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Medicinal and veterinary plants of El Caurel (Galicia, northwest Spain)

E. Blanco, M.J. Macía, R. Morales *

Real Jardín Botánico, CSIC, Plaza de Murillo, 2. E-28014 Madrid, Spain

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Abstract

A study of the medicinal and veterinary plants popularly used in El Caurel region (Lugo province, northwest Spain) and their relationships is reported. We obtained data for 85 species belonging to 31 families of vascular plants. Their vernacular names, properties, preparations, mode and popular uses are presented. © 1999 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Folk medicine; Veterinary; Medicine; NW Spain

1. Introduction

El Caurel is an isolated, rural region of Galicia, near León province, but it is a part of the province of Lugo (Fig. 1). The inhabitants live in very small communities. The study area is included within the square of UTM coordinates 29TPH52, which is a mountainous region which reaches 1600 m elevation. A river, Lor, flows through the region at about 600 m elevation. The communities are situated between 600 and 1100 m.

The climatic conditions of El Caurel are mild, with average temperatures varying between 2 and 5°C (minimum temperatures) and between 15 and 20°C (maximum temperatures), while rainfall ranges from 1200 to 1900 mm per year.

The flora of this region has been well studied by Amigo (1984) and Guitián (1984), who listed more than 800 species of vascular plants, 40% of all Galician flora. The vegetation is mostly made up of forests of beech (*Fagus sylvatica* L., Fagaceae), known as 'faial' in Galicia, oak (*Quercus pyrenaica* Willd., Fagaceae) or 'reboleiras', birch (*Betula alba* L., Betulaceae) or 'abeduales', ash (*Fraxinus excelsior* L., Oleaceae) or 'freixoales', evergreen oak (*Quercus ilex* L. subsp. *ballota* (Desf.) Samp., Fagaceae) or 'encinales' and cultivated chestnut (*Castanea sativa* Miller, Fagaceae) or 'soutos', as well as scrub and grasslands.

* Corresponding author.

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The inhabitants of the region are traditional stockfarmers with a small number of animals. Their agricultural activity, which is also traditional, makes it possible for them to be almost completely self-sufficient. Health practices are also traditional, despite the presence of a physician and a veterinarian in the region. Thus, there is a large number of folk medicinal and veterinary uses of plants among the population.

The purpose of the present research is to document medicinal and veterinary uses of plants of northwest Spain, before such information disappears due to the advancing civilisation.

2. Methodology

Interviews were conducted among the population in the course of fieldwork carried out from 1989 to 1994. Information was obtained from 39 individuals between 30 and 85-years-old, living in 17 different communities of the area of study. Interviews were not structured, in order to preserve a high degree of spontaneity; they were informal conversations. More details on interviewees name, age and localities are given in Blanco (1996). From almost all the plants reported, a voucher specimen was collected. Each specimen has a collection number of Blanco (EBC) and has been included in MA, the herbarium of the Royal Botanic Garden Madrid.

3. Results

The data presented here are part of a more extensive ethnobotanical study (Blanco, 1995, 1996) conducted in western Spain, where 223 plant taxa were included. From these, 85 species, which have medicinal or veterinary uses, are dealt with here.

Tables 1 and 2 show the species and their medicinal and veterinary uses arranged in alphabetical order by family and genus. The species with medicinal uses belong to 30 families, but 25% of which are either in *Asteraceae* or *Lamiaceae*. The popularly used veterinary plants belong to 16 families, all of which, except for *Saxifragaceae*, are included in the families that have medicinal uses.

Out of all species listed in Tables 1 and 2 61 (71.8%) are native, 21 (24.7%) are introduced and three (3.5%) are naturalized. Almost all parts of the plant for each species are used in folk

