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Nerium oleander L., a circum-Mediterranean study of the etymological, ecological, historical, mythological, and ethnobotanical roots of its vernacular names

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Abstract

Background *Nerium oleander* is one of the most famous poisonous and horticultural plants of the Mediterranean, as well as in other regions of its distribution. In many cultures, oleander is associated with poisoning, simultaneously symbolizing beauty and evil. Due to its unique properties and large showy flowers, this plant has many names in various languages.

Methods This paper presents an attempt to reconstruct the historical, ethnobotanical, and etymological roots in 23 languages of 180 vernacular names of *Nerium oleander* around the Mediterranean. We used the plant's morphological data, myths and legends about it, its chemical properties and uses, as well as historical evidence and ethnobotanical data, to explain the meaning, origin, migration, and history of the plant's names.

Results The languages with the highest number of names are Turkish (30), followed by Italian (21), Greek (20), Catalan (16), Arabic (15), Spanish (14), and French (13). The remaining 14 languages collectively account for 51 names. These names were categorized as follows: Derivatives of 'generic' names: *Nerium*, oleander, and *difla / arodafne* (25 names in 14 languages); names referring to morphological characteristics, color, and odor (11 names in 5 languages); names referring to similarity to other plants (51 in 14 languages); names related to taste, chemical constituents, and their uses and effects (53 in 16 languages); names related to religion and local saints (12 in 7 languages); names related to habitat and places (11 in 8 languages); names falling outside the above categories or unexplained (16 in 8 languages).

Conclusions The distribution of these names across languages and categories reflects *Nerium oleander*'s toxicity, similarity to other plants, historical distribution, and to a lesser extent—its specific habitat and traces of cultural migrations. Some names preserve evidence of extinct past uses.

Keywords Apocynaceae, Plant names, Etymology, Phytonymy

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Introduction

Hunn and Brown [1] have already surveyed the implications of linguistic ethnobiology, stressing the importance of common plant names and noting their influence on the typology of biological names, their descriptive value, the metaphorical associations they evoke, and the role they play in preserving words from long-extinct languages. Various studies have examined the linguistic, anthropological, and logical aspects of folk taxonomy (e.g. [2–8]).

Gledhill [9: 1–2] noted that 'Common plant names present language at its richest and most imaginative… Local variations in common names are numerous and this is perhaps a reflection of the importance of the plant in general conversation in the kitchen and in herbalism throughout the country in bygone days '.

Some names refer unequivocally to a specific plant species (monosemic names), while other names can be used for different plants (polysemic names). The proliferation of names for individual botanical species is related to a variety of factors: the geographical range of the plant and languages spoken in its area, the ethnobotanical value as a ritual and/or medicinal plant, its strange appearance or resemblance to familiar objects, etc. For example, *Cyclamen persicum* Mill. has no less than 30 names in Arabic, most of which reflect its unusual flower form [10, 166–171]. *Pistacia terebinthus* L. has a variety of names throughout Greece, which probably reflects the importance of this plant for the local societies [11, 12]. Functionality, however, is no guarantee of name diversity. Consider the olive tree, which in the Mediterranean is both omnipresent and widely used, yet is known simply as the 'olive tree '. In the same way, some plants ' names are quite similar in the different languages of the places where they grow, for example, as Vallès [13] pointed out, *Potentilla reptans* L. is called 'five fingers-herb ' (or names containing the words five, fingers, hand or foot) in English, French, Spanish, Portuguese, German, Russian, Greek, Romanian, Polish, Lithuanian, Catalan, Basque, and Chinese, due to the leaf morphology.

A few studies have conducted a multilingual comparison of the same plant species to understand its performance, perception, and use across its area of distribution. Flattery and Swartz [14, 141–152] studied the identity of the mythical 'Haoma ' plant, which plays an important role in Zoroastrian worship. Šeškauskaitė and Gliwa [15] studied the etymology of *Datura stramonium* L. and related narcotic species in Lithuania. Austin and Felger [16] studied the etymology of the genus *Fagara* (Rutaceae), from its first written record in the eleventh century through to the present day. They employ historical, economic, geographic, linguistic (in several languages) and ethnobotanical approaches to understand the origin of the plant and its economic trade route. Austin [17] studied the history and etymology of the genus *Sambucus* to reveal the history of the intercultural exchange of this plant and the evolution of its name. Dafni et al. [18, 19] reconstruct the etymological, ethnobotanical, and folkloristic roots of the vernacular names of *Ecballium elaterium* (L.) A. Rich [18] and *Mandragora officinarum* L. [19]. They use the plant 's morphological data, ecological characteristics, medicinal properties and uses, examining myths as well as historical evidence and ethnobotanical data, to explain the meaning, origin, spread, and history of these plant names.

In this paper, we focus on the vernacular names of the oleander (*Nerium oleander* L.), a well-known toxic, ornamental, and useful plant belonging to the family Apocynaceae. Our analysis centers on the etymological, ecological, mythological, historical, and ethnobotanical origins of these names in all available languages spoken around the Mediterranean basin.

The genus *Nerion* was first established by Tournefort [20, III:304) and was later adopted by Linnaeus as *Nerium* [21, I, 209]. Today, it is considered a monotypic genus [22: 57, 23: 2], comprising a single species, *N. oleander* L. The species has no fewer than 47 botanical synonyms [24], the main ones being *N. indicum* Mill., *N. odoratum* Lam., *N. odorum* Sol., and *N. verecundum* Salisb.

Nerium oleander L. is distributed naturally from the Mediterranean to Central and South East Asia. It habitually grows in stream beds, from sea level to 1500 m (although its ecology is variable given its wide distribution area), but it has also been widely cultivated and it is currently naturalized in tropical, subtropical, and temperate regions (Asia, Europe, N and S America; [23]). It is well-known that the plant is extremely poisonous. It contains many glycosides, some of which have proven medicinal properties and most of which are highly toxic. One of these compounds, oleandrin, is particularly known for its strong effect on the function of the heart [25–27]. In fact, some have explicitly declared that 'the oleander is one of the most poisonous plants known to man ' [28: 99]. Due to the high toxicity of the oleander and its rapid effect (depending on the dosage), it has been used throughout history against people, in suicide, and for pest control [26]. Therefore, there is no surprise that the medical and criminological literature is replete with references to oleander [29]. It is also no wonder that it is included in the list of poisonous plants used as a 'botanical weapon ' [30: 114], as well as in the fundamental textbook on forensic medicine and toxicology, in the section on cardiotoxic poisons [31: 673].

Research questions and goals

This study provides a multilingual comparison of the common names of *Nerium oleander* across the Mediterranean region in a broad sense, i.e., covering also Middle East. Names in languages outside the Mediterranean

basin were omitted deliberately, particularly those in languages from China, India and Central, Eastern and Southeastern Asia, as Hindi, Urdu, Mandarin, Cantonese, Indonesian, Thai, etc. By examining the plant 's morphological traits, ecological characteristics, medicinal properties, and uses—alongside historical evidence and ethnobotanical data—we explore the meaning, origin, spread, and history of its various vernacular names.

The study aims to:

1. Demonstrate how the plant 's morphological features, chemical properties, uses, and ecological demands are reflected in its diverse vernacular names across the various Mediterranean languages.
2. Trace potential interlingual or cultural migrations of names and identify their putative origins.
3. Identify names that reflect local traditions and their ethnobotanical background.

Materials and methods

Data gathering and possible pitfalls

Popular names were collected in as many Mediterranean languages as possible, around the Mediterranean, through literary reviews (including local and national floras), dictionaries, the authors ' personal knowledge, and—rarely—in internet sources (where the plant 's identity was not doubtful). The names were checked by us to ascertain their validity and their meaning in each language, as possible. Names clearly related to plants other than oleander were discarded. All remaining names were carefully examined for validity, based on the authors ' personal expertise. Given the wide historical and geographical spread of Arabic, we also indicate the country of origin for each name in that language. This not only reflects linguistic diversity but also provides historical context—for instance, Arabic is no longer spoken in Spain, although many Arabic plant names were once used there.

Considering the validity and reliability of the names used for oleander in the various languages, we tried to look out for, and avoid, the following possible pitfall: Many names for oleander are not related to or did not originate in the Mediterranean (e.g. [23, 32, 33]), thus they were not included in our survey. This applies, for example, to specific South American names for the plant in Spanish or Portuguese. In some countries and languages, *Thevetia peruviana* (Pers.) K. Schum. is also called 'oleander ' [34, 35] or 'yellow oleander ' (e.g. [36]). Thus, it is important to check only primary sources which indicate full scientific names and to avoid a general list of names unless these names are validated. We have to account for the fact that the species has many cultivars [22: 57, 37] and some names are related to specific cultivars and not to the whole species.

In the literature, especially in translations of Dioscorides [38], several 'vernacular ' names were given to the plant, but they are translations from Greek or Latin rather than true popular names.

Data presentation

Spelling variants (hereafter SV) of the same name were pooled into the same cell in the tables and counted only once. To avoid repetition, we cited each author only once in the relevant cell even if they present several SVs. This method had no influence on our analysis and conclusions. In practice, distinguishing between a 'derivative ' (i.e., a name originating from a generic name: oleander, *nerion* or *difla*) and a 'spelling variant ' is sometimes quite arbitrary.

The names were categorized based on linguistic and ethnobotanical aspects into the following groups.

A. Derivatives of 'generic ' names: *nerium* (A1), *oleander* (A2) and *difla / arodafne* (A3)
B. Morphological characteristics, colour, and odour.
C. Similarity to other plants: rose (*Rosa* spp., C1), laurel (*Laurus nobilis* L., C2), hellebores (*Helleborus* spp. and *Veratrum* spp., C3), cassia (*Cassia* spp., C4), barley (*Hordeum* spp., C5) and chaste tree (*Vitex agnus-castus* L., C6).
D. Names related to taste, chemical constituents, uses, and effects: related to bitterness and toxicity (D1), to medicinal uses (D2), to ethnoveterinary applications and pest control (D3).
E. Names related to religion (E1) and local saints (E2)
F. Names related to habitat (F1) and places (F2)

NC. Names which are not classified into any specific category.

EU. Unexplained names, most of which appear in secondary sources.

A few names may fit into two categories. In these cases, we decided on the category according to relevance in the original text (e.g. *belladonna* could be classified under both 'relation to toxicity ' and 'similarity to another plant ' categories). Due to the vastness of the geographical area where Arabic is spoken, for this language only we have indicated the countries or areas where each of the names apply.

Results and discussion

We recorded 180 distinct names (excluding derivatives and spelling variants) for oleander across 23 languages (Table 8). The languages with the highest number of names are Turkish (30), followed by Italian (21), Greek (20), Catalan (16), Arabic (15), Spanish (14), and French (13). The remaining 16 languages collectively account for 51 names (Fig. 1). For 6 languages (Albanian, Amazigh,

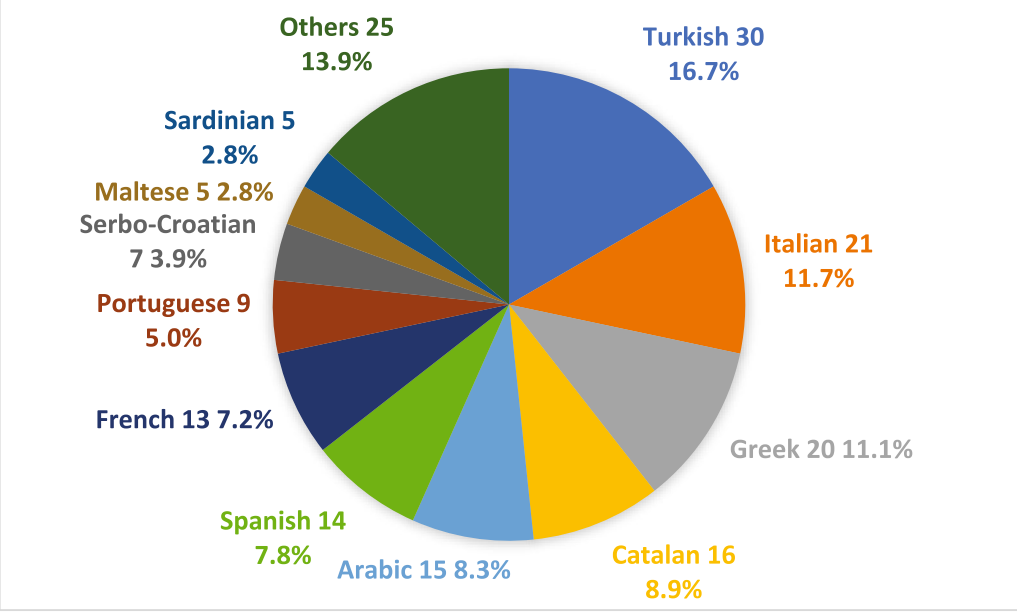

Fig. 1 Distribution of names and percentages according to languages

Aramaic, Azeri, Basque and Hebrew), we gathered just one vernacular name for the plant. In these languages, and those with 2 (Corsican) the low amount is possibly due to the not particularly high number of speakers. Notably, despite the vast expanse of the Muslim world, relatively few names for oleander have been found in Arabic, with only 15 documented. The historical expansion of the Muslims appears to have facilitated the widespread migration of plant names across large regions, enabling terms like *difla* to enter European languages.

Turkish, in particular, has an exceptionally large number of plant names (30). This abundance can be attributed to Turkey 's variety of naming conventions influenced by regional differences [39: 273, 40: 8–9]. It is noteworthy that a few languages with a moderate number of speakers, such as Catalan or Greek, there are a high number of names.

A. Derivatives of 'generic' names

Three 'generic ' or general names are the most frequently used to designate the plant in several languages: *nerium*, oleander and *difla / arodafne*. Seven names in six languages derived from *nerium*, while oleander and its numerous local variations appear in nine languages (Table 1). Names originating from *nerium* and oleander are primarily found in Western Europe, and can be currently considered cultisms. In contrast, derivatives of *difla* and *arodafne* (found in eight languages) are associated with regions that have experienced past or present Muslim influence. All sources, names in the original languages and their transcriptions and main variants can be found in Table 1.

A1. Etymology and derivatives of nerium

Two different hypotheses could explain the etymology of the name *nerium*.

1. The name *nerion* used by Dioscorides [38: 4–82] to indicate the oleander. This name supposedly derived from the Ancient Greek *naros* (flowing, running), referring to the natural habitat, such as riverbanks and stream edges, where the oleander grows. The Sardinian names *neulaghe, neulache, neulagi* might derive from a dialectal variation of the name for oleander, possibly from the word *nerion*, with suffixes like *-laghe* or *-lagi*, which often indicate areas characterized by water or humidity. This suggests that the name is a derivative of *nerium* (see above), combined with an indication of the plant 's natural habitat [83: 89–92]. The name *lannaxi* and its derivatives, seem to stem from the same linguistic root. Alternatively, the generic name for oleander may refer to an ancient pre-Latin or Latin root related to water (*lau-* or *leu-*), possibly referencing humid areas [84: 112].
2. The sea-god Nereus. The name could be derived from the Greek *nerion* which supposedly refers to the Greek sea-god Nereus and his daughters, the Nereides. The Ancient Greeks maintained holy forests of oleanders and decorated altars with their blossoms to honour the Nereides [23: 5].

A2. Etymology and derivatives of oleander

Again, we found different hypotheses for the origin of oleander.

