Traditional medicinal uses of the Eurasian wild grapevine in the Iberian Peninsula

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ABSTRACT

The Iberian Peninsula constitutes the Western limit of the dioecious Eurasian wild grapevine. At present, it is a threatened plant genetic resource, due to a large number of human impacts. This liana had different uses in this territory from the Paleolithic until the end of the last century. Among them, several medicinal applications remain as a Classical Greek culture heritage.

In order to retrieve the existing written information, an exhaustive bibliographic search was carried out in the literature related to the pharmacopoeia linked to this Vitaceae, from the 16th century to the present day. Current references on chemical composition of different parts of grapevine and their medical effects were also included. In parallel, an investigation in several archives of different localities was also conducted and complemented with an intensive inquiry to historians, anthropologists, sanitary personnel and surveys to elderly people living in different rural regions from Spain and Portugal, where some relic populations of wild grapevine are still conserved.

Among the written and oral medicinal uses compiled, grapevine bleeding water before sprouting has been used to alleviate eczema and skin eruptions, due to its anti-inflammatory and healing properties. It has also been applied as an eye drop to combat conjunctivitis and keratitis. The must from unripe berries (called agua de agraz in Spanish) has been used as liver tonic due to its cleansing properties and to treat digestive diseases. Leaves were used mainly to reduce edema, mainly on legs and as antihemorrhoidal and for menopausal disorders. Vinegar was used to clean and disinfect wounds both on humans and animals.

Keywords. Bleeding water, leaves, must, vinegar, Vitis vinifera L. subsp. sylvestris (Gmelin) Beger & Hegi.

RESUMEN

La Península Ibérica constituye el límite occidental de la euroasiática y dioica vid silvestre. Actualmente es un recurso fitogenético amenazado debido a una gran cantidad de impactos humanos. Esta liana tuvo diferentes usos en este territorio desde el Paleolítico hasta finales del siglo pasado. Entre ellos, como herencia de la cultura griega clásica, aparecen diferentes usos médicos.

Para recuperar la información escrita existente, se ha llevado a cabo una búsqueda bibliográfica exhaustiva en la literatura relacionada con la farmacopea vinculada a esta Vitaceae, desde el siglo XVI hasta el presente. También, se incluyen referencias sobre la composición química de diferentes partes de la vid y sus efectos médicos. Paralelamente, se ha desarrollado una investigación en los archivos de diferentes localidades, que se ha complementado con los testimonios de historiadores, antropólogos, personal sanitario y encuestas a ancianos del campo que viven en diferentes regiones de España y Portugal, donde todavía se conservan algunas poblaciones relictas de vid silvestre.

Entre la información escrita y oral de los usos medicinales recopilados, mencionaremos el uso del “agua de lloro” de la vid previo a la brotación para aliviar el eczema y las erupciones cutáneas, debido a sus propiedades antiinflamatorias y curativas. También se ha aplicado como colirio para combatir la conjuntivitis y la queratitis. El mosto de las bayas inmaduras, llamado “agua de agraz”, se ha utilizado como tónico, por sus propiedades de limpieza del hígado y para tratar afecciones digestivos. Las hojas se han empleado principalmente para reducir el edema, particularmente en las piernas y como antihemorroidales y para trastornos de la menopausia. El vinagre ha venido utilizándose para limpiar y desinfectar heridas de personas y animales.

Palabras clave. Agua de lloro, hojas, mosto, vinagre, Vitis vinifera L. subsp. sylvestris (Gmelin) Beger & Hegi.

Fig. 1. Exemplar of wild grapevine in river-bank forest.

