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## **MODEL STRUCTURES OF GARDEN AND PARK LANDSCAPES OF CENTRAL EUROPE**

The landscape structure of garden and park landscapes of Central Europe on the example of the garden and park landscape «Sofiyivka» (Uman, Cherkasy region, Ukraine) and the garden and park landscape «Arcadia» (Nieborów, Łód Voivodeship, Poland) had been examined. Geographical understanding of Central Europe as a natural-geographical region and socio-geographical category had been discovered. The modern understanding of garden and park landscapes as a corresponding group of man-made landscapes, which in its structure is a reasonable combination of natural components, elements and components and elements formed in the process of economic / art activity of man had been done. The article presented maps of the modern landscape structure of the garden and park landscape «Arcadia» and the garden and park landscape «Sofiyivka».

It has been established, that the garden and park landscape «Arcadia» and the garden and park landscape «Sofiyivka» were founded during the anthropogenic-landscape period of the formation of garden and park landscapes, namely the romantic direction. They are connected by the history of the foundation and friendly relations of the owners of these objects: Princess Helena Radziwill and Sophia Glavani-Witt-Potocka. Garden and park landscape «Arcadia» is located 5 km southeast of the town of Łowicz, Łowicz County, Łód Voivodeship in the structure of the rural subclass of the residential class of man-made landscapes. Garden and park landscape «Arcadia» is located within the Mazowiecko-Podlaska Lowland, an example of a floodplain type of garden and park landscapes. The area of the object is 14.5 hectares. Today, the garden and park landscape «Arcadia» is part of the museum in Nieborów, which was established in 1945. Garden and park landscape «Sofiyivka» is located in the city of Uman, Cherkasy region on the Dnieper Upland. The object of study has a complex landscape structure, which is formed by the valley of the river Kamyanka, as well as two beams: Zvirynets and Grekova. Garden and park landscape «Sofiyivka» is an example of a valley-beam type of garden and park landscapes. Area - over 200 hectares. Today it is the National dendrological park «Sofiyivka» of the National Academy Sciences of Ukraine.

**Keywords:** Central Europe, man-made landscape, garden and park landscape, park «Arcadia», National dendrological park «Sofiyivka» of NAS of Ukraine, landscape structure, types of terrain, rational use of nature.

## **Кравцова І.В., Канська В.В. МОДЕЛЬНІ СТРУКТУРИ САДОВО-ПАРКОВИХ ЛАНДШАФТІВ ЦЕНТРАЛЬНОЇ ЄВРОПИ**

Розглянута ландшафтна структура садово-паркових ландшафтів Центральної Європи на прикладі садово-паркового ландшафту «Софіївка» (м. Умань, Черкаська обл., Україна) та садово-паркового ландшафту «Аркадія» (Nieborów / с. Неборув, Лодзинське воєводство, Польща). Розкрито географічне розуміння Центральної Європи як природно-господарського регіону. Подане сучасне розуміння садово-паркових ландшафтів як своєрідної групи антропогенних ландшафтів, структура яких сформована розумним поєднанням природних компонентів та компонентів і елементів, утворених в процесі господарської / мистецької діяльності людини. Представлені картосхеми сучасної ландшафтної структури садово-паркового ландшафту «Аркадія» та садово-паркового ландшафту «Софіївка», розглянуто історичні взаємозв'язки між ними, що відобразилися і у сучасних «образах» цих зразкових садово-паркових ансамблів Центральної Європи.

**Ключові слова:** Центральна Європа, антропогенний ландшафт, садово-парковий ландшафт, парк «Аркадія», Національний дендрологічний парк «Софіївка» НАН України, ландшафтна структура, типи місцевостей, раціональне природокористування.

**Relevance of the research topic.** In development, man has passed a difficult path of formation and adaptation to the natural environment. Adaptation is not only related to the external changes of a Homo sapiens, it is much more radical. Man has learned to use natural resources, build complex engineering structures, change the environment, began to extract minerals and more. All its activities are aimed at transforming natural components and elements according to their needs. As a result, in the structure of the Landscapesphere of the planet formed a special sphere - the anthroposphere or man-made sphere, which is composed of different origins, functional load, structure of man-made landscapes, combining components and elements of natural and anthropogenic genesis. Man-made landscapes not only perform their functions. They become a kind of natural-socio-historical-cultural ethno-identifiers. Among the man-made landscapes formed as a result of human economic activity, garden and park landscapes are special, genetically complex, multifunctional, the most constructive and rational.