Table 1 Vernacular names of oleander that originated from generic terms

Language	Name	Original transcription	Translation or comments	Selected references
A1. *Nerium*				
Greek	*[Nerion]*	Νήριον	See text	[23: 13, 41, IH:258, 43, 699–700]38: 4, 81, 1, 1,
French	*Nérion*			[45, 773, 46, 537, 48
French	*Nérion laurier-rose*		[Nerium pink laurel]	[23: 13, 49: 391]
Italian	*Nerio* (+ca 15 SV)			[50: 313]
Portuguese	*Nerio, Nério*			[23, 51, 52]
Sardinian	*Neulache, Neulaghe* (+5 SV)		See text	[50, 53–55]
Spanish	*Nerio, Nério*			[51, 52]
A2. *Oleander*				
Albanian	*Landër, Landrop, Leandri*			[56: 107, 57: 30]
Bulgarian	*[Oleander]* (+5 SV)	Олеандер		[58: 218]
Catalan	*Oleandre*			[59–61]
French	*Oléandre* (+5 SV)			[45: 773, 46: 10, 47: 537, 48: 46]
Greek	*[Leandros]*	Λέανδρος	See text	[43, 6, 2764–5, 62]
Italian	*Oleandero* (+ca 50 SV)			[50, 54, 63–6667: 32, 68: 132,]
Latin	*[Oleandrum]*	Ολεάνδρουμ		[38: 4, 81, 1, 2, 44: 699–700]
Maltese	*Olejandr, Oljandru*			[69: 18, 7071: 98]
Portuguese	*Loendro, Oleandro* (+ca 12 SV)			[51, 52, 72]
Spanish	*Oleandro, Oliandro, Oleander* (+6 SV)			[51, 5273: 233, 74: 185]
A3. *Difla / arodafne*				
Aramaic	*[Ardafni]* (+4 SV)	ינפדרא	From *arodafne* (Αροδάφνη) in Greek	[75: 130–131]
Arabic	*[Difla]* (+ca 20 SV)	دِفْلَى	See text	[76: 6, 77: 57, 78: 227, 79: 181]
Catalan	*Adelfa, Adelfo*		See text	[59, 66]
Catalan	*Biva, Diva, Bira*		See text	[51, 59, 80]
Hebrew	*[Hardúf]* (+5 SV)	הרדופ	From *arodafne* (Αροδάφνη) in Greek	[81]
Maltese	*Difla*		See text	[66: 18, 70]
Portuguese	*Adelfo* (+5 SV)		See text	[51, 52, 72]
Spanish	*Adelfa* (+ca 13 SV)		See text	[51, 52, 72, 8273: 10, 74: 185,]

1.The myth of Leander. According to the Greek legend, Hero, a priestess at the temple of Aphrodite in Sestos on the western side of the Dardanelles, fell in love with Leandros, who lived in Abydos. Leandros swam across the Dardanelles every night to Sestos to see Hero. One night he was drowned in a storm. Wild waves dashed his body against sharp rocks and left him lifeless on the white sands [85. Ovid 's *Heroides*, XVIII, Leander to Hero]. Thus, the name oleander could be a late derivation from the name of Leandros in Greek mythology.

The traditions that relate Leander to the plant oleander are recent and recorded from Turkey:

> *Young Leander was in love with a girl living on an isolated island in the Aegean Sea. He crossed the sea every night to see his lover. It was a stormy day when he again decided to go, but he drowned while trying to reach the island and died. Wild waves washed his body against sharp rocks and finally left it on the sand. The young girl was in sorrow and laid oleander flowers over his body. Since then, oleander flowers are the symbol of Leander 's endless love, and decorate the sea shore [86, 87].*

The current use of *leandros* for oleander is known from Greek only from Corfu, an island occupied by for a long time by Venice, thus probably a loan from Italian.

2. The name of the oleander is due to its leaves, which resemble olive leaves (*Olea*), but according to [268:58], 'Oleander has no connection with oleum, but is … a popular etymology from *rhododendron* or *lauro-dendron* ' (see also [88:433], and further below).
3. Oleander was derived from Greek roots meaning 'to kill ' (ὀλ, ὀλλύω, ὄλλυμι) and 'man ' (ἀνήρ,

ἀνδρός), because of the plant 's well-known toxicity [23: 5, 89: 133].
4. Oleander is derived from the Latin name for the plant, *lorandrum* [Dioscorides 38 4.811,1]. Isidore of Seville mentioned that the *rhododendron* is common was corruptly called *lorandrum*, because it has laurel-like leaves, and a flower like a rose [89, Isid. orig. 17,7,54). Over time, the link with the laurel may have weakened, and it was changed into oleander [90: 116, 91: 78,83, 92: 319]. The name oleander appears already in vernacular Latin in the late 14th [93: 36] or the fifteenth century [88: 433], but.

see but see [94: 28] as a variant of Medieval Latin. Hence the later oleander and its variants in European languages (e.g. [95:325, in Serbo-Croatian; 96:146; in French and Italian; 93:36, English]). Linnaeus established the species *Nerium oleander* much later [21: 290], presumable when oleander was already established as a vernacular name.

5. The origin is *'olere '* which is related to the 'poisonous vapours ' [97: 42 in 91: 83].

Table 2 Names related to morphological characteristics and odour

Language	Name	Original transcription	Translation and comments	Selected references
Farsi	*[Lurek]*	کرول	[An arc-like (bow) tool in cotton-beating] See text	Iran: Peyman Matin, pers. comm. 2.2.25) Iraq: [76: 6]
Greek	*[Aemostafis]*	αἱμοσταφίς	[Bloody resin] See text	[38: 4,81.11]
Greek	*[Phyllada]*	Φυλλάδα	[Big-leaved]	[42: IH:258, 6243: 2764–5, 44:699–700, 100: 32]
Italian	*Bell 'omo*		[Handsome man]	[50: 313, 53: 154]
Italian	*Fior d 'or, Sciù d 'or*		[Gold flower]	[50: 313, 53: 154, 101: VIII: 29]
Italian	*Erba puzza*		[Stinking grass]	[50, 313, 53: 154, 101: VIII: 29]
Portuguese	*Loendro de cheiro*		[Oleander of smell]	[102: 109]
Turkish	*Kan ağacı*		[Blood tree]	[40: 150, 103: 50, 104: 23, 105: 363]
Turkish	*Kanağısı, Kan ağısı*		[Blood poison]	[103: 50, 105106: 118]
Turkish	*Ağan ağacı, Ağın ağacı*		[Milky tree]	[40: 22, 107: 271, 108: 562]
Turkish	*Patlangeç, Potlağaç*		[Plant that pops] See text	[103: 50: 109: 867: 110: 71, 111: 54]

A3. Etymology and derivatives of difla /defla (Arabic)

Difla in Arabic and Maltese (as a Semitic language derived from an Arabic dialect) originated from the Greek name *dafne* [98: 531]. Because the leaves of the oleander resemble the laurel (*Laurus nobilis*); the Greek name of the laurel, *dafne,* passed into the Arabic *difla*. Hence the names *adelfa, adelfo* and similar in the Iberian Peninsula in Spanish, Portuguese and Catalan [80, 99, 24]. We presume that the Catalan *diva* (and its variants *biva*, *bira*) also derive from *difla*. In fact, *difla* is the most used common name for the plant from Iraq [76: 6] and Yemen [77: 57] to North Africa [78: 227, and was used in al-Andalus about the thirteenth century [79: 181].

B. Names related to morphological characteristics and odour

In plant vernacular names, those describing the morphology or other specific characteristic of the plant are very frequent. We have the poppy and the opium poppy, as well as the thyme and the lemon thyme. Eleven names were collected under this category in five languages (Table 2).

Three names, the Greek αἱμοσταφίς [bloody resin] and the Turkish *kan ağacı* and *kan ağısı* [blood tree, blood poison] seem to be related to the red colour of the flowers of some cultivars of oleander [112]. The names *bell 'omo* [handsome man] and *fior d 'or* [gold flower] may originate from the beauty of the flowers.

Although oleander has a sweet smell, the Italian name *erba puzza* [stinking grass] seems to indicate the distinct smell of the leaf. The Portuguese name *loendro de cheiro* [oleander of smell] seems to be related to some varieties previously named *Nerium indicum* Mill., which have stronger odours that the common ones [23: 6] The milky liquid flowing from injured plants gave the Turkish name *ağan ağacı* [milky tree].

The Turkish name *patlangeç* [plant that pops] might refer to the way that the fruit opens abruptly, revealing its feathery seeds. Another name in Farsi, *lurek* [an arc-like (bow)] seems to be related to the shape of the fruit, which resembles an arc-like tool used in cotton beating.

C. Names related to similarity to other plants

It is striking that no fewer than 51 names, across 14 languages, indicate relationships to seven other plant species, primarily laurel (23 names in 12 languages; see Table 3). In giving vernacular plant names, it is logical to

Table 3 Names related to similarity to other plants

Language	Name	Original transcription	Translation and comments	Selected references
C1. Rose, *Rosa* spp.				
Arabic	*[Ward al-ḥimār]*	ورد الحمار	[Donkey rose]	Iraq: [113: 19] Lebanon: [114: 317] Morocco: [115: 118] Palestine: [116: 175] Yemen: [77: 57] (Aden): [117: 58]
Arabic	*[Ward kaḏḏāb]*	وَرْد كَذّاب	[False rose (lit. liar rose)]	Saudi Arabia: [118: 98]
Catalan	*Fals roser*		[Fake rose]	[59]
Catalan	*Glòria rosa*		[Glory rose]	[119]
Catalan	*Roser*		[Rose]	[119]
Catalan	*Roser reial*		[Royal rose]	[51: 82]
French	*Rosage, Rosagine, Rosage d 'Europe*		Related to rose	[45: 773, 46: 10, 48: 46, 49: 381, 120: 275, 121: 341]
Italian	*Roseo*		[Rose]	[50: 313]
Catalan	*Roser-llorer,* *Roser de llor*		[Rose reminding of laurel]	[122: 82]
Greek	*[Rhododafne, Rodafne]*	Ροδοδάφνη / Ροδάφνη	[Rose-laurel]	[38: 4,81,1,1, 6241: 12,86,8, 42: IH, 258, 43: 6, 2764–5, 44: 699–700, 100: 32]
Greek	[*Dourafa*]	[Δουράφα]	A version of *arodafne*	[62]
French	*Rhododaphné*		From Greek	[47: 537]
Greek	*[Rododendron]*	ῥοδόδενδρον / ροδόδενδρον	Resembling both rose (flowers) and laurel (leaves)	[38: 4,81,1,1, 44: 699–700]
Latin	*[Rodandrum]*	ῥοράνδρουμ	See text	[38: 4,81,1,1]
French	*Rododendron de Pline*		See text	[45: 773: 46
Spanish	*Rododafne*		Greek origin	[74: 185]
C2. Laurel, *Laurus nobilis* L				
Arabic	*[Ġār wardī]*	غار وردي	[Laurel-rose]	Yemen (Aden): [117: 58]
Armenian	*[Dap 'nevard]*	Դափնեվարդ	[Laurel-rose]	George Fayvush, pers. comm., 10.12.24
Bulgarian	*[Lavra]* (+ 2 SV)	Лавра	[Laurel] See text	[58: 218]
Catalan	*Llorer bord*		[Bastard laurel]	[122]
Catalan	*Llorer de jardí*		[Garden laurel]	[82]
Catalan	*Llorer reial* *(SV: Llorer real,* *Llorer ral)*		[Royal laurel]	[59, 72, 123]
Catalan	*Llorer rosa,* *Llorer roser*		[Pink laurel]	[51, 59, 82124: 1]
Corsican	*Laurifiore*		[Laurel flower]	[125]
Corsican	*Laurier rose, Laurose* (+ 7 SV)		[Pink laurel]	[45, 126–12846: 10, 47: 537, 49: 381, 50: 24, 67: 32, 120: 275, 125: 129: 325,]
French	*Laurelle*		[Laurel]	[46: 10, 49: 381]
French	*Nérier à feuilles de laurier*		[Bay-leaf nerium]	[45: 773, 129: 325]
Greek/Latin	*[Laurorosa]*	Λαυρορόσα	[Pink laurel]	[38: 4,81,1,2]
Greek	*[Psorodafne]*	Ψωροδάφνη	[Scabby laurel]	[62]
Greek	*[Dafne agria]*	Δάφνη αγρία	[Wild laurel]	[130: IX,19,1]
Greek	*[Agriodafne /* *Ariodafne,* *Arodafne]* *(+ 4 SV)*	Αγριοδάφνη / Αριοδάφνη, Αροδάφνη	[Wild laurel]	Greece: [42: IH:258, 6243: 6, 2764–5, 44:699–700, 100: 32] Cyprus: [131: 97]
Italian	*Lauro roseo, Rosalauro*		[Pink laurel]	[50: 313, 67: 32]
Portuguese	*Loureiro rosa*		[Pink laurel]	[23, 51, 52]
Spanish	*Laurel cerezo*		Name used for *Prunus laurocerasus* L., probably used for oleander by confusion	[51, 72132: 54]
Spanish	*Laurel de jardín*		[Garden laurel]	[52, 74: 185]

Table 3 (continued)

Language	Name	Original transcription	Translation and comments	Selected references
Spanish	*Laurel de flor*		[Flower laurel]	[73: 52, 74: 185, 133: 62]
Spanish	*Laurel rosa, Rosa laurel, Rosalaurel*		[Pink laurel]	[23: 44, 51, 74132: 54]
Turkish	*Güldefnesi, Gül defnesi*		[Rose laurel]	[111: 54, 134]
C3. *Veratrum* and *Helleborus*				
Catalan	*Baladre* (+7 SV)		See text	[51, 59, 61, 135–137]
Catalan	*Veratre*		See text	[59–61]
Sardinian	*Balàndru, Belandru*		From *baladre* in Catalan	[55]
Spanish	*Baladre* (+ca 12 SV)		See text	[51, 52, 59, 61, 82, 135–13773: 29, 74: 185,]
C4. Barley, *Hordeum vulgare* L				
Catalan	*Sividilla*		See text	Sardinia (Alguer): [59, 138] [66]
Portuguese	*Sevadilha* (+7 SV)		See text	[23: 12, 51, 7273: 45, 102: 10]
Portuguese	*Savadilla bastarda*		[Bastard *savadilla*] See text	[51, 5273: 45]
Sardinian	*Siviriglia*		From *sividilla* in Catalan	[50: 314, 13853: 154:]
C5. Willow, *Salix* spp.				
Azeri	*Soid guli*		[Willow rose]	Turkey: [139]
Turkish	*Söğüt gülü*		[Willow rose]	[108: 972]
C6. *Cassia*				
Catalan	*Senet, Sanet*		See text	[59, 140: 49]
C7. Chaste tree, *Vitex agnus-castus* L				
Turkish	*Deli hayıt*		[Crazy chaste tree]	[109: 867, 110: 71]

assume that less-common plants are compared to more widespread ones. At least in Europe, there are indications that oleander has spread (especially in gardens) since the classical period due to human activities [23], so it is not surprising that some names compare oleander to already existing, better-known as well as more common, local plants.

C1. Derivates of rose (Rosa spp.)

A series of 16 names in 8 languages point to the similarity to roses. Dioscorides already mentioned the resemblance of the oleander to rose and bay laurel [38: 4,81,1,1] as reflected by the Greek names *rhododafne* and *rhododendron*. According to Yeshua Ben Sirach (second century BCE): 'Like the cedar, I rose up in Lebanon and like the cypress in the mountains of Hermon. Like a palm tree, I grew tall in Ein Gedi and like the rose plants in Jericho ' (Sirach 24:13–14 [144]). It is reasonable to suppose that the reference is to the oleander which grows alongside streams. It is important to note that some names are connected directly to the similarity to roses, while others are derivatives of the Greek names *rhododafne* and/or *rhododendron*.

The Arabic name [donkey rose] was placed in this category because in several cases, the epithet 'donkey ' is added to Arabic plant names of 'useful ' plants to denote non-useful or poisonous similar plants [10: 139 – 141]. The other Arabic name [false rose] may summarize this section.

The French name *rhododendron de Pline* [45: 773, 46: 10] recalls Pliny [145 Nat. Hist. Book XVI.33,20]: 'The *Rhododendron*, as its name indicates, comes from Greece. By some it is known as the *Nerium*, and by others as the *Rhododaphne* '.

