

Commentary

Specific Epithet-Composite Name

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Abstract

The research deals with part of the specific epithets in the Latin language in binomial botanical names, in particular with those that consist of two separate words. This article proposes a linguistic analysis of used grammatical forms as well as their informative value. An appendix of personal names and an index of ancient authors cited in the article, are included to give more thorough and comprehensive interpretation of Latin terms.

Keywords: Specific epithets; Botanical species

1. Introduction

The present research is based on “Conspectus of the Bulgarian vascular flora”, fourth revised and updated edition, Sofia, 2012. The current article is dealing with a less popular type of specific epithet in binomial botanical denominations, namely “Specific epithet-composite name”. According to the ICBN (International Code of Botanical Nomenclature) “The name of a species is a binary combination consisting of the name of the genus followed by a single specific epithet in the form of an adjective, a noun in the genitive, or a word in apposition, or several words, but not a phrase name of one or more descriptive nouns and associated adjectives in the ablative” (Chapter III, Section 4, Article 23.1).

The specific epithet-composite name combines two single hyphenated words. This type of specific epithet is relatively rare-in the current research are represented 42 examples. The following groups could be defined as composite specific epithets:

- denominations of other botanical species which indicate similarity referring to external features or habitat;
- mythological characters and real historical persons;
- word-combinations relating to the practical application of the particular botanical species.

2. Types of Composite Specific Epithets

Several types of composite specific epithets could be differentiated according to the used grammatical forms within the denominations:

2.1 Noun and adjective both in nominative case

The adjective usually signifies the place of spreading or specific peculiarities of particular botanical species. The adjective is agreed with the noun, i.e. it takes the same gender, number and case as the noun.

1. **adiantum-nigrum**-literally “black adiantum”. *adiantum* (Pliny1)-latinized form from Greek *adianton* (a- “without” and *diaino* “I bath”: “does not get wet”), reference to the fact that the fronds of these ferns are water-repellent; *nigrum* (*niger, gra, grum*)-the attribute “black” is for the color of the rachis.
 - *Asplenium adiantum-nigrum* (Black spleenwort)
2. **agnus-castus**-literally “chaste lamb”. *agnus*-lamb (transmitted with this meaning in medieval writings as a symbol of purity); *castus* (*castus, a, um*)-chaste, pure. In antiquity the plant is thought suppressing the libido. Hippocrates1 and Theophrastus1 recommend it as an excellent remedy in the treatment of different female disorders.
 - *Vitex agnus-castus* (Vitex, Chaste tree, Abraham’s balm)
3. **anagallis-aquatica**-literally “aquatic pimpernel”. *anagallis*-Dioscorides1 uses this name for a plant which is thought to drive away sadness and depression (from the Greek *ana*-“again” and *agalliao* “rejoice, exult”); *aquatica* (*aquaticus, a, um*)-due to the place of spreading of the plant.
 - *Veronica anagallis-aquatica* (Water speedwell, Blue water-speedwell, Brook pimpernel)
4. **bella-donna**-literally “pretty woman” (it.). The name is referring to the cosmetic use of the plant that was used by the courtesans of Venice as eye drops, to cause widening of the pupils.
 - *Atropa bella-donna* (Belladonna, Deadly nightshade)
5. **bonus-henricus**-literally “good Henry”. *Henricus*-forename; *bonus* (*bonus, a, um*)-good. According to some texts the plant is named in honor of Henry IV of Navarre (1553-1610), protector of botanists, for the success that this plant had during his reign by saving the population from the famine.
 - *Chenopodium bonus-henricus* (Good-King-Henry, Perennial goosefoot, Lincolnshire spinach, English mercury; synonym of *Blitum bonus-henricus*)
6. **foenum-graecum**-literally “Greek hay”. *foenum*-hay; *graecum* (*graecus, a, um*)-Greek.
 - *Trigonella foenum-graecum* (Fenugreek)
7. **linum-stellatum**-literally “star-shaped flax”. *linum*-flax; *stellatum* (*stellatus, a, um*)-star-like.
 - *Asterolinon linum-stellatum* (*Scientific name*)
8. **plantago-aquatica**-literally “water plantain”. *plantago*-plantain (from Latin *planta* “foot”): similar to the sole of the foot, reference to the size of the leaves of the greater plantain; *aquatica* (*aquaticus, a, um*)-reference to the place of habitation of the plant.
 - *Alisma plantago-aquatica* (European water-plantain, Common water-plantain, Mad-dog weed)

