

Creating Landscape Compositions on the Basis of Permanent Green Bushes

Khudoyberdieva Nargiza Turgunboevna¹

Annotation: This article is to identify the requirements for the creation of landscape compositions based on permanent green bushes from plants *Ligustrum* or Privet (*Ligustrum*) - a family of shrubs and small trees belonging to the olive family, *Euonymus* (*Euónymus*) - a genus of woody plants of the *Euonymus* family (*Celastraceae*) and Lavender (*Lavandula*) is a shrub or evergreen shrub belonging to the lavender family, an essential oil culture cultivated in the conditions of the Tashkent Botanical Garden named after Academician F. N. Rusanov.

Key words: *Ligustrum* or Privet (*Ligustrum*), *Euonymus* (*Euónymus*), Lavender (*Lavandula*), ornamental shrubs in landscape design, landscape gardening.

Relevance of the topic: Ornamental shrubs in landscape design play a special role. A huge variety in plant habit (bush height, crown diameter, crown shape), leaf color and shape, flower and inflorescence color and shape, flowering time allows landscape designers, landscapers and gardeners to create highly decorative compositions that can be used to decorate gardens, parks, squares, forest parks. For many years, a large number of species, varieties and forms of ornamental shrubs have been cultivated in the Tashkent Botanical Garden, which are acclimatized in the conditions of our region, annually go through a full cycle of seasonal development, successfully bloom and multiply.

The aim of the study is to generalize the experience on the introduction of ornamental shrubs in the conditions of the Tashkent Botanical Garden and the selection of an assortment of stable flowering and ornamental deciduous shrubs for their use in landscaping settlements.

In accordance with the goal, the following **tasks** are being solved that determine the structure of the work:

As with all types of education and educational institutions, we can proudly ask for a lot of information about preschools and the conditions created there for the younger generation. Teaching preschoolers physical activity, which is the first form of physical education for them to grow up healthy and well-rounded, begins with teaching the youngest children in preschool.

- determination of the possibility of increasing the level of landscaping of settlements in the study region through the use of sloping lands and expanding the range of shrubs in plantations of green areas of settlements;
- analysis of species diversity and biometric characteristics of shrubs in various growing conditions to justify the optimal density in the formation of the necessary types of spatial structure of landscapes;
- assessment of the ecological and environment-forming properties of shrubs in plantations of green areas in settlements;
- development of techniques for increasing the yield of planting material for shrubs and their economic justification.

The object of the study is a collection of ornamental shrubs cultivated on the site of the botanical garden of the city of Tashkent.

The subject of the study are the plants *Ligustrum* or Privet (*Ligustrum*), *Euonymus* (*Euónymus*) and Lavender (*Lavandula*).

Research methods. Phenological observations were carried out according to the "Methodology of Phenological Observations in the Botanical Gardens of the USSR" [1975] and according to I.N. Beideman (1954) according to 9 main phenological phases: bud opening (beginning of vegetation); the beginning of shoot growth; the beginning of flowering; the end of flowering; end of shoot growth; the beginning of lignification of shoots; complete lignification of shoots; the beginning of fruit ripening; the beginning of leaf fall (the end of the growing season).

Scientific novelty of the research. In the process of research, new indicators for assessing biometric characteristics, ecological and environment-forming role, principles of placement of ornamental shrubs were refined and obtained.

Theoretical and practical significance. Based on the analysis of the biometric characteristics of the studied species of shrubs, a mathematical model was developed for changing the projective coverage of urban lands by them, which was used to compile planting density standards in order to form the required type of spatial structure. The formulated scientific

¹ Tashkent Agrarian University, 1st year undergraduate, Faculty of "Landscaping of residential areas and landscape design"

provisions and conclusions can be applied in the work of design organizations, green building enterprises, in the conduct of green farming in settlements.

Plant species used for landscape compositions based on permanent green bushes cultivated in the conditions of the Tashkent Botanical Garden:

1. **Privet** is a beautiful evergreen or deciduous plant. Distributed all over the world and enjoys well-deserved love from landscape designers. It is successfully grown as hedges. It tolerates crown formation very well. It has miniature fragrant flowers collected in panicles and leaves of various shapes and colors. Due to its species diversity, it is grown in many regions and climatic zones. Some varieties of privet are honey plants. The plant propagates easily and does not require special care. Generally unpretentious to growing conditions.

Privet belongs to the *Oleaceae* family. Scientific name of the plant: *Ligustrum*. Depending on the subspecies, it is an evergreen or deciduous tree or shrub. It reaches a height of 3-6 m. It has opposite, hard leaves of an emerald hue. They grow on short petioles. The flowers of the plant are miniature, snow-white. Formed in apical or paniculate inflorescences. Flowering is very long. May last from early to late summer. The corollas of the plant are very fragrant. They have a sweet alluring scent. The genus Privet includes more than 50 different subspecies. They are united by the ability to adapt to any content or weather conditions. This representative of the flora is intended for inexperienced beginner flower growers. The most common subspecies is the common privet. The plant was bred in the 19th century. The main difference from other types is increased frost resistance.

The birthplace of Privet, depending on the subspecies, can be considered China, Japan, Asia. The plant is very shade tolerant. Therefore, it grows on the slopes of mountains, on the coasts, in mixed forests next to thickets of shrubs. Likes light, breathable soil. Grows well in calcareous soil and black earth. Dies in loamy soil with high acidity. Can grow in open soil garden plots, greenhouses, botanical gardens and room conditions. The plant is common in the Russian Federation, Asia, Japan, China, Australia, Europe, South Africa. Often used as a hedge. It looks good both in curb or group, and in single plantings. Responds well to crown formation. Spherical figures, images of animals, pyramids and cylinders are cut out of decorative bushes.