The Arabic name [false rose] may reflect the phenomenon where oleander blooms profusely but produces few fruits, due to a lack of pollinators in some of its natural habitats [146, A.D. pers. obs.]. It may also express the contrast between the plant 's beautiful flowers and its toxicity. This idea is echoed in proverbs from the Muslim world, such as in Persian: 'Their likeness is that of the oleander—its flower is beautiful, but its taste is bitter. Their words are wisdom, but their deeds are an illness… ' [147, 917]; and in Arabic (fourteenth century): 'You are like the oleander tree, which attracts those who look at it but kills those who eat it ' [148, 619].

C2. Derivates of laurel (Laurus nobilis L.)

Rhododafne (ροδοδάφνη) originates from the juxtaposition of two Aegean phytonyms ρόδον (rose) and δάφνη (laurel), and it characterizes the oleander as a plant with rose-like (pink) flowers and laurel-like leaves. The

etymological association of oleander with the bay laurel has continued into the modern day (Table 3). Dioscorides [38: 4,81,1,1] already mentioned the resemblance of the oleander 's leaves to bay laurel and the flowers to roseIt is noteworthy that the similarity between laurel and oleander has deep roots in Greek history, etymology and mythology [149].

As in many other Romance languages, a set of Catalan names refers to the similarity to laurel, as *llorer reial*, *llorer-roser* or *llorer rosa*, sometimes remarking their differences: it is not the true laurel (*llorer bord* = 'bastard laurel '), it maybe interpreted as 'false *savadilla* ' in contrast to the 'true *savadilla* ', i. e., the medicinal one, or the cultivated not wild laurel (*llorer de jardí* = [garden laurel]) or it differs by flower colour (*llorer rosa* = pink laurel]), see also the French names (Table 3). In Bulgarian the name *[lavra]* applied to oleander as well as to laurel.

C3. Derivates of Veratrum and Helleborus

From Latin *veratrum* (probably in Roman times, for *Helleborus* spp., currently in Spanish for *Veratrum album* L.) and then to *baladre* due to the confusion of liquid consonants through the vulgar Latin variant *varatrum* [140]. The main Catalan name for *N. oleander* is this, *'baladre* ' (and variations, including *'veratre* '), and in Spanish (Aragonese variant) or Occitan *'baladre '*, *'belandre '*, *'valadre '*, *'balaire* ' etc. are also applied [140: 41–42]. Following Coromines [150] and Laspeñas [140: 41–42], this name designates plants belonging to three morphologically and ecologically very distinct taxa, all three of which are very toxic: oleander itself, *Veratrum album* and some hellebores (*Helleborus* spp.), pointing out the derivation of *veratrum* (> *veratre* > *veladre* > *baladre*). The suggested oldest name should refer to *V. album* (common in megaphorbs and alpine meadows in high Mediterranean mountains, see also [151]), becoming almost synonymous with other very toxic plants from Mediterranean lower altitudes, as oleander is, and adopting the same denomination. A similar process of linguistic adaptation took place in Minorca (Balearic Islands, obviously without any native species of *Veratrum*), where the Catalan name of *baladre* is also applied to the similarly toxic *Daphne gnidium* L. [152]. Since *Veratrum 's* derivatives found only in Catalan in Spain, yet also in Sardinian, it is possibly a relic of the Crown of Aragon 's rule (1324–1479) in Sardinia and the subsequent union with Spain (1479–1714).

C4. Derivates of barley (Hordeum vulgare L.)

A Catalan name recorded for oleander only in the Sardinian (Italian) city of L 'Alguer is *sividilla*. However, this name is interpreted as a loan from the Sardinian *logudoresu* (*logudorese* in Italian), considered one of the most conservative of all Romance languages, where oleander is known as *sibidiglia* [138: 60] which, in turn, probably originated in a loan from the Spanish *cebadilla* (dimin. of *cebada* = small barley) to designate a toxic plant, such as oleander, hellebore or even ivy, growing in Sardinia [153: 42]. Interestingly, *cebadilla* is defined by the Dictionary of the Spanish Royal Academy [154], as 'a species whose powder is used as a snuff and to kill insects '; alternatively, as 'root of the white hellebore, whose powder has the same uses as that of the *sabadilla* ' as a wider sense. Although *cebadilla* was used in the Americas to designate both small *Bromus* (Poaceae) and the bulbous American Liliaceae *Schoenocaulon officinale* (Schltdl. & Cham.) A. Gray [155], the same name is retained in Portuguese for *Nerium oleander* (*cevadilla, sevadilla, sevadilha, savadilla bastarda*, Table 3).

The name *sevadilha* derives from the name of barley in Portuguese, *cevada*. Thus, the main name of the diminutive should be *cevadilha*, with the remaining similar names being regarded as variations (*sevadilha, savadilha*, and the Sardinian s*iviriglia*).

C5. Derivates of willow (Salix spp.)

It seems that the Azeri and the Turkish names [willow rose] are related to the similarity between the leaves of oleander and willows.

C6. Derivates of Cassia

In Catalan *senet/sanet*, primarily meaning *Cassia angustifolia* Vahl (= *Senna angustifolia* (Vahl) Batka), is later also applied to *Nerium oleander,* probably because of gastric disorders after consumption and/or due to similitude with cassia leaves as presented in commerce. This *senet* has a variant (from a bad transcription of the pronunciation of the neutral first 'e ', that sounds like an 'a ' in Central Eastern Catalan), written as *sanet*. Probably in Spanish it is transcribed as *sanet* too, as the neutral sound of the letter 'e ' does not exist in Spanish. Following Laspeñas [140: 49], *sanet* is also used as the name of other native plants in Aragonese, as *Daphne laureola* L. or *Amelanchier ovalis* Medik.; this author suggests this name is derived from Arabic *sanā*, probably through vulgar Latin *sene*.

C7. Derivates of chaste tree (Vitex agnus-castus L.)

It seems that the Turkish name [crazy chaste tree] indicated a rough similarity of the leaves of the two plants (which often share the same habitat) and 'crazy ' probably denotes oleander 's toxicity.

D. Names related to taste, chemical constituents, their uses and effects

Adjectivation is a very natural way of constructing vernacular nouns from a primary noun that exists in many languages. In large part due to the adjectivation of names,

there are a total of 53 names for the plant in 16 languages that are related to taste, chemical constituents, their uses and effects (Table 4).

D1. Derivates of bitterness and toxicity

Bitterness and toxicity are reflected in 37 names in 13 languages. The Greek names: *pikrodafne* [bitter laurel] and *pikrophyllada* [bitter tree] originated from the bitterness of oleander 's leaves [159: 2]. In Turkish no less than 15 names are related to the toxicity of the plant (Table 4). The Italian name *mordèna* might derive from *mordace* (= biting), a term which would, therefore, indicate the plant 's properties or effects.

Oleander is naturally spread over a wide area along the Mediterranean coast in Turkey and it is preferred as an ornamental plant in parks and gardens [183: 1, 189: 1382]. It is widely cultivated also along the coast of the Black Sea [190]. Its high toxicity, many cases of poisoning, and wide distribution may be the reason for the proliferation of names related to bitterness and toxicity. Some supporting evidence for this idea comes from Çana and Koca [191: 393] who state that '… some plants can cause severe conditions such as paralysis, coma and even death. For example, *Nerium oleander* L. (*zakkum*), which is mainly used for medicinal purposes by the local people, is one of the most poisonous plants among the list [of 51 medicinal plant species that were examined] '. Oleander is included in the list of the most common toxic plants to animals of Turkey [192], yet, it must be noted that oleander is no less common that in other Mediterranean countries.

Toxicity to humans: One of the names recorded is *ballestera* (Catalan), meaning 'of the crossbow (= *ballesta*) ', related to the use of plant juice to oint arrow points to increase the destructive power of such weapons. It is a very direct reflection of the toxicity of *Nerium* latex (due to cardiotoxic glycosides, [193]. It was used by the aborogines of Spain as an arrow poison [194: 334], and thus it was called *yerba mala* [evil herb] ([195: 465] and Table 4).

The relation of bitterness and toxicity is historically long. The bitter taste likely evolved to deter poison ingestion [196]. On this basis, bitter compounds are added to some products to prevent accidental poisonings [197]. Interestingly, to better understand the origin of this denomination, the same name in Spanish (i.e., *hierba ballestera*, *hierba del ballestero, herba de ballesteros*—meaning 'crossbow herb ' or 'crossbow-man herb ') is also applied to *Veratrum album* [198: 391, 199], suggesting a broader meaning of a plant used for arrow poison. The term *baladre/valadre* and its related forms, meaning 'bitter ', extend to other species with a bitter taste in Aragon and, from there, to other linguistic domains in the western Iberian Peninsula [140]. Additionally, some proverbs use the plant 's name as a synonym for 'bad ', as in the expression 'being worse than the *baladre* (= oleander) ' in Spanish and Catalan, see also [140].

Other toxic effects: The Maltese name *siġret il-bass* [fart 's tree] seems to be related to the effect of consuming oleander, which may cause flatulence [200: 1314]. The Serbo-Croatian name *boliglav,* from Боли [boli], 'hurts ', and глава [glava] 'head ', means a plant able to cause headache. Headache and dizziness are among the symptoms of oleander poisoning [201].

Oral traditon has transmitted that during the Spanish-French War (1808–1814), an entire company of Napoleon 's troops died after eating meat grilled on oleander branches, (in Corsica [201: 63] or in Spain: [202, 203]). This story was recently refuted [204, 205]. They found that hot dogs that were cooked on *Nerium oleander* skewers contain a negligible amount of oleandrin with respect to that sufficient to cause human poisoning. They concluded that reports of poisonings occurring in this manner are most likely the result of an 'urban myth '.

Other names related to toxicity: Serbo-Croatian: *zloljesina*, *zloljesine*—Зло [zlo] means evil, љесина [ljesina] could be from љес [ljes] which means coffin, i.e., indicating severely poisonous character. The Serbo-Croatian name *kožolistna* / *zlolepina* is explained since *kožolistna* means 'with skin-like leaf ' (*koža* = skin; *list* = leaf), while *zlolepina* is from *zlo* = evil, meaning here 'evil attached '. A possible explanation is that the touch of the plant may cause dermatitis [206].

The ancient Andalusi Arabic name [the big bad-luck tree] may be also linked to its toxicity. A local Arabic name in Israel for the plant is [Satan 's tree]. In Arabic, other toxic plants are also associated with Satan, such as *Mandragora officinarum* [Satan 's testicles,19] and *Ecballium elaterium* [18].

The Turkish name *ağı,* which means 'poison ' is also used also for other poisonous plants, as *Arum* spp., *Euphorbia helioscopia* L. and *Urginea maritima* (L.) Baker *(= Drimia maritima* (L.) Stearn). The name *ağı ağacı* [= poison tree] is used also for *Rhododendron luteum* Sweet [106: 115]. The Turkish name [orphan flower] may hint that poisoning by oleander could leave children orphans. An alternative interpretation suggests that the name is because of its poisonous nature, people avoid contact with it, leaving it untouched and solitary, much like an orphan (Selçuk Tuğrul Körüklü, Pers. Com. 24.3.24).

Belladonna is a generic term used in Sardinia to refer to poisonous or ornamental plants (e.g. *Atropa belladonna* L., *Impatiens balsamina* L.), often applied to oleander. The name might be connected to its toxicity or its attractive appearance [162: 95]. For the same reason the name *belladonna* for oleander appears also in French,

Table 4 Names related to taste, chemical constituents, their uses and effects

Language	Name	Original transcription	Translation and comments	Selected references
D1. *Bitterness and toxicity*				
Arabic	*[Marārat al-ḥimār]*	مرارة الحمار	[Donkey bile, gall bladder]	Andalusia (13th c.): [156, I:147,233]
Arabic	*[Kharzahra]/ [Khûrzaharj]*	خرزهرة / خرزهارج	[Donkey poison] (Loan from Farsi)	Morocco: [78: 20] Andalusia (13th c.), [79: 181, 157]
Kurdish	*[Gharjalak]*	غرجالك	[Donkey poison] loan from Persian	[158]
Greek	*[Pikrophyllada]*	Πικροφυλλάδα	[Bitter big-leaved]	[62, 100:32]
Greek	*[Pikrodafne]*	Πικροδάφνη	[Bitter laurel] due to the bitter leaves	[42: IH:258; 62100: 32; 158: 2]
Italian	*Mordèna*		See text	[50: 313, 53:154]
Turkish	*Acı ağaç (+5 SV)*		[Bitter tree]	[40:17, 103:50, 109:867; 110:71, 159: 159:640;]
Turkish	*Acı hayıt*		[Bitter chaste tree]	[109: 867; 110: 71]
Arabic	*[aš-Šağara lxabīṯa]*	الشجرة الخبيثة	[The wicked / cunning tree]	Andalusia (13th c.): [155 I:232]
Arabic	*[Šajarat ʾiblīs]*	شجرة إبليس	[Satan's tree] See text	Israel: local name [S.A.K pes. knowledge]
Arabic	*[Šağarat an-naḥs al-kabīr]*	شجرة النحس الكبير	[The big bad-luck tree]	Andalusia (13th c.): [156, I:232]
Basque	*Eriotz-orri* (+ 5 SV)		[Leaf of death]	[51, 73:46]
Catalan	*Ballestera*		[Crossbow herb] See text	[59, 160, 161]
Corsican	*Belladonna*		See text	[55, 125, 161, 162]:95]
French	*Belladone*		See text	[163: 210]
Italian	*Belladonna*		See text	[50: 313, 53: 154, 101: VIII:29]
Maltese	*Siġret il-Bass*		[Fart's tree]	[164: 19]
Sardinian	*Belladonna*		See text	[125]
Serbo-Croatian	*[Boliglav]*	Болиглава	See text	[165, 166:317, 167:60]
Serbo-Croatian	*[Vitoglav]*	Витоглав	Sounds like causing dizziness	[165]
Serbo-Croatian	*[Nabaida], [Nevajda]*	Небајда, Невајда	See text	[168, 257-8, 166:317]
Serbo-Croatian	*[Kožolistna] [Zloljesina], [Zloljesine / Zlolepina]*	Кожолистна, Злолијесина, Злољесина / Злолепина	See text	[166: 317, 169168: 465,]
Spanish	*Malvadra*		From '*mal*' (bad) and '*vadra*' (abbreviation of '*valadre*') See text	[82, 170:38]
Spanish	*Yerba mala*		[Evil herb] See text	[51, 5273: 46, 74: 185]
Turkish	*Ağcı ağacı (+ 4 SV)*		[Poison tree]	[40: 22,23; 109, 103: 50; 171:80]
Turkish	*Ağcı çiçeği / Ağı çiçeği*		[Poison flower]	[40: 23, 103: 50, 104:23; 171: 80, 172: 664; 173: 1893]
Turkish	*Ağı / Ağu*		[Poison]	[111: 54, 174: 9,13]
Turkish	*Ağıcık / Ağılcık*		[Little poison]	[40:23, 171:80]
Turkish	*Ağı çalısı*		[Poison bush]	[40: 23, 159: 640]
Turkish	*Ağıdalı*		[Poison branch]	[40: 23, 103: 50, 159: 275]
Turkish	*Ağı yaprağı*		[Poison leaf]	[106: 112, 175:188, 176: 634]
Turkish	*Ağlı ağacı/ ağu ağacı*		[Poisonous tree]	[40: 23, 134172: 664,]
Turkish	*Avı / avu*		[Poison]	[40, 109, 134103: 50,]

Table 4 (continued)