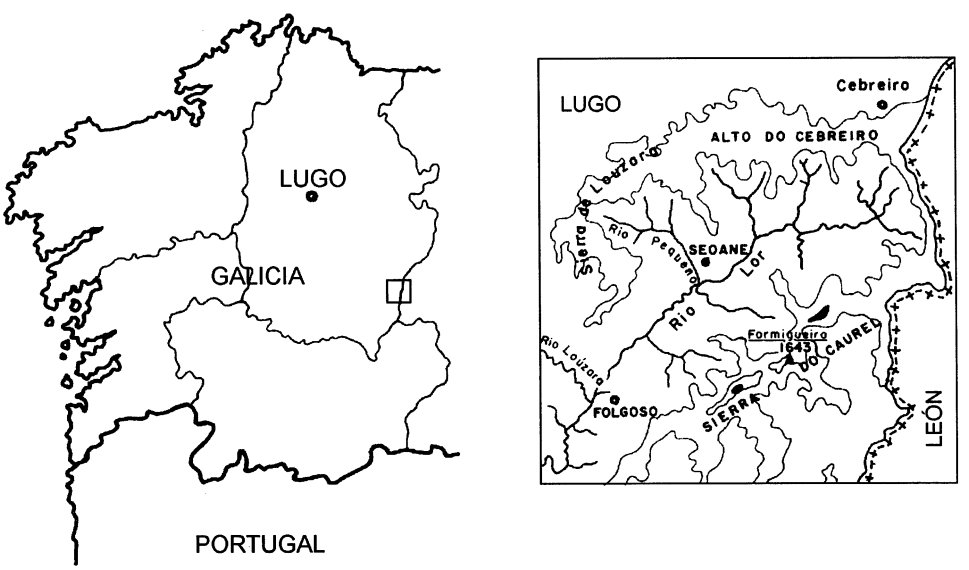

Fig. 1. Situation map.

Table 1
Tradicional medicinal plants in El Caurel (Galicia, northwest Spain)[a]

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Apiaceae					
A. graveolens L. (1172 EBC) (c)	Apio	As an antihemorrhoidal	Aerial part	Decoction,	Internal
		For dysmenorrhea	Aerial part	With eggs	Internal
		As an antispasmodic	Aerial part	Oil macerate, decoction, with eggs	Rubbing, internal, internal
Foeniculum vulgare Mill. (837 EBC)	Fiollo	As a carminative and diuretic	Aerial part	Infusion	Internal
		As an antipyretic	Aerial part	Infusion	Sanitary towel applied on the head
Petroselinum crispum (Mill.) A.W. Hill (1216 EBC) (c)	Perexil, perixe	As a diuretic	Leaves	Decoction, with eggs	Internal
		As a laxative for children	Stem	Fresh plant	Anal
Araliaceae					
Hedera helix L. (850 EBC)	Hedra	As an antipyretic	Fruit	Decoction	Internal
		As an anti-inflammatory	Leaves	Decoction	Bath
		As an oral antiseptic	Leaves	Decoction mixed with *Malva* sp. or *Juglans regia*	Mouthwash
Aspleniaceae					
Asplenium trichomanes L. subsp. *quadrivalens* D.E. Meyer (1171 EBC)	Colondrillo	For dysmenorrhea, as an emenagogue	Aerial part	Decoction	Internal
		Against pharyngitis	Aerial part	Decoction	Gargles
Asteraceae					
Achillea millefolium L. (491 EBC)	Piorniña	As an antihelmintic	Inflorescence	Infusion	Internal
		As a vulnerary and cicatrizant	Aerial part	Crushed, juice	External
Arnica montana L. (718 EBC)	Árnica	As an antihaemorrhagic	Leaves	Fresh plant	External
		As a vulnerary	Aerial part	Crushed, also with *Hypericum perforatum*	Plaster
Artemisia absinthium L. (1153 EBC)	Axenxo	As an antihelmintic	Aerial part	Fried in oil	Internal
Bidens aurea (Aiton) Sherff (1286 EBC) (n)	Té, té americano	As a digestive, stomachic and sedative	Flowering tops	Infusion	Internal
Chamaemelum nobile (L.) All. (784 EBC)	Manzanilla	As a digestive and stomachic, against dispepsia	Flowering tops	Infusion, decoction	Internal
Matricaria recutita L. (1212 EBC) (c)	Manzanilla	As a digestive and stomachic	Flowering tops	Infusion, decoction	Internal
		As an ocular antiseptic	Flowering tops	Infusion	Bath
Senecio jacobaea L. (1143 EBC)	Cálsamo	As a vulnerary and cicatrizant	Aerial part	Crushed	External

Table 1 (Continued)