INTRODUCTION

From the Iberian Peninsula to Afghanistan (Hindu Kush mountain-range) and the African Maghreb areas, only one type of Eurasian wild grapevine is found in the natural ecosystems, mainly in colluvial positions, as river-bank forests. Its scientific denomination is Vitis vinifera L. subsp. sylvestris (C.C. Gmelin) Beger & Hegi (Morales & Ocete 2015). It is a fundamentally dioecious liana climbing through its tendrils on bushes and trees of the accompanying vegetation (Fig. 1). This subspecies constitutes the parent of the current vineyard cultivars. These last ones are mostly hermaphrodites and belong to the subspecies Vitis vinifera L. subsp. vinifera [=V. vinifera subsp. sativa DC. ex Hegi] (Morales & Ocete 2015).
Those cultivated vines were selected by man since the Neolithic period from hermaphrodite specimens that appeared by mutation in natural habitats of the cited wild Vitaceae. However, humans observed that these plants exhibited a higher level of fruit set, given their power of self-fertilization, than that of the female plants that needed the contribution of pollen grains from more or less distant male specimens. For this reason, branches of hermaphrodite vines were selected in order to carry out the first plantations outside natural habitats (Forni 2006, 2012).
Wild seeds from female vines are morphologically different from cultivated ones. These are more elongated with longer peak. There are several morphometric indexes to distinguish both kind of pips, which can be conserved in archaeological findings, such as Stummer (1911), Logothetis (1974), Mangafa & Kotsakis (1996), Terral & al. (2010) and Orrù & al. (2013).
At the moment, southern Caucasus constitutes the first and main focus of domestication and the cradle of the viticulture. Concretely in the tell of Shulaveri Gora, Republic of Georgia appeared the first domesticated seeds and ceramic recipients that have contained must or wine dated about 8000 years B.P. (McGovern 2003, Chilashvili 2004).
During quaternary glaciations, the Eurasian wild grapevine took refuge mainly in the aforementioned area of the Southern Caucasus ridge and also in some areas of the Mediterranean basin (Huglin 1986, Lehmann & Böhm 2011).
In the case of the Iberian Peninsula, following the references included in Iriarte-Chiapusso & al. (2013), fossils of pollen grains have been found in Atapuerca site, Burgos, Castile and Leon Community, at the TD7 level, whose chronological ascription is located on the limit of the Lower and Middle Pleistocene (García-Antón 1989). They were also found in El Padul peat bog, Granada, Andalusia, located at the foot of the Sierra Nevada mountain-range, at levels of the middle and upper Pleistocene (Florschütz & al. 1971), as well as during the most recent phase of the Pleistocene. In the last glacial period (Würm), the wild vine was present in different peninsular areas, both in contexts inhabited by Neanderthals, Homo neanderthalensis, as in Abric Romaní, Barcelona province, Catalonian Community (Burjachs & Juliá 1994) and, later, by Cro-Magnons, Homo sapiens, in Cova de les Malladetes, Valencia province, Valencian Community (Dupré 1980).
In the Holocene, the presence of grapevine pollen is found both in the Basque country, within Biscay province (Iriarte-Chiapusso & al. 2004), and in Andalusia, in the Laguna de Las Madres, Huelva (Stevenson 1985). It should be noted that these two locations are very close to certain current relic populations of wild grapevine which are conserved in both geographic protected areas: Urdaibai

