

SCIENTIFIC VS. POPULAR IN FOREST TERMINOLOGY: *FIR TREE, SPRUCE TREE, PINE TREE*

Simona SANDU (PÎRVULESCU), PhD student
University of Craiova

Abstract

In this article we aim to approach aspects of forest terminology, namely scientific names and popular names of trees. By consulting the forest-related literature, we can see that forest terminology interferes with other terminologies. Strictly referring to the names of trees, we find that forest terminology has adopted names of trees/shrubs from systematic biology, dendrology, botany (one can notice the unity of the classification of woody plants).

Key-words: *terminology, scientific, popular, trees, meaning*

Résumé

Dans cet article on s'est proposé d'approcher des aspects de la terminologie forestière, plus exactement des noms scientifiques et populaires des arbres. A partir de la littérature de spécialité forestière on peut constater que la terminologie forestière interfère avec d'autres terminologies. En nous référant strictement aux noms d'arbres, on constate que la terminologie forestière a repris les noms des arbres/arbustes de la biologie systématique, de la dendrologie, de la botanique (l'on observe l'unité de la classification des plantes ligneuses).

Mots-clés: *terminologie, scientifique, populaire, arbre, sens*

1. Introduction

Initially referred to as *specialized language*¹ or *professional language*, terminology was defined by the international standard ISO 1087: 1990 (Terminology - Vocabulary) as a discipline: "The science of terminology is the scientific study of notions and terms used in specialized languages"² and as a set of terms: "Terminology is the set of terms that represent a system of notions of a particular domain"³. This definition emphasizes the fact that each field operates with its own specialized language, and the terminology related to the forestry domain is not an exception. From the definition of terminology and the determiner *forestier* ('forestry')⁴, we can conclude

¹ Angela Bidu-Vrănceanu uses the name *specialized language* (*linguistic specialized language, philosophical specialized language, plastic arts specialized language* and so on). Within these specialized languages, Bidu-Vrănceanu (together with the group of authors) identifies interdisciplinary terms that adapt their meaning to the science that borrows them "with longer or smaller semantic distances" from the common science/lexis from which they were taken over. Other interdisciplinary terms "retain part of the meaning in any terminology in the form of a semantic average" (Bidu-Vrănceanu, 2001: 265).

² *International standard ISO 1087-1/2000 Travaux terminologique. Vocabulaire. Theorie et applications*, apud Mariana Pitar, *Terminologia: concepte de bază*, https://litere.uvt.ro/litere-d/vechi/documente_pdf/, accessed on 26.10.2017.

³ *Ibidem*.

⁴ *forestier*; -ă, *forestieri*, -e, adj. With regard to forests; of the forest; in relation to forest exploitation; forestry. From Fr. *forestier* (DEX: 441); *forestier*; -ă [At: DA ms / P: -ti-er ~ / Pl: ~i~e / E: Fr. *forestier*] 1. a With regard to forests. 2. a Of the forest. 3. a In relation to forest exploitation Si: *silvic* (MDA, I: 929).

that forest terminology (the forestry specialized language) is the set of terms that represent the system of notions of the forestry domain. Forest terminology operates with simple terms recognized in the domain, categorematic, monosemantic terms (which render the concepts used in the forestry field), with consignificant terms, with complex terms - terms that have strictly specialized meanings in the forestry field. In addition to specialized phrases, forest terminology uses terms of the common lexicon and interdisciplinary terms: “The main problem that this terminology raises is the adaptation of the terms taken over from so many disciplines to the specificity of forestry. There are borrowed terms with the same form, without changes, such as those for taxonomic bases (plant and animal taxonomy), adopted as such from biology or those taken from geography to characterize landscape, climate or soil conditions, but most of the terms are interdisciplinary, therefore polysemantic in relation to the general system of language.”⁵ While analysing the terms used in forest terminology, we find that it has “adopted” terms from biology, botany, dendrology, geography, bioenergy, bioeconomics, mathematics, physics, the environment, horticultural sciences, law. Some of the specialized terms, as well as other interdisciplinary terms taken over by the forest terminology coexist with the popular name.

In this article we intend to present the characteristics and belonging to the scientific language, popular language respectively, of the terms and phrases that refer to tree species present on the territory of Romania.

The corpus subject to analysis in this article contains three simple and complex terms, which are in the structure of nominal phrases. The terms - names of trees (popular and scientific) - were taken from the “National Catalogue of Forest Genetic Resources”⁶. These are terms that are part of the kingdom Plantae, division Spermatophyta, subdivision Pinophytina (Gymnospermae)⁷.