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Tanacetum parthenium (L.) Schultz Bip. (809 EBC)	Artemixe, artemisa	To loosen up stiff feet	Aerial part	Fresh plant	Poultice
Tanacetum vulgare L. (1211 EBC) (c)	Triaca, artemixe real	As an antihemorrhoidal	Aerial part	Macerated in white wine	Internal
		As a cardiotonic	Aerial part	Decoction	Internal
Betulaceae					
Betula alba L. (367 EBC)	Abedul, bidueiro	As a vulnerary	Sap	Fresh plant	Bath
		Against gout	Inflorescences	Decoction	Internal
Corylus avellana L. (848 EBC)	Abraira, abalaira	Against snake bites	Leaves	Fresh plant	External
Boraginaceae					
Pentaglottis sempervirens (L.) Tausch. ex L.H. Bailey (485 EBC)	Borraxa	As an anticatarrhal	Leaves	Infusion with *Sambucus nigra*	Internal
Brassicaceae					
Brassica nigra (L.) Koch. (481 EBC) (c)	Mostaza	As a sedative; to loosen up stiff feet	Leaves	Crushed	Plaster
Brassica oleracea L. var. *acephala* DC. (1307 EBC) (c)	Berza	Against gastric ulcer	Juice of the young leaves	Fresh plant	Internal
Lepidium latifolium L. (781 EBC) (c)	Rompepiedra	Against renal stones; as an antispasmodic	Aerial part	Decoction	Internal
Caprifoliaceae					
Sambucus nigra L. (1085 EBC)	Sabugueiro	As an anticatarrhal	Inflorescence	Infusion	Internal
		As an ocular antiseptic	Fruits	Decoction	Bath
		As a vulnerary and antihemorrhagic	Juice of the fruits	Fresh plant	External
		As an emolient	Inflorescence	Infusion	Bath
Caryophyllaceae					
Dianthus hyssopifolius L. (853 EBC)	Curamil	As an antirrheumatic and anticatarrhal	Aerial part	Decoction	Internal
ChenopodiaceaE					
Chenopodium ambrosioides L. (786 EBC) (n)	Té	As a digestive, stomachic and laxative	Aerial part	Infusion	Internal
Clusiaceae					
Hypericum androsaemum L. (840 EBC)		As a vulnerary and cicatrizant	Leaves	Decoction	Plaster
H. perforatum L. (1168 EBC)	Pericón	Against pharyngitis	Aerial part	Decoction	Gargles
		As an antirrheumatic	Aerial part	Decoction	Sanitary towel
Crassulaceae					
Sedum telephium L. (1257 EBC) (c)	Bálsamo santo	As a vulnerary and cicatrizant	Leaves	Fresh plant	External
Sempervivum tectorum L. (794 EBC) (n)	Punteira	As a vulnerary and cicatrizant	Juice of the leaves	Fresh plant	External

Table 1 (Continued)

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Umbilicus rupestris (Salisb.) Dandy (1282 EBC)	Capelexo, cepalexo	As a vulnerary and antiseptic	Leaves	Decoction, crushed	Bath, plaster
		As an emolient	Leaves	Fresh plant	External
Dioscoreaceae					
Tamus communis L. (806 EBC)	Cereixas de can, cereixas de corriola	As a diaphoretic, rubefacient and antirrheumatic; to treat colds	Fruits	Macerated in alcohol or brandy	Rubbing
Equisetaceae					
Equisetum arvense L. (1287 EBC)	Cola de cabalo	As a vasotonic, antirrheumatic and diuretic	Aerial part	Decoction	Internal
		As toothpaste	Aerial part	Fresh plant	Rubbing
Ericaceae					
Erica australis L. (1099 EBC)	Uz rubia, uz albar	Against pleuritis and as an antituberculotic	Flowering tops	Infusion	Internal
Erica arborea L. (1134 EBC)	Uz bornal, uz blancal	As a renal antiseptic and diuretic	Flowering tops	Decoction	Internal
Fabaceae					
Chamaespartium tridentatum (L.) Gibbs (1132 EBC)	Carqueixa	As a hypotensive, antirrheumatic, diuretic, sedative and vasotonic	Flowers	Decoction	Internal
Cytisus scoparius (L.) Link. (857 EBC)	Xesta negral	As a vulnerary and antihemorrhagic	Bark	Fresh plant	External
		As an antidiabetic	Flowers	Infusion, decoction	Internal
Ulex gallii Planchon (1283 EBC)	Toxo, tuxo	Againt pleuritis; as an antituberculotic	Flowers	Infusion	Internal
U. minor Rothm. (799 EBC)					
Fagaceae					
Q. pyrenaica Willd. (492 EBC)	Rebola, rebolo, roble, carvallo	Against pharyngitis	Bark	Decoction	Gargles
Q. robur L.(1157 EBC)					
Gentianaceae					
G. lutea L. subsp. *aurantiaca* Laínz (1227 EBC)	Xanzá, xenzá, xensá	As a vulnerary and cicatrizant	Root	Crushed	Plaster
		As a dental antiseptic	Root	Decoction	Mouthwash
		As an antipyretic, hypotensive and depurative; against pneumonia; to reduce weight	Root	Decoction	Internal
Juglandaceae					
J. regia L. (800 EBC) (c)	Nogal, nogueira	As a vulnerary and antiseptic	Leaves	Decoction	Sanitary towel, bath
		Against renal stones	Leaves	Decoction	Internal
		Against pharyngitis; as an anti-inflammatory and dental antiseptic	Leaves	Decoction	Mouthwash