Biosphere Reserve, Basque country and Doñana National Park, Andalusia. Berries were used as human food at various periods, from the Paleolithic (Rivera & Walker 1989) up to the last Spanish civil postwar, after 1939 (Ocete & al. 2007).
The presence of seeds of wild grapes is frequent in burials ranging from the Bronze Age in the Argaric Culture of eastern Andalusia to the Early Christian period of the capital of Roman Lusitania, Mérida (Hopf 1961, Torres-Vila & Mosquera Müller 2004).
The wild grapevine was called labrusca by Virgilius (1st century), a voice that has been preserved in Romance languages such as Spanish, Portuguese and Italian and under the name of labrusque in French. In Spain is popularly known as vid silvestre in the majority of the regions. In Andalusia also as parrón bravío or parrón moruno, in Montes de Toledo as parreña (Blanco 2002), in Extremadura as parra soteña (Blanco & Cuadrado 2000) and as uvas soteñas in Albacete (Verde & al. 1998: 342). In the Basque country as uvillas, zozo mahatsa and basamahatsondoa. In Catalonian community as llambrusca, parra llambrusquera and vinya (Morales & Ocete 2015). On the other hand, Clemente y Rubio (1807, 1879) gave two different names to both wild types of grapevine growing in La Algaida, a natural habitat situated between the town of Sanlúcar de Barrameda and the mouth of the Guadalquivir river, Cádiz province, Andalusia. One of them was virgiliana, dedicated to the memory of Virgil (Fig. 2). The other garabatona, derivated from garabato, a word from Arab origin (scribble in English), due to the high sinuosity of the leaf margin (Fig. 3). The parra silvestre in the Sierra de Cazorla, Jaén province, has also the name of parra garabateña that agrees with the name that Clemente employed 200 years ago (Fernández Ocaña 2000: 384). In Portugal it is known as videira brava, videira selvagem and parreira.
The little berries of the wild bunches have been collected and eaten, at least in Sierra de Cazorla, Jaén, the Siberia region of Extremadura and in the Montes de Toledo (Fernández Ocaña 2000, Blanco & Cuadrado 2000, Blanco 2002).
Wild grapes have been also used as wine additives. Quer & Gómez Ortega (1784) indicated that wild grapes and flowers were used as preservatives of the wine made with cultivated grapes. They wrote: “The berries from wild grapevine have an astringent metallic flavor, these ones and male flower bunches are usually mixed with the must to communicate a longer duration to the wine, and a certain rasping flavor, pleasant to the taste and conforting to the stomach”.
Wines of that age, without the addition of potassium metabisulphite that is made nowadays, with a possible high volatile acidity, were camouflaged due to cause a pleasant stomach sensation. Male flowers (Fig. 4), which have a very pleasant smell, gave to the wine a fruity aroma. This procedure was also used in Southern Caucasus, concretely in Azerbaijan (personal communication of Bugar Salimov).
The juice of unripe grapes is known as verjuice in English, and agua de agraz in Spanish and has been traditionally consumed. Female wild vines produce almost in the totality of the populations small bunches with dark-colored berries, although their flesh is not colored. The maturation of the berries is quite irregular in each bunch, so the resulting must has a rather high acidity, given the high content of malic and tartaric acids (Ocete & al. 2011b) (Fig. 5). It also contains sugars, such as glucose, sucrose and levulose, various vitamins, mineral salts, flavonols (quercetin, kaempferol and myricetin) and some anthocyanin pigments from the skin (Velasco & Lavin 2007). Some of the aforementioned flavonols seem to act as antiplatelet agents, interesting for the prevention of atherosclerosis and stroke (Ruiz-León & al. 2019). This must further contains proteins, B1, B2, B6 and C vitamins, panthothenic and nicotinic acid, as well as C, K and Na (Pour, 2008).
In Arnold (2002) there is an interesting German reference of Bock (1546) pointing out that in the Rhine Basin, this must directly or mixed with milk and sugar, in which case it was called Syrupus agrestae, was used for the treatment of epileptic seizures.
Homemade vinegar production from wild grapes was a fairly widespread practice in Sierra Morena mountain-range, Córdoba and Jaén provinces, in Sierra de Cazorla, Segura y las Villas Natural Park, Jaén province and in Sierra de Cádiz up to the end of the last century, according to our live experiences; also in the Montes de Toledo (Blanco 2002). For this aim, grapes were laid in the sun squeezed with the skin in a clay vessel. It should be borne in mind that this derivative from wine has been an outstanding food preservative together with sodium chloride (halite) from the antiquity to present days (Ocete & al. 2018).
Up to present time, the only chemical profile of this vinegar was reported by our group, elaborated with grapes from a population situated along the Iregua river and the national road 111, in La Rioja region (Ocete & al. 2011a). This condiment had particularly good organoleptic characteristics, according to an expert tasting panel from the Departamento de Nutrición y Bromatología belonging to the Faculty of Pharmacy of the University of Sevilla. The concentration of acetic acid is low, 3.5 g/100 ml, given

Fig. 2. Virgiliana (Clemente y Rubio, 1879). Fig. 3. Garabatona (Clemente y Rubio, 1879).

the low content of sugar in the berries. The dry extract is around 1.8 g/100 ml. The total poliphenol index is about 1200. Color depends mainly on the concentration of monomeric anthocyanins and phenolic compounds, such as gallic and caftaric acids.
Volatile compounds are very diverse, with the presence of 42 belonging to different chemical groups. In the analysis only the unique compounds and those that appear in higher concentrations inside each group are indicated, such as: aldehydes (mainly acetaldehyde), acetal (only acetaldehyde diethylacetal), ethylesters (mainly diethyl succinate), ketones (only aceton), lactones (only butyrolactone), phenols (mainly 4-ethylphenol), acetic esters (mainly isobutylacetate), alcohols (ethanol, furfuryl and 1-xexanol) and acids (mainly hexanoic acid).
Besides fruits, other plant parts have been also used. Wild branches, given their great flexibility, were historically used for the manufacture of strings, such as those used by the Spanish Navy (Quer & Gómez Ortega 1784). In the Montes de Toledo straight stems were used to produce crooks (Blanco 2002). Wild grapevines have also been used in Spain and other countries as natural rootstocks since they are very well adapted to the terrain (Zimmermann 1958, Verde & al. 1998, Fernández Ocaña 2000, Aceituno-Mata 2010).