Language	Name	Original transcription	Translation and comments	Selected references
Turkish	*Aycı/ ayıcı*		[Might be a version of *ağı ağacı*, poisonous tree]	[103: 50; 108: 597; 111: 54]
Turkish	*Zehr ağacı*		[Poison tree]	[108: 1060, 177: 287]
Turkish	*Yetim çiçeği*		[Orphan flower] See text	[103: 50, 172: 664]
D2. *Toxicity to animals*				
Arabic	*[Samm al-bahā'im]*	سم البهائم	[Beast poison]	Andalusia (13th c): [155, I:147]
Italian	*Ammazza cavallo*		[Horse killer]	[179, I:257]
Arabic	*[Qātil al-ḥamīr]*	قاتل الحمير	[Donkey killer]	Andalusia (13th c.): [155, I:233]
Arabic	*[Samm il-ḥmār]* (+ 5 SV)	سم الحمار	[Donkey's poison]	Morocco: [17, 178] Yemen: [77: 57, 117: 58] Iraq: [113: 19] Lebanon: [114: 22] Spain: Andalusia (13th c): [155,I:147]
Italian	*Ammazza l'asino*		[Donkey killer]	[50: 313, 53: 154, 67:32, 179:152]
Farsi	*[Kharzahreh]* (+ 4 SV)	خرزهره	[Donkey's poison] (*khar* =ass) *zahreh*=poison	[23: 14, 158139: 4210, 180: 116, 181: 4211]
Latin	*Herba asinaria*		[Donkey's herb]	[182: 2034, 91: 85]
Turkish	*Develik*		[Suitable for camels]	[183: 2]
D3. *Medicinal uses*				
Arabic	*[Ḥaban],* *[Ḥabn],* *[Ḥibn]*	حَبّ حبْ حبن	See text	Morocco: [115] Persia: [184: 410] Saudi Arabia: [185: 3] Oman: [186: 211] Qatar: [186: 211]
Maltese	*Siġret il-Ġarab*		[Eczema-tree]	[70, 164:18]
Portuguese	*Espirradeira*		[Causing sneezing] *Espirrar* =to sneeze; *deira*=to cause See text	[23: 12; 51, 73: 45]
Turkish	*Fattak*		[Hernia] (from Arabic)	[40: 106, 103: 50]
D4. *Ethnoveterinary and pest control*				
Italian	*Erva scarafaggi /Erva scaravaggi / Arvulu di scarvacchi*		[Cockroach grass]	[50: 314, 6853:154,
Maltese	*Sigra tal-wirdien*		[Tree of cockroaches]	[69: 18]
Italian	*Erba da rogna*		[Mange (mites) grass, a skin disease of mammals caused by parasites]	[50: 313; 67: 32; 179: 152]
Italian	*Velen dij rat*		[Rat poison]	[50: 313; 53: 154]

Italian and Corsican (Table 4), probably to emphasize its high toxicity.

D2. Names related to its toxicity to animals

Dioscorides [38: 4–82] mentioned that 'the flowers and the leaves are able to kill dogs, asses, mules and most four-footed living creatures '. Pliny [145, Nat. Hist. XVI.33,20] repeated this while mentioning sheep and goats. Galenus [41: 130–2100] mentioned it as toxic to pack animals, goats and sheep.

Toxicity to horses: In Sanskrit, the oleander is called *asvamarakah* (*asva* = horse; *marakah* = killer), as 'the plant is capable of killing horses due to its poisonous content ' [207: 61, 208: 501]. In Hindu tradition, it is also called *bayamarca* [horse killer], a name that originates from the belief, still held among Hindus, that a horse consuming the leaves of *Nerium* will almost certainly die [209: 270]. This name, 'the horse killer ', is known in Europe only from Italy (Table 4).

Toxicity to donkeys: In classical mythology, the relation of oleander to a donkey originated in the famous story brought by Lucius Apuleius. He narrates in the *Metamorphoses* [183 Met. 4.2/8] that Lucio, transformed into a donkey, looked frantically for the roses needed to restore his human features. He was deceived by the similarity of the oleander with the rose and was about to eat from it, but as soon as he saw that it was dangerous for donkeys, he walked away from it. Hence the Latin name *herba*

asinaria [the donkeys ' herb, Apuleius, 182: 2034, 91: 85]. According to Thüry [210: 66], the term *Asinaria herba* might superficially suggest a connection to donkeys (*asinus* in Latin), leading to a literal translation as 'donkey herb '. However, the author argues that this interpretation may be too simplistic. Considering the Greek word *asines* (ασινής), meaning 'harmless ' or 'protector ', *Asinaria herba* could instead be a euphemistic or protective term, possibly referring to the plant 's perceived beneficial properties. In many countries, oleander is considered particularly poisonous to donkeys, which has influenced their naming. Similar names exist in Farsi, Arabic, and Italian (Table 4).

The Farsi name *kharzharaj* can be translated to [donkey poison] [180: 116, 211: 268]. Another interpretation suggests that *kharzahra* means 'donkey bile ' or 'gall bladder ' [212: 173, 213: 327]. The Arabic name *samm al-ḥimār* ('donkey poison ') is believed to have originated from the Persian term [214: 85]. رخ (khar) means 'donkey ' in Persian, likely referencing the plant 's bitter taste and unpalatability to grazing animals, including donkeys, which avoid it due to its toxicity, while هرزه (zahre) derives from زهر (zahr), meaning 'poison '.

Toxicity to camels: The Turkish name *develik* means 'suitable for camels ' [215: 2]. This name is quite surprising, as oleander is reported to be highly poisonous to camels, as well as to donkeys [180: 139].

D3. Names related to its medicinal uses

Although oleander is well known as a medicinal plant [25–27], it is surprising that very few vernacular names reflect this aspect. In contrast, *Mandragora officinarum* has 11 names across 6 languages related to its medicinal uses [19].

Oleander is traditionally used in Malta to treat eczema and skin itching [71: 98], which explains its Maltese name, *siġret il-ġarab* [eczema-tree]. In Turkey, it is used for the treatment of herniated discs [215: 205], reflected in the name *fattak* [hernia].

The Portuguese name *espirradeira* likely refers to oleander 's ability to induce sneezing, as *'espirrar '* means 'to sneeze '. This effect arises from the plant 's leaves and bark, which have an unpleasant smell and a bitter, acrid taste. When the leaf powder is introduced into the nose, it provokes strong sneezing [216: 179, 217: 188] and was historically used as 'sneezing powder ' [23: 25]. Sneezing was believed to relieve headaches, treat illnesses, and clear nasal passages and sinuses in cases of congestion [217: 188].

The Arabic word نَبَح (*ḥaban*) in classical or older Arabic usage, can refer to a medical or anatomical condition, particularly abdominal swelling or bloating. It is sometimes associated with dropsy (edema), a condition characterized by fluid retention in the body. In India oleander is used to treat edema [218: 261].

D4. Names related to pest control and ethnoveterinary uses

Nerium oleander has been used for veterinary purposes in several countries such as Spain [219: 82: 220]; Algeria [221]; Morocco [222, 223: 179] and in Turkey [224–226]. Four names from Italy and one from Malta are related to this subcategory.

The following names are linked to insects: [cockroach tree], [cockroach herb], [cockroach grass], and [mange (mites) grass] in Italian, and [tree of cockroaches] in Maltese. These names reflect the use of oleander as an insecticide and insect repellent in Italy and Sicily [227: 41, 228: 190].

In France, the powder mixed with grease is used to cure ringworm and scabies. Mendicant monks historically used this powder to eliminate all cutaneous insects [202: 64].

The Italian name *velen di rat* [rat poison] seems to retain an old tradition of using oleander as a rodenticide [50, 53, 229]. Branches of oleander were traditionally stuck into the ground to poison moles, a practice that is still in use today. In ancient Greece, oleander leaves were placed in rodents ' holes [230, Palladius, 13.5.3, 231, 11)], and it was also used against mice in France [202: 63, 232: 600] and other places [23: 25].

The Italian name *fiori di morto*, meaning 'flower of death, ' still exists in the Vesuvian area [233: 133] and may reflect the custom of using oleander as a funeral plant in Italy [234: 257]. In ancient Pompeii, it was customary to decorate tomb gardens with oleander flowers [235: 102]. In Sicily, oleander flowers were once spread on the deceased, but once the custom ceased, the word remained. The phrase *allannaratu* (a local derivation of oleander) is a curse no longer widely understood but that remains common in Chiaramonte (Southern Sicily). One of the local songs recalls the custom: 'I saw her *allannarata* in the bed, she had the palm and her little hands crossed ' [236: 77].

E. Names related to religion, customs, and local saints

These 12 names were recorded in 7 languages, and are categorised into two groups: religion and customs, and saints (see Table 5).

E1. Names related to religion and customs

According to the Quran, *zakkum* is the 'tree of Hell ', which produces poisonous fruits that are torturously fed to those condemned in hell, burning the stomachs of the sinners: 'Is that the better entertainment / Or the Tree of Zaqqum? For We have truly / Made it (as) a trial / For the wrongdoers. For it is a tree / That springs out / Of the bottom of Hellfire: The shoots of its fruit-stalks / Are like

Table 5 Names related religion customs and local saints

Language	Name	Original transcription	Translation and comments	Selected references
E1. Religion and customs				
Bulgarian	*[Zakum / zokum]*	Закум Зокум	See text	[58: 218, 237: 330]
Greek	*[Zoukoumi / zakoymi]*	ζουκούμι / ζακούμι	Loan from Turkish, See text	[238: 59110, 867]
Turkish	*Zakkum* (+5 SV)		See text	[40: 289,291, 103: 50, 110: 71, 176: 634, 239: 640, 172: 664, 174: 13]
Italian	*Fiori di morto*		[Flower of death]	[89: 133]
Arabic	*[aš-Šağara lmubāraka]*	ةَرَجّشلا ةَكَرابُمْلا	[Blessed tree] See text	Andalusia (13th c.): [79: 175]
E2. Saints (St. Joseph)				
French	*Fleur de Saint-Joseph*		[St. Joseph 's flower]	[240: 110, 101: VIII: 29]
French	*Bâton de Saint-Joseph*		[St. Joseph 's stick]	[234: 257]
Italian	*Fiori de San Giuseppe*		[St. Joseph 's flower]	[241: 161]
Italian	*Mazza di San Giuseppe*		[St. Joseph 's stick]	[50: 313]
Italian	*Mazza di S. Giovanni*		[St. John 's stick]	[50: 313]
Portuguese	*Flor de São José*		[St. Joseph 's stick]	[52, 242]
Arabic	*[ʿAṣă Mūsă]*	عَصَى موسى	[Moses ' staff]	Morocco: [243: 177, 244245: 331]

the heads / Of devils: Truly they will eat thereof /And fill their bellies therewith. Then on top of that / They will be given /A mixture made of / Boiling water. Then shall their return / Be to the Blazing (Fire)' [246: 58–59; Quran, Surah, 37: 62–68].

Ghazanfar [247: 8] consider the Quranic *zakkum* to be symbolic rather than referring to a specific plant species. Several plants are called *zakkum* in the Muslim world, including *Citrullus colocynthis* (L.) Schrad. [248: 116], *Caralluma europaea* (Guss.) N.E.Br. Morocco, [249, 391], *Euphorbia* spp. [248: 108–117], *Opuntia dillini* (Ker Gawl.) Haw. (250 Hadi and Hussain, 2011:310), *Marrubium vulgare* L. [251: 156], and *Balanites aegyptiaca* (L.) Delile [252: 2: 78: 241]. All of these species are bitter and/or poisonous. It is therefore not surprising that in Turkey, *Nerium oleander* was identified with the Quranic *zakkum* [246]. While all these species share similar bitter properties, only *Balanites aegyptiaca* is a true tree, whereas *Nerium* is generally a high shrub.

The name [blessed tree] in Arabic is tied to the plant 's power against the evil eye, making it a key element in rituals meant to prevent calamities and ensure good luck, especially in rites of passage like weddings [253: 168, 322, 254255: 442,]. This use may explain the name 'blessed tree ' in relation to oleander, similar to the term 'blessed sage ' for *Salvia fruticosa* Mill. like in Arabic communities in Israel [256].

E2. Names related to local saints

Several legends connect oleander to saints, explaining some of its vernacular names. The staff has symbolic meaning, often associated with supernatural power. In the Hebrew Bible, the staffs of Moses and Aaron were symbols of God 's authority given to them [Exodus, 4, 3–4; So, 253, 51]. In many religions, wooden staffs were used by holy figures and saints, believed to possess supernatural powers, beginning with Moses [257: 57].

In Spain, a legend tells of a mother praying to St. Joseph to heal her ill daughter. A miraculous stranger appeared, placing oleander on the girl 's chest, and she was swiftly cured. From that day on, oleander became known as the flower of St. Joseph [258: 201]. In Italy, it is called *mazza di San Giuseppe* [St. Joseph 's staff], with local women claiming that the staff began to flower as soon as St. Joseph took it in his hands [234, II, 257]. Another version of the legend states that when the angel announced to St. Joseph that he was destined to be the husband of the Virgin Mary, his staff blossomed in his hands [259: 473, 65: 91, 84f, 115].

In Morocco, one of the names for oleander is *ʿAsā Mūsā* [Moses ' staff]. Oleander is used in Morocco as an apotropaic plant, believed to ward off the evil eye and protect the person who possesses it from evil spells [253: 168, 322, 260: 113]. The term *ʿAsā Mūsā* implies a connection between the staff and supernatural power, as symbolized by Moses [243: 177]. This name is also associated with *Laurus nobilis* in Morocco [261: 1579], which is likewise considered an apotropaic plant. Vickery [262: 209] and Coulon [263] explicitly mentions the use of laurel berries in magical fumigation rituals, combined with other plant and animal substances, within the context of the medieval Arabic magical tradition. Although this source does not refer directly to the contemporary Moroccan context, it does demonstrate a well-documented ritual and symbolic dimension of laurel in such practices within the broader Islamic world.

F. Names related to habitat and places

A total of 11 names in 8 languages are related to the places or habitats where the plant can grow (Table 6).

The Berber name *alili* (and variants) is linked to its habitat near water sources [267: 91, 268: 311]. *Alili* is described as the quintessential shrub of African

Table 6 Names related to habitat and places

Language	Name	Original transcription	Translation and comments	Selected references
F1. Habitat				
Amazigh	*[Alili]* (+ca 15 SV)	ⵍⵍⵉⵍ	See text	Algeria: [264: 106] Morocco: [78: 241, 17879: 221,]
Greek	*[Sema]*	Σέμα	See text	[72]
Greek	*[Spoggos]*	σπόγγος	[Sponge] See text	[38, 4,81,1,1]
Kurdish	*[Zala], [zhala], [jeleh]*	ژاڵ، ژاوەژاڵ، جەلاج	[Dew, hoarfrost]	Iran: [158, 265: 11] Iraq: [76, 6]
Italian	*Rànnulu*		See text	[50: 314, 68: 132 (Sicily)]
Sardinian	*Lannaxi* (+15 SV)		See text	[50, 54, 5553: 154,]
F2. Places				
Armenian	[*Chpni*]	ճապնի	Perhaps connected with 'Japan', in Armenian '*Chaponia*' (Ճապոնիա)	[266: 936]
Greek	[*Tourkiko triantafyllo*]	Τούρκικο τριαντάφυλλο	[Turkish rose]	[43, 6: 764–5, 62]
French	*Laurier Rose des Indes*		[Indian pink laurel]	[121: 341]
Italian	*Alloro d 'India (+5 SV)*		[Indian laurel]	[50: 313, 6753: 154, 120: 275, 179: 152]
Spanish	*Rosa de berberia*		[Berber rose]	[51, 5274: 185]

riverbeds, with related terms (*Ilel, Ilil, Tillit*) frequently used in toponymy for springs and rivers. Two Greek names may also hint at the oleander 's habitat. Σέμα [*sema*] may be instead of *σήμα*, the ancient version, meaning 'mark ', because the plant marked dry areas colourfully, and Σπόγγος [*spoggos*], i.e. related to the ability of the plant to thrive in aquatic habitats.