9. **ruta-muraria**-literally “rue of walls”. *ruta*-rue, bitter herb (due to the leaves shape); *muraria* (*murarius, a, um*)-mural, wall (reference to the places frequently colonized by this fern).
 - *Asplenium ruta-muraria* (Wall-rue)
10. **uva-crispa**-literally “curly grape”. *uva*-grape; *crispa* (*crispus, a, um*)-curly (because of the hairy or bristly-glandular berries gathered in clusters).
 - *Ribes uva-crispa* (Gooseberry)
11. **vitis-idaea**-literally “vine of Mount Ida”. *Vitis*-vine; *idaea* (*idaeus, a, um*)-of mount Ida (Ida-mountain in Crete island considered sacred as a birthplace of Zeus).
 - *Vaccinium vitis-idaea* (Lingonberry, Mountain cranberry)

2.2 Noun in nominative case and another noun in genitive case

The specific epithets in this group usually mean some peculiarities relating to external features, similarities, coloration of the particular species (*caput-medusae, dens-canis, gaudium-solis, pecten-veneris* etc.).

1. **bursa-pastoris**-literally “shepherd’s purse” (because of its triangular or heart-shaped flat seedpods). *Bursa*-purse, pouch; *pastoris*-Gen. sg. (*pastor, oris m* – shepherd).
 - *Capsella bursa-pastoris* (Shepherd’s purse)
2. **capillus-veneris**-literally “Venus’ hair”. The name is associated with the hydrophobic qualities of the leaves because, according to the Roman mythology, Venus came out of the sea foam with dry hair. *capillus*-hair; *veneris*-Gen. sg. (*Venus, eris f*-Venus, goddess of love and beauty).
 - *Adiantum capillus-veneris* (Southern maidenhair fern)
3. **caput-galli**-literally “head of cock”. *caput*-head; *galli*-Gen. sg. (*gallus, i m*-cock).
 - *Onobrychis caput-galli* (Cockshead sainfoin)
4. **caput-medusae**-literally “Medusa’s head”. Reference to the very long awns of the spikelets, resembling snakes on the head of Medusa Gorgon. *caput*-head; *medusa*-Gen. sg. (*Medusa, ae f* – according to the Greek mythology, Medusa was a female winged monster with living venomous snakes in the place of hair).
 - *Taeniatherum caput-medusae* (Medusahead)
5. **crus-galli**-literally “foot of cock”. Reference to the inflorescences shape. *crus*-foot; *galli*-Gen. sg. (*gallus, i m*-cock).
 - *Echinochloa crus-galli* (Cockspur grass, Barnyard grass)
6. **dens-canis**-literally “dog’s tooth”.
 - The common name is referring to the tooth-like, sharp shape of the bulb. *dens*-tooth; *canis*-Gen. sg. (*canis, is mf*-dog).
 - *Erythronium dens-canis* (Dog’s-tooth violet)
7. **flos-cuculi**-literally “cuckoo’s flower”. Because of the presence of the froth released from the larva of *Philaenus spumarius*, called also “cuckoo’s saliva”. *flos*-flower, blossom; *cuculi*-Gen. sg. (*cuculus, i m*-cuckoo).
 - *Lychnis flos-cuculi* (Ragged-Robin)