Their exudates have been also used. After the fall of the leaves in autumn and winter rest, when the soil temperature reaches around 10°C and other climatic factors are activated, the roots begin to absorb water and nutrients from the soil. This flow of root pressure is directed towards the branches. If an intentional cutting of the same occurs, the so-called weeping (or bleeding) stage begins, prior to the development of the buds (Reynier 1989). According to our observations in natural habitats, this xylem sap exudation is quite copious in the case of wild vines, settled in soils with great water availability, such as riverside forests or areas with very shallow water tables. When cutting a branch, the drops of the fluid appear (Fig. 6).
During this process, the starch is broken down into lower molecular weight sugars and cellular respiration phenomena are reactivated. Depending on the location of the vines, the composition of the weeping can vary, as well as its pH. Apart from the aforementioned sugars, it contains amino acids, various cations, such as Ca, Fe, K and Mg, as well as tartaric acid and salts derived from it, mainly (Hidalgo 2002).
The crying is interrupted because colonies of bacteria and fungi begin to develop in the cut areas, plugging the wounds of the xylem vessels (Hidalgo, 2002).
Several uses of wild grapevine, including medicinal ones,

Fig. 4. Male plant at flowering time.

were also substituted by uses of cultivars of cultivated grapevine in traditional peasant communities, as shown by Jordán (2005).

Genetic researches indicate that there were some secondary centers of domestication of wild grapevine belonging to the Mediterranean areas (Arroyo-García & al. 2006, Cunha & al. 2010, De Andrés & al. 2012). Introgression of wild grapevine into close vineyards provokes the development of new varieties in secondary domestication centers (Riaz & al. 2018, D´Onofrio 2020).

At present time, the wild grapevine constitutes a threatened plant genetic resource, due to human impacts on the wild populations with the cleaning of riversides, their natural habitat (Ocete & al. 2007, 2015). There is a great interest to develop new grape cultivars, due to problems derived of drastic genetic erosion in vineyards into the actual framework of climatic change (Anderson & Aryal 2017). In the majority of European countries, including Spain, there is a lack of a legal figure of preservation of this wild grapevine, according to the conclusions of the COST Action 1003 (Viticulture): East-West collaboration for grapevine diversity exploration and mobilization of adaptive traits for breeding (Ocete & al. 2015).

The aim of the present paper is to record the dispersed information about traditional medicinal uses of the wild grapes organs and fluids in the Iberian Peninsula in order to highlight its health benefits and to promote its biocultural conservation.

Fig. 5. Ripe bunch of wild grapes.

MATERIAL AND METHODS

As a starting point, an exhaustive revision of the Spanish literature from the 16th to 21st centuries on wild grapevine in Spain was carried out. Some of the references were included in Ocete & al. (2011b), a general preliminary paper on the traditional uses of this plant, as fruit food, rootstock, fishing pots and wine production among others.

At a later stage, an investigation in several archives of different localities was carried out from 1992 to the present day, in particular: Biblioteca Nacional, Real Jardín Botánico, Universidad de Sevilla, Real Chancillería de Valladolid, Archivo Histórico de Euskadi, Archivo Histórico de Durango, Archivo Histórico de Prado del Rey, Archivo Histórico de Villamartín, Archivo Histórico Provincial de Cádiz, Archivo General de la Casa de Medina Sidonia, Archivo Histórico Provincial de Cáceres, Archivo Histórico de Badajoz y Archivo General de Extremadura in the Spanish case and, on the other hand, Biblioteca Geral de la Universidad de Évora, Convento de Nossa Segnora da Graça (Évora), Arquivo Histórico de Porto, Universidade Tras os Montes, Palacio do Conde de Vimioso in Portugal. Likewise, the study was complemented with an intensive inquiry to historians, anthropologists and health personnel, where eleven of them as personal communications are cited in the text. Many countryside old people from different regions of Spain and Portugal, where some populations of wild grapevine are still conserved, are interviewed. The number of interviews was 270 people in Spain and 186 in Portugal in a long time, but many of these have had little results.