**The state of study of the issue, the main works.** The garden and park landscapes are the objects of detailed study of such Ukrainian and foreign scientists: V.I. Bilous [1], I.O. Bogova, S.I. Galkin, A.D. Zhyrnov, Yu.O. Klymenko, I.O. Kosarevskyi, I.I. Kryvosheia, I.S. Kosenko [6], V.P. Kucheriavyi [7], O.P. Rohotchenko [10], I.D. Rodichkin [11], L.I. Rubtsov, Roman Aftanazy, James Stevens Curl [14], Lichanski Jakub Z. [16], Katarzyna Palubsca, Iga Solecka, K. H. Wojciechowski, Ewa Skowronek, Andrzej Tucki [22] and others.

In scientific works the authors disclose the issues of design, construction and reconstruction of gardens and parks, features of their architectural-planning and landscape organization, the main methods of composition of tree-shrub and flower-ornamental plantations;

give their characteristics, color recommendations, planting and care rules, etc. In particular, the history of the development of gardens and parks, actually garden and park art from ancient times to the present is set out in the works of A.D. Zhyrnov, A.P. Verhunov, V.A. Horokhov, V.I. Bilous, L.I. Rubtsov, V.P. Kucheriavyi, N.O. Nekhuzhenko and others. I. D. Rodichkin researches the history of the development of ancient estates and manors, gardens and parks in Ukraine from the Middle Ages to the beginning of the twentieth century; gives a detailed description of gardens, parks, reserves; analyzes modern urban and suburban parks, emphasizing their importance in the formation and preservation of the natural environment. V.P. Kucheriavyi reveals the socio-ecological role of landscaping, landscape-typological and architectural-artistic foundations of garden and park art, the technology of creating greenery. He pays special attention to the selection of plant material and the formation of garden and park compositions. L.S. Zalesskaya covers the design of suburban landscapes, large parks in the urban environment and small ensembles of urban gardens; reveals general compositional and planning issues, shows the influence of natural conditions – climate, relief, water and vegetation – on the formation of the landscape. Today, scientists study the floristic composition of gardens and parks, the historical experience of introduction and acclimatization of relevant plant species of different life groups, morphological features of aboriginal and introduced plant species, annual development cycle, methods of reproduction, prospects for use in landscaping. They reveal the issues of semantics and associative load of garden and park ensembles, etc.

From the point of view of anthropogenic landscape science, garden and park landscapes are substantiated as an appropriate type of man-made landscapes in the structure of the residential class of man-made landscapes. In particular, G.

I. Denysyk notes that these are original examples of garden and park architecture with a rich set of trees and shrubs, sometimes picturesque lawns, game attractions and ponds [4, p. 55]. These man-made landscapes are not just areas where trees, shrubs and beautiful flowering plants grow. Garden and park landscapes are an example of constructive organization of the anthropogenic / man-made environment, proper use of natural conditions and resources. Therefore, the study of their structure, the relationship between natural components and elements, genetic and functional features is an actual scientific problem.

**The purpose of the study** – to study the structure of Sofiyivka (Uman, Cherkasy region, Ukraine) and Arkadia (Neborów village, Łódź Voivodeship, Poland) as model garden and park landscapes of Central Europe for the purpose of their rational use.

**Research methods.** The study of the landscape structure of garden and park landscapes of Central Europe is based on the principle of natural and anthropogenic combination, which is thoroughly revealed in the works of G.I. Denysyk, F.M. Milkov [4]. The authors note that it is not enough to know only man-made landscapes. It is important to study the man-made landscape as one of the components of the interacting paragenetic system [4]. Man-made landscapes are formed and function in specific natural conditions and in close connection with existing landscapes. Therefore, in their study it is important to take into account both natural and socio-economic conditions of the region. In order to study the landscape structure of garden and park landscapes of Central Europe, both general and specific scientific research methods were used [4].

**Presentation of the main material with substantiation of the obtained scientific results.** From the point of view of modern anthropogenic landscape science, Central Europe is a rather peculiar natural-ethno-cultural formation.

Peculiarities of natural conditions of this territory, history of settlement and anthropogenic transformation – all this is reflected in the physiognomy of different classes of man-made landscapes of the study area. Central Europe as a natural-geographical region includes the central parts of Europe, which are separated by geological and geomorphological structure and occupy an intermediate hypsometric position between the highlands of Western and Southern Europe, the midlands of Northern and Lowlands of Eastern Europe, clearly limited to reach. Central Europe is formed by the Central European Plain, the Carpathians (including the Danube Plains) and the islands of the North and Baltic Seas adjacent to the Central European Plain (Friesian, Danish, Bornholm, Rügen, Moonsun, etc.). The straits of the Baltic Sea (Skagerrak, Kattegat, Oresund, Hamrarne), the Gulf of Finland, the Neva and the Svir rivers, Central Europe is separated from Fennoscandia, and the waters of the North Sea - from the British Isles. In the south, the area is bounded by the Hercynide, the eastern foothills of the Alps and the Morava, Sava, Danube and Black and Azov Seas. The eastern border of Central Europe runs along the western spurs of the meridional and sublatitudinal chain of hills (Vepsov, Tikhvin, Valdai, Central Russia, Smolensk-Moscow, Don ridge) and the Don River to its confluence with the Taganrog Bay [3, 8].