The name *lannaxi* (in Sardinian) may stem from the same linguistic root as *Nerium*, possibly connected to *naros* or an ancient root related to flowing water [84: 112]. The Italian name *rànnulu* may also reflect its aquatic habitat, similar to the buttercup (*Ranunculus* spp.). As *rana* in Latin means frog, it refers to 'living close to water '.

The names [Indian laurel] in Italian and French suggest a geographical origin for some oleander varieties in India [202: 61, 91: 113]. The Spanish name *rosa de berberia* [Berber rose] may be due to its prevalence in former Berbery (North Africa).

Table 7 Unclassified and unexplained

Language	Name	Original transcription	Translation and comments	Selected references
Armenian	*[Nezruvard]*	Նզրուվարդ	[Rose?]	George Fayvush, (pers. comm., 10.12.24)
Bulgarian	*[Rozolavra Lyan]*	Розолавра Лян	[Rose-laurel] (lyan = oleander)	[58: 218]
Catalan	*Peu de llop*		[Wolf 's foot] See text	[59: 160]
Farsi	*[Kish / Kēš]*	كيش		[158]
Greek	*[Sfaka]*	Σφάκα	See text	[42: IH΄: 258, 4344: 699–700,
Greek	*[Psoraka / psouraka Psoura]*	Ψωράκα, Ψουράκα, Ψουρά	Due to insect pests commonly known as *psores* (ψώρες) which attack the plant See text	[43, 6, 2764–5, 62]
Greek	*[Sepsa]*	Σέψα	May be related to 'σήψη» meaning sepsis or rotting	[43, 6, 2764–5, 62]
Italian	*Alessandrina*		See text	[179: 7]
Italian	*Paradisi*		See text	[269]
Kurdish	*[Hortil]*	لیترووە		Iran: [157]
Serbo-Croatian	*[Arpac]*	Арпац, Арпец		[168: 4, 166: 317]
Serbo Croatian	*[Kandiš / kundis]*	Кандиш, Кундиш		[166: 317, 183167: 60, 168: 79]
Turkish	*Acangeç*			[103: 50]
Turkish	*Angaç*			[103: 50]
Turkish	*Ayıngeç*			[108: 599]
Turkish	*Gobşan*			[108: 747]
Turkish	*Topluk*			[103: 50, 111: 54]

G. Unclassified and unexplained names

In spite of our efforts to understand the origin and etymology of the vernacular names presented, a small percentage (8.8%) of them have remained unexplained (see Table 7).

The Greek name Σφάκα [*sfaka*] is also used for *Salvia fruticosa* (Greek sage) in Crete and other areas. It is derived from the ancient Greek word *elelisfakos*, meaning 'Greek sage '. It seems unlikely that these two plants were confused. *Ψωράκα/Ψουράκα/ Ψουρά [Psoraka / Psouraka*

/ Psoura] may derive from *psoro,* a characteristic of something unworthy, similar to the Serbo-Croatian name Небајда/Невајда *[nabaida* or *nevajda]*. The expression could come from *He* (no) and *вајда* (meaning sense, reason, or worth), thus implying a plant of no reasonable use or worth.

Peu de llop ('wolf 's foot ') is a strange name reported in Catalan, with no evident morphological, traditional or use explanation. The same is used in this language to name *Lycopodium clavatum* L. or *Lycopus europaeus* L. (even scientific genus names are both etymologically derived from greek *lýkos* 'wolf ' and *poús, podós* 'foot '). We suggest the rare references to oleander under "wolf 's foot" as a new case of lexical convergence with other toxic species: not surpisingly, *Veratrum album* (veladre) is also named in Catalan *as peu de llop* [59] (see also chapter C3). The Italian *alessandrina* echoes one of the pre-Linnaean names for *Nerium oleander*, *Laurus Alexandrina* [270, 30], which was also applied to *Ruscus* spp. [271: 355]. The Italian name *paradisi* may be because of its lush, exotic beauty, which evokes the image of paradise.

Summary of the vernacular names

Table 8 presents a summary of the names collected in this review, differentiated by language and based on the above categories and subcategories.

As mentioned, only in seven languages were more than 10 names collected for the plant. For these, Fig. 2 shows the proportional distribution of names in the different categories.

Distribution of names according to categories and languages

The largest category, names related to bitterness and toxicity (D), encompasses 53 names; the second largest is the category of similarity to other species (C, 51 names). Together, these two categories constitute a significant percentage of 57.7% of the total 180 names. Since oleander is one of the most poisonous plants, it is unsurprising that many names in this category are related to its bitterness, toxicity and medicinal uses. A similar situation is observed for *Mandragora officinarum*, where a notable portion of the names originates from its chemical composition and its effects on humans [19]. Names in the category of similarity to other species may reflect the historically limited distribution of oleander. The third major category, generic names (A), includes 21 names that reflect influences from Greek (*nerion* and oleander) and Arabic (*difla*).

When examining the relative distribution of names across categories in different languages, two main trends emerge: A. Names related to bitterness and toxicity are dominant in Turkish, Arabic, and Italian, exceeding the average prevalence across other languages. B. Names reflecting similarity to other species are particularly common in Catalan but less so in Portuguese and Greek. Most Catalan names in this category appear to be local, which may serve as indirect evidence of oleander 's limited distribution before it was widely introduced as an ornamental plant.

Conclusions

This review of vernacular names for *Nerium oleander* reveals a wealth of ethnobotanical information, reflecting the oleander 's diverse uses, cultural associations, and geographical distribution. In total we found 180 names in 23 languages.

Regarding the evolution and migration of names between territories and languages, we highlight that three names originate from the ancient Greek names *rhododendron*, *arodafne*, and *nerion*. In European languages, oleander (and its variations) derives from the Middle Latin *lorandrum*, which itself is a derivative or corruption of *rhododendron*. The Greek *nerion* was adopted in several languages with slight variations. Seven names across 7 languages names derived from *arodafne*. The names 'donkey killer ' and 'horse killer ' likely emerged through cultural migration, spreading from India through Persia and the Muslim world to Greece, Italy, Spain, and France. It is plausible that the story of Apuleius contributed to the association of these names with donkeys.

Several names in Sardinian may be remnants of Spanish rule. Names linking oleander to willow and chaste-tree are endemic to a limited area in eastern Turkey, while a name associated with cassia is found in Catalonia. The Arabic name [Satan 's tree] was recorded in only one village in Israel. Due to the limited distribution of these names, it is impossible to determine whether they were once more widespread and have since become relics or if they were inherently local in nature.

We found names that preserve old uses and ancient traditions: no fewer than 12 names are related with funeral customs (*fiori di morti*), arrow poisoning (*ballastera*, *yerba mala),* medicinal uses (*espirradeira, sigra talwirdien, fattak, haban*) and ethnoveterinary applications (*arvulu di scarvacchi = erva scaravaggi, erba da rogna, erva scarafaggi, velen dij rat*). These names illustrate how vernacular names can serve as 'linguistic time-capsules ', preserving rare or nearly forgotten historical knowledge.

Regarding the distribution of names according to the used categories, results show that main categories are names related to bitterness and toxicity (D, 53 names) and similarity to other species (C, 51 names), achieving together the 57.7% of all names. Names in the category of similarity to other species may reflect the historically limited distribution of oleander. Generic names (A, 21 names) is the third major category and reflect influences from Greek (*nerion* and *oleander*) and Arabic (*difla*).

Table 8 The distribution of the oleander name categories according to the various languages

Category	A			B	C							D				E		F		G	Total
Subcategory	**1**	**2**	**3**		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**	**3**	**4**	**1**	**2**	**1**	**2**		
Albanian		1																			1
Amazigh																		1			1
Arabic			1		2	1						5	3	1		1	1				15
Aramaic			1																		1
Armenian					1	1													1		3
Azeri									1												1
Basque												1									1
Bulgarian		1				1										1				1	4
Catalan		1	2		4	4	2	1				1								1	16
Corsican						1						1									2
Farsi				1									1							1	3
French	2	1			3	3						1					2		1		13
Greek	1	1		2	3	4						2				1		2	1	3	20
Hebrew			1																		1
Italian	1	1		3	1	1						2	1		3	1	3	1	1	2	21
Kurdish												1						1		1	3
Latin		1			1	1							1								4
Maltese		1	1									1		1	1						5
Portuguese	1	1	1	1		1		2						1			1				9
Sardinian	1						1	1				1						1			5
Serbo-Croatian												4	1							2	7
Spanish	1	1	1		1	4	1			1		2							1	1	14
Turkish				4		1			1		1	15	1	1		1				5	30
	A1	**A2**	**A3**	**B**	**C1**	**C2**	**C3**	**C**	**C5**	**C6**	**C7**	**D1**	**D2**	**D3**	**D4**	**E1**	**E2**	**F1**	**F2**	**G**	
Total names	**7**	**10**	**8**	**11**	**16**	**23**	**4**	**4**	**2**	**1**	**1**	**37**	**8**	**4**	**4**	**5**	**7**	**6**	**5**	**17**	**180**
Total languages	**6**	**10**	**8**	**5**	**8**	**12**	**3**	**3**	**2**	**1**	**1**	**13**	**6**	**4**	**2**	**5**	**4**	**5**	**5**	**9**	

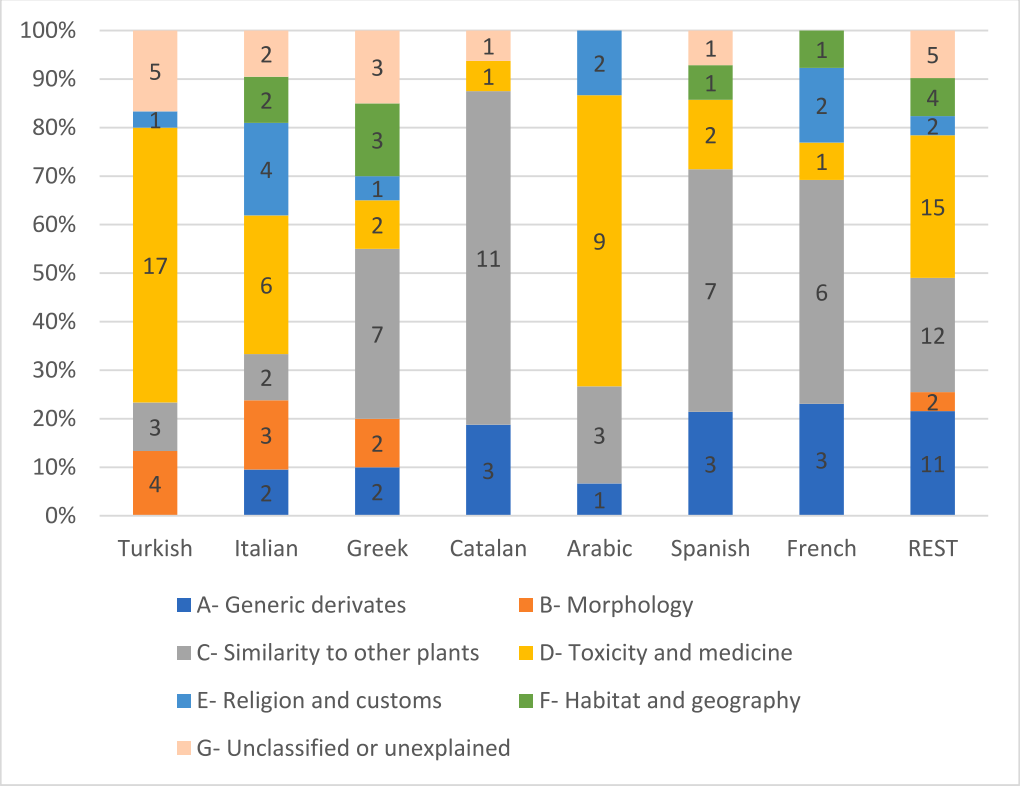

Fig. 2 Proportional distribution of names in the categories for languages with over 10 vernacular names

Names related to bitterness and toxicity are dominant in Turkish, Arabic, and Italian, while names reflecting similarity to other species are most common in Catalan but less so in Portuguese and Greek.

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AD and GB designed and conceived the study. All authors collected names in their respective languages, verified their validity and meaning, and participated in data analysis and discussions. AD and GB prepared, revised, and finalized the manuscript. All authors read and approved the final manuscript.

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References

1. Hunn ES, Brown CH. Linguistic ethnobiology. In: Anderson EN, Pearsall D, Hunn E, Turner N, editors. Ethnobiology. New York: Wiley-Blackwell; 2011. p. 319–33.
2. Berlin B. Folk systematics in relation to biological classification and nomenclature. Annu Rev Ecol Syst. 1973;4:259–71.
3. Berlin B. Ethnobiological classification: principles of categorization of plants and animals in traditional societies. Princeton, NJ: Princeton University Press; 1992.