The first names given to plants in the history of mankind were the popular names.

Theophrastus (382-287 BC) attempted a first “classification of plants in trees, shrubs, undershrubs, herbaceous perennials, and annual herbs”⁸. The botanist Carl von Linné (or Linnaeus) introduced the Latin binary nomenclature in 1753. In order to ensure the uniqueness of plant names, in 1905, at the Botanical Congress in Vienna there was imposed the use of Latin names as official scientific names which are currently regulated by a series of nomenclature codes⁹. In Romanian, Dumitru Bejan (1991) identifies the moment of the written certification of the names of plants in 1700, in a manuscript containing a Slav-Romanian glossary called the *Slavonic-Romanian Glossary of Plants*.

⁵Biriş, 2012: 188.

⁶ Annex no. 1 to the Order of the Minister of the Environment and Forests no. 945/01.03.2012, p. 8, respectively Table 1 *Species for which nuclei for the preservation of forest genetic resources have been established*, “basic species” and “associated species”, <http://www.mmediu.ro/beta/domenii/paduri/>, accessed on 09.02.2018.

⁷ Săvulescu, 2010: 8.

⁸ Săvulescu, 2010: 8.

⁹ *The Melbourne International Code of Nomenclature for algae, fungi, and plants, The International Code of Nomenclature for Cultivated Plants*, apud Nagy Imola Katalin, *Numele de plante. O abordare lingvistică*, www.upm.ro/facultati_departamente/stiinte_litere/conferinte/.../IETM5_Part56.pdf, accessed on 02.11.2017.

2. Analysis of terms

The terms under analysis, both with the popular name and with the scientific name, consist of simple units, compounds and phrases.

2.1. Brad ('fir tree')¹⁰ – *Abies alba* Mill., species code: BR (*brad* < Alb.*bradh*, *breth*).

Brad, *brazi*, with the variant *bread*, is defined in the general use as “1. Tree of the pinaceae family growing in the mountainous area, up to 50 m high, with a straight trunk, with persistent, dark green, needle-shaped leaves, with cone-like seeds and flowers (*Abies alba*); *p.gener.* the name given to conifers”, cf. Alb. *bradh*, *breth*¹¹. From the base word *brad* there are many derivatives¹²:

brădac masc.n. (*brad* + *-ac*) (bot; reg): 1 “fir tree”; 2 “horse tail”;

brădaică fem.n. (*brad* + *-aică*) (bot; reg): 1 “fir tree”; 2 “spruce tree”;

brădan masc.n. (*brad* + *-an*) (pop; aug) “thick fir tree”;

brădancă fem.n. (*brad* + *-ancă*) 1-2 (pop) “A relative (or girlfriend) of the bride who attends the party and takes part in the dance of the fir tree”;

brădănaș masc.n. (*brădan* + *-aș*) 1-2 “small fir tree”;

brădățel neuter n. (*brădet* + *-el*) 1-2 (reg) “small or young fir wood”; 3 (bot; reg) “milfoil”; 4 (bot; mar) “roundfruit rush” (*Juncus compressus*);

brădău masc.n. (*brad* + *-ău*) (pop; aug) “big (and solid) fir tree”;

brădet neuter n. (*brad* + *-et*) 1 “many fir trees together”, synonym: (reg) *brădinici*, *brădiniș*, *brădiș*; 2 “fir tree forest”; 3 (rare) “family of conifers”; 4 (reg) “flower undefined in detail”;

brădeț masc.n. (*brad* + *-eț*) 1-2 “beautiful small fir tree”, synonym: *brădișcan*, *brăducean*, *brădui*, *brădușcan*, *brăduț*;

brădioară fem.n. (*brad* + *-oară*) (orn; reg) “hazel-hen”;

brădiș, *~iniș*, *~inici* (*brad* + *-iș*) 1 “fir wood”; 2 (bot.) “hornwort”; 3 (bot.; ~galben) “spiked water-milfoil”; 4 (bot.; reg.) “fern”;

brădișcan masc.n. (*brad* + *-ișcan*) 1-2 “small fir tree”; 3-4 “fir wood”;