Spatially to Central Europe as a socio-geographical region, different authors include different European countries. For example, I.V. Smal, O.M. Kharchenko (2013) unites Belarus, Moldova, Poland, Russia, Romania, Slovakia, Hungary, Ukraine and the Czech Republic in Central Europe [12]. V.V. Bezuhlyi, S.V. Kozynets (2007) – Belarus, Estonia, Latvia, Lithuania, Poland, Russia (European part), Slovakia, Hungary, Ukraine, Czech Republic. The socio-geographical core of Central Europe is Poland, Slovakia, Hungary, Ukraine and the

Czech Republic. In each of these states, examples of cultural landscapes are garden and park landscapes, which, for the most part, reflect the state of attitude of these states to the nature of their territory.

Garden and park landscapes are group of man-made landscapes that are formed as a result of human economic activity, which is aimed at meeting material and spiritual needs; in which natural components (rocks, water, air, soil, vegetation, fauna, solar radiation) in combination with small architectural forms and structures, road-linear network form a harmonious, supple landscape system. These landscape systems are rich in various cultural artifacts, have strong associative, historical aspects and, in our opinion, are the so-called landscape cultural identifiers of the respective regions [5]. At the same time, this group of anthropogenic / man-made landscapes, which contains information about both ordinary and unique features of the natural conditions of the region.

Among the numerous garden and park landscapes of Central Europe, it is worth focusing on the analysis of the landscape structure and history of the establishment and functioning of the following garden and park landscapes: Sofiyivka National Dendrological Park of the National Academy of Sciences of Ukraine (Uman, Cherkasy region, Ukraine) and Arcadia Park (village of Nieborów, Łód Voivodeship, Poland). Garden and park landscape «Arcadia» and garden and park landscape «Sofiyivka» are historically connected. In particular, the garden and park landscape «Arcadia» became the «initiator» of the creation of the garden and park landscape «Sofiyivka». I.S. Kosenko notes that Sophia Glavani-Witt, returning to Ukraine in 1795, stayed in the town of Nieborów, near Warsaw, with Princess Helena Radziwill, who showed her her magnificent Arcadia Park, built in a romantic style using elements of Greek mythology. Sofia

wrote in a letter to Stanislaw Szczenny Potocki «In the afternoon we went to see Arkady. It's hard to imagine something better and more romantic. You know Arkady, but you saw her 10 years ago. Imagine how young trees can grow in 10 years and how much has been done here to improve this place.... In Arcadia I am in love with madness; there are no species of flowers or exotic plants in the world that do not grow here. Walking through the gardens of Arcadia, I felt that in the middle of summer I am experiencing spring again and every tree seems to say «I'm good here» ...» [6, p. 6].

Garden and park landscape «Arcadia» and garden and park landscape «Sofiyivka» are garden and park landscapes of Central Europe, which were laid down during the anthropogenic-landscape period of formation of garden and park landscapes, namely the romantic direction of formation of garden and park landscapes. These are the best examples of garden and park art and examples of constructive organization of man-made landscape within the highland (garden and park landscape «Sofiyivka») and lowland (garden and park landscape «Arcadia») territories. The XVIII century is considered the «golden age» of landscape art. James Stevens Curl notes that amazing gardens were created in the 18th century. At this time, garden and park landscapes were created at palaces, in urban and suburban manors. The 1770s and 1780s were marked by radical changes in landscape art, the abandonment of the regular style of landscaping and the establishment of landscaping. The main idea of landscape parks is to imitate nature. Garden and park landscapes should merge with the surrounding landscapes, their boundaries are erased, become invisible, physically disappears the fence, which was replaced by a moat, a shaft (garden reception «ah – ah»). Garden and park landscapes of the 70s and 80s of the 18th century are not examples of the organization of cultural landscapes, which demonstrate a return to simplicity and immediacy,

