BIOECOLOGICAL CHARACTERISTICS OF SOME ORNAMENTAL TREES INTRODUCED IN JIZZAKH

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Abstract: *As a result of the development of urban planning and industry on a global scale, people are demanding the use of ornamental introduced trees and shrubs in greening their habitats and optimizing their microclimate.*

Keywords: *introducer, Acer platanoides L,* Aesculus hippocastanum *L, Betula*

Introduction

In the greening of residential areas with high industrial sectors in the world, special attention is paid to tree species with high flexibility and resistance to various factors and their decorative forms. In this place, trees and shrubs with open and closed seeds, which are widely used in landscaping, have a special place. Especially in the hot and arid regions of Central Asia, *Acer platanoides* L, *Aesculus hippocastanum* L, *Betula* and other species are widely introduced for greening, scientific justification of their growth and development characteristics, determination of resistance to various environmental factors, and requires the development of ways to increase the efficiency of reproduction. At this point, it is important to determine the bioecological characteristics of these species and to recommend their greening on a large scale.

The Main Findings and Results

In the following years, attention is being paid to beautification of the cities of our republic, improvement of infrastructure and greening in accordance with the rules of modern architecture. In this place, the samples of new trees and shrubs adapted to the harsh continental climate were expanded, new species and varieties resistant to greening were acclimatized, and their promising representatives were introduced to the fields of beautification of different regions of our republic. In the Strategy of Actions for the further development of the Republic of Uzbekistan[1], the task of “preventing problems that harm the environment” is defined. At this point, it is of great scientific and practical importance to substantiate the biological characteristics of ornamental tree species, which are important in harsh continental climatic conditions, to determine the changes that occur in them under the influence

of various environmental factors, and to develop measures to be applied to greening.

In the process of urbanization in the world, a number of studies are being conducted on the greening of large cities and the enrichment of the composition of flora at the expense of introducers. In this regard, bioecological characteristics of ornamental trees and shrubs, distribution areas, modern systematics, introduction and acclimatization, expansion of forest and green areas, seed germination under different conditions, flowering biology and their development under the influence of various climatic factors were studied.

Therefore, bioecological characteristics of trees introduced in the region, their natural distribution area and centers of origin, seasonal development pattern, flowering biology, seed fertility in different conditions, introduction assessment in urban conditions and making recommendations for greening from them are of important scientific and practical importance.

Cultivated maple (*Acer platanoides* L.) – It is a large tree with a height of 25-30 m in natural conditions. The branches of the species introduced in Jizzakh are thick, wide, round, and the leaves have large claws. This maple blooms before leafing, that is, in the conditions of the city of Jizzakh, in May. Plant flowers are unisexual. The seed is large and flat. The root system is of the arrow root type. The main root does not go deep into the ground, but the strong lateral roots are extremely branching. This tree grows green from the top, reproduces by budding, and it is reported to live up to 150-200 years in natural conditions.

The color of the bark of young branches is reddish-gray, and they are smooth. Stems are usually glabrous, brownish-olive or reddish in color, with shiny light gray stripes and scattered lenticels. Plant buds are ovoid or ellipsoid, 6-9 mm long, with 6-8 pairs of oppositely located stigmas. Their side shoots are inverted ovoid, gypsum is located on the branch, and they have 4-6 pairs of stigmas.

Leaves are simple, (3) 5-7-lobed, rounded, 4-10 (15) cm long, 8-12 (20) cm wide, claw-like veins, upper 3 lobes almost equal to each other. The lower ones are a little shorter, all large groove-toothed, the tips and teeth of the lobes become thinner and sharper towards the end; The base of the leaf is heart-shaped, usually located on short pedunculate branches. The upper side of the leaf is glabrous, dark green, shiny, the lower part is a little lighter, shiny, glabrous, rarely hairy along the veins and there are beards at the corners of the veins, golden-yellow or red in autumn; the length of the leaf band is 3-15 cm, it is flattened from the side, it is reddish in color. The plant has an erect, glabrous flat inflorescence (false umbel) in a short peduncle; flowers are greenish-yellow, 7-10 mm in diameter, seeds and

pollinators are usually located on the same plant (pseudo-bisexual), but in some cases, the flowers on the tree belong to one or the other sex, they open before the leaves or almost at the same time; sepals 5, obovate, obtuse; sepals 5, lanceolate, slightly shorter than or nearly equal to the sepals. There are 8 (5-10) stamens in anther flowers, the length is equal to a flower, they are shorter in false bisexual flowers; seeds have a flat glabrous node, a long peduncle and 2 recurved beaks. The winged fruit splits at an obtuse angle or into two horizontally elongated wings, when it is shed it splits into 2 one-seeded wings 4-5 cm long and 1-1.5 cm wide. Seed cells are 1-2 mm thick and 10-16 mm long. 1000 seeds weigh (50) 80-170 g, 1 kg contains (5)-7-13-(20) thousand seeds.

