are using nowadays (*Acer monspessulanum* L., *Sonchus oleraceus* L., *Phyllanthus niruri* L. and *Salvia officinalis* L.). Also, in the Table 3 we present the botanical *taxa* with the most category-reports;

Table 3: The botanical *taxa* most frequently cited and with most categories.

Taxa	Use-reports	Number categories	Number informants	CI
Olea europaea L. var. *europaea*	322	6	77	4.13
Citrus sinensis (L.) Osbeck	319	6	78	4.09
Pinus pinea L.	315	8	77	4.04
Citrus limon (L.) Osbeck	312	5	78	4.00
Vitis vinifera L.	299	6	76	3.83
Zea mays L.	276	6	75	3.54
Eucalyptus globulus Labill.	266	6	77	3.41
Cucurbita maxima Duchesne	250	4	78	3.21
Lycopersicon esculentum Mill.	244	3	78	3.13
Daucus carota L. subsp. *sativus* (Hoffm.) Schübl. & G.Martens	232	3	78	2.97
Prunus avium (L.) L.	227	6	78	2.91
Prunus cerasus L.	222	3	77	2.86
Allium cepa L.	214	4	78	2.74
Triticum aestivum L.	195	4	76	2.50
Rosmarinus officinalis L.	175	7	75	2.24
Ficus carica L.	168	6	78	2.15
Arundo donax L.	140	6	77	1.79
Quercus coccifera L.	105	7	64	1.35
Myrtus communis L.	92	6	66	1.18
Calluna vulgaris (L.) Hull.	85	7	67	1.09
Cytisus grandiflorus (Brot.) DC.	85	6	68	1.09

- The mean number of plants referred per informant was approximately to 110.1;
- The mean number of use-reports referred per informant was approximately to 185.4;
- The mean number of use-reports referred per *taxa* was approximately to 67.0;
- The mean number of different local Portuguese names per *taxa* was approximately to 2.9;
- More than 10% of all plants (23) were cited by all interviewees, and only nine plants were cited by three interviewees;
- One hundred and ten plants were cited by 50% or more of interviewees;
- Data on quantitative ethnobotany:
- Ethnobotanical richness (R, number of useful species) [3] was 216;
- Ethnobotanical diversity assessed through the Shannon-Wiener index, H = $-\Sigma(p\ln p)$, where p was the proportion between the number of citations for each species and the total number of citations (Begossi 1996) was approximately to 4.91;
- Equitability, E = H/H_{max}, where H_{max} = $\ln$ (R) [3] was 0.91;
- The cultural index (CI), presented in the Table 1 (selected in Table 3), is given by CI=UR/N, where UR (use-reports) is the use recorded for every *taxa* and N is the total number of informants. This index was used to estimate the cultural significance of each species, that is to verify, in quantitative terms, to what extent each species is present in the local culture and in the memory of the inhabitants in the study [23];
- The ethnobotanical index [25], i.e. the ratio between reported useful plants and the flora area (expressed as a percentage), cannot be determined because the flora study was not finished.
- Additionally was used the relative frequency of citation (RFC) [32] (see table 1)

A quantitative data analysis during the interviews was of great importance and relevance, as it allows us to make macro-scale comparisons; cultural and biological biodiversity is seriously threatened in many regions of the world [3], as seen in independent studies using the same methodology [6]. Next, we present Table 4 showing ethnobotanical studies from Portugal, which considered the general categories of uses of plants (not only medicinal and/or aromatic categories).

Table 4: Ethnobotanical contras studies from natural territories of Portugal.

Region	References	NI	R	H	E	NT/I
Parque Natural Montesinho	[7]	88	364	-	-	4.14
Alentejo	[9]	54	166	4.84	0.95	3.07
Rio de Onor	[17]	18	137	-	-	7.6
Serra de Montejunto	Present study	78	215	4.91	0.91	2.76

NI: number of informants, R: ethnobotanical richness, H: ethnobotanical diversity, E: equitability, NT/I: number of taxa cited per informant

The ethnobotanical richness (R) is the number of *taxa* reported in each ethnobotanical study [3]. In this study, R is equal to 191.

The ethnobotany diversity obtained (H=4.91) when compared with the same index of the other available studies and with the value of R allow us to conclude that, in this area, there is considerable ethnobotanical diversity.

The equitability index range is 0 to 1. This index allows a comparison between the value found with the application of the Shannon-Wiener index and its maximum value. It enables the comparison of systems that have very different levels of ethnobotany richness. A value close to one indicates high use diversity. In this study, E= 0.91.

We are aware that this study was not exhaustive, but was only a first contribution to the ethnobotany of this region. It was field research using ethnobotanical methodology to survey the general uses of plants. More studies like this and those quoted in the introduction are needed to gather ethnobotanical knowledge, including all kinds of useful plants, in the various Portuguese regions.

4. Conclusions

The present work allowed us to capture experiences, revive memories, check the importance of the ancestral use of plants,

and provide important knowledge. It also allowed us to collect information about 191 *taxa* cited as useful (confirmed by three or more informants) from the Protected Landscape of "Serra de Montejunto" (Lisbon District, Portugal), in which studies on the traditional uses of plants are nonexistent. The plants were distributed among ten use-categories.

The botanical families *Asteraceae*, *Fabaceae*, *Lamiaceae*, *Rosaceae* and *Poaceae* were those with the greatest species representation. The most representative taxa for: a) the number of people who cited them; b) the number of use-reports; or c) the number of different categories, are *Citrus sinensis* (L.) Osbeck, *Eucalyptus globulus* Labill, *Olea europaea* L. var. *europaea*, *Pinus pinea* L., *Vitis vinifera* L. and *Zea mays* L.

In addition to previous changes, we can also refer to some practices or articles that are used less frequently, namely to sharpen knives, scorch pigs, shuck corn, burn in thunderstorms, and seal barrel corks, strings, carpets, brooms, furniture, mattresses and straw mattresses, tobacco, baskets, corks, lids, bungs, buoys and olive oil lamps.

We found several undocumented local names [31, 16, 2]; for example, "bódanha", "chucha-moleiros", "erva-da-infeção", "erva-do-betadine", "flor-do-natal", "meias-do-cuco", "responços" and "tremoço-ratinho". It is also important to note that some local Portuguese names allude to their uses such as "cipreste-dos-cemitérios" (ornamental tree) – *Cupressus sempervirens* L. – or "erva-das-azeitonas" (aromatic herb) – *Calamintha nepeta* (L.) Savi – used to decorate cemeteries and to flavor olives, respectively.

In quantitative terms, by analyzing the ethnobotanical indices (R=191, H=4.91 and E=0.91) we obtained similar results to other studies carried out in Portugal that considered a wide range of ethnobotanical uses (Table 4).

The transmission of this type of knowledge from generation to generation is now threatened in this region and may disappear. Despite this reality, it is possible to find younger people still living in the countryside that depend on the use of plants to satisfy their needs. For the greater conservation of traditional knowledge of the use of plants, which can benefit local communities, studies of this nature are important, so as to encourage younger people to make contact with plants, preserve knowledge and realize that every plant is a small, natural and sustainable laboratory.

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