the desire of owners and architects to «show» the beauty of natural nature. The most characteristic feature of park compositions of garden and park landscapes of this period is ambiguity, use of landscape, sculptural, architectural symbols, their romantic orientation. By special means of landscape art, romantic landscapes «told» about the gods and heroes of antiquity, «depicted» the nature of distant exotic countries, focused on important historical events, sought to impress with drama. Some plots of the parks seem naive. The park was perceived in the context of the general cultural interests of the time, in the halo of literary and artistic associations. Sometimes he acquired his philosophy, was a kind of means of expressing the individual vision of the world. Garden and park landscapes of this period were saturated with semantic objects, for example, in the structure of the garden and park landscape «Sofiyivka» there are the following groups of semantic objects, namely: «ancient» - Chaos, Champs Elysees, underground river Acheron, the grotto of Venus, Tarpeian Rock, Flora Pavilion, Euripides Statue, Diana Grotto, Moose Terrace, etc.; «Geographical» - Amsterdam Gateway, Venetian Bridge, Caucasus Hill, Chinese gazebo, etc.; landscape and exotic - the Great Waterfall, Dead Lake (Lake Acherontia), the Lion's Grotto; historical - the Stone of Death, the Truncated Column, the cascade of Three Tears, the grotto of Loketek and others [6, 7, 8, 10, 11]. The semantic objects of the Arcadia garden and park landscape are the temple of Diana, the grotto of Sibylla, the Aqueduct, the stone arch, the Gothic house, the house of Mugarbi, the circus and the amphitheater [14, 15, 17-21]. It should be noted that in the landscape structure of garden and park landscapes «Arcadia» and «Sofiyivka» there is no palace, and the compositional center of these objects of study are the valleys of small rivers, which determine the general direction of objects, configuration and physiognomy of man-made

landscapes.

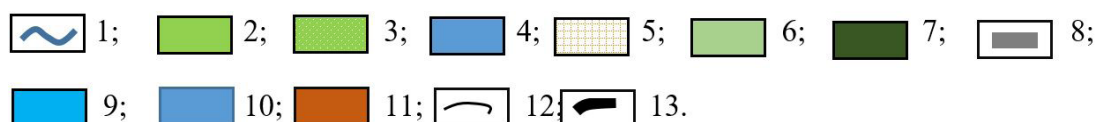
Garden and park landscape «Arcadia» is located 5 km southeast of the town of Łowicz, Łowicz County, Łód Voivodeship, in the structure of a rural subclass of the residential class of man-made landscapes. Arcadia in the Neborów commune. «Arcadia» is organized within the Mazowieckie-Podlaskie lowland (Nizina Mazowiecko-Podlaska), in the valley of the river Skierniewka, the right tributary of the river Bzura (Vistula basin); in the area of deciduous forests of Central Europe. The Arcadia Landscape Park was founded in 1778 by Princess Helena Przeździecka Radziwiłł. The formation of «Arcadia» took place over 40 years. Architects Simon Gottlieb Zug (Szymon Bogumił Zug), Henryk Ittar, and artists Jan Piotr Norblin (Jean-Pierre Norblin de la Gourdain), Alexander Orłowski. The first small architectural structures were the Sibylla Grotto (1781), the Temple of Diana (1783), the Aqueduct (1784), a stone arch (1784), a Gothic house (1795 - 1797), the Mugarbi House. (1795), circus and amphitheater (1801) [13, 14, 16–20]. In 1785-1789 on the island of Poplar was built a symbolic tombstone of the Duchess with an ambiguous Latin sentence «Et in Arcadia ego» on the model of the Tomb of Jean Jacques Rousseau in Ermenovil. Helena Radziwiłł had collected in «Arcadia» a rich collection of ancient sculptures, copies of ancient works, as well as medieval and Renaissance antiquities, from which she created a kind of museum in the temple of Diana.

Geographical coordinates of the object of study – 52° 05' N, 20° 00' E. The garden and park landscape has a flat surface, divided by the valley of the Skierniewka River (a tributary of the Bzura River, the Vistula River Basin) [2, 10, 16]. The absolute height of the physical surface is 85 - 96 m. «Arcadia» is extended in the direction from northwest to southeast. The surface is composed of sandy glacial and water-glacial deposits, the valley of the river Skirnevka is swampy. The



**Fig. 1.** Map of the landscape structure of the garden and park landscape «Arcadia»

Legend:



**River channel type of terrain.** Tracts: 1 - Skierniewka riverbed, winding, low banks, muddy bottom, average depth - 0.3 - 0.5 m; 2 - alluvial island, length - 65 m, width - 50 m, height - up to 2 m above the water's edge, area - 2800 m<sup>2</sup> (0.28 ha), covered with meadow soils under park tree plantations; 3 - alluvial island, length - 180 m, width - 35–40 m, height - up to 2 m above the water's edge, area - 6374.3 m<sup>2</sup> (0.64 ha), covered with meadow soils under park tree plantations; 4 - pond, stretched from northwest to southeast, length - 300 m, width - 100 m, area - 31596, 59 m<sup>2</sup> (3.16 ha), low shores, muddy bottom, average depth up to 2 m.