False chestnut *(Aesculus hippocastanum* L.) - a large tree, 25-30 m tall, 1 m in diameter. It is a very beautiful plant. The tree has thick pyramidal branches with thick branches and branches, the buds are large and durable. The leaves are opposite, large, 45-50 cm long, 5-7-leafed, compound-compound, each leaf is 10-25 cm long and 3-10 cm wide, inverted ovate, tapering towards the base. The middle leaf is larger than the side leaves, the leaf band is very long, 15-20 cm.

The branches are pointed, first hairy, green-red, then brown-red. The leaves grow in a spiral shape, shedding occurs in the autumn months. It blooms in April-May. Petals are white, but first a yellow, then a pink spot appears at the bottom. Fruiting in October, it is spiny, round, and contains a large, dark brown, shiny single seed. In the conditions of the city of Jizzakh, it is poured into the ground in November. At this time, the hard barbed spherical wrapper is divided into 4 parts.

In long-lived trees, the outer branches are often drooping. The body has a straight cylindrical shape, with a dark brown plate-like bark. Like other species of the genus, this species has a very strong root system, strong main root and well-developed lateral roots, due to which this tree is wind resistant. Root hairs contain bacteria that absorb nitrogen from the air, so they grow well even in soils that are low in nitrogen. Young shoots and seedlings are also thick. Buds are large, sticky, reddish-brown in color.

The flowers are white, erect, cone-shaped, 10-25 cm long, and usually have small yellow spots or spots. From 20 to 50 flowers are produced in each bud. In the conditions of the city of Jizzakh, it blooms after the leaves open in May. The flowers have a remarkable feature: the yellow spots on the petals turn red after the nectar secretion stops. Data in the literature show that this feature serves as a signal to pollinating insects and they do not land on red flowers. Usually from 1 to 5 fruits are formed in each furrow. The fruit is a green pod, with multiple spines, producing one (rarely two or three) nut-like (colloquially known as chestnut) seeds. Each chestnut

is 2-4 cm in diameter, shiny, nut-brown, and has a oozing scar at the base. In nature, it reproduces using seeds.

Birch (*Betula*) family. This genus is also considered one of the largest genera in the world, with 83 species recorded so far (Ashburner, 2016). Representatives of this category are trees and shrubs. The leaves have a simple structure, banded, quick-shedding margins, shed in autumn. The leaf plate is entire, rounded and lancet-shaped, with toothed edges and feathery veins. They are monoecious, unisexual trees. Birch blooms in early spring, and at this time the leaves also write.

Pollinated by wind. When fruiting, the wrapping coin becomes rough. The fruit is a one-seeded nut that is dispersed by wind. The root is located on the surface. He is bruised from the nape, this feature disappears in old age. Birch grows well until the age of 40, then its growth slows down. He lives 100-120 years. The category has more than 100 species, most of which are found in the CIS. They spread from the tundra zone to the steppe zone and form large forests.

Birch wood is hard and does not differ from oak wood in its mechanical properties. The surrounding wood is white-yellow or white-reddish in color, has high mechanical properties, is hard, flexible, and has a uniform structure. Plywood, rifle butts are made from it, barrel, wheel frame, shot, etc. are made from it. It is also widely used in agricultural machinery and furniture production. Pistachio charcoal is made from it and used as firewood. It is often planted in landscaping because it is a beautiful tree. The forest is also planted in rows.

Conclusion

In 2019-2022, in the conditions of the city of Jizzakh, the flowering of the species is observed in late April and early May. The flowers are bisexual and some are unisexual, some are dioecious. The fruit of the plant is made in September and begins to fall gradually, a part is stored on the tree throughout the winter. Starting from early spring, when the plant writes a new leaf, all the remnants of the previous year are shed. The plant reproduces from seed and grows very quickly. Light-loving, not affected by the heat and dryness of the air.

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