

*Гусакова Н.Л., кандидат психологических наук, доцент кафедры
Иностранных языков и профессиональной коммуникации
Белгородский государственный национальный исследовательский
университет
Россия, Белгород
Жилина А.А.
Студент
3 курс, кафедры "Биология"
Институт фармации, химии и биологии
Белгородский государственный национальный исследовательский
Россия, Белгород*

РАСПРЕДЕЛЕНИЕ ВИДОВ СЕМЕЙСТВА БОБОВЫЕ (FABACEAE) НА ТЕРРИТОРИИ БЕЛГОРОДСКОЙ ОБЛАСТИ

Аннотация: В статье рассматривается разнообразие видов семейства Fabaceae на территории Белгородской области, включающее 78 видов растений, относящихся к 23 родам. Каждая жизненная форма этих растений фенотипически отражает особенности и влияние различных экологических условий в процессе их флористического развития. Исследование показало, что экологические группы растений семейства Fabaceae в Белгородской области по отношению к влаге представлены преимущественно мезофитами - 61 вид, в том числе различные виды гороха, вьюнка синего, клевера, хедизарума прицепного, эспарцета и люцерны (рис. 1). Кроме того, выявлено 24 вида ксерофитов, таких как *Amorpha fruticosa*, *Astragalus*, *Caragana*, *Coronilla*, *Ononis* и *Robinia*. Гигрофиты представлены четырьмя видами, включая *Lythrum salicaria*, *Peucedanum palustre* и различные виды клевера. Кроме того, в исследовании подчеркивается вклад А.Г. Серебрякова в понимание жизненных форм растений, в частности, в отношении

доминирующей лидерной оси деревьев и наличия двух видов деревьев в семействе Fabaceae, а именно *Robinia pseudoacacia* и *Robinia viscosa*. В статье также представлено распределение кустарников, лазающих виноградоподобных поликарпиков, корневищных поликарпиков, лентовидных поликарпиков и однолетних длиннокорневищных растений в семействе Fabaceae. Полученные данные дают ценное представление об экологических закономерностях и разнообразии семейства Fabaceae в Белгородской области.

Ключевые слова: Семейство Бобовые, виды растений, жизненные формы, экологическое распространение, Белгородская область.

DISTRIBUTION OF SPECIES OF THE FABACEAE FAMILY IN THE BELGOROD REGION

Annotation: This article examines the diversity of Fabaceae Family species in the Belgorod region, comprising a total of 78 plant species belonging to 23 genera. Each life form of these plants phenotypically reflects the characteristics and influence of various ecological conditions during the process of their floristic development. The study reveals that the ecological groups of Fabaceae Family plants in the Belgorod region, in relation to moisture, are predominantly represented by mesophytes, with 61 species identified, including various types of peas, blue vetchling, clover, trailing *Hedysarum*, sainfoin, and alfalfa (Figure 1). Additionally, 24 xerophyte species are identified, such as *Amorpha fruticosa*, *Astragalus*, *Caragana*, *Coronilla*, *Ononis*, and *Robinia*. Hygrophytes are represented by four species, including *Lythrum salicaria*, *Peucedanum palustre*, and different types of clover. Furthermore, the study highlights the contributions of A.G. Serebryakov to the understanding of plant life forms, particularly regarding the dominant leader axis of trees and the presence of two tree species in the Fabaceae Family, namely *Robinia pseudoacacia* and *Robinia viscosa*. The article also

presents the distribution of shrubs, climbing vine-like polycarpics, rhizomatous polycarpics, taprooted polycarpics, and annual long-vigorous plants within the Fabaceae Family. These findings provide valuable insights into the ecological patterns and diversity of the Fabaceae Family in the Belgorod region.

Keywords: Fabaceae Family, plant species, life forms, ecological distribution, Belgorod region.

In the Belgorod region, there are 78 species of plants belonging to 23 genera of the Fabaceae family (Leguminosae). Each life form of plants phenotypically reflects the character of manifestation and influence of a complex of diverse ecological conditions in which the process of formation of specific flora species occurred [3].

It has been determined that the ecological groups of plants in the Fabaceae family in the Belgorod region, in relation to moisture, are mainly represented by mesophyte plants - 61 species: peas (hairy, four-seeded, thin-leaved, woodland, fence, sown, vetch, hairy, etc.), blue vetchling, clover (creeping, meadow, alpine, etc.), trailing hedysarum, sainfoin (Volga, medicinal, etc.), alfalfa (sown, sericeous, etc.), and others (Fig. 1).