**Floodplain type of terrain.** Tracts: 5 - leveled surface, composed of sandy glacial and water-glacial deposits, covered with gray forest soils under park plantations with small architectural forms: the temple of Diana, a stone arch, a Gothic house, the house of Mugarbi, a circus, an amphitheater; 6 - leveled surface, composed of sandy glacial and water-glacial deposits, covered with meadow soils under grassy vegetation; 7 - leveled surface, composed of sandy glacial and water-glacial deposits, covered with gray forest soils under park deciduous plantations.

**Residential landscapes** (rural residential landscape). Floodplain type of terrain. Tracts: 8 - road landscapes; 9 - pond, low shores, muddy bottom, average depth up to 2.0 m; 10 - leveled surface, composed of sandy glacial and water-glacial deposits, covered with gray forest soils under agricultural lands; 11 - leveled surface, composed of sandy glacial and water-glacial deposits, covered with gray forest soils under a low-rise type of residential landscape.

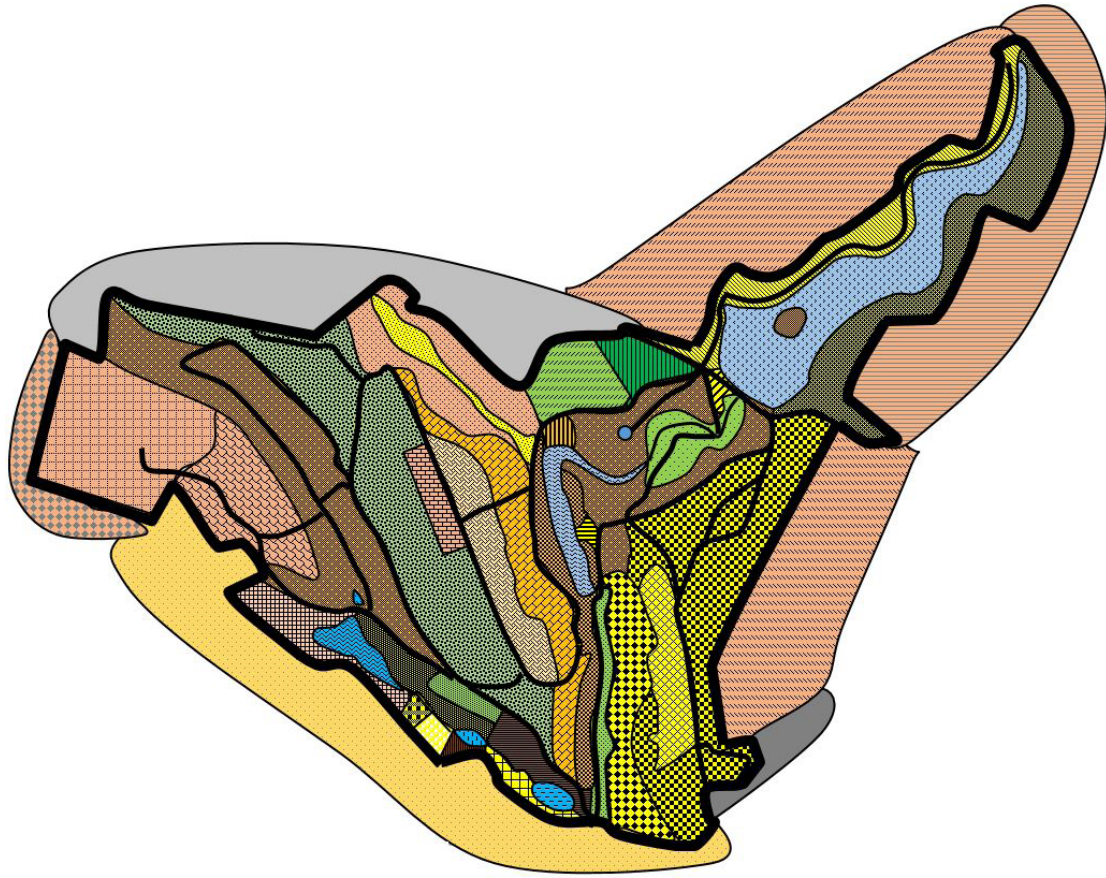
12 - boundaries of tracts; 13 - the boundaries of the garden and park landscape «Arcadia».

surface is covered with gray forest soils, broadleaf park plantings. The main tree-forming species of park plantations is the European plane tree. The landscape structure of the Arcadia garden and park landscape is formed by river channel and floodplain-type tracts. The river channel type of localities is represented by the Skirnewka riverbed. The river channel is winding, 2 – 5 m wide, average depth - 0.5 m, the banks are low, covered with grassy and shrubby vegetation. The river is complicated by the tracts of the pond and the island of Poplar. The floodplain type of areas is represented by tracts of leveled surfaces, composed of alluvial deposits, covered with meadow soils with park plantings with numerous small architectural forms.

