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Lexical and Semantic Comparison of Botanical Terms (Phytonyms) in Russian and Uzbek Languages

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Abstract: this paper examines the lexical and semantic comparison of phytonyms in the Russian and Uzbek languages, the peculiarities of compiling botanical dictionaries and their formation, as well as the translation of some botanical terms.

Keywords: phytonyms, lexical and semantic research, botanical dictionary, translation, Russian language, Uzbek language.

The lexical units denoting the names of plants belong to a group of words that traditionally cause difficulty in interpreting ancient texts. And if modern researchers do not fully understand what lies behind this or that phytonym, even in well-studied canonical texts, then for the Old Russian translator it was sometimes an unsolvable task that required different approaches in each case. It is also sometimes difficult for a modern reader of ancient Russian texts to understand what is behind this or that ancient Russian phytonym. If the text is translated, you can refer to the original, otherwise you can determine the denotation only based on the information available directly in the text. And the more contexts with the phytonyms used are available to researchers, the more accurately its denotation can be established.

The limited contexts presented in historical dictionaries predetermined the need to create a PhytoLex[2] resource dedicated to the names of plants found in texts of the XI–XVII centuries of various genres. The resource contains more than 16,000 uses of phytonyms, indicating the source (handwritten or printed), the time of its creation, and the place of storage. Whenever possible, phytonyms are identified in accordance with modern botanical classification based on The Plant List[3] database. This information resource is a valuable source for linguists and ethnobotanists. In addition, it is assumed that it will become a source base for the Dictionary of phytonyms of the Russian language of the XI–XVII centuries.

Phytonymic vocabulary as an object of lexicography is a rather complex material. A significant number of phytonyms are not represented in historical dictionaries, and among the available ones, far from all are identified and contain a Latin botanical name in the dictionary interpretation, as well as a sufficient number of quotations and examples. Russian Russian dictionary of the XI–XVII centuries, based on the materials of the Phytolex resource, should include all the phytonyms recorded in the texts, regardless of their frequency and whether they remained in the Russian language to this day or were used only temporarily and by a limited number of people (doctors, pharmacists, medical dealers drugs).

The following structure of the dictionary entry is assumed:

1. The title word and options. The following spelling variants of the word are combined under a single lexeme: containing spellings with and without a b between consonants (visson and visson), with one and two consonants (arnoglosa and arnoglossa), with the finales y and i, y and ie (crow

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[2] PhytoLex - ethnobotanical database (XI-XVIII centuries), contains the names of plants recorded in the Russian literature of the XI-XVIII centuries.

[3] The Plant List - an encyclopedic Internet project providing access to information on the nomenclature of modern (non-fossil) taxa belonging to the plant kingdom.

and crow), with and without iotation (daphnia and daphnia), s and i s after sibilant and c (vavtsyna and vavtsina), s and o after sibilant, with the endings -o and -o in the forms of masculine adjectives. The lexemes in the "traditional" spelling also include distorted forms found mainly in the recordings of Russian words by foreigners (volovea eye, voloviy eye, rebini dikoi, ryabina dikaya, etc.).

2. Grammatical characteristics include an indication of the gender of the noun. The absence of a characteristic is possible in the case when the genus of the phytonym is unknown (e.g., gul from tours. gül "rose").
3. Etymology – an indication of the etymon and the source language, as well as (if available) the intermediary language. For transliterated foreign-language lexemes, the etymon means the original foreign-language lexeme (e.g. agrimonium from Latin agrimonium).
4. Interpretation, including the modern Latin and Russian names.
5. Quotations indicating the author, title and time of creation of the work, cipher and time of creation of the manuscript, place and year of publication of the printed source, sheet, page.
6. Compatibility.
7. Plant functions (based on available quotations).
8. The reference part, which includes a list of single-root words (of the same or other parts of speech) and equivalent plant names.

Controversial points include individual cases of differentiation of headline units and variants, as well as the submission of quotations (in accordance with the spelling of the source or in simplified spelling). Let's compare the lexical and semantic aspect of botanical terms in the Russian and Uzbek languages. Abiotic environmental factors (from gr. a – denial, absence + bios – life) are components and phenomena of inanimate, inorganic nature that directly or indirectly affect living organisms: climatic, soil (edaphic), orographic, hydrographic. For example, the term "ablation" in Russian means a method of inoculation in which the graft is not separated from the parent plant until it is completely fused with the rootstock (apple, pear, grape).

The term "autogamy" means the concept of "self-pollination", which in Uzbek is translated by the term "avtogamiya, o'z o'zidan changlanish", which means the process of self-pollination. In Russian, organisms that form organic substances from inorganic environmental substances (carbon dioxide, water and mineral salts) during photosynthesis (green plants) or chemosynthesis (some bacteria) are called autotrophs. In Uzbek, this term is translated as "autotroflar" and means organisms that contribute to the formation of organic substances released into the environment.