4. Hunn ES. Size as limiting the recognition of biodiversity in folkbiological classification: one of four factors governing the cultural recognition of biological taxa. In: Medin DL, Atran S, editors. Folkbiology. Cambridge (MA): MIT Press; 1999. p. 47–69.
5. Brown CH. Linguistic ethnobiology: Amerindian oak nomenclature. In: Ford RI, editor. Ethnobiology at the millennium: past promise and future prospects. University of Michigan Press: University of Michigan Museum of Anthropological Archaeology; 2001. p. 111–47.
6. Brown CH. Development of agriculture in prehistoric Mesoamerica: the linguistic evidence. In: Staller J, Carrasco M, editors. Pre-Columbian Foodways: Interdisciplinary Approaches to Food, Culture, and Markets in Mesoamerica. Springer: New York; 2010. p. 71–107.
7. Hidayati S, Franco FM, Suhaimi A. Folk plant names are condensed forms of traditional knowledge: case study with the Urang Kanekes of Banten, Indonesia. In: Knudsen M, Hassan NH, editors. Franco FM. Case Studies in Biocultural Diversity from Southeast Asia. Asia in Transition. Springer: Singapore; 2022. p. 167–225.
8. Soldal H, Múrcia C, Ouhammou A, Hawkins JA, Martin GJ, Puri RK, et al. Plant names encode Tašlḥit knowledge of Morocco's high atlas landscapes. Hum Ecol. 2024;52(2):369–81.
9. Gledhill D. The names of plants. Cambridge University Press; 2008.
10. Dafni A, Khatib SA. Plants, demons and wonders: plants folklore of the Holy Land. Tel Aviv: Olam Hadash; 2017.
11. Petanidou T, Soulakellis N, Dahm H. The role of terraces for the future of the islands in relation to economy, ecology and civilization. Final Report to the Ministry of the Aegean. Mytilene, Gre: University of the Aegean; 2001;I-II.
12. Petanidou T. Sculpturing the landscape of Nisyros with terraces for agriculture. Nisyriaka. 2005;15:212–55.
13. Vallès J. Los Nombre Populares de las Plantas.Método y Objetivo en Etnobotánica. Monogr Jard Bot Cordoba. 1996;3:7–14.
14. Flattery DS, Schwartz M. Haoma and harmaline: the botanical identity of the Indo-Iranian sacred hallucinogen "soma" and its legacy in religion, language, and Middle-Eastern folklore. Univ of California Press; 1989.
15. Šeškauskaitė D, Gliwa B. Some Lithuanian ethnobotanical taxa: A linguistic view on Thorn apple and related plants. J Ethnobiol Ethnomed. 2006;2:13. https://doi.org/10.1186/1746-4269-2-13.
16. Austin DF, Felger RS. Sichuan peppers and the etymology of Fagara (Rutaceae). Econ Bot. 2008;62(4):567–73.
17. Austin DF. *Sambucus*: intercultural exchange and evolution. Ethnobot Res Appl. 2012;10:213–34.
18. Dafni A, Benítez GC, Blanché C, Rammón-Laca L, Petanidou T, Aytaç B, et al. The etymological, ecological, historical and ethnobotanical roots of the vernacular names of Ecballium elaterium (L.) Rich. (Squirting cucumber). J Ethnobiol Tradit Med Photon. 2013;119:515–37.
19. Dafni A, Blanché C, et al. In search of traces of the mandrake myth: the historical and ethnobotanical roots of its vernacular names. J Ethnobiol Ethnomed. 2021;17:1–35.
20. Tournefort JP. Institutiones Rei Herbariae. Paris: Edition Altera. (In Latin). 1700.
21. Linnaeus C. Species plantarum, exhibentes plantas rite cognitas, ad genera relatas, cum differentiis specificis, nominibus trivialibus, synonymis selectis, locis natalibus, secundum systema sexuale digestas. Holmiae [Stockholm]: Impensis Laurentii Salvii. (In Latin). 1753;1.
22. Leeuwenberg AJM. Notes on Nerium L. and *Tabernaemontana* L. Series of revisions of Apocynaceae, part XIII. Meded Landbouwhogesch Wageningen. 1983;83(7):55–60.
23. Pagen FJJ. Oleanders Nerium L. And the Oleander cultivars. Series of revisions of Apocynaceae XX (No. 87-2). Wageningen Agricultural University; 1987.
24. Plants of the World Online, Kew. Nerium oleander L. Available at. 2025. https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:80460-1#synonyms Accessed Jan 2025.
25. Wasfi IA, Zorob O, Al Awadhi AM. A fatal case of oleandrin poisoning. Forensic Sci Int. 2008;179(2–3):e31–6.
26. Farkhondeh T, Kianmehr M, Kazemi T, Samarghandian S, Khazdair MR. Toxicity effects of Nerium oleander, basic and clinical evidence: A comprehensive review. Hum Exp Toxicol. 2020;39(6):773–84.
27. Gorodetsky Oleander R. In: Wexler P, editor. Encyclopedia of Toxicology. 4th ed. Press: Academic; 2024. p. 107–10.
28. Radenkova-Saeva J, Atanasov P. Cardiac glycoside plants self-poisoning. Acta Med Bulg. 2014;41(1):99–104.
29. Giuliano DO. Nerium oleander toxicology: an historical review. La Rivista Italiana della Medicina di Laboratorio. 2019;15(4):305–12.
30. Khajja BS, Sharma M, Singh R, Mathur GK. Forensic study of Indian toxicological plants as botanical weapon (BW): A review. J Environ Anal Toxicol. 2011;1(3):112.
31. Vij K. Textbook of forensic medicine and toxicology: principles and practice, 5/e. Elsevier India. 2011.
32. Duke JA, Duke PK. Medicinal plants of the Bible. Owerri, NY: Trado-medic books; 1983.
33. Quattrocchi U. CRC world dictionary of medicinal and poisonous plants: common names, scientific, names, eponyms, synonyms, and etymology. CRC Press; 2012.
34. Shaw D, Pearn J. Oleander poisoning. Med J Aust. 1979;2(5):267–9.
35. Yadav AK, Khan ME, Pal A. Biodiesel production from oleander (Thevetia peruviana) oil and its performance testing on a diesel engine. Korean J Chem Eng. 2017;34:340–5.
36. Banerjee B, Banerjee T, Shukla G. A review on Thevetia peruviana (Pres.) K. Schum. Res J Pharmacogn Phytochem. 2010;2(5):343–6.
37. Eggenberger ME. The Handbook of Oleanders. Cleveland, GA: Tropical Plant Specialists; 1966.
38. Dioscorides Pedanius Med. De materia medica [Internet]. Available at: stephanus.tlg.uci.edu/Iris/inst/csearch. Accessed 21 Mar 2025.
39. Önler Z. XIV.-XV. Yüzyıl Tıp Metinlerinde Türkçe Bitki Adları. Kebikec. 2004;18:273–301.
40. Baytop T. Türkçe bitki adları sözlüğü. Ankara: Atatürk Kültür, Dil ve Tarih Yüksek Kurumu, Türk Dil Kurumu; 2007.
41. Galenus. De Med De simplicium medicamentorum temperamentis facultatibus ac Med libri Sebisch M, Briccius C. Disputatio De Simplicium Medicamentorum Facultatibus XIV.: Ex Capitibus 1. 2. 3. 4. 5. 6. 7. 8. & 9. Libri quinti Galeni. (Argentorati [Strasbourg], Typis Eberhardi Welperi). Welperusf. (In Latin). 1651.
42. Papagiannopoulos DN. Νήριον / Nerium. In: Pavlos Drandakis ' Megali Elliniki Egkyklopaedia, vol. IH. Athens: Phoenix Publishing House. (In Greek). 1926–1934.
43. Kavvadas DS. Eikonografimenon Botanikon Phytologikon Lexicon (Illustrated Botanical Dictionary) Volumes 1–9. Athens: Pigassos Publisher; 1956. p. 2764–5.
44. Gennadios PG. Lexicon phytologikon. Athens: Typografeion Paraskevas Leonis; 1914.
45. Rameau JC, Mansion D, Dumé G, Gauberville C. Flore forestière française. Guide écologique illustré. 3. Région mediterranéenne. Paris: Institut pour le Développement Forestier. (In French). 2008.
46. Thielens A. Flore médicale belge. Bruxelles and Leipzig: Lacroix; 1862.
47. Flesch F. Intoxications d'origine végétale. EMC-méd. 2005;2(5):532–46.
48. Arnaud J. Intoxication digitalique non médicamenteuse: un risque non négligeable. 2010. https://docnum.univ-lorraine.fr/public/SCDMED_T_2010_JOLY_ARNAUD.pdf [dissertation on the Internet]. (In French). Accessed 18 Jan 2023.
49. Loiseleur-Deslongchamps J. Manuel des plantes usuelles indigènes, ou, Histoire abrégée des plantes de France : distribuées d 'après une nouvelle méthode : contenant leurs propriétés et leurs usages en médecine, dans la pharmacie et dans l 'économie domestique : suivi de recherches et d 'observations sur l 'emploi de plusieurs espèces, qui, dans la pratique de la médecine, peuvent remplacer un certain nombre de substances exotiques. Paris: Méquignon; 1819. (In French).
50. Penzig O. Flora Popolare Italiana. Genova: Orto Botanico della R.a Università; 1924.
51. Ortiz PL, Arista M. Nerium L. In: Castroviejo et al., editors, Flora Iberica XI. Madrid: CSIC. (In Spanish). 2012. pp. 103-106.
52. Anthos. Sistema de información sobre las plantas de España. Available at. 2024 http://www.anthos.es/. (In Spanish). Accessed 12 Mar 2024.
53. Borsetta F. Segreti delle erbe: 250 erbe e piante medicinali. Torino: F. Borsetta; 1953.
54. Milia G, Mossa L. Ricerche floristiche e vegetazionali nell'Isola di S. Antioco (Sardegna meridionale): la flora. Boll Soc Sarda Sci Nat. 1977;16(1976):167–213.
55. Campus G. Contributo aña conoscenza della flora di Sardegna. Nerium oleander L. Available at: http://sardegnaflora.it/linkarbusti/nerium_oleander.html. (In Italian). Accessed Jan 2026.
56. Peterson-Bidoshi K. Qazim Shemaj 's "Veronica 's Dream" 2006 A Contemporary Albanian Fairytale. FOLKLORICA-Journal of the Slavic, East European, and Eurasian Folklore Association. https://doi.org/10.17161/folklorica.v11i0.3774.
57. Mullaj A, Hoda P, Shuka L, Miho A, Bego F, Qirjo M. About green practices for Albania. Studies. 2017;28(29).

58. Davidov B, Javašev A, Achtarov B. Materials for Bulgarian botany-–dictionary. Sofia: Royal Publication House; 1939.
59. Vallès J, Veny J, Vigo J, Bonet MÀ, Julià MA, Villalonga JC. Noms de plantes Corpus de fitonímia catalana. Barcelona: Edicions Universitat Barcelona; 2014.
60. Fabra P. Diccionari General de la Llengua Catalana. Barcelona: Llibreria Catalonia; 1932.
61. Masclans. Els noms de les plantes als Països Catalans. Granollers: Montblanc-Martín; Barcelona: Centre Excursionista de Catalunya. 1981. (In Catalan).
62. Voliotis D, Athanasiadis N. Dendra ke thamni [Trees and shrubs; in Greek]. Thessaloniki: Arion; 1971. (In Greek).
63. Gusumpaur F. Vocabolario botanico napolitano. Napoli: Chiurazzi; 1887.
64. Cortesi F. Manuale dell 'erboristeria sarda. Gallizzi: Comitato provinciale per le piante officinali; 1934.
65. d Ascoli F, Cutolo A. Dizionario etimologico napoletano. Edizioni del Delfino; 1979.
66. Sanna J, Subirats J, Pascual I, Ferrando E. Diccionari català de l 'Alguer. Barcelona: Fundació II Congrés de la Llengua Catalana; 1988.
67. Susini E. Le Apocynaceae ornamentali. Riv Ortoflorofruttic Ital. 1953;37(1/2):32–7.
68. Cuttonaro DP. Le specie e le fitocenosi forestali nel paesaggio vegetale dei Monti Sicani [Internet]. Università degli Studi di Palermo Facoltà Agraria Dipartimento dei Sistemi Agro-Ambientali. 2012 [cited 2025 Mar 21]. Available at: https://core.ac.uk/download/pdf/53290227.pdf. Accessed Jul 2025. (In Italian).
69. Lanfranco E. Woodlands. BirdLife Malta Annual Magazine; 2000.pp. 17–8.
70. Mifsud S. Nerium oleander (Oleander): MaltaWildPlants.com-the online Flora of the Maltese Islands. Available at: https://www.maltawildplants.com/APCY/Nerium_oleander.php. Accessed Jun 2025.
71. Attard E, Pacioni P. The phytochemical and in vitro pharmacological testing of maltese medicinal plants. In Iraj Rasooli, editor. Bioactive Compounds in Phytomedicine; 2012. Pp.93-112. https://doi.org/10.5772/30270.
72. Euro MEDT DataBase. Nerium oleander. Available at: https://europlusmed.org/cdm_dataportal/taxon/89ea58ed-f9ee-428d-ada4-48c7fd0fd195. Accessed Jun 2025.
73. Colmeiro M. Enumeración y revisión de las plantas de la Peninsula Hispano-Lusitana é Islas Baleares: con la distribución geográfica de las especies, y sus nombres vulgares, tanto nacionales como provinciales. Madrid: la Viuda é Hija de Fuentenbro; 1888.
74. Villar Pérez L. Los saberes científico y popular en torno a las plantas del Pirineo Aragonés. Un ejemplo de biodiversidad cultural. Monografías de la Real Academia de Ciencias Exactas, Físicas, Químicas y Naturales de Zaragoza 23. 2003. Available at: https://digital.csic.es/bitstream/10261/58274/1/249_Los_saberes__RAcademiaZaragoza.pdf. Accessed 23 Mar 2024. (In Spanish).
75. Löw I. Aramaeische pflanzennamen. London: Wilhelm Engelmann; 1881.
76. Jawad AAH, Khuon OS, Ali NA. Intestinal activities induced by additionof different plantsextracts in vitro. Basrah J Agric Sci. 2006;19:195–206.
77. Alasbahi RH, Al-Hawshabi OS. A review on some cultivated and native poisonous plants in Aden Governorate, Yemen. Elec J Uni Aden Basic Appl Sci. 2021;2(2):54–70.
78. Najem M, Nassiri L, Ibijbijen J. Vernacular names of plants between diversity and potential risks of confusion: case of toxic plants used in medication in the central Middle Atlas, Morocco. J Pharm Pharmacogn Res. 2021;9:222–50.
79. Corriente F. Poesía dialectal árabe y romance en Alandalús. Madrid: Gredos; 1997.
80. Font i Quer P. Plantas medicinales: El Dioscórides renovado. Barcelona: Ed. Labor; 1985. (In Spanish).
81. Hebrew Academy. Oleander. Available at: https://maagarim.hebrew-academy.org.il/Pages/PMain.aspx?koderekh=8418&page=1&_gl=1wd5y8v_gaMTU0MDI1ODY4MC4xNzIxNzIxOTM0_ga_FPYHDSXS4J*MTczMzY0ODM2OC4xNC4xLjE3MzM2NDg0NTYuNjAuMC4w. Accessed 21Mar 2025. (In Hebrew).
82. Fajardo J, Barroso E, San Joaquín LE. Nerium oleander. Inventario español de los conocimientos tradicionales relativos a la biodiversidad. Fase II (Tomo 2). 2018. pp. 18–24. (In Spanish).
83. Ferrer Blasco A. Storia linguistica della Sardegna. Bologna: Il Mulino; 1984.
84. Rohlfs G. Etymologisches Wörterbuch der Sardischen Sprache. Niemeyer; 1945.
85. Kenney EJ, ed. Ovid: Heroides XVI-XXI. Cambridge University. Press. 1996.
86. Atik M, Danaci HM, Erdoğan R. Perception of plants in ancient times and their use as motifs revealing aspects of the cultural landscape in Side, Turkey. Landsc Res. 2010;35(3):281–97.
87. Cokuğras I. Hirt-Hisir: Zakkum. 2017. Available at: https://manifold.press/hirt-hisir-zakkum. Accessed 20 3 2024. (In Turkish).
88. Genaust H. Etymologisches Wörterbuch der botanischen Pflanzennamen. 1983. (In German).
89. Jashemski WF, Meyer FG, Ricciardi M. Plants: evidence from wall paintings, mosaics, sculpture, plant remains, graffiti, inscriptions, and ancient authors, catalogue of plants. In: Jashemski WF, Meyer FG, editors. The natural history of Pompeii. Cambridge: Cambridge University Press; 2002. p. 80–180.
90. Sofer J. Lateinisch-Romanisches aus den Etymologiae des Isidorus von Sevilla. Vandenhoeck & Ruprecht; 1930. (In German).
91. Liberati I. L'oleandro nell'ambiente mediterraneo, tra vicende linguistiche e culturali. Graeco-Lat Brun. 2015;20:77–88.
92. Diez FC, Donkin TC. An etymological dictionary of the Romance languages; chiefly from the German of F. Diez. TC Donkin. London and Edimborough: Williams and Norgate; 1864.
93. Cacciafoco FP. The concealed origins of three English plant names: including 'carnation 'and 'oleander'. Silly Linguistics, The Magazine for Language Lovers. 2024;76:33–8.
94. Alessio G. Relitti mediterranei nel lessico botanico greco e latino. Ann Scu Norm Super Pisa Lettere Storia Filos. 1946;13(Ser II):24–51.
95. Vajs N. Fitonimija u Vitezovićevu Rječniku "Lexicon Latino-Illyricum." Rasprave Časopis Instituta za hrvatski jezik i jezikoslovlje. 1994;20(1):313–41.
96. Salas EB. Toponimia portuguesa en Extremadura. Campo abierto Revista de educación. 1988;5:144–66.
97. Niedermann M. Contributions à la critique et à l 'explication des gloses latines. Neuchâtel: Attinger; 1905.
98. Blau O. Vergessene punische Glossen. Z Dtsch Morgenl Ges. 1873;27(4):521–32.
99. Pamies Bertrán A, Chunyi L. L 'intraduisible? Dîtes-le avec des fleurs: Botanismes figuratifs et spécificité culturelle. In: Dalmas M, Piirainen E, Filatkina N, (Eds). Figurative Sprache: Festgabe für Dmitrij O. Dobrovol 'skij. Tübingen: Stauffenburg; 2014. pp. 19-40. (In French).
100. Panaiis M. The butterfly of Rhodes Panaxia quadripunctaria (Poda), Noctuidae, its exploitation, problems and their management. Crete Heraklion: Department of Plant Production School of Agricultural Technology T.E.I; 2008.
101. Rolland E. Flore populaire, ou, Histoire naturelle des plantes dans leurs rapports avec la linguistique et le folklore. Paris: Librairie Rolland; 1912.
102. Pereira JF. Introducção á historia natural. Lisboa: Jose da Costa Nascimento Cruz; 1864.
103. Aktan T. Yenişehir (Bursa) köylerinin etnobotanik özellikleri [MS Thesis]. Manisa: Celal Bayar Üniversitesi Fen Bilimleri Enstitüsü; 2011.
104. Akgün N. Oleander 'in izole sıçan kalp kası preparatı üzerine etkilerinin elektrofizyolojik yöntemlerle araştırılması [MS Thesis]. Konya: Selçuk Üniversitesi, Sağlık Bilimleri Enstitüsü; 2014.
105. Tuzlacı E. Türkiye Bitkileri Sözlüğü: Bitki Adlarının Özel Açıklamaları. 2nd ed. Baskı, İstanbul: Alfa Basım Yayım Dağıtım; 2011.
106. Nomer NZ, Sevgi E. Ağı ve Ağu Sözcüklerinin Yöresel Bitkiadlarında Kullanımının Değerlendirilmesi. Avrasya Terim Dergisi. 2023;11(3):109–23.
107. Tietze A. Tarihî ve Etimolojik Türkiye Türkçesi Lugati I-IX. Ankara: TÜBA; 2016.
108. Yıldız Y. Türkçe Bitki Adlarının Anlam Bilimi Açısından İncelenmesi Sakarya Üniversitesi Sosyal Bilimler Enstitüsü Türk Dili ve Edebiyatı Anabilim Dalı Doktora Tezi. Sakarya; 2020.
109. Sargın SA, Akcicek E, Selvi S. An ethnobotanical study of medicinal plants used by the local people of Alasehir (Manisa) in Turkey. J Ethnopharmacol. 2013;150:860–74.
110. Sargin SA, Selvi S, Lopez V. Ethnomedicinal plants of Sarigol district (Manisa), Turkey. J Ethnopharmacol. 2015;171:64–84.
111. Furkan MK. Adıyaman ilinde yetişen bazı bitkilerin etnobotanik özellikleri [MS Thesis]. Fen Bilimleri Enstitüsü Biyoloji Anabilim Dalı: Adıyaman Üniversitesi; 2016.
112. Baldi A, Pandolfi C, Mancuso S, Lenzi A. A leaf-based back propagation neural network for *Nerium oleander* L. cultivar identification. Comput Electron Agric. 2017;142:515–20.
113. Al-Snafi AE. Bioactive ingredients and pharmacological effects of *Nerium oleander*. IOSR J Pharmacy. 2020;10(9):19–32.
114. Arnold N, Baydoun S, Chalak L, Raus T. A contribution to the flora and ethnobotanical knowledge of Mount Hermon, Lebanon. Fl Medit. 2015;25:13–55.
115. Najem M, Ibijbijen J. Vernacular names of toxic plants used as medicine in the central Middle Atlas-Morocco. Ethnobot Res Appl. 2020;20:1–30.
116. Abdallah AH, Mahmoud N, Elmahi N. Documentation and investigation into the floristic composition of Barakat area (Gazira State) Sudan. Res Aspects Biol Sci. 2022;4:167–80.
117. Al-Shameri KA. Atlas of medicinal plants in Yemen. Al-Naseem for printing and publication; 2008.