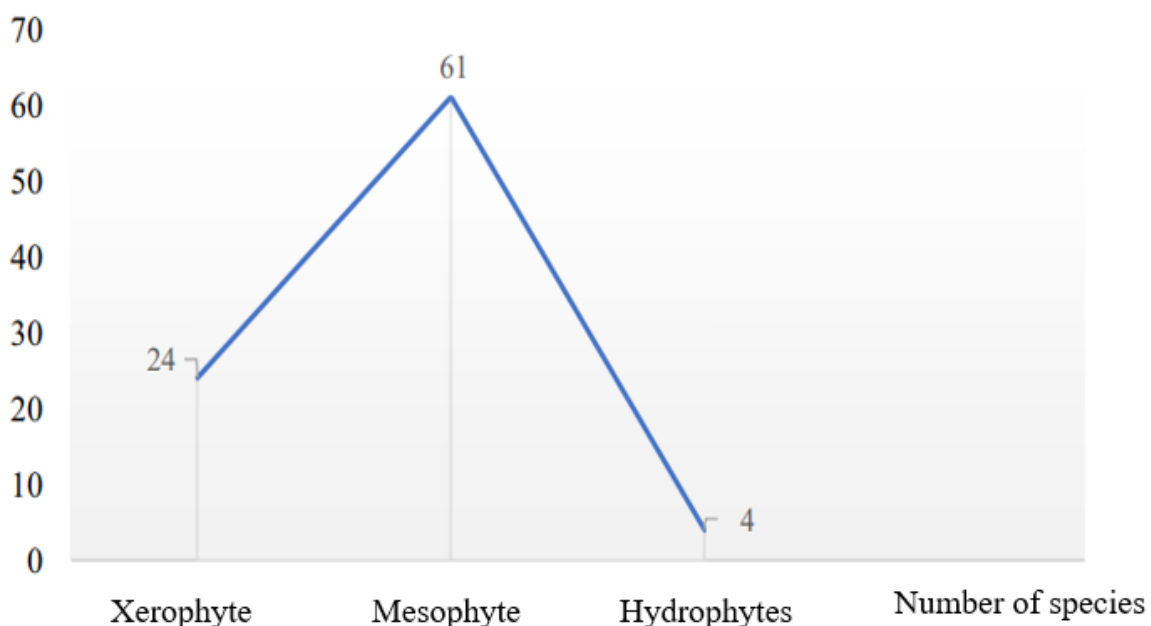


Figure 1. Ecological groups of plants in the Fabaceae family in the Belgorod region in relation to moisture (number of species)

There are 24 species of the Fabaceae family that belong to xerophytes. These include *Amorpha fruticosa*, *Astragalus* (horned, fluffy-flowered, Elenovsky, sand vetch, Ukrainian, prickly), *Caragana* (arboreal, shrubby), *Cytisus* (Austrian, Russian), *Ononis* (Don, dyeing), *Coronilla* (large-flowered, Ukrainian), *Melilotus alba*, *Onobrychis hirsuta*, and *Robinia pseudoacacia*.

There are 4 species of hygrophytes - *Lythrum salicaria*, *Peucedanum palustre*, *Trifolium fragiferum*, and *Trifolium hybridum* (see Fig. 1).

It should be noted that A. G. Serebryakov made a significant contribution to the study of life forms. Considering that woody species have a single stem throughout their entire lifespan - the biologically main leading axis, which actively functions throughout the life of the plant. Trees are represented by only 2 species of the Fabaceae family, namely *Robinia pseudoacacia* and *Robinia viscosa* (see Fig. 2).