brădișor masc.n. (*brad* + *-ișor*) 1-2 “small fir tree”; 3 (spc.) “small fir tree placed on the roof of houses which are being built”; 4 (pop, p.ex.) “wisp of straw or hay placed on the roof of houses which are being built to protect them from evil”; 5 “common juniper” (*Juniperus communis*); 6 (pan.) “various plants that resemble the small fir tree”; 7 “small herbaceous plant (*Lycopodium selago*), synonym: *cornișor*, *pedicuță*; 8 (bot; reg.) “field horsetail” (*Equisetum arvense*); 9 (bot; reg.) “common club moss” (*Lycopodium clavatum*);

brăducean masc.n. (*brad* + *-ucean*) 1-2 “small fir tree”; 3-4 “fir wood”;

brădui masc.n. (*brad* + *-ui*) 1-2 “small fir tree”; 3-4 “fir wood”;

brădulă fem.n. (*brad* + *-ulă*) (reg.) “big wooden club”;

¹⁰ It is part of the kingdom *Plantae*, division *Spermatophyta*, subdivision *Pinophytina* (*Gymnospermae*), class *Pinopsida* (*Pinatae*), order *Pinales*, family *Pinaceae*, genus *Abies*, species *Abies alba* Miller (Săvulescu 2010: 33-39, Clinovski, 2005). We observe the classification/ordering of superspecific and infraspecific terms/taxa. Species is the base taxon within the classification; supraspecific taxa are: genus, family, order, class, division, and kingdom; infraspecific taxa are: subspecies, variety and form (Săvulescu, 2010: 7). The classification follows the pattern of conceptual structures presented by Pavel, Rucăreanu, 2001: 34-40.

¹¹ DEX, 127.

¹² MDA, I, 241-242.

brăduleț masc.n. (*brad* + *-uleț*) 1-2 “small fir tree”; 3 (reg.) “weed undefined in detail”; 4 (pan.) “stitches on the sleeves of the traditional peasant blouse”; 5 “braided bread that is made on the day of Saint Toader and on the Day of the Forty Martyrs”;

brăduliță fem.n. (*brad* + *-(ul)iță*) (bot.; reg.) “white cedar”;

brădușcan masc.n. (*brad* + *-uș*+ *-can*) 1-2 “small fir tree”; (1-2)”; 3-4 “fir wood”;

brădușcare masc.n. (*brad* + *-ușcă*+*-re*)¹³ 1-2 “small fir tree”; 3(pop.) “type of fabric”;

brădușor, *~oară* masc., fem.n. (*brad* + *-(ușor)*) (bot.; reg.) “common bladderwort” (*Utricularia vulgaris*);

brăduț masc.n. (*brad* + *-uț*) 1-2 “(small) fir tree” synonym: *brădișor*, *brăduleț*,(reg.) *brădăuș*, *brădișcan*, *brăducean*, *brădui*, *brădușcan*, *brădușcare*; 3 (bot.; reg.) “small fir tree”.

Derivatives are formed only by suffixation; one can identify such productive suffixes as: *-ac*, *-aică*, *-an*, *-ancă*, *-aș*, *-el*, *-et/-eț*, *-ău*, *-iș*, *-ișor*, *-ișcan*, *-oară*, *-ucean*, *-ui*, *-ulă*, *-uleț*, *-(ul)iță*, *-uț*, *-uș*.

Compounds are less frequent as compared with the derivatives¹⁴:

casă debrad: (pop.) “coffin”;

brad-roșu or *brad-negru*: “spruce tree”;

bradul-ciumei: (reg.) “juniper with small fruit” (*Jnepen communis*);

brad de apă: (bot.; reg.) “mare’s tail” (*Hippuris vulgaris*);

brad de pârleală (bot.; reg.) “spike heath” (*Bruckenthalias piculifolia*).

Within the above-mentioned compounds, we have identified two terminological metaphors: *casă de brad* (literally ‘house of fir tree’) and *bradul-ciumei* (literally ‘fir tree of the plague’) whose meanings resulted from the resemblance to real aspects.

Several expressions have been created around the term¹⁵:

turta bradului: “the bread cake that every girl brings to the bride’s home on the fir tree day”;

hora bradului: “dance performed at the bride’s home on the eve of the wedding”;

apă de brad: “mixture of water and oil extracted from pine leaves used for perfuming rooms or bathing water”;

*brad alb*¹⁶: “conifer with white bark, with large, broad, dark green leaves, glossy on the top side and with two white-blue strips on the bottom side”;

sirop de brad: syrup obtained from fir buds, used in diseases of the larynx, trachea, bronchitis;

brad de nuntă: on the wedding day, there is a tradition that the bride and bridegroom have a fir tree, usually decorated with flowers and tinsel made of crepe paper; this tree accompanies the bride to the tradition of the watery, then the tree is lifted onto the roof of the bridegroom’s house

¹³ Cf. *brad*+ *-uș*+*-care*, MDA, I: 242.