Garden and park «Arcadia» is an example of a floodplain type of garden and park landscapes. The area of the research object is 14.5 hectares. Today, the garden and park landscape «Arcadia» is part of the museum in Neboriv, which was established in 1945 [14, 15, 17-21].

One of the best landscape parks of the romantic direction in Ukraine is the garden and park landscape «Sofiyivka», which is located in the city of Uman, Cherkasy region. Geographical coordinates of the object of study – 48° 45' N, 30° 13' E. Garden and park landscape «Sofiyivka» is located on the Dnieper Upland. The absolute height of the physical surface is 190 - 230 m. The surface is composed of loess breeds, located in the valley of the river Kamyanka, beams Grekova and Zvirynets [2, 10, 16]. The garden and park landscape was founded by the Polish magnate Stanisław Szczeński Potocki. Construction began in 1796 under the direction of engineer L. Metzel and continued, alternating with long periods of calm, almost the entire nineteenth century and part of the twentieth century. I.S. Kosenko [6, 7], studying in detail the history of this garden and park ensemble, distinguishes six main stages of development of «Sofiyivka»: 1796 – 1832; 1832

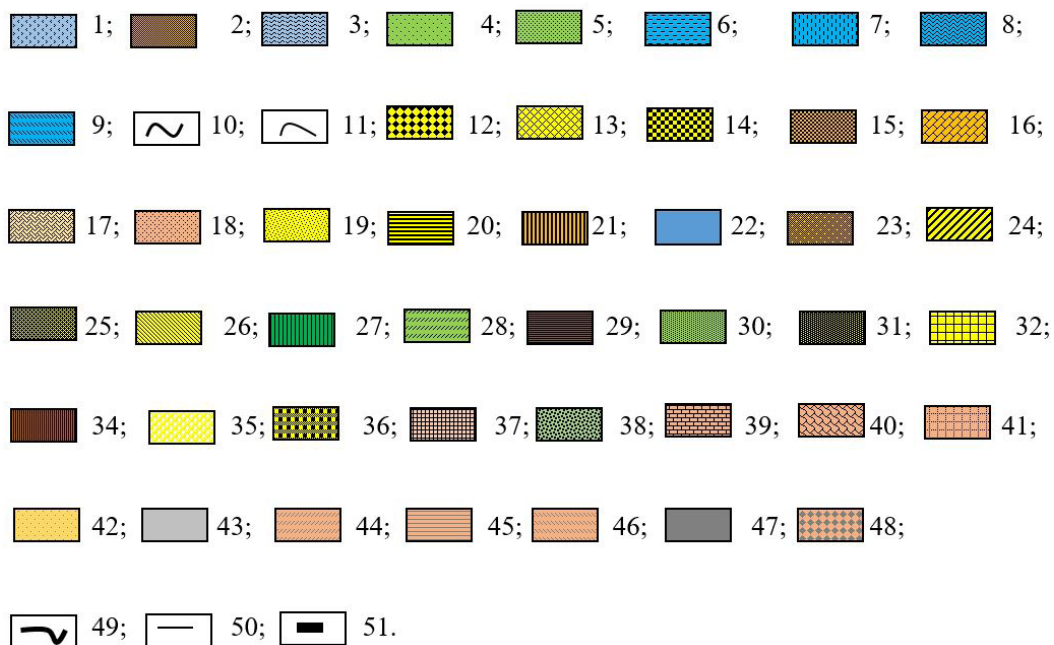
– 1859; 1859 – 1929; 1929 – 1955; 1955 – 1980; 1980 – is our time. The garden and park landscape «Sofiyivka» was created on the territory covered with steppe vegetation. The area is divided by beams and the valley of the river Kamyanka (Bagno) with outcrops of crystalline rocks on the day surface. Initially, S. Potocki planned to turn the entire valley of the Kamyanka River with hills and granite cliffs into a large English park equipped with numerous cascades and fountains. It was planned to plant all the surrounding hills with trees with magnificent leaves, in the open spaces south of the river Umanka, southeast of the village Gorodetsky, to create a continuous green massif, and in the northwest to connect the park with the Greek forest. In the west, it was to start at the city outpost (now the area of the intersection of European (Lenin) and Velyka Fontanna (Paris Commune) streets and continue east to the village of Pikivets [6, 10, 11]. During the first period of the park's creation, the works were Garden and park landscape «Sofiyivka» is located within the urban subclass of the residential landscape. The territory of the object directly borders with low-rise buildings of the city of Uman, as well as with agricultural lands (fields, gardens) of Uman National University of Horticulture (in the southwest) and lands of the Institute of Tobacco (former Institute of Sugar Beets) (northeast). Analyzing the landscape structure of the garden and park landscape, it should be noted that the landscape structure of «Sofiyivka» is formed by slopes, represented by slopes of different steepness and exposure, afforested with plantations of tree and shrub species of both aboriginal and exotic floras. This type of area occupies about 75% of the area. The river channel-floodplain type of terrain is consisted of ponds, valleys of the river Kamyanka, streams, waterfalls, islands, floodplain meadows. At the watersheds there are park plantings and the scientific and administrative part of the park (Fig. 2).