Table 1 (Continued)

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Lamiaceae					
Calamintha nepeta (L.) Savi (860 EBC)	Nébeda	As a digestive and stomachic	Aerial part	Fried with eggs	Internal
		As a vermifuge	Aerial part	Macerated in brandy	Internal
		As an antispasmodic	Aerial part	Infusion, fried with eggs	Internal
G. hederacea L. (488 EBC)	Malvela	Against dysmenorrhea; as an antispasmodic	Aerial part	Decoction, fried with eggs	Internal
		As an antitussive and hypotensive	Aerial part	Decoction	Internal
Mentha x gentilis L. (671 EBC) (c)	Herbabuena	As an antispasmodic and digestive	Aerial part	Infusion	Internal
Mentha suaveolens Ehrh. (1088 EBC)	Maravallo	Against nettlerash of *Urtica* species	Leaves	Fresh plant	Rubbing
Origanum virens Hoffmanns. & Link (1150 EBC)	Ourego, origano	As an anticatarrhal; to reduce pain after childbirth	Aerial part	Infusion	Internal
Rosmarinus officinalis L. (1290 EBC) (c)	Romero, romeo, romeu, romeiro	As an anti-inflammatory	Flowering tops	Decoction	Bath
		As an anticatarrhal	Flowering tops	Decoction	Internal
		As a dental and bucal antiseptic	Flowering tops	Decoction with wine	Mouthwash
S. officinalis L. (838 EBC) (c)	Xarxa	Against pharyngitis; as an oral antiseptic	Aerial part	Decoction	Internal
		As a dental antiseptic; against gingivitis	Aerial part	Decoction	Mouthwash
		As a digestive, stomachic and sedative	Aerial part	Infusion	Internal
		As an antihaemorrhoidal	Aerial part	Crushed	Plaster
		As a toothpaste	Leaves	Fresh plant	Rubbing
S. sclarea L. (812 EBC) (c)	Herba de la madre	Against uterine prolapse	Leaves	Fresh plant	External
T. scorodonia L. (686 EBC)	Seixebra	As a vermifuge	Aerial part	Crushed and macerated in water or milk	Internal
Thymus pulegioides L. (698 EBC)	Tomillo, tumillo	As an anticatarrhal and digestive	Flowering tops	Infusion	Internal
		As an anti-inflammatory	Flowering tops	Decoction	Bath
Lauraceae					
L. nobilis L. (1295 EBC) (c)	Loureiro, laurel	As an antitussive and analgesic	Fruits	Fresh plant, decoction	Internal
Liliaceae					
L. martagon L. (827 EBC)	Soldaconsolda	As an anti-inflammatory and analgesic; to cure fractures	Bulbs and roots	Crushed	Plaster
Ruscus aculeatus L.(804 EBC)	Silvarda	Against erysipelas	Roots	Decoction	Plaster
S. mattiazzi (Vand.) Sacc. (506 EBC)	Ouropeso, oropeso	As a vermifuge and diuretic	Roots	Decoction	Internal
Linaceae					
Linum usitatissimum L. (c)	Lino, liñaza (seeds)	Against pneumonia; as an anti-inflammatory	Seeds	Decoction	Poultice