2. **Euonymus** is a genus of woody plants of the family Tree-lipped, or *Euonymous (Celastraceae)*, numbering 142 species. The range of these plants covers mainly temperate and subtropical regions of both hemispheres (with the exception of the extreme northern ones), although some species are found in the tropics. 50 species are endemic to China. Euonymus trees grow in the undergrowth of broad-leaved and mixed forests. These are shrubs, sometimes small trees, erect or creeping, evergreen or deciduous, glabrous, rarely pubescent. Shoots in cross section are tetrahedral or rounded, often ribbed, often with cork outgrowths. The leaves are opposite, sometimes also alternate or whorled, entire, finely dentate or crenate along the edge, pointed. Inflorescences axillary, occasionally apical, cymose. The flowers are small, bisexual, 4 or 5-membered, in complex or simple semi-umbels, occasionally solitary, from light yellow to dark purple. They bloom after the leaves bloom, so flowering is hardly noticeable. The fruit is a spherical leathery capsule, wrinkled, prickly, with lateral wings or with deep lobes, with one or more ellipsoid seeds. The seeds are surrounded by a brightly colored seedling (aryllus). Many species are very decorative, especially at the time of fruiting. Used in landscape design.

Evergreen shrubs or small trees, erect, up to 3 m tall, sometimes dwarf. Branches grey-green to grey-brown, round, glabrous, strong. Leaves on petioles 3-10 mm long, leathery, ovate, obovate, orbicular-ovate or long-ovate, (3-)5-10(-12) cm long and (2-)3-5(-5.5) cm wide, rounded or slightly angular at the base, crenate along the margin, rounded at the apex, with 6-8 pairs of indistinct veins. Inflorescences cymose, usually axillary, sometimes apical, strongly branched, with many flowers. The flowers are 4-membered, 5-6 mm in diameter, green or yellowish-green, sometimes creamy, with the smell of vinegar. The boll is spherical, from brown to yellow- or red-brown, 6-9 (-12) mm in diameter, 4-chambered. Each chamber contains 2 seeds, dark brown, spherical, with orange-red aryllus. Flowering in July, fruiting from August to January.

3. **Lavender** (*Lavandula*) is an original ornamental and medicinal crop, which, two thousand years ago, earned the great love of gardeners with its sweet aroma, classic purple or lilac lush flowering, and excellent culinary properties. The plant is widely used in the design of rabatok, it looks good in a flower pot, is used as a background plant.

Lavandula is a perennial plant that is distinguished by its incredible beauty and pleasant aroma. The shrub has a fibrous and woody root type. It goes down to 2 meters deep. It is branched, reaching a height of up to 60 centimeters. In the lower part of the stems become woody. The leaves are oppositely arranged, they are linear, painted in a green-silver hue. On the surface there is a slight pubescence. Flowers form inflorescences in the form of spikelets, consist of 6-10 units in whorls. The flowers are lilac-blue or blue. Inflorescences form from above, where there are no leaves on the shoots. Such a culture blooms from mid-summer, it is an excellent honey plant. With proper storage of seed material, it will have good germination for many years.

Lavender is a photophilous plant. Its cultivation is carried out in heated soil. It also takes root and grows in the shade, but then it will not be possible to obtain lush flowering. For planting, it is recommended to select free spacious areas, it is desirable that groundwater does not stagnate on them.

Figure 1.



Figure 2.



The flower is used to frame flower beds, alleys. Looks good both in single plantings and in groups. A small plant (about 90 cm) is preferred to be planted in small groups, for example, when decorating alpine slides, without violating the naturalness of the design. Of course, it is necessary to wisely select plants for the neighborhood with mountain lavender in the garden. The most suitable for decorating garden alleys is narrow-leaved lavender, which grows about one meter. In winter, amazing leaves of a gray-green hue remain on the plant, but in summer it blooms with unusual purple flowers.

There are more than 20 types of Lavender, but as a rule, gardeners grow the most common varieties.

Lavender (*Lavandula*) is a genus of plants in the *Lamiaceae* or *Labiatae* family. Includes approximately 47 species. It grows in the Canary Islands, in northern and eastern Africa, in Australia, in southern Europe, in Arabia and in India. Cultivated forms are grown in gardens all over the world.

Lavender narrow-leaved or English (*Lavandula Angustifolia*).

It grows about a meter in height, the leaves are small, thin, gray-green. It is distinguished by beautiful light blue buds, blooms with the advent of July and pleases until the beginning of September. Among the varieties in demand:

- "Rosea". In height only up to 40 centimeters. Flowering is a beautiful purple-pink.
- "Alba". Bushes up to 50 centimeters in height, have a white tint.
- "Muntstead". The flowers are bright blue, and the bush itself reaches a height of up to 40 centimeters.
- "Hidcoat Blue". The flowers have a classic lavender color - purple-blue. A bush grows up to 40 centimeters in height.

Figure 3.



Fig. 1,2,3. Cultivation of Privet (*Ligustrum*), Euonymus (*Euonymus*) and Lavender (*Lavandula*) in the Tashkent Botanical Garden.

Conclusion.

Thus, long-term observations of ornamental shrubs from the collection of the Tashkent Botanical Garden named after academician F.N. Rusanov made it possible to select and develop recommendations for the use of some ornamental shrubs from the groups of tall, medium and short for various needs of landscape gardening in the Republic of Uzbekistan.

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