¹⁴ MDA, I, 239.

¹⁵ *Ibidem*.

¹⁶ Mentioned as species by Clinovski, 2005: 23.

brad de Crăciun: at Christmas, there is a tradition for fir trees to be adorned with balls, tinsel, sweets (and other ornaments); Santa puts the presents beneath it.

Such expressions as *înalt ca bradul* (as tall as a fir tree), *voinic ca bradul* (as strong as a fir tree) are formed based on similarity starting from the attributes of the fir tree (height and ability to resist bad weather).

While analysing the above-mentioned phraseological units, we have noticed that there are three patterns of nominal phrases consisting of two or three terms, such as: noun+preposition *de*+*brad* (*apă de brad*, *casă de brad*)/*brad*+preposition *de*+noun (*brad de nuntă*, *brad de Crăciun*), noun+*brad* in the genitive case (*turta bradului*, *hora bradului*) and *brad*+ adjectival determiner (*brad alb*).

Compounds follow the pattern *brad*+ adjectival determiner, chromatic term (*brad-roșu*, *brad-negru*) or the pattern *brad*+common noun in the genitive case (*bradul-ciumei*). Other compounds are obtained by juxtaposition (*brad-roșu*, *brad-negru*), with preposition (*brad de apă*, *brad de pârleală*), by inflection (*bradul-ciumei*).

2.2. Molid ('spruce tree')¹⁷ – *Picea abies* (L.) Karst., species code: MO (*molid*<Alb.*molikë*).

“*Molid*, *molizi*, with the lexical variants: *molidf*, *molift* and regional forms: *molim*, *molin*, *molit*, *molity*, *moliv*¹⁸, is defined in the general use as: resinous tree from the pinacea family, up to 50 meters high, with a pyramidal crown, needle-shaped leaves and hanging cones (*Picea excelsa*)”, cf. Alb. *Molikë*¹⁹. As synonyms for *molid*, the following words are known: *brad*, *brad-roșu*, *brad-negru*, (reg.) *molidar*, *molete*.

The following derivatives are formed from the base word *molid*²⁰:

molidar masc.n. (*molid* + *-ar*) 1 (bot.; reg.) “spruce tree” (*Picea excelsa*); 2 “crow bar made of spruce wood”;

molidaș masc.n. (*molid* + *-aș*) 1-2 (pop.) “small spruce tree”;

molidiș masc.n. (*molid* + *iș*) 1 “spruce tree forest”; 2 “place where spruce trees grow”.

We can note that these derivatives do not change grammar class or gender category, maintaining themselves as common masculine nouns, like the base word.

MDA records the compound *molid-mic* with the meaning “dwarf mountain pine” (*Pinus pumilio*).

2.3. Pin silvestru ('Scots pine')²¹ – *Pinus sylvestris* L., species code: PI (*pin* < ML*pinus*)

*Pin*², *pini*, with the lexical variants (used regionally): *chin*, *spcin*, is defined as:

¹⁷ It is part of the kingdom *Plantae*, division *Spermatophyta*, subdivision *Pinophytina* (*Gymnospermae*), class *Pinopsida* (*Pinatae*), order *Pinales*, family *Pinaceae*, genus *Picea*, species *Picea abies* (L.) Karsten (Săvulescu, 2010: 33-39). Clinovski provides more information with regard to this classification: the species of the *Picea* genus are included in the “*Eupicea* section” – these are species whose leaves “are persistent, needle-shaped, with four edges” (Clinovski, 2005: 35).

¹⁸ MDA, I: 45.

¹⁹ DEX, 736.

²⁰ *Ibidem* 13.

²¹ It is part of the kingdom *Plantae*, division *Spermatophyta*, subdivision *Pinophytina* (*Gymnospermae*), class *Pinopsida* (*Pinatae*), order *Pinales*, family *Pinaceae*, genus *Pinus*, species *Pinus sylvestris* L. (Săvulescu, 2010: 33-39). Clinovski makes a detailed classification, namely: the *Pinus* genus consists of two subgenera – subgenus *Diploxylon* Koehne and subgenus *Haploxylon* Koehne. *Pinus sylvestris* is part of the subgenus *Diploxylon* Koehne, section *Eupitys* Spach (Clinovski, 2005: 47).