118. Jp M. Bdouin Ethnobotany-Plant Concepts and Uses in a Desert Patoral World. Tucson: The Univerity of Arizona Press; 2011.
119. Parada M. Estudi etnobotànic de l 'Alt Empordà [PhD thesis]. Barcelona: Universitat de Barcelona; 2007. (In Catalan).
120. Gori P. L 'Amore per i Fiori. Firenze: Adiano Salani; 1882.
121. Rabitti AH. Catalogo Polygloto delle Piante. Firenze: Stabilimento di Giuseppe; 1870.
122. Fraga P, Mascaró C, Carreras D, Garcia O, Pallicer X, Pons M, Seoane M, Truyol M. Catàleg de la flora vascular de Menorca. Maó: Institut Menorquí d 'Estudis IME; 2004. (In Catalan).
123. Bouchard J. Flora Catalana: Capcir, Cerdanya, Conflent, Rosselló, Vallespir, Salanca, La Costa, Els Aspres, Les Alberes. Prada de Conflent: Terra Nostra; 1971.
124. Vallès J, Parada M. Etnobotànica i fitonímia: plantes, noms i cultura popular a l 'Alt Empordà. In: Jornades de la Secció Filològica de l 'Institut d 'Estudis Catalans a Castelló d 'Empúries:(13 i 14 d 'abril de 2018). Institut d 'Estudis Catalans; 2021. pp. 109-34. (In Catalan).
125. Conrad MM. Les Corses et les plantes sauvages autrefois et maintenant. Conférence faite à Cervioni le 3 avril 1981. Association pour l 'Etude Ecologique du Maquis; 1981. (In French).
126. Pouly PL, Fauconnet L. Sur quelques substances stéroïdes du laurier-rose (Nerium oleander L.). Bulletin de la Société vaudoise des Sci nat N° 301. 1960;67:205–10.
127. Paris RR, Duret S. Contribution à l'étude de la répartition et du métabolisme des flavonoïdes. Variations des flavonoides chez le Laurier-rose (Nerium oleander L.) au cours de la végétation. Bull Soc Bot Fr. 1972;119(9):531–42.
128. Daflaoui H, Ragragui H, Aburabie H, Dikhaye S, Zizi N. Dermite de contact secondaire à l'application du laurier rose (Nerium oleander). Rev Fr Allergol. 2021;61(2):123–5.
129. Gillet M, Magne MJH. Nouvelle Flore française, descriptions succinctes et rangées par tableaux dichotomiques des plantes qui croissent spontanément en France et de celles qu 'on y cultive en grand. Paris: Garnier Frères; 1883.
130. Scarborough J. Theophrastus on herbals and herbal remedies. J Hist Biol. 1978. https://doi.org/10.1007/BF00389304.
131. Lardos A. The botanical materia medica of the Iatrosophikon---a collection of prescriptions from a monastery in Cyprus. J Ethnopharmacol. 2006;104(3):387–406.
132. Vidaller TR. Dizionario sobre espezies animals y bexetals en o bocabulario altoaragonés. Huesca: Diputación de Huesca; 1989.
133. Zadravec DM, Gómez M, Luna C, Pistán ME, Canteros S. Daños pulmonares causados por el extracto de Nerium oleander (Laurel de Jardín) de Corrientes en ratones. XVII Sesiones de Comunicaciones Técnicas y Científicas Estudiantiles: Facultad de Ciencias Veterinarias, Universidad del Noreste; 2018.
134. Multilingual dictionary Tureng. Available at: https://tureng.com/en/turkish-english. Accessed on 21 March 2025.
135. Coll J. El parlar del Pallars. Barcelona: Ed. Empúries; 1991. (In Catalan).
136. Borja CJ. Estudi fitogràfic de la Serra de Corbera. Corbera (València): Ajuntament de Corbera; 1994.
137. Pellicer J. Costumari botànic, recerques etnobotàniques a les comarques centrals valencianes. Picanya: Edicions del Bullent; 2000.
138. Corbera PJ. Caracterització del lèxic alguerès. Palma: Universitat de les Illes Balears; 2000.
139. Asl MB, Talebpour AH, Alijanpour R. Introducing of medicinal plants in Maragheh, Eastern Azerbaijan province (northwestern Iran). J Med Plant Res. 2012;6:4208–20.
140. Laspeñas D. Correspondencias léxicas entre aragonés, catalán y occitano. Algunas relaciones en el mundo vegetal a la luz de las fuentes bibliográficas [PhD]. Universidad de Zaragoza, Zaragoza; 2022.
144. Nelson, Thomas (Publisher). The Holy Bible: New Revised Standard Version. Nashville (TN): Thomas Nelson Publishers; 1989.
145. Jones WHS trans. Pliny, Natural History. Cambridge (Mass.): Harvard University Press and London: Heinemann; 1969.
146. Herrera J. The reproductive biology of a riparian Mediterranean shrub, Nerium oleander L. (Apocynaceae). Bot J Linn Soc. 1991;106(2):147–72.
147. Golpaygani S. Muntakhab Ul- Asar Fil Imam- e- Thani Ashar (Vol. III). S. Rizvi (transl.), H. Farnagh (ed.). Tehran: Naba Organization; 2016.
148. Khatib I. Stories of the Prophet. Beirut: Dar Al Kotob Al Ilmiya; 2013.
149. Harissis HV. A bittersweet story: the true nature of the laurel of the Oracle of Delphi. Perspect Biol Med. 2014;57(3):351–60.
150. Coromines J. Diccionari etimològic i complementari de la llengua catalana. Barcelona: Curial: Caixa de Pensions "La Caixa"; 1980. (In Catalan).
151. Muñoz Centeno L, Rico E, et al. Veratrum L. In: Castroviejo S, et al., editors. Flora Iberica, vol. 20. Madrid: Real Jardín Botánico-CSIC; 2013. p. 105–8.
152. Flora catalana. Daphne gnidium. Available at: https://www.floracatalana.cat/flora/vasculars/taxons/VTax930. Accessed Jun 2024. (In Catalan).
153. Maxia M. Il toponimo Billèllera e il blasone di Sorso. RIOn Rivista -- Italiana di Onomastica. 2004;10(1):39–52.
154. Real Academia Española. Diccionario de la lengua española. 23rd ed. Madrid: Real Academia Española. Diccionario de la lengua española | Edición del Tricentenario | RAE – ASALE. (In Spanish); 2022.
155. Asociación de Academias de la Lengua Española (ASALE). Diccionario de americanismos. Available at: https://www.asale.org/damer/cebadilla. Accessed 15 Dec 2023 (In Spanish).
156. Al Isbili, Abu I Hayr. Kitabu 'Umdati Ttabib Fi Ma 'rifati Nnabat Likulli Labib (Libro base del médico para el conocimiento de la Botánica por todo experto). vol. II (Fuentes Arábico Hispanas) de Abu I hayr al Isbili; Córdoba FC, Tilmatine C, Costa JB. 1995. (In Spanish).
157. Corriente F. A dictionary of Andalusi Arabic. Leiden: Brill; 2022.
158. Ghasemi PA, Momeni M, Bahmani M. Ethnobotanical study of medicinal plants used by Kurd tribe in Dehloran and Abdanan districts, Ilam province, Iran. Afr J Tradit Compl Altern Med. 2013;10(2):368–85.
159. Dawkins RM. The semantics of Greek names for plants. J Hellen Stud. 1936;56:1–11.
160. Sallent A. Els noms de les plantes. Butlletí de Dialectologia Catalana; 1929.
161. Sánchez-Monge A. Plantas cultivadas en España. 2nd ed. Madrid: Ministerio de Agricultura; 1981.
162. Contu M. Flora e toponimi della Sardegna. Cagliari: Regione Autonoma della Sardegna; 1989.
163. Germain G, Becker M, Picard J-F. Larousse des arbres, des arbustes et des arbrisseaux de l 'Europe occidentale. Paris: Librarie Larouse; 1982.
164. Government of Malta: Trees and woodlands protection. Available at: https://legislation.mt/eli/sl/549.123/eng/pdf. Accessed 18 April 2023.
165. Hirc D. Revizija hrvatske flore (Revisio florae croaticae). Rad Jugoslavenske akademije znanosti i umjetnosti. 1906;167:8–128.
166. Simonović D. Botanički rečnik, Srpska Akademija Nauka i Umetnosti, Posebna izdanja, knjiga 3, Naučno delo, Beograd. Belgrad: Serbian Academy of Sciences and Arts, Special issue, Book 3, Naučno delo; 1959. (In Croatian).
167. Džalto I. Fitonimija u Parčićevu Rječniku hrvatsko-talijanskome iz 1901. godine [Master 's thesis]. University of Rijeka. Faculty of Humanities and Social Sciences. Department of Croatian Language and Literature; 2021. (In Croatian).
168. Šulek B. Jugoslavenski imenik bilja. Zagreb: Tiskom dioničke tiskare; 1879.
169. Schlosser JC, Vukotinović L. Bilinar: Flora excursoria: uputa u sabiranju i označivanju bilinah u Hrvatskoj, Slavoniji i Dalmaciji. Zagreb: L. Hartman i družba; 1876.
170. Rivera D, Alcaraz FJ, Verde A, Fajardo J, Obon C. Las plantas en la cultura popular. Sociedad Mediterránea de Historia Natural: Enciclopedia divulgativa de la historia natural de Jumilla-Yecla; 2008.
171. Türk Dil Kurumu. Türkiye 'de Halk Ağzından Derleme Sözlüğü. Baskı, Ankara: Türk Dil Kurumu Yayınları; 1993.
172. Çavuş Alan S, Özen R. Medicinal plants used in wound treatment in veterinary folklore in Turkey: a literature review. Kafkas Univ Vet Fak Derg. 2021;27(5):663–73. https://doi.org/10.9775/kvfd.2021.26113.
173. Akbulut S, Yilmaz D. Ethnobotanical knowledge on the plants used by people on the Datça peninsula (Muğla-Turkey). Appl Ecol Environ Res. 2022;20(2):1887–910.
174. Emre G, Dogan A, Haznedaroglu MZ, Senkardes I, Ulger M, Satiroglu A, et al. An ethnobotanical study of medicinal plants in Mersin (Turkey). Front Pharmacol. 2021;12:664500. https://doi.org/10.3389/fphar.2021.664500.
175. Satıl F, Tümen G, Dirmenci T, Çelik A, Arı Y, Malyer H. Kazdağı Milli Parkı ve çevresinde Balıkesir etnobotanik envanter çalışması 2004-2006. TÜBA-KED Türkiye Bilimler Akademisi Kültür Envanteri Dergisi. 2007;5:171–99.
176. Polat R, Satıl F. An ethnobotanical survey of medicinal plants in Edremit Gulf (Balıkesir–Turkey). J Ethnopharmacol. 2012;139(2):626–41.
177. Gümüşatam G. Risâle-i Mu'âlece'ye Göre On Altıncı Yüzyıl Osmanlı Tıbbında Bitkisel Tedavi Şekilleri ve Terminoloji. Osmanli Bilimi Arastirmalari. 2022;23:261–90.
178. Najem M, Nassiri L, El Mderssa M, Ibijbijen J. Originality and meaning of the vernacular names of medicinal plants common in the central Middle Atlas-Morocco. Ethnobotany Res Appl. 2024;29(1):39. https://doi.org/10.32859/era.29.29.1-39.
179. Targioni-Tozzetti O. Dizionario botanico italiano: che comprende i nomi volgari italiani specialmente toscani e vernacoli delle piante raccolti da diversi