**Fig. 2.** Map of the landscape structure of the garden and park landscape «Sofiyivka»

Scale 1: 16000

Legend:



**River channel-floodplain type of terrain.** Tracts: 1 – Upper pond, area 8.6 ha, average depth 2.5-3.0 m, muddy bottom, with fortified banks; 2 – alluvial island «Anti-Circei», covered with cultivated soils (anthropogenic soil mixture) with plantations of weeping willow, Crimean pine, white poplar, with a built Pink Pavilion and broken flower beds; 3 – Lower pond, with an area of 1.1 hectares, granite bottom, average depth of 2.0 m, with high, fortified with granite masonry shores and a fountain «Snake»; 4 – floodplain of the Kamyanka river valley, composed of alluvial deposits with meadow and meadow-swamp soils under meadow vegetation, complicated by the granite composition «Cretan labyrinth»; 5 – floodplain of the river Kamyanka, composed of alluvial deposits with meadow-swamp soils under meadow-swamp vegetation; 6 – «Hazel



Lake» pond, an area of 0.2 hectares, an average depth of 2.0 m sandy-muddy bottom with artificially fortified shores; 7 – Nahirny pond, with an area of 0.12 ha, an average depth of 1.8 m muddy bottom; 8 – «Forest Lake» pond, an area of 0, 35 hectares, average depth of 2.0 m, muddy bottom, with fortified granite masonry shores; 9 – Falcon pond, area 0.13 ha, average depth 1.5 m, muddy bottom, with steep earthen water banks; the mirror is occupied by white water lilies, yellow jugs, marsh cocks, etc.; 10 – the riverbed of the river Kamyanka 1.0 – 2.0 m wide, with a muddy bottom, sloping banks, complicated in some areas by gullies, small cascades, etc.; 11 – riverbed 0.5 – 0.6 m wide, 0.3 m deep with granite bottom, with fortified wooden logs.

**Slope type of terrain.** Tracts: 12 – very steep ( $50^{\circ}$ - $55^{\circ}$ ) slope with granite outcrops on the day surface under plantations of linden, hornbeam, spruce, ash, oak, cypress; 13 – slightly sloping ( $5^{\circ}$ - $7^{\circ}$ ) surface, composed of loess breeds with gray forest regraded soils under herbaceous vegetation; 14 – steep slope ( $20^{\circ}$ - $30^{\circ}$ ), composed of loess breeds with gray forest soils under ash-hornbeam-maple-linden plantations; 15 – very steep slope ( $65^{\circ}$ ), composed of loess breeds with gray forest soils under oak-hornbeam plantations; 16 – very steep ( $45^{\circ}$ ) slope, composed of loess breeds with gray forest soils under oak-hornbeam-ash-linden plantations; 17 – steep slope ( $25^{\circ}$ ), composed of loess breeds with gray forest soils under oak-hornbeam-ash-linden plantations; 18 – very steep slope ( $60^{\circ}$ ), composed of loess breeds with gray forest soils under oak-ash vegetation; 19 – the bottom of the beam «Zvirynets», composed of loess breeds, covered with meadow soils under weeds and ruderal vegetation; 20 – Caucasian slide – a very steep ( $60^{\circ}$ ) granite slope with plantations of juniper and fir; 21 – Bellevue terrace, a very steep ( $60^{\circ}$ ) terraced slope with cultivated soils covered with five-leaved grapes, complicated by the Apollo grotto and the Eagle obelisk; 22 – «Lake Acherontia» – a pool with an average depth of 2.0 m; 23 – very steep slope ( $45^{\circ}$ - $60^{\circ}$ ), composed of loess breeds, covered with gray forest soils under oak-ash-maple vegetation; 24 – wall ( $80^{\circ}$ ), composed of loess breeds with cultivated soils under plantations of spruce, ash, linden, black alder, maple; 25 – steep slope ( $20^{\circ}$ ), composed of loess breeds, covered with gray forest soils under park plantings; 26 – sloping slope ( $10^{\circ}$ ), composed of loess breeds, covered with gray forest soils under park plantings; 27 – «English Park», slightly sloping surface ( $3^{\circ}$ ), composed of loess breeds with gray forest soils under park plantings; 28 – «Ground floor amphitheater» – a very steep ( $45^{\circ}$ ) loess slope with degraded soils, occupied by lawns and flower beds; 29 – very steep ( $45^{\circ}$ ) loess slope, covered with sod-podzolic soils under shrubby vegetation; 30 – terraced sloping ( $10^{\circ}$ ) slope, composed of loess breeds with podzolic soils under plantations of spruce; 31 – very steep ( $45^{\circ}$ ) terraced slope, composed of loess breeds with gray forest soils under oak-hornbeam-ash-maple vegetation; 32 – very steep ( $60^{\circ}$ ) slope, composed of granites under plantings of spruce, prickly blue spruce, western thuja, maple; 33 – very steep slope ( $45^{\circ}$ ), composed of loess breeds, covered with gray forest soils under turchaninov hornbeam plantations; 34 – steep slope ( $200^{\circ}$ ), composed of loess breeds, terraced, covered with gray forest soils under plantations of hazel Turkish; 35 – steep slope ( $250^{\circ}$ ), composed of loess breeds, covered with gray forest soils under plantations of Andrianna of Colchis, velvet maple, Nedzvetsky apple, ginkgo biloba, dog rose, spruce, Eastern Carpathian lilac, fragrant wolfberries, alder almost hearty, tulip tree, hazel, catalpa; 36 – terraced sloping slope ( $100^{\circ}$ ), composed of loess breeds with sod-podzolic soils under plantations of spruce; 39 – slightly sloping surface ( $30^{\circ}$ ), composed of loess breeds with gray forest soils under park plantings