Table 1 (Continued)

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Malvaceae					
Althaea officinalis L. (1289 EBC) (c)	Malverisco	As an emolient As an anticatarrhal	Roots	Decoction	Poultice
Malva neglecta Wallr. (708 EBC)		As a laxative	Aerial part	Decoction	Internal
M. moschata L. (768 EBC)	Malva	As an anti-inflammatory	Aerial part	Decoction	Bath
M. sylvestris L.		To stimulate tooth growth	Roots	Fresh plant	Chewed
Moraceae					
Ficus carica L. (1291 EBC) (c)	Figueira, figo	As an antitussive	Fruits, young shoots	Sap	Internal
Myrtaceae					
Eucalyptus globulus Labill. (c)	Colipto, eucalipto	As an anticatarrhal; against congestion	Leaves	Decoction	Fume
Oleaceae					
Fraxinus excelsior L. (851 EBC)	Freixo	As a cicatrizant	Bark	Decoction	Bath
Papaveraceae					
C. majus L. (862 EBC)	Ceridoña	As a vulnerary; against warts and gastritis	Juice of leaves	Fresh plant	External
Plantaginaceae					
Plantago coronopus L. (839 EBC)	Estrellamar	As an emenagogue; against dysmenorrhea	Aerial part	Decoction	Bath
		As an anticatarrhal, vulnerary and cicatrizant; against conjunctivitis	Aerial part	Infusion	Internal
Plantago media L. (852 EBC)	Setecostas, lantén	Against ulcer; as a stomachic	Leaves	Decoction	Internal
		As an antiseptic and vulnerary	Leaves	Decoction	Bath
Poaceae					
Z. mays L. (c)	Millo	As a diuretic	Styles of the flowers	Decoction	Internal
Pteridaceae					
Pteridium aquilinum (L.) Kuhn. (1180 EBC)	Folgueiro	Against burns	Rachis of the pinnae	Gelatinous sap	External
Ranunculaceae					
H. foetidus L. (810 EBC)	Chaveira	As a vulnerary; against warts	Aerial part	Decoction	External
Rosaceae					
Rosa canina L. (1231 EBC) *R. nitidula* Besser (1209 EBC)	Silva macha	As a vulnerary	Leaves	Crushed	Plaster
Rubus ulmifolius Schott	Silva	As a vulnerary and antihemorrhagic	Young shoots	Crushed	Plaster
		Against pharyngitis	Leaves	Decoction	Internal
R. caesius L.		As an antidiarrheic	Fruits	Crushed	Internal

Table 1 (Continued)

Family/species (voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration
Rutaceae					
R. chalepensis L. (779 EBC) (c)	Ruda, rurda	Against conjunctivitis	Aerial part	Infusion	Bath
		As an anti-inflammatory	Aerial part	Crushed	Plaster
		As an analgesic for ears and teeth	Aerial part	Fried in oil	External
		As a vermifuge	Aerial part	Fried in oil	Applied on the navel
		Against dysmenorrhea	Aerial part	Infusion with *Matricaria recutita* or *Chamaemelum nobile*	Internal
Scrophulariaceae					
Anarrhinum bellidifolium (L.) Willd. (712 EBC)	Entrelaceira	As a vulnerary	Leaves	Decoction, fresh plant	Bath, directly applied
Linaria triornithophora (L.) Willd. (1241 EBC)	Herba caralleira	As an aphrodisiac	Aerial part	Decoction	Internal
Scrophularia balbisii Hornem. (1204 EBC)	Chupón, folla de chupón	As a vulnerary and cicatrizant	Leaves	Fresh plant	External
		As an anti-inflammatory	Aerial part	Decoction	Bath
Thymelaeaceae					
Daphne laureola L. (807 EBC)	Lombrigueira	As a vermifuge	Stembark	Fresh plant	As bracelet
Urticaceae					
U. dioica L. (864 EBC)	Ortiga, urtiga	As a blood depurative	Aerial part	Infusion	Internal
		As a buccal antiseptic	Aerial part	Infusion	Mouthwash
		As a vulnerary and antihemorrhagic	Aerial part	Crushed fresh plant	External
Violaceae					
Viola alba Besser (684 EBC)	Violeta	As a vulnerary and anti-inflammatory	Aerial part	Fried with cow fat	Plaster
		Against pharyngitis; as an anticatharral and digestive	Aerial part	Infusion	Internal

[a] c, cultivated; n, naturalized.