The Russian language uses the botanical term "agro-climatic resources". These are the features of the climate that provide opportunities for the development of agricultural production. The most important indicators of agro-climatic resources are: the duration of the period with an average daily temperature above 10 °C, the sum of temperatures for this period; the coefficient of moisture; the power and duration of snow cover. There is enough moisture in the steppe and forest-steppe zone, and the sum of active temperatures is 1600-2200 °C, i.e. favorable conditions for growing various crops.

The term "agrocenosis" in Russian means a biotic community regularly maintained by humans, created for the purpose of obtaining agricultural products and having low environmental reliability, but high yield (productivity) of one or more selected plant species (varieties). It differs in a smaller variety of species compared to the natural phytocenosis. In the Uzbek language, the term "agrocenosis" is translated as "agrosenoz" and is endowed with the meaning of a system related to the production of agricultural crops. The term "agroecotype" used in Russian means a group of plants within a specific species adapted to a certain climate or soil, certain conditions for growing an agronomic crop characterized by certain morphological and biological characteristics. In the Uzbek language, the term "agroecotype" is translated as "agroekotur" and means a certain ecological type of agronomic culture, differing in its morphological and biological characteristics.

In Russian, the term "adaptation" is used (from Latin. adaptation – adaptation). It is very meaningful. Firstly, it means a set of features of a biological species that provides the possibility of a specific lifestyle of individuals in certain conditions. Secondly, the adaptation of the organism to new environmental conditions; thirdly, the evolutionary adaptation of organisms to environmental conditions, expressed in a change in their external and internal characteristics; Fourthly, any adaptation of an organ, function or organism to changing environmental conditions, and fifthly, a set of reactions of a living system that support its functional stability under changing environmental conditions. In the Uzbek language, the term "adaptation" is conveyed by the concept of "moslashish". It is also ambiguous. For example, through it, the adaptability of a biological species to environmental conditions, climate, etc. is transmitted.

In Russian, the term "nitrogenous substances" is used. Such substances include organic substances of cell juice, including proteins, amino acids, alkaloids, glycoalkaloids. In the Uzbek language, this term is conveyed by such a concept as "azotli moddalar". The term "acclimatization" is used in the scientific literature. It is very meaningful and means the following: 1) a set of measures for the introduction of the species into new habitats, carried out in order to enrich natural and artificial communities with organisms useful to humans; 2) adaptation of the species to new conditions of existence into which it got with its artificial relocation; 3) the process of adaptation to existence in new conditions, which consists in the formation of a genetically specific population of a displaced species in the depths of the local biocenosis and the transformation of the structure of the biological community as a result. It should be emphasized that there is a distinction between natural (transfer of plant seeds by animals to new places, etc.) and artificial (after plant introduction) resettlement. In Russian, the term "actinomorphic (regular) flower" is used, characterized by its corolla, which can be dissected into symmetrical parts in several directions (for example, an apple tree). In the Uzbek language, this term is rendered as "iqlimlashuv, iqlimlashtirish", which is also distinguished by a corolla dissected into parts.

The term "allelopathy" is widely used in botany. This is the process of plants influencing others by isolating physiologically active substances. In the Uzbek language, it is conveyed by the term "alleopatiya". The term "allochthonous" used in Russian (from the Greek allos – other, other + chtion – place, land) means an alien biotope. This is a species or organism that has migrated or relocated from another territory. In the Uzbek language, this term is translated as "alloxton" and very organically reveals its inconsistency with the biotope. The term "Albedo of the Earth", widely used in botany in Russian (from Latin. albus – light) means the ratio of solar radiation reflected by the Earth (with its atmosphere) into the world space to solar radiation received at the boundary of the atmosphere. In the Uzbek language, this term is conveyed by the concept of "Yer Albedosi" and very accurately characterizes the ratio of solar radiation reflected by the Earth and entering the boundary of the atmosphere.

In Russian, the term “amitosis” is known, meaning direct cell division. In Uzbek, this term is translated as “amitoz”. In botany, the term “amphivasal bundles” is known in Russian. By means of this term, concentric bundles are designated, in which the phloem is surrounded by a xylem. In the Uzbek language, such a designation of concentric bundles is conveyed by the term “amfivazal tutam”, which identically verbally displayed the xylem surrounding the phloem. In Russian, the term “amphicribral bundles” is used, meaning concentric bundles, in which, unlike amphivasal bundles, the xylem is surrounded by a phloem. In the Uzbek language, in botany, this term is translated as “amfikribral tutamlar”.

In botany, the term "amphicarpia" refers to a phenomenon in which two types of fruits are formed on the same plant: aboveground and underground (for example, red-yellow wild peas). In the Uzbek language, this phenomenon is conveyed in botany by the term "amfikarpiyalar". Based on the research conducted in the article, we found out the lexical typology, revealed the importance of creating terminological dictionaries as an integral part of general lexicography. The role of linguistic typology in the establishment of linguistic universals, as well as integral types formed by related features in linguistic structures, were also studied, and a lexical and semantic comparison of botanical terms in Uzbek and Russian languages was carried out.

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