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Research Article

ROCKERIES AND ROCK GARDENS IN THE LANDSCAPE DESIGN OF THE URBAN ENVIRONMENT

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Abstract

The article discusses the features of the construction of rockeries and rock gardens, studied their stylistic features. Some types of plants for planting them among stones are considered.

Rockery, rock garden, stone, slide, style, decorative, plants, typology, alpine plants, landscape design

Keywords

The word «rockery» itself comes from the English word «rock», which literally means «stone». Already from this it becomes clear that the basis of rockery are stones.

INTRODUCTION

To create a rockery, one of the following styles can be used:

• Japanese. It is characterized by a minimal number of inconspicuous plants (ferns, etc.)

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and stones of rounded shapes. If a rockery of this style is located on a large area, then Buddhist sculptures or a small tea table can be installed inside it (Picture 1);

- Italian. This style has a smooth aesthetic. The rockery should have rounded and smooth lines, and delicate and bright flowers are planted on small areas of the soil (Fig. 2);
- English. It is characterized by sharp stones, similar to fragments of rock. When carrying



Figure 1. Japanese









Figure 3. English



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It is worth noting that when arranging a rockery, it is not necessary to strictly adhere to one style, their competent combination with each other is also allowed. Rockery in landscape design is divided into several types, namely [2]:

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- Horizontal or flat. For the device of this type of rockery, a flat area is chosen, without hills;
- Retaining or stone walls. The creation of rockeries of this type is often part of the vertical layout of the site. Such compositions, firstly, look very impressive, and secondly, they can perform the function of separating zones;
- Classic. When arranging this type of rockery, plants are planted on a small elevation, laid with stones.
- Based on the styles and types of rockeries described above, landscape designers have developed a huge variety of compositions [3]:
- Terraced slope. To create it, retaining walls made of natural stone or limestone of different shapes and levels are used. However, it is important that there is a natural steep slope on the territory;
- Landscape. For the device of such a rockery, a spacious plot is needed, since its main advantage is the absence of restrictions for plant growth;
- Architectural. At the heart of this rockery are wide rectangular terraces connected by stone stairs. Plants in such rockeries are planted in pockets between slabs. It is worth noting that

this type of stone garden is most often used in the design of landscape design of large areas;

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- Mountain valley. The main purpose of this rockery is to simulate a mountain valley. The condition for its creation is a sufficiently flat and extended place;
- «Rocky hill». This view is as close as possible to the natural one. To create it, a hill is required, on which stones and plants will be placed in a chaotic order. It is important that there are no flower beds next to the rocky hill.

The most important advantage of rockery in landscape design is that you can create it almost anywhere; the main thing is to choose the right plants. The rockery does not set any special requirements for relief, lighting, or soil features.

When planning the creation of a rockery, it is necessary to adhere to three rules:

- 1. Damp places where water accumulates regularly are not suitable for this purpose. On such a site, a rockery can be created only in the case of the arrangement of a drainage system;
- 2. There should be no large trees and shrubs on the site of the future rockery. This is due to the fact that such plants are completely inappropriate for this composition;
- 3. It is better to avoid planting fast-growing plants in rockeries. Otherwise, after two or three years, the composition will be completely ruined and it will have to be redone.

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The basis of any rockery in landscape design are stones, choosing them for a rockery should be guided by the following principles:

- Decorative;
- Naturalness;
- Durability.

Choosing plants for rockery, first of all, it is necessary to exclude excessively tall, fastgrowing and flowering plants for too short a period of time. It is necessary that flowers, trees and shrubs harmonize with each other in size, shape and color, and it is desirable that these proportions remain as long as possible.

Mountain perennials, dwarf tree species (coniferous or deciduous), various shrubs are most often used for landscaping rockeries; the main thing is that these plants have a height of no more than half a meter.

The rock garden is a piece of pristine nature transferred to the garden. Plants growing in rocky foothill and mountainous areas are called Alpine, because many of them really came to us from the Alps, Himalayas and other high-altitude areas. Therefore, alpine plants are usually grown on specially prepared soil among or large fragments of natural stone. These conditions ensure optimal development of the root system in the shade and form a natural background, emphasizing the decorative advantages of these small plants. The location of the rock garden and its plantings are chosen taking into account the general layout of the garden. Many rock garden plants do not belong to the original Alpine plants, however, for true Alpine plants, the specifics of growing conditions must be observed.

A characteristic feature of rock gardens is the cultivation of perennial plants growing in one place for several years. Rock gardens throughout the year look beautiful if you choose the right plants. In rock gardens, it is easy to replace plants, constantly supplementing or limiting the number of individual species.