Table 2
Veterinary plants in El Caurel (Galicia, northwest Spain)

Family/species (Voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration	Animals[a]
Apiaceae						
P. crispum (Mill.) A.W. Hill (1216 EBC)	Perexil, perixe	As a vulnerary; used in castration	Aerial part	Decoction	Internal	P
Thapsia villosa L. (1187 EBC)	Herba do lobo	Against bloating	Aerial part	Decoction	Internal	C
Asteraceae						
T. vulgare L. (1211 EBC)	Triaca	Against bloating	Aerial part	Fresh plants	Rubbing in the mouth	C
Chenopodiaceae						
C. ambrosioides L. (786 EBC)	Té	As a vermifuge	Aerial part	Decoction	Internal	C
Clusiaceae						
H. perforatum L. (1168 EBC)	Pericón	As an antiabortive	Aerial part	Decoction	Internal	C
		As a vulnerary	Aerial part	Decoction	Internal	C,S
Equisetaceae						
Equisetum arvense L. (1287 EBC)	Cola de cabalo	Against kidney colic	Aerial part	Decoction	Internal	H
Gentianaceae						
G. lutea L. subsp. *aurantiaca* Laínz (1227 EBC)	Xanzá	Agaist bloating; as a vulnerary	Roots	Decoction	Internal	C
Lamiaceae						
S. sclarea L. (812 EBC)	Herba de la madre	Against uterine prolapse	Aerial part	Decoction	Internal	C
T. scorodonia L. (686 EBC)	Seixebra	As a vermifuge	Aerial part	Crushed fresh macerated in water	Internal	C, S, H
Lauraceae						
L. nobilis L. (1295 EBC)	Loureiro, laurel	Against bloating	Fruits	Decoction	Internal	C, S
		Against colic	Fruits	Fried	Internal	C, S
Liliaceae						
Allium sativum L.	Allo	As a vermifuge	Bulbs	Crushed in oil or macerated in water	Internal	C, S
L. martagon L. (827 EBC)	Soldaconsolda	As an anti-inflammatory and analgesic; to cure fractures	Bulbs	Crushed	Plaster	S
S. mattiazzi (Vand.) Sacc. (506 EBC)	Ouropeso	As a vermifuge and diuretic	Roots	Decoction	Internal	C,S
Veratrum album L.	Herba do lobo	Against kidney colic	Aerial part	Decoction	Internal	H
Malvaceae		As a vulnerary	Aerial part	Fried in oil	Plaster	All
M. neglecta Wallr. (708 EBC) *M. moschata* L. (768 EBC)	Malva	As a vulnerary; used in the castration	Aerial part	Decoction	Internal	P

Table 2 (Continued)

Family/species (Voucher specimen)	Vernacular name	Popular uses	Part used	Preparation	Administration	Animals[a]
Papaveraceae						
C. majus L. (862 EBC)	Ceridoña	Against bloating	Leaves	Fresh plant or with fat	Internal	C
		Against cataracts	Juice of the stem	Fresh plant	External	H
		As an antidiarrheic and vermifuge	Leaves	Crushed and macerated in water	Internal	C
Poaceae						
Z. mays L.	Millo	As a diuretic	Styles of flowers	Decoction	Internal	C,S
Ranunculaceae						
H. foetidus L. (810 EBC)	Chaveira	Against warts	Aerial part	Decoction	Rubbing	C
		Against bloating	Aerial part	Fresh plant, decoction	Rubbing in the mouth, Mouthwash	C
Rutaceae						
R. chalepensis L. (779 EBC)	Ruda, rurda	Against bloating	Aerial part	Fresh plant	Internal	C, S
		As a vermifuge	Aerial part	Fresh plant	Internal	C, S, H
Saxifragaceae						
Saxifraga spathularis Brot. (844 EBC) *S. hirsuta* L. (819 EBC)	Abreiriña, abelairiña	As an analgesic and anti-inflammatory; to reduce weight	Aerial part	Decoction	Internal	C, S, H
Thymelaeaceae						
D. laureola L. (807 EBC)	Lombrigueira	As a diuretic	Aerial part	Decoction	Internal	C

medicine: aerial part in 43.2% of cases, leaves in 23.5%, inflorescences, flowers and flowering tops in 14.4%, roots, rhizomes and bulbs in 6.8%, fruits or seeds in 5.3% and bark in 3% of the cases. For veterinary uses, aerial parts are the most commonly encountered (62.9%), folllowed by root (14.8%), leaves and fruits.