8. **gaudium-solis**-literally “joy of the sun”. Reference to the flowers coloration. *gaudium*-joy; *solis*-Gen. sg. (*sol, solis m* – sun).
 - *Anthemis gaudium-solis* (synonym of *Cota tinctoria subsp. gaudium-solis* – Golden Marguerite)
9. **herba-venti**-literally “grass of the wind”. *herba*-grass; *venti*-Gen. sg. (*ventus, i m*-wind).
 - *Phlomis herba-venti* (Iranian Jerusalem sage)
10. **morsus-ranae**-literally “bite of frog”. Probably reference to the habitat of the plant. Another hypothesis refers to the tendency of frogs to hunt for food among these plants. *morsus*-bite; *ranae*-Gen. sg. (*rana, ae f*-frog).
 - *Hydrocharis morsus-ranae* (European frogbit)
11. **nidus-avis**-literally “nest of bird”. Because of peculiar shape of the coiled roots resembling a nest. *nidus*-nest; *avis*-Gen. sg. (*avis, is f*-bird).
 - *Neottia nidus-avis* (Bird’s nest orchid)
12. **oculus-christi**-literally “eye of Christ”. *oculus*-eye; *Christi*-Gen. sg. (*Christus, i m*-Christ).
 - *Inula oculus-christi* (Christ’s-eye)
13. **pecten-veneris**-literally “comb of Venus”. Reference to the shape of the infructescences. The seed pods are very long and thin, held in upright clusters as comb pins, hence its common name. *pectin*-comb; *veneris*-Gen. sg. (*Venus, eris f*-goddess of love and beauty).
 - *Scandix pecten-veneris* (Shepherd’s needle)
14. **speculum-veneris**-literally “mirror of Venus”, in which beauty is reflected. *speculum*-mirror, looking-glass; *veneris*-Gen. sg. (*Venus, eris f*-goddess of love and beauty).
 - *Legousia speculum-veneris* (Large Venus’-looking glass)
15. **spica-venti**-literally “spike of the wind”. *spica*-spike, ear; *venti*-Gen. sg. (*ventus, i m*-wind).
 - *Apera spica-venti* (Loose silky-bent, Common windgrass)
16. **spina-christi**-literally “thorn of Christ”. The epithet is based on the presumption that the crown of thorns placed on the head of Christ during the crucifixion was made with branches of this shrub. *spina* – thorn, spine; *christi*-Gen. sg. (*Christus, i m*-Christ).
 - *Paliurus spina-christi* (Jerusalem thorn, Garland thorn, Christ’s thorn)
17. **tzar-borisii**-Boris III (see in **Appendix nominum**).
 - *Verbascum tzar-borisii* (*Scientific name*; literally: Mullein of Tzar Boris) – Bulgarian endemic
18. **tzar-ferdinandii**-Ferdinand I (see in **Appendix nominum**).
 - *Jurinea tzar-ferdinandii* (*Scientific name*; literally: Jurinea of Tzar Ferdinand) – Balkan endemic
19. **uva-ursi**-literally “grape of the bear”. *uva*-grape; *ursi*-Gen. sg. (*ursus, i m* – bear).
 - *Arctostaphylos uva-ursi* (Common bearberry, Kinnikinnick)

2.3 Two nouns in genitive case

The specific epithets in this group consist of a personal name and a title except for *laserpitii-sileris* (*Laserpitium siler*).

1. **borisii-regis**-Tzar Boris III (see in **Appendix nominum**).
 - *Abies borisii-regis* (Bulgarian fir)
2. **ferdinandi-coburgii**-Tzar Ferdinand I (see in **Appendix nominum**).
 - *Saxifraga ferdinandi-coburgi* (Ferdinand saxifrage)
 - *Arabis ferdinandi-coburgii* (“Old Gold”; literally: Rockcress of Ferdinand Saxe-Coburg and Gotha)-Bulgarian endemic
3. **ferdinandi-regis**-Tzar Ferdinand I (see in **Appendix nominum**).
 - *Hieracium ferdinandi-regis* (synonym of *Hieracium naegelianum* subsp. *ferdinandi-regis*; literally: Hawkweed of Tzar Ferdinand)
4. **lasepitii-sileris**-Gen. from *Laserpitium siler* (Laserwort – host plant of the plant pest *Orobanche*).
 - *Orobanche lasepitii-sileris* (Laserpitium broomrape)
5. **regis-borisii**-Tzar Boris III (see in **Appendix nominum**).
 - *Anthemis regis-borisii* (*Scientific name*; literally: Chamomile of Tzar Boris) – Bulgarian endemic
 - *Potentilla regis-borisii* (synonym of *Drymocallis regisborisii*; literally: Cinquefoil of Tzar Boris)