Finally, the most representative chemical components of these

Fig. 6 Bleeding water of wild grapes

products have been consulted in treaties on pharmacy, medicine, viticulture and oenology in order to check if traditional uses have been pharmacologically validated.

RESULTS AND DISCUSSION

The main historical references containing medical applications of wild grapevine are Laguna (1570), Quer & Gómez Ortega (1784), Font Quer (1961), Bustamante (1971) and Hidalgo (2002). They were completed with Dioscorides (1st century) and Bock (1546).
Laguna (1570) did this comparison between wild and cultivated grapevines: "Just as the villains and the rustic people differ from those who live in the cities in nothing substantial, only for their very wild customs, for having been raised without discipline, neither does the wild grapevine differ from the domestic vine, not for any other reason, but because this last one was cultivated by the hand and industry of men and that one was born and grew by itself…".
He indicated that the medicinal characteristics of wild grapevines, except in the case of the must, are superior to those of cultivated ones, mainly male plants, which flowers that do not develop grapes are called enanthe by Dioscorides (1st century). This medical doctor of Greek origin who served in a Roman legion in Neron's time wrote literally: "Therapeutic faculties are much more effective in labrusca, and mainly that which produces the enanthe, than in the cultivars."
Fig. 7 represents the locations of traditional pharmacological uses of wild grapevine compiled in the Iberian Peninsula.

Bleeding water of grapevine
This fluid has aperitif and diuretic actions when is drunk. It has been also applied as an eye drop to combat conjunctivitis and keratitis in persons and domestic animals (Sintes 1977). So, Quer & Gómez Ortega (1784) reported: "From the grapevine, both wild and cultivated, various uses are made in medicine. The water that naturally loose or cry in the spring, is aperitif, diuretic and good for the eyes, for whose diseases some keep them".
According to our research, there is memory on the use of this sap against eyes disorders up to 1940-1950 in the Eastern coast of Asturias (along the Cantabrian sea) and around the Matarraña river, near to the Parrizal de Beceite, Teruel province, Aragón. It was also used up to the same date along the Asón river basin and in Santoña, Cantabria and around Montnegre coastal mountain–range, belonging to the Maresme, Barcelona province, Catalonian community. Here, after Phylloxera infestation at the end of the 19th century, sometimes the bleeding water was taken not only from real wild vines but also from some other feral Vitaceae, cultivars and plants from American origin, root-stocks and direct producer hybrids (French hybrids) (personal communication of Pep Panon).

Verjuice or agua de agraz
Agua de agraz has been used for its toning and liver cleansing properties (Font Quer 1961).
In the registry of the Real Chancillería de Valladolid, Castile and Leon, there is a document entitled Noticia Histórico Corográfica del Muy Noble y Real Valle de Mena, dated in 1796, where is written: "Many vines are found in the mountains and on the sides of roads and rivers and their fruits are very good for "agua de agraz" (verjuice)".
As indicated by Quer & Gómez Ortega (1784), verjuice was used to alleviate digestive diseases, saying: "The unripe grapes or "agraces", and their juice serve to refresh and restrict, excite the appetite, lower the burning of fever, and restrain the diarrheal episodes".
Pure or with added water, verjuice was used in Mena and Angulo