The rock garden in landscape design is an unlimited opportunity for creativity, because its composition allows for countless options. There are rock gardens that can rightfully be attributed to works of art (Fig. 5) [4]. International Journal of Advance Scientific Research (ISSN - 2750-1396) VOLUME 02 ISSUE 05 Pages: 90-97 SJIF IMPACT FACTOR (2021: 5.478) (2022: 5.636) METADATA IF - 7.356 Crossref O Science Metadata METADATA IF - 7.356





Figure 5. Rock garden

Conventionally, rock gardens can be divided into four types:

- Alpine plants planted between crushed cobblestones, which are placed horizontally on the surface of the soil. It can be a large group of stones in one place or small rock gardens scattered in several places (4-6 stones each), which, if properly placed, will give the garden an unusual, unique look.
- 2. Alpine plants planted on traditional alpine slides, i.e. small elevations laid with natural stone. The main attraction of such rock gardens is that a large number of plant species can be planted on a small plot of land.
- 3. Alpine plants planted in stone walls, not bonded with mortar, but partially filled with soil. The walls made of natural stone allow

you to make the most of the irregularities of the site. They can be built with small terraces, i.e. they can be made two-level (stepped), and steps made of the same material as the rock garden will look great between the terraces.

4. Mini rock gardens, alpine plants planted in trays, bowls, various large concreted shells.

To form the hillock of the rock garden directly, it is necessary to prepare a specific mixture. In equal proportions, clean soil, coarse-grained sand and crushed humus are combined (the hill from the soil mixture is shown in yellow in the figure). The height of the slide is on average 1 meter (Fig. 6) [5].

The size of the tiers decreases from the bottom up, according to the pyramid principle. At the bottom point of each individual tier, a massive stone should be laid so that the structure is strong



and small stones do not roll down the slope. Schematically, the placement of stones looks like this (Fig. 6) [5].





Plants are the decoration of the Alpine slide. When choosing plants for rock gardens, you need remember that their size should be to proportional to the size of the stones. If these are large stones reflecting a real mountain landscape, slow-growing shrubs and trees will be suitable for plant decoration: dwarf varieties of spruce, pine, juniper, stunted species of spirea and deutsia, etc. If the alpine slide is designed with the help of small stones, then it would be more appropriate to use miniature annual or perennial flowers, such as: dwarf primrose, lobelia, creeping veronica, stunted bells, etc. In spring, the rock garden will be decorated with various varieties of spring crocuses, snowdrops, tulips and daffodils.

It is better to plant unpretentious plants on an alpine slide. In this decorative corner of the garden, flowers that do not need careful care will look most harmoniously. For the design of alpine slides, low-growing and compact, as well as groundcover plants are usually used. In some

cases, if the slide is equipped on a natural slope and has an impressive size, even dwarf trees can be introduced into the composition. Flowers, herbs, shrubs should not only be combined with each other in appearance, but also have similar needs for moisture, care, and soil composition. Flowering species are selected so that they have a different flowering period. This will give variety to the appearance of the rock garden throughout all seasons.

Consider some plants for rock garden [6]:

Edelweiss - Is A Symbol of The Alps (Fig. 7). This perennial is frost-resistant, he does not mind any cold. Edelweiss lines the slopes of the Alpine slide with mats, the diameter of which reaches 20 cm.

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Ochitok - There are several types of this modest plant (Fig.7). It is absolutely unpretentious, securely fixed on any soil with its creeping stems. Under the influence of sunlight, the leaves of the ochitka become brighter, as if they are sunbathing. It can be used to decorate the edging of the rock garden, since it destroys weeds within the radius of its «mat».

Molodilo is the most popular inhabitant of Alpine slides (Fig. 7). Its fleshy leaves themselves will

adorn any flower bed, and light purple flowers can compete in modest beauty with many of their relatives.

Saxifrage - In spring, these cute mats are literally strewn with small flowers. The plant prefers darkened areas, even covering stones with its green nets (Fig. 7).



Figure 7. Edelweiss, ochitok, molodilo, saxifrage

Shrubs and flowers are also suitable for rock gardens: juniper (various types), dwarf barberry, Japanese spirea, aquilegia, alpine aster, horned viola, crocus, awl-shaped phlox.

Conclusion

Thus, the rock gardens and rockeries considered by us in the article are areas with a rocky base on which mountain plants are planted. The purpose

of such decorative corners is to recreate a real mountain landscape. As a rule, slow-growing flora is planted, which is not demanding of care.





The placement of rockeries and rock gardens in an urban environment will help to create an exclusive composition that will become a worthy decoration of the landscape.

References

- Drobchenko N.V. Fundamentals of landscape design. Study guide Samarkand: SamGASI, 2019
- Drobchenko N.V. History of formation and ways of development of landscape architecture in Uzbekistan. Samarkand: Zarafshon, 2017
- 3. http://www.le-park.com
- 4. https://i.ogurki.com
- 5. https://vosadu-li-vogorode.ru
- 6. https://m-strana.ru/design