autori e dalla gente di campagna, col corrispondente latino botanico. 2nd ed. Firenze: Forni; 1858.
180. Aitchison JET. Notes on Products of Western Afghaniatan and North-Eastern Persia. Edinburg: Nill; 1890.
181. Marzieh BA, Amir-Hossein T, Rahim A. Introducing of medicinal plants in Maragheh, Eastern Azerbaijan province (northwestern Iran). J Med Plants Res. 2012;6(25):4208–20.
182. Lucio Apuleyo. The Golden Ass: Being the Metamorphoses of Lucius Apuleius, Transl. William Adlington. London: William Heinemann Limited; 1958.
183. Sargin SA. Micro-morphological, anatomical and statistical correlative evaluation between different altitudes and leaf structural features of Nerium oleander L. (Apocynaceae), growing in the Middle-West Taurus, Turkey. Botany Res J. 2021;14(1):1–9.
184. Steingass F, Richardson J, Johnson F. A Comprehensive Persian-English Dictionary: Including the Arabic Words and Phrases to be Met with in Persian Literature, Being Johnson and Richardson 's Persian, Arabic, and English Dictionary Rev., Enl., and Entirely Reconstructed. Allen; 1892.
185. Shahin SM, Jaleel A, Alyafei MA. The essential oil-bearing plants in the United Arab Emirates (UAE): an overview. Molecules. 2021;26(21):6486.
186. Phondani PC, Bhatt A, Elsarrag E, Horr YA. Ethnobotanical magnitude towards sustainable utilization of wild foliage in Arabian Desert. J Tradit Complement Med. 2016;6(3):209–18.
189. Ozturk M, Uysal I, Guecel S, Mert T, Akcicek E, Celik S. Ethnoecology of poisonous plants of Turkey and Northern Cyprus. Pak J Bot. 2008;40(4):1359–86.
190. Bragard C, Dehnen-Schmutz K, Di Serio F, Gonthier P, Jacques MA, Jaques Miret JA, et al. Commodity risk assessment of Nerium oleander plants from Turkey EFSA Panel on Plant Health (PLH). EFSA J. 2021;19(5):e06569.
191. Çana D, Koca AD. Toxic effects of ethnobotanically used plants in Muğla. Hacettepe Univ J Fac Pharm. 2024;44(4):390–400.
192. Yipel M, Yarsan E, Altinok Yipel F. Most common toxic plants of Turkey to animals: classification by target species/systems and management of poisoning cases. Austin J Pharmacol Ther. 2014;2(7):1039–47.
193. Navarro Moll C, Nogues S. Nerium oleander. In: Pinillos MA, Nogué S, editors. Plantas Tóxicas. Madrid. Madrid: Ministerio de Sanidad and Fundación Española de Toxicología Clínica; 2022.
194. Whittaker JJ. Diseases of the heart and deridinuim. In: Stedamn TL, editor. Tewntieth Century Practice, An International Encyclopedia of Modern Medical Medicine. Vol Wasfi IA, Zorob IV: Diseases of the Vascular System and Thphoid Gland. London: Sampson, Low and Marston; 1986. pp. 1–454.
195. Gleditsch M. Eclaircissmentes historique et physiques sur diverses plantes. Mémoires de L 'académie Royal. 1759;25:456–84.
196. Reed DR, Knaapila A. Genetics of taste and smell: poisons and pleasures. Prog Mol Biol Transl Sci. 2010;94:213–40. https://doi.org/10.1016/B978-0-12-375003-7.00008-X.
197. Sibert J, Frude N. Bittering agents in the prevention of accidental-poisoning - childrens reactions to denatonium benzoate (Bitrex). Emerg Med J. 1991;8(1):1–7. https://doi.org/10.1136/emj.8.1.1.
198. Coquebert CCh. On the plants used by the ancients people to poison their arrows. J Nat Phil Chem Arts. 1799;3:2390–2.
199. Pinillos MÁ, Nogué S. Plantas tóxicas. Madrid: Ministerio de Sanidad; 2022.
200. Magdalene M, Kavitha S, Priya VV, Gayathri R. Evaluation of antidiabetic effect of *Nerium oleander* flowers-an in vitro study. Drug Invent Today. 2019;12:1313–5.
201. Pillay VV, Sasidharan A. Oleander and datura poisoning: an update. Indian j crit care med peer-rev official publ Indian Soc Critical Care Med. 2019;23(Suppl 4):S250.
202. Loiseleur-Deslongchamps M. Nouveau Duhamel, ou, Traite des arbres et arbustes que l 'on cultivé en France. Tome Cinquième. Paris: Chez Etiene Michel et Arthus-Bertrand; 1812.
203. Climent D. Adelfa, tan bella como tòxica. Jardí Botànic de la Universitat de València, València; 2018. Available at: https://espores.org/es/etnobotanica-es/adelfa-tan-bella-como-toxica/. Accessed 15 Dec 2022. (In Spanish).
204. Suchard J, Greb A. Negligible oleandrin content of hot dogs cooked on Nerium oleander skewers. J Med Toxicol. 2021;17:57–60.
205. Suchard JR, Lim J, Schmitt K. Food poisoning by oleander skewers: investigation of a toxicologic urban legend. J Med Toxicol. 2024;20(2):222–5.
206. Pellet G, Masson-Regnault M, Beylot-Barry M, Labadie M. Dermatite irritative par contact direct avec du laurier rose (Nerium oleander). Ann Dermatol Venereol. 2015;142:434–7.
207. Patil DA. Ethnotaxonomy as mirrored in Sanskrit plant names. Plantae Sci. 2020;3(5):56–64.
208. Dymock W. The vegetable materia medica of Western India. Bombay: Education Society 's Press; 1885.
209. Jones W. Botanical observations on select Indian plants. Asiatic Res Transactions Societ InstitutedNengal Inquiring Into History Antiquities Arts Sci Lit Asia. 1798;4:238–321.
210. Thüry GE. Lavendel und Oleander in der griechisch-römischen Antike. Carnuntum Jahrb. 2020;2019:59–72.
211. Levey M. The Medical Formulary or Aqrabadhin of Al-Kindi. Madison and Milwaukee, Wisconsin: Publications in Medieval Science, University of Wisconsin Press; 1966.
212. Binning RBM. A journey of two years ' travel in Persia, Ceylon etc. London: H. Allen; 1857.
213. Palmer EH. A Concise Dictionary of the Farsi Language. Routledge; 2015.
214. Saadi M. The Bustan. Clarke W, translator. London: WM. H. Allen and Co. (Original work published 665 A.H.); 1879.
215. Sargin SA, Selvi S, Buyukcengiz M. Ethnomedicinal plants of Aydincik district of Mersin, Turkey. J Ethnopharmacol. 2015;174:200–16.
216. NapoleaoChernoviz PL. Diccionario de Medicina Popular. 2nd ed. Rio de Janeiro: Eduardo & Enrique Laemert; 1851.
217. Waizel-Bucay J, Waizel-Haiat S. El estornudo. Fisiología, mitos, tradiciones, etnomedicina y plantas con propiedades estornutatorias. S. Sneeze. Physiology, myths, traditions, etnomedicine and plants with sneezing properties. An Orl Mex. 2015;60:179–93.
218. Devi N. Indian tribes and villages health and habits: popularity of Apocynaceae plants as medicine. Int J Green Pharm. 2017;11(2):256–79.
219. Benítez G, González-Tejero MR, Molero-Mesa J. Knowledge of ethnoveterinary medicine in the Province of Granada, Andalusia, Spain. J Ethnopharmacol. 2012;139(2):429–39.
220. Rivera D, Verde A, et al. Ethnoveterinary medicine and ethnopharmacology in the main transhumance areas of Castilla-La Mancha (Spain). Front Vet Sci. 2022;9:866132. https://doi.org/10.3389/fvets.2022.866132.
221. Miara MD, Bendif H, Ouabed A, Rebbas K, Hammou MA, Amirat M, et al. Ethnoveterinary remedies used in the Algerian steppe: exploring the relationship with traditional human herbal medicine. J Ethnopharmacol. 2019. https://doi.org/10.1016/j.jep.2019.112164.
222. Mathieu J, Maneville R. Les accoucheuses musulmanes traditionnelles de Casablanca. Librairie administrative centrale; 1952.
223. Chaachouay N, Azeroual A, Bencharki B, Douira A, Zidane L. Ethnoveterinary medicinal plants for animal therapy in the Rif, North of Morocco. S Afr J Bot. 2022;147:176–91.
224. Süleyman A, Kargıoğlu M, Yıldırım Hİ, Konuk M. An ethnobotanical approach to animal diseases and biological control in Antalya: Southern Turkey. Indian J Tradit Knowl. 2018;17:59–76.
225. Erarslan ZB, Kültür Ş. Ethnoveterinary medicine in Turkey: A comprehensive review. Turk J Vet Anim Sci. 2019;43(5):55–82.
226. Alan SÇ, Rahşan Ö. Medicinal plants used in wound treatment in veterinary folklore in Turkey: A literature review. Kafkas Univ Vet Fak Derg. 2021;27(5):663–73.
227. Aleo N, Amato F, Aleo M. Le piante tossiche della flora trapanese (Sicilia). Quad Bot Ambientale Appl. 2011;22:31–49.
228. Viegi L, Ghedira K. Preliminary study of plants used in ethnoveterinary medicine in Tunisia and in Italy. Afr J Tradit Complement Altern Med. 2014;11(3):189–99.
229. Passalacqua NG, De Fine G, Guarrera PM. Contribution to the knowledge of the veterinary science and of the ethnobotany in Calabria region (Southern Italy). J Ethnobiol Ethnomed. 2006;2:1–4.
230. Palladius. Opus agriculturae. Rodgers RH, editor. Leipzig: B. G. Teubner; 1975.
231. Baumann H. Greek wild flowers and plant lore in ancient Greece. London: The Herbert Press; 1993.
232. Lindley J. The Vegetable Kingdom, Or, The Structure, Classification, and Uses of Plants. London: Bradbury and Evans; 1853.
233. Barney SA, Lewis WJ, Beach JA, Berghof O. The etymologies of Isidore of Seville. Cambridge: Cambridge University Press; 2006.
234. La GD. mythologie des plantes ou les légendes du règne végétal. Paris: Reinwald; 1882.
235. Jashemski WF. Tomb gardens at Pompeii. Class J. 1970;66(2):97–115.
236. Guastella SA. Canti popolari del circondario di Modica. Modica: Lutri and Secagno figli; 1876.
237. Kozuharova E, Benbassat N, Napier J. New records of the remedial properties of vascular plants, some traditionally accepted as medicinal plants and some less familiar to ethnobotanists. Phytol Balc. 2012;18:323–32.

238. Koukkidis K. Dictionary of Greek words as derived from Turkish [Lexilogion Ellinikon lexeon paragomenon ek tis Tourkikis]. Athinai: Etaireia Thrakikon Meleton; 1960.
239. Bulut G, Tuzlacı E. An ethnobotanical study of medicinal plants in Turgutlu (Manisa–Turkey). J Ethnopharmacol. 2013;149(3):633–47.
240. Duchesne EA. Répertoire des plantes utiles et des plantes vénéneuses du globe. Cans et Compie: Meline; 1846.
241. Ugolini G. *Nerium oleander* Lin. Bullettino della R Società Toscana di Orticultura. 1899;4(7):161–4.
242. Porta do Jardim. Oleandro. Avalable at: https://www.portaldojardim.com/pdj/2010/09/28/oleandro/. Accessed Jun 2025. (In Portuguesse).
243. Claisse R, Foucault BD, Delelis-Dusollier A. Nommer les plantes et les formations végétales. The man Revue française d'anthropologie. 2000;153:173–82.
244. El Amri J, El Badaoui K, Zair T, Bouharb H, Chakir S, Alaoui TEM. Ethnobotanical study of medicinal plants in the region El Hajeb (central Morocco). J Res Biol. 2014;4(8):1568–80.
245. Khoufache A. Study of the vernacular and scientific names of plants of North Africa. Doctoral dissertation. Paris: Sorbonne Paris Cité University; 2019.
246. Gördük YE. Kur'an'da Geçen Zakkum Ağacı Üzerine Bir Literatür İncelemesi. Harran Üniversitesi İlahiyat Fakültesi Dergisi. 2017;37:57–86.
247. Ghazanfar SA. Plants of the Qur'ān: history and culture. London: Kew; 2023.
248. Farooqi MIH. Plants of the Quran. Aninabad: Sidrah Publishers; 1989.
249. Issiki Z, Moundir C, Marnissi F, Seddik N, Benjelloun N, Zaid Y, et al. Toxicological evaluation of the aqueous extract of Caralluma europaea and its immunomodulatory and inflammatory activities. Pharmacogn Res. 2017;9(4):390.
250. Hadi F, Hussain F. The plant biodiversity mentioned in the Holy Quraan. Int J Biol Biotechnol. 2011;8(2):305–11.
251. Rahman MA, Mossa JS, Al-Said MS, Al-Yahya MA. Medicinal plant diversity in the flora of Saudi Arabia 1: a report on seven plant families. Fitoterapia. 2004;75(2):149–61.
252. El Harkaoui S, El Kaourat A, El Monfalouti H, Kartah BE, Mariod AA, Charrouf Z, et al. Chemical composition and geographic variation of cold pressed Balanites aegyptiaca Kernel Oil. Foods. 2024;13(7):1135.
253. Westermarck E. Marriage Ceremonies in Morocco. London: Macmillan; 1914.
254. Gélard ML. Des fleurs en plastique. Artefacts exogènes en contexte saharien. Journal des Anthropologues; 2012 (28—29): 163--83.
255. Westermarck E. Ritual and Belief in Morocco. London: Macmillan; 1926.
256. Dafni A, Petanidou T, Vallianatou I, Kozhuharova E, Blanche C, Pacini E, et al. Myrtle, basil, rosemary, and three-lobed sage as ritual plants in the monotheistic religions: A historical–ethnobotanical comparison. Econ Bot. 2020;74:330–55.
257. So BH. The staff as a symbol of spiritual guidance for individuation. J Symbols Sandplay Ther. 2018;9(2):49–68.
258. Skinner CM. Myths and Legends of Flowers, Trees, Fruits, and Plants. Philadelphia: J.B. Lippincott Co.; 1911.
259. Folkard R. Plant lore, legends, and lyrics: embracing the myths, traditions, superstitions, and folk-lore of the Plant Kingdom. Low, Marston: Sampson; 1892.
260. Abouri M, El Mousadik A, Msanda F, Boubaker H, Saadi B, Cherifi K. An ethnobotanical survey of medicinal plants used in the tata province, Morocco. Int J Med Plant Res. 2012;1(7):99–123.
261. Vickery R. A Dictionary of Plant Lore. Oxford University Press; 1995.
262. Coulon JC. Fumigations et rituels magiques. Bull Études Orientales LXIV. 2016. Available at: http://journals.openedition.org/beo/4679 https://doi.org/10.4000/beo.4679. Accessed Jun 2025.
263. Teixidor-Toneu I, Martin GJ, Ouhammou A, Puri RK, Hawkins JA. Comprehensive dataset of the medicinal plants used by a Tashelhit speaking community in the High Atlas, Morocco. Data Brief. 2016;8:516–9.
264. Mehrnia M, Zahra Hosseini Z. Popular and famous vegetation in traditional medicine of Lorestan province. Herbal Med J. 2020;5(3):100–12.
265. Mesrob G Kouyoumdjian. A Comprehensive Dictionary English-Armenian. Beirut: G. Doniguian and Fils; 1981.
266. Laoust É. Mots et Choses Berbères : notes de linguistique et d'ethnographie : dialectes du Maroc. Paris: A. Challamel; 1920.
267. El Alaoui N. L'action rituelle pour la pluie: Anti-Atlas – Maroc. In: Katz E, Lammel A, Goloubineff M, editors. Entre ciel et terre, climat et sociétés. Editions Ibis Press; 2002. p. 299–319.
268. Fabricius G. Originum Illustrissime Stipis Saxonnicae. Tobiae Steinmanni, Janae. (in Latin); 1597.
269. Bellomaria B, Della Mora L. Novità nell'uso delle piante officinali per la zona di Matelica (Macerata) anche in confronto con altre zone delle Marche. Arch Bot Biogeogr Ital. 1985;61:51–81.
270. James R. Pharmacopoeia Universalis: Or, A New Universal English Dispensatory. Containing, I. An Account of All the Natural and Artificial Implements and Instruments of Pharmacy, Together with the Processes and Operations, Whereby Changes are Induced in Natural Bodies for Medicinal Purposes. With a Copious Index to the Whole. London. J. hodges; 1747.
271. Bally J. Eur-Aran roots with their English derivates. London: Kegan Paul, Trench, Trübner and co.; 1897.

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