“tree of the pinaceae family, up to 40 meters high, with persistent, needle-shaped leaves, reddish bark and resistant wood (*Pinus sylvestris*)”²². As synonyms, used regionally, the following forms are known: *brad*, *brad-de-munte*, *cățuni*, *cetină*, *chifăr*, *jolcă*, *luciu*, *mălin*, *moletă*², *molid*, *schin*, *silhă*, *sosenca*, *zadă*, (*Pinus sylvestris*)²³.

In terms of combinatorial possibilities in phraseological units, the term *pin* is very productive, forming many compounds: The forms below are used at national/international level: *pin-de-Banat*, *pin-negru-de-Banat* (‘Banat pine’ – *Pinus pallasiana banatica*); *pin-strob* (or *pin-moale*, *pin-american*, *pin-mirositor*) (‘Soft pine’ - *Pinus strobus*); *pin-negru* (or *pin-austriac*, *pin-negru-austriac*) with the regional synonym *brăduiță* (‘Black pine’ - *Pinus nigra*); *pin-maritim* (‘Maritime pine’ - *Pinus maritima*); the following are used regionally: *pin-mic*, *pin-u-ăl-mic*, *pin-pitic*, *pin-de-piatră*, *pin-strâmb*, *pin-târâtor* (‘Mugo pine’ - *Pinus mugo*); *pin-de-munte* (‘Swiss pine’ - *Pinus cembra*); *chin-înalt*, *pin-roșu* (‘Norway spruce tree’ – *Picea excelsa*); the old compound *pin-alb* (‘Fir tree’ - *Abies alba*).

Three units constitute species/subspecies with separate codes (differing from the base term from which they were formed): *pin negru de Banat* – *Pinus nigra spp. banatica* (Borb.) Novak, species code: PINB; *pin negru* – *Pinus nigra spp. nigra* Arn., species code: PIN and *pin strob* – *Pinus strobus* L., species code: PIS. For the subspecies *pin negru*, MDA indicates a popular name, formed by derivation from the base word *brad*: *brăduiță* fem.n. (*brad*+ -(u)iță) (bot.; reg.) “black pine” (*Pinus nigra*)²⁴.

The units presented above are structured according to syntagmatic patterns of the type: *pin* + adjectival determiner (*pin-mic*, *pin-pitic*, *pin-strâmb*, *pin-târâtor*, *chin-înalt*, *pin-roșu*, *pin-moale*, *pin-mirositor*, *pin-negru*, *pin-maritim*, *pin-alb*) – where the adjectival determiner updates the information referring to the characteristics of that pine; *pin* + preposition *de* + noun (*pin-de-piatră*, *pin-de-munte*, *pin-de-Banat*) and *pin* + adjectival determiner + noun indicating the place/origin of the pine (*pin-negru-de-Banat*) and *pin* + adjectival determiner + determiner indicating the origin/location (*pin-negru-austriac*).

3. Conclusions

After researching the etymology of the popular names of trees, we can conclude that the source-languages are varied - Latin, Albanian, Bulgarian, French, Italian, Neo-Greek, Old Slavic, Serbian, Turkish. Most of the terms used to give popular names to the trees are monosemantic, with lexical variants.

Some of these terms have a combinatorial possibility in phraseological units - compounds, phrases; in the compounds²⁵, we can notice that the terms are formed by hyphenating two words (*brad-roșu*, *molid-mic*, *pin-târâtor*), with prepositions (*brad de apă*, *pin de piatră*), by inflection (*bradul-ciumei*, *pin-mirositor*). Subordination relations are established between the elements of compounds both by determination (*brad alb*, *brad-roșu*, *molid-mic*, *pin maritim*, *pin negru*), and by inflection (*bradul-*

²² DEX, 903.

²³ MDA, I: 381.

²⁴ MDA, I: 242.

²⁵ We have treated the compound terms from the perspective of the constituent element criterion and the criterion of the relationship between the constituent elements of the compound terms (See Șerban, Evseev, 1978: 274-278).

ciumei). Only the first component of the compound receives the affixes of enclitic determination (*casă de brad, casa de brad, casele de brad; brad-negru, bradul-negru, brazii-negri; bradul-ciumei, brazii-ciumei*). In the case of compounds of the type noun+preposition+noun and noun+noun in the genitive, in the case of number change, only the first term receives the plural mark (*casele de brad; brazii-ciumei; brazii de apă; brazii de pârleală; siropuri de brad; pinii-de-munte; pinii-de-piatră*). In the case of compounds of the type noun+adjective, both terms of the compound receive the plural mark (*brazii negri, molizii mici, pinii-mici, pinii-târători, pini maritimi, pini-mirositori, pini-americani*).