As to formulation, the most popular medicinal preparation is decoction or infusion (61.9%) for internal uses or fresh plants for external use. There appears to be no clear distinction between decoction and infusion, a similar case as observed by Bonet et al. (1992). Very unusual preparation were also found, for example, in the case of plants mixed with eggs and fried as 'tortilla' (5.2%), or only fried in oil or fat (2.2%). In veterinary uses, decoction (57.7%) is the most widely used method of preparation, followed by the use of fresh plants.

As far as therapeutic use is concerned, there are 59 different disease conditions treated. The most important categories of use are: vulnerary, cicatrizant, antihemorrhagic (18.6%), respiratory complains (11.9%), digestive and stomachic (9.3%), anti-inflammatory (4.6%), diuretic (4.1%), oral antiseptic (4.1%) and vermifuge (3.6%). Almost all the species are used alone; very few mixtures of different herbs have been identified. Among the veterinary uses, there are 14 therapeutic purposes, such as against bloat or tympanitis (20%), as a vermifuge (17.1%), as a vulnerary (14.2%), as a diuretic (8.5%) and against colic or 'torzón' (8.5%).

The following is a brief description of some interesting uses of a number of species.

Chamaespartium tridentatum is considered a poisonous plant, but it is very much used in the region. It has been considered a panacea or cure-all since the 18th century (Sarmiento, 1787). Several medicinal and veterinary uses, such as hypotensive, antirrheumatic and diuretic applications, were found in this study.

Gentiana lutea subsp. *aurantiaca* is a plant endemic to the northwestern region of the Iberian Peninsula. It is one of the most interesting medicinal plants encontered in the present study, which is used in many different ways: as a hypotensive, vulnerary, cicatrizant, antipyretic and dental antiseptic. The scientific phytotherapeutic use is limited as a stomachic and appetizer (Arteche et al., 1994; Peris et al., 1995).

Glechoma hederacea is very popular in the region as expectorant, as antispasmodic, hypotensive and against dysmenorrhea. Some phytotherapeutic uses of this plant had only been reported by Font Quer (1961).

Helleborus foetidus is used in veterinary treatment against bloating or tympanitis and also to combat warts. This type of uses has never been reported in the literature. This species is known to be poisonous, especially for its effect on the heart (Mulet, 1991).

Juglans regia, the walnut tree has many folk medicinal and veterinary uses, such as, its use as vulnerary and antiseptic is well known in Galicia and surrounding areas. However, it is not important in scientific phytotherapy (Arteche et al., 1994; Peris et al., 1995).

Lilium martagon is a very popular plant and is frequently used to treat human and animal diseases, for example as an analgesic or anti-inflammatory.

4. Discussion and conclusions

The knowledge on medicinal and veterinary plants appears to be well preserved in Galicia. This represents the last remains of a culture that has been orally transmitted since ancient times. Due to the rate of acculturation, which has increased since the 1980's, popular human uses of medicinal plants are currently decreasing. Veterinary uses, however, are still intact. The primary reason for this is distrust of professional veterinarians.

The interviews show that women have a greater and better knowledge about medicinal plants than men. The following nine taxa, representing 11.1% of medicinal plants and 39.1% of plants with veterinary uses, have common uses for human and animal diseases: *Equisetum arvense* (Equisetaceae), *H. foetidus* (Ranunculaceae), *Laurus nobilis* (Lauraceae), *L. martagon* (Liliaceae), *Ruta chalepensis* (Rutaceae), *Salvia sclarea* (Lamiaceae), *Simethis mattiazzi* (Liliaceae), *Teucrium scorodonia* (Lamiaceae) and *Zea mays* (Poaceae).