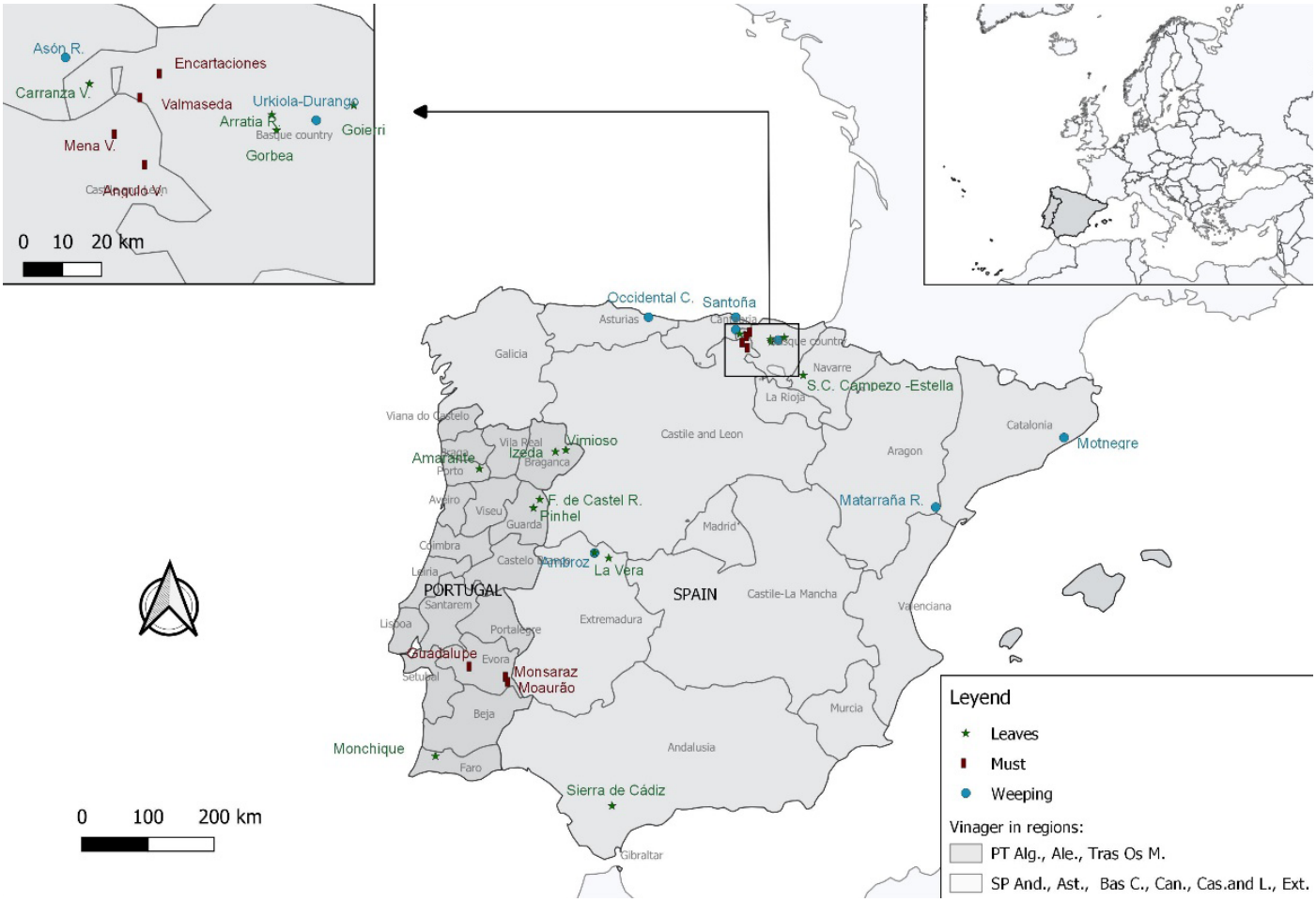

Fig. 7. Location of traditional pharmacological uses of wild grapevine compiled in the Iberian Peninsula

valleys, Burgos, Castile and Leon region, up to the end of the decade of 1960 (personal communication of José Bustamante). Following the downstream of the Cadagua river, it was also consumed in the area of Las Encartaciones, Biscay, Basque country, mainly between the town of Balmaseda and the border with the cited Mena valley. The surroundings of the famous beret factory museum "La Encartada" were visited by local population to pick wild grapes growing in the forest of Cadagua river up to 1950–1960 (personal communication of Javier Otaola).
In Portugal, old people have memory of the cited use, up to the last cited decade, in Guadalupe, Monsaraz and Mourão, Alentejo region. In the last locality most of the wild grapes collected belonged to the Ribeira das Vinhas population, today covered by the water of Alqueva reservoir.

Vinegar
This wild grape vinegar was used to clean and disinfect wounds of people in countryside areas of Andalusia, Asturias, Basque country, Cantabria, Castile and Leon and Extremadura, approximately up to 1950. The same use was cited inside Portugal, in Algarve, Alentejo and Tras Os Montes it was used up to 1940–1950 (personal communication of Luis Whyton da Terra). The vulnerary use for cattle was registered up to the mid–1990s in the Andalusian Sierra de Cádiz (personal communication of Francisco Guerra).