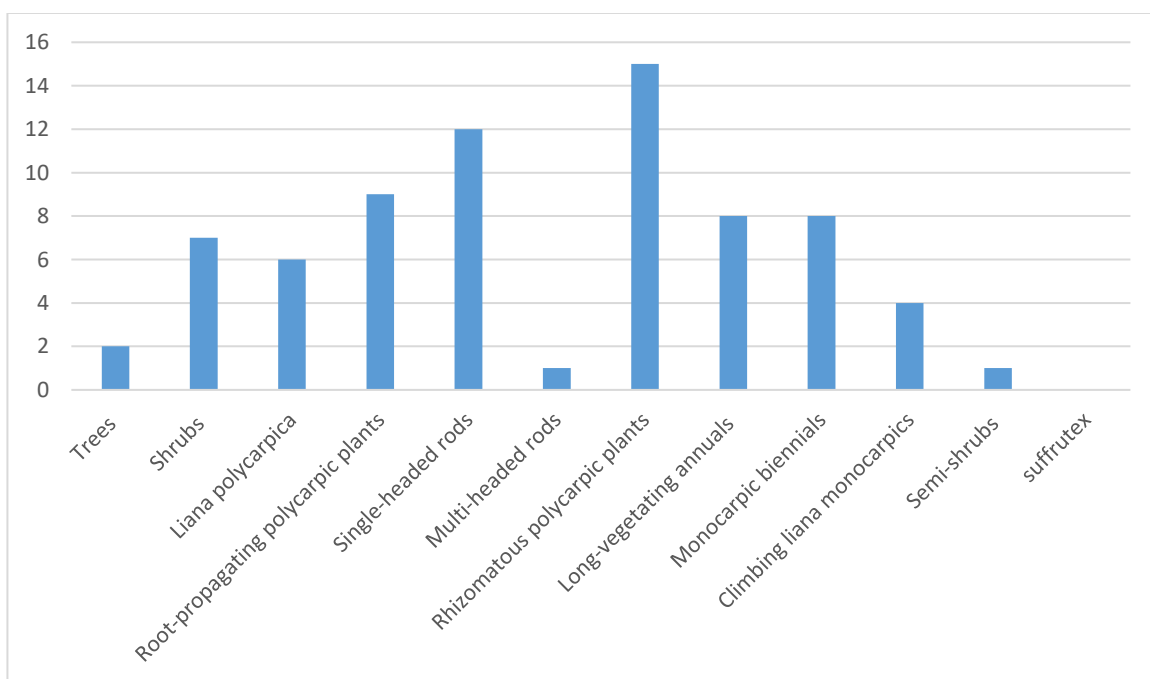


Figure 2. Distribution of species in the Fabaceae family in the Belgorod region according to I.G. Serebryakov's system (number of species).

Among the woody plants, there is a group of life forms known as shrubs. They are distinguished from other forms by the formation of stem systems. Shrubs of the Fabaceae family are represented by 7 species (8.97% of the total number of species). These include *Amorpha fruticosa*, *Caragana* (arboreal, shrubby), *Cytisus* (Austrian, Russian), and *Ononis* (Don, dyeing).

Lianoid polycarpics are a special life form of plants that result from the struggle for light and space in dense plant communities. They are characterized by long, slender stems and the ability to grow rapidly, allowing them to reach the surface of tree canopies [2]. Lianoid polycarpics in the Fabaceae family are represented by 6 species (7.69%): *Lythrum salicaria*, peas (Kashubian, mouse, vetch, woodland, thin-leaved) (see Fig. 2).

Rhizomatous polycarpics are perennial plants with long horizontal roots that give rise to root shoots or suckers, formed from accessory buds on the roots [1]. Rhizomatous polycarpics account for 9 species (11.54%). These include *Trifolium praetense*, *Galega orientalis*, *Coronilla ukrainica*, and *Coronilla* (*alba*, *nigra*, *pallida*, bog, vetch, meadow) (see Fig. 2).

Monocephalic taprooted polycarpics in the Fabaceae family comprise 12 species (15.38%) - *Astragalus floris-femina*, *Onobrychis* (*arenaria*, *viciifolia*), *Coronilla varia*, *Vicia cracca*, *Medicago falcata*, *Onobrychis* (*arenaria*, *viciifolia*), *Trifolium* (*fragiferum*, *hybridum*, *montanum*, *pratense*).

Multacephalic taprooted polycarpics are represented by 1 species - *Hypericum perforatum*.

Stoloniferous polycarpics in the Fabaceae family account for 15 species or 19.23%. These include *Astragalus* (*austriacus*, *cicer*, *danicus*, *glycyphyllos*, *elymococcus*, *hirsutus*), *Coronilla* (*indica*, *verna*), *Lupinus polyphyllus*, *Medicago sativa*, *Hedysarum coronarium*, *Anthyllis vulneraria*, *Trifolium* (*alpinum*, *medium*), *Lathyrus latifolius* (see Fig. 2).

Long-vigorous annuals comprise 8 species, which is 10.26% of the total number of Fabaceae species - *Lotus corniculatus*, *Trifolium incarnatum*, *Vicia sativa*, *Medicago lupulina*, *Onobrychis viciifolia*, *Vicia faba*, *Vicia hirsuta*.

Biennial monocarpics undergo a long period of dormancy during the winter and die in the second year after fruiting. Among the Fabaceae family, there are 8 species of biennial monocarpics, including *Lotus corniculatus* (golden, dark-flowered), *Medicago lupulina*, *Onobrychis* (*alba*, *dentata*, *officinalis*, *viciifolia*), and *Pisum sativum*.

There are 4 species, or 5.13% of the total number of Fabaceae species, of climbing vine-like monocarpics. These include *Pisum sativum* and *Vicia doica* (narrow-leaved, four-seeded, hairy).

Semi-shrubs and subshrubs, characterized by their height, have the upper parts of their annual shoots die off each year. They have a shorter lifespan of the skeletal axes compared to shrubs [4]. Semi-shrubs account for 1.3% of the total number of species (1 species) - *Astragalus tragacantha*. There are 2 species of subshrubs - *Astragalus* (*albicaulis*, *ukrainicus*) (see Fig. 2).

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