Of all the species in Tables 1 and 2, the following are the most popular and reported by almost all interviewees for many different uses: *Apium graveolens* (Apiaceae), *Chelidonium majus* (Papaveraceae), *G. lutea* (Gentianaceae), *Malva* sp. (Malvaceae), *R. chalepensis* (Rutaceae), *Salvia officinalis* (Lamiaceae) and *Urtica dioica* (Urticaceae). The uses of the species of Tables 1 and 2 have been previously mentioned in books (Font Quer, 1961; Evans, 1991; Mulet, 1991; Arteche et al., 1994; Peris et al., 1995) and in published papers (Mascolo et al., 1987; Abdul-Ghani and Amin, 1988; Al-Said et al., 1990; Aqel, 1991; Alarcón de la Lastra et al., 1994; Navarro et al., 1994). It would be desirable to carry out phytochemical and pharmacological studies of some of these species, especially, *C. tridentatum* (Fabaceae), *H. foetidus* (Ranunculaceae) and *L. martagon* (Liliaceae), since literature review of these species indicates that they have not previously been investigated.

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References

Abdul-Ghani, A.-S., Amin, R., 1988. The vascular action of aqueous extracts of *Foeniculum vulgare* leaves. Journal of Ethnopharmacology 24, 213–218.

Alarcón de la Lastra, C., Martín, M.J., La Casa, C., Motilva, V., 1994. Antiulcerogenicity of the flavonoid fraction from *Bidens aurea*: comparison with ranitidineand omeprazole. Journal of Ethnopharmacology 42, 161–168.

Al-Said, M.S., Tariq, M., Al-Yahya, M.A., Rafatullah, S., Ginnawi, O.T., Ageel, A.M., 1990. Studies on *Ruta chalepensis*, an ancient medicinal herb still used in tradicional medicine. Journal of Ethnopharmacology 28, 305–312.

Amigo, J., 1984. Estudio de los Matorrales y Bosques de la Sierra del Caurel (Lugo). Doctoral thesis, Universidad de Santiago, Spain, p. 248.

Aqel, M.B., 1991. Relaxant effect of the volatile oil of *Rosmarinus officinalis* on tracheal smooth muscle. Journal of Ethnopharmacology 33, 57–62.

Arteche, A., Güenechea, J.A., Uriarte, C. Vanaclotxa, B., 1994. Fitoterapia. Vademecum de Prescripción. Asociación Española de Médicos Naturistas y Colegio Oficial de Farmacéuticos de Vizcaya, Spain, p. 958.

Blanco, E., 1995. Investigaciones Etnobotánicas en la Sierra del Caurel (Lugo) y en la Calabria Extremeña (Badajoz). Doctoral thesis, Universidad Autónoma de Madrid, Spain, p. 555.

Blanco, E., 1996. El Caurel, las Plantas y sus Habitantes. Fundación Caixa Galicia, Spain, p. 203.

Bonet, M.A., Blanché, C., Vallès, J., 1992. Ethnobotanical study in River Tenes valley (Catalonia, Iberian Peninsula). Journal of Ethnopharmacology 37, 205–212.

Evans, W.C., 1991. Farmacognosia Trease-Evans, 13 ed. Interamericana-McGraw-Hill, Madrid, p. 901.

Font Quer, P., 1961. Plantas Medicinales. El Dioscórides Renovado. Editorial Labor, Barcelona, Spain, p. 1033.

Guitián, J., 1984. Estudio de la Vegetación Herbácea de la Sierra del Caurel (Lugo). Doctoral thesis, Universidad de Santiago, Spain, p. 330.

Mascolo, N., Autore, G., Capasso, F., 1987. Local antiinflamatory activity of *Tamus communis*. Journal of Ethnopharmacology 19, 81–84.

Mulet, L., 1991. Estudio Etnobotánico de la Provincia de Castellón. Diputación de Castellón, Castellón, Spain, p. 596.

Navarro, E., Alonso, J., Rodriguez, R., Trujillo, J., Boada, J., 1994. Diuretic action of an aqueous extract of *Lepidium latifolium*. Journal of Ethnopharmacology 41, 65–70.

Peris, J.B., Stübing, G., Vanaclocha, B., 1995. *Fitoterapia Aplicada*. Colegio Oficial de Farmacéuticos de Valencia, Valencia, Spain, p. 628.

Sarmiento, F., 1787. Disertación sobre las Eficaces Virtudes y Uso de la Planta llamada Carquesa. Imprenta Hilarion Santos, Madrid, Spain, p. 29.