Leaves
Crushed leaves of wild grapevines were used in cataplasm for wounds in the Sierra de Cazorla, Jaén province (Fernández Ocaña 2000) and for wounds and heavy menstruations in the Ambroz river valley and La Vera geographical area, Cáceres province, Extremadura, before the Spanish Civil War (1936-1939), where also the dried leaves were ground to be snorted to stop nosebleed (personal communication of Fernando Forero). According to our inquiry, the cited cataplasms were used in Portugal also up to 1960 approximately, around the municipalities of Monchique, Algarve region and along Sabor river, in the localities of Vimioso and Izeda, Tras os Montes. Similar information and sometimes to control diarrhea were found along the Ega river, from Santa Cruz de Campezo, Álava, Basque country to Estella, Navarra (personal communication of Fernando Andrés) and several caseríos (isolated farms) of other territories in the Basque country, mainly the Goierri area, Guipúzcoa province (personal communication of José Luis Martínez de Salinas). Leaf extract obtained by macerating ground leaves with water were used, up to the last postwar period, to reduce leg swelling in older people in Carranza valley, around the Gorbea mountain and along the Arratia river valley, Biscay province, Basque country. Also, in caseríos situated around Urkiola and other parts situated close to the town of Durango belonging to the same province (personal communication of Juan Bilbao). A similar procedure was also used in Sierra de Cádiz, Andalusia to heal the wounds of fighting cocks up to 1960s.
In Portugal, the cited maceration was used up to 1940–1950 to alleviate the same human problems in As Beiras region, mainly along the Côa river, around Figueira de Castelo Rodrigo and

Fig. 8. Leaves with typical open petiole sinus.

Pinhel villages. A well-preserved population of wild grapevine, where leaves were collected for that aim, was situated in Foz do Rego da Vide, close to rock engravings from the Paleolithic to the Chalcolithic. The same use was practiced in Amarante and Entre Os Ríos in the Northern region (personal communication of Domingo Rocha Mendes). Boiled water with the leaves is good for the liver and was used in Sierra de Cazorla (Fernández Ocaña 2002).

All these leaves uses are consistent with known phytotherapeutical effects of domestic grapevine leaves, especially of the red varieties, which contain tannins with astringent effect, and abundant flavonoids (riboflavin) and anthocyanin pigments, as well as various vitamins (e.g. folic acid), and Ca, Cu, Fe, Mg and Mn, which give their protective action on blood capillaries and haemostasis (Ortiz 2004, USDA 2013) (Fig. 8). The grape vine leaves are also a source of nutrients such as vitamins A, B6, C, E, K, Fe iron, fiber, folic acid, as well as Ca, Cu, Mg and Mn, and substances such as niacin and riboflavin (Bárcena & al. 2014). According to Ortiz (2004), grapevine leaf extracts reduce edema in patients with chronic venous insufficiency. This is a condition characterized by difficulty for the veins to return blood back from the legs to the heart (Martínez de Anguiano 1866). When venous blood return is compromised, the increase of hydrostatic pressure into the vessel provokes interstitial edema, resulting in ankle and leg swelling. According to the information gathered on phytotherapeutical uses in Ortiz 2004 and USDA 2013, crushed leaves of domestic grapevines as well as their extracts (decoction, infusion) have been used in the following cases:

-Venous circulatory conditions: hemorrhoids, chilblains, varicose veins, tired or swollen legs due to disorders of capillary permeability. It is one of the most active plant remedies against these conditions (Ayuso 2003; Bruneton 2004).

-Bleeding: especially useful in menopausal disorders, to prevent frequent blood loss; also, in case of hypermenorrhea (too abundant menstruations); as well as to normalize the menstrual cycle in dysmenorrhea (irregular or painful periods). It stops epistaxis (nosebleeds) if it is applied directly, sucking the dust from the crushed dry leaves, in addition to drink its infusion (Ortiz 2004).

-Gastroenteritis, chronic diarrhea and especially dysentery with bloody stools, due to the astringent and anti-hemorrhagic effect they have (Ortiz 2004).

CONCLUSION

The medicinal use of these products obtained from the wild grapevine and known from the Classical Greek period has continued in the Iberian Peninsula practically until the middle of the last century in isolated rural areas. However, historical references are very scarce and the memories on these uses are already very diluted due to the abandonment of the use over the years. This paper highlights the tremendous erosion of the traditional knowledge about this very relevant plant genetic resource. Promoting the in situ and ex situ conservation of this knowledge

may help to enhance the social interest in this threatened plant genetic resource.

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