Other terms enlarge the lexical family by means of suffix derivation (productive suffixes: *-ac, -aică, -an, -ancă, -aş, -el, -et/-eţ, -ău, -iş, -işor, -işcan, -oară, -ucean, -ui, -ulă, -uleţ, -(ul)işă, -uţ, -uş*). Some derivatives also develop a second meaning (*brădac*: “horse-tail”; *brădăţel*: “milfoil” – in this situation, the derivative develops a third meaning: “roundfruit rush” – as a plant; *brădiş*: “hornwort” and two other meanings: “spiked water-milfoil” – within the parasynthetic compound *brădiş-galben*, “fern”; *brădişor*: - with four extra meanings besides the main meaning “small fir tree”: “wisp of straw or hay placed on the roof of houses which are being built to protect them from evil”; “various plants that resemble the small fir tree”; “small herbaceous plant” synonym: *cornişor, pedicuţă*; “field horsetail”; “common club moss”, etc.

The determiners which are part of the phraseological units update the semantic information of the tree name, many times the adjectival determiner designating a characteristic of the tree (colour, height, strength, origin, location).

Inherited words have the capacity to form compounds, derivatives and phraseological units, which leads to the enrichment of the lexical family, lexical field, as well as the lexicon of the Romanian language. The detailed examples throughout the article form the derivational series of the type “fan-based paradigm”²⁶, namely “each transformation involves the return to the base word”²⁷.

Forest terminology, like other terminologies, uses both popular names and scientific names (scientific names being internationally regulated by nomenclature codes). Scientific terms are present in the written language and are used by specialists in particular. Popular terms are in use, sometimes undergoing changes in form (*brad – bread; molid – molidf, molift, molim, molin, molit, molitv, moliv; pin – chin*). The names are justified by the lexical variants of the term; some meanings are metaphors and have resulted from similarities to certain things/aspects of reality²⁸. For specialists, both scientific and popular variants are important.

BIBLIOGRAPHY

- Bidu-Vrănceanu, Angela (coord.), *Lexic ştiinţific interdisciplinar*, Bucureşti, Editura Universităţii din Bucureşti, 2001.
- Biriş, Gabriela, *Termenii forestieri*, in Bidu-Vrănceanu, Angela (coord.), *Terminologie şi terminologii*, Bucureşti, Editura Universităţii din Bucureşti, 2012, p.185-206.
- Clinovski, Florin, *Dendrologie*, Suceava, Editura Universităţii Suceava, 2005.

²⁶ Pavel, Rucăreanu, 2001: 32.

²⁷ *Ibidem*, 24.

²⁸ Sala, 1999: 67-72.

- DEX=Academia Română, *Dicționarul explicativ al limbii române*, București, Editura Univers Enciclopedic, 2016.
- MDA=Academia Română, *Micul dicționar academic*, vol. I-II, București, Editura Univers Enciclopedic Gold, 2010.
- Nagy, Imola Katalin, *Numele de plante. O abordare lingvistică*, www.upm.ro/facultati_departamente/stiinte_litere/conferinte/.../IETM5_Part56.pdf
- Pavel, Eugen, Rucăreanu, Costin, *Introducere în terminologie*, București, Editura Academiei Române, 2001.
- Pitar, Mariana, *Terminologia: concepte de bază*, https://litere.uvt.ro/litere-old/vechi/documente_pdf/aticole/.../Pitar_Mariana.pdf
- Sala, Marius, *Introducere în etimologia limbii române*, București, Editura Univers Enciclopedic, 1999.
- Săvulescu, Elena, *Botanica sistematică*, București, Facultatea de Horticultură, Invățământul la Distanță. Atelierul de Multiplicat Cursuri, U.S.A.M.V., 2010.
- Șerban, Vasile, Evseev, Ivan, *Vocabularul românesc contemporan – schiță de sistem*, Timișoara, Editura Facla, 1978.
- <http://www.mmediu.ro/beta/domenii/paduri/>
<http://www.horticultura.ro/fisiere/file/ID/Manuale>