2.4 Noun and adjective both in Genitive case

1. **gregorii-bakurianii**-Gregory Pakourianos (see in **Appendix nominum**).
 - *Hieracium gregorii-bakurianii* (*Scientific name*; literally: Hawkweed of Gregory Pakourianos)
2. **immanuelis-loewii**-Immanuel Löw (see in **Appendix nominum**).
 - *Centaurea immanuelis-loewii* (*Scientific name*; literally: Knapweed of Immanuel Low)-Balkan endemic
3. **emilii-popii**-to define.
 - *Potentilla emili-popii* (*Scientific name*)
4. **sancti-johannis**-according to some sources the name is due to the flowering at the beginning of the summer, during the period when Saint John the Baptist is celebrated (June 24th); he was believed to have worn a girdle of this plant while in the wilderness. The holotype, however, was collected by Boris Stefanoff on the first of August 1926 in Bulgaria and, according to other sources, the authors (Stojanov, Stefanoff and Turrill) would have dedicated this species to Ivan Rilski (927-968), also known as Saint John of Rila, patron saint of the great and famous Orthodox Rila monastery, Bulgaria.
 - *Anthemis sancti-johannis* (St. John’s chamomile)

2.5 Two nouns in nominative case

1. **filix-mas**-male fern.
 - *Dryopteris filix-mas* (Male fern)

Note: *mas* could be interpreted also as an adjective agreed with the noun *filix*, but by analogy with *filix-femina* is placed in this group of epithets.

2. **filix-femina**-lady fern.

- *Athyrium filix-femina* (Common lady-fern, Lady fern)

2.6 Verbal forms

1. **noli-tangere**-literally: Do not touch! (reference to the fruits that are opened abruptly as soon as they are touched).
 - *Impatiens noli-tangere* (Touch-me-not balsam)

3. Conclusion

The specific epithet-composite name as well as the other types of specific epithets in binomial names is an important source of essential information on particular botanical species. This type of specific epithet is comparatively rare and its use is limited to singular species with more distinguished peculiarities or practical application. The good knowledge of etymology and meaning of these epithets contributes to the further development and improvement of the knowledge of the species themselves.

Appendix nominum

Appendix of names

1. **Boris III** (1894-1943)-Boris III, Tzar of Bulgaria (1918-1943). Full name: Boris Klemens Robert Maria Pius Ludwig Stanislaus Xaver. Boris III as his father Ferdinand I was very interested in botany and this fact has reflected in the denominations of several species found in Bulgaria.
2. **Ferdinand I**-Ferdinand I, Tzar of Bulgaria (firstly knyaz from 1887 to 1908, tzar from 1908 to 1918). Full name: Ferdinand Maximilian Karl Leopold Maria of Saxe-Coburg and Gotha. He is also known as a passionate botanist, entomologist and philatelist.
3. **Gregory Pakourianos** (?-1086)-a Byzantine politician and military commander; the founder of the Monastery of the Mother of God Petritzonitissa in Bachkovo.
4. **Immanuel Low** (1854-1944)-Hungarian rabbi, scholar and politician. Author of four volume work “Die Flora der Juden” (“The Flora of the Jews”), considering the terminology of plants in Jewish sources.

Index auctorum antiquorum

Index of Ancient authors

1. **Dioscorides** (Pedanius Dioscorides, c. 40-90 AD)-a Greek physician, pharmacologist and botanist. His work “De materia medica” about herbal medicine and related medicinal substances was widely known in the Roman empire.
2. **Hippocrates** of Kos (460-c. 370 BC)-a Greek physician, called “Father of Medicine” due to his enormous contribution to the medicine and medicinal education. The works of Hippocrates and other scientists are collected in so called “Corpus Hippocraticum”, containing about 70 medical writings.
3. **Pliny** (Gaius Plinius Secundus, 23-79 AD)-a Roman writer, natural philosopher, encyclopedist. The most important work is “Naturalis historia” into which is collected much of the knowledge of his time.

4. **Theophrastus** (371-287 BC)-a Greek writer, philosopher, successor to Aristotle in Peripatetic school. He is often considered father of the botany due to his botanical works “*Historia plantarum*” and “*De plantis*”.

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