**Watershed type of terrain.** TTracts: 37 – slightly sloping ( $10$ - $20$ ) surface, composed of loess breeds with gray forest soils under plantations of oak; 38 – slightly sloping ( $30$ ) surface, composed of loess breeds, covered with gray forest regraded soils under grassy vegetation; 40 – slightly sloping surface ( $10$ - $20$ ), composed of loess breeds, covered with gray forest podzolic soils under park plantings.

**Residential landscapes.** Slope type of terrain. Tracts: 41 – slope, composed of loess breeds, covered with gray forest podzolic soils under low-rise buildings; 42 – slope composed of loess breeds, covered with gray forest podzolic soils under low-rise buildings of the city (the territory of Uman National University of Horticulture); 43 – slope, composed of loess breeds, covered with gray forest soils under agricultural lands; 44 – slope, composed of loess breeds, covered with gray forest podzolic soils under low-rise buildings of the city; 45 – slope composed of loess breeds, covered with gray forest podzolic soils under agricultural lands; 46 – slope, composed of loess breeds, covered with gray forest soils under oak-ash-hornbeam plantations. Watershed type of areas: 47 – leveled surface ( $10$ - $20$ ), composed of loess breeds, covered with gray forest podzolic soils under low-rise buildings of the city.

48 – road landscapes of the park (roads, paths, alleys); 49 – boundaries of tracts; 50 – the boundaries of the garden and park landscape «Sofiyivka».



Fig. 3. Garden and park landscape «Arcadia» in the program Google Earth [15]



Fig. 4. Garden and park landscape «Sofiyivka» in the program Google Earth [15]



Fig. 5. Plan of the garden and park landscape «Arcadia», 1839



Fig. 6. Plan of the garden and park landscape «Sofiyivka», XIX century

**Conclusions.** Central Europe is a complex geographical region that is heterogeneous in natural and socio-geographical terms. It is a transitional zone between the nature of Western and Eastern Europe, an ecotonic territory between Western and Eastern cultures. The garden and park landscapes of the study area show the uniqueness of the conditions of Central Europe, as well as carry a large semantic load through a system of objects, small architectural forms, etc. The best examples of garden and park art in Central Europe are the Sofiyivka National Dendrological Park of

the National Academy of Sciences of Ukraine (Uman, Cherkasy Region, Ukraine) and Arcadia Park (Neborów, Łód Voivodeship, Poland). These garden and park landscapes are historically interconnected. The garden and park landscape of the Polish «Arcadia» «inspired» Stanislaw Szczenny Potocki and Sofia Glavani-Witt-Potocka to organize the garden and park landscape of the Ukrainian «Sofiyivka». Garden and park landscapes are organized in the valleys of small rivers, in their landscape structure there are no tracts occupied by palaces and other farm build-



Fig. 7. Zygmunt Vogel, View of the Temple of Diana in Arcadia, 1795, ink, sepia, paper



Fig. 8. Meeting Square, Sofiyivka, XIX century



Fig. 9. Zygmunt Vogel, shrine of the archpriest in Arcadia, 1795, ink, sepia, paper



Fig. 10. Lion Grotto in Sofiyivka



Fig.11. Chinese gazebo, «Sofiyivka»



Fig. 12. Grotto of Venus, garden and park landscape «Sofiyivka», 1820



Fig. 7. Zygmunt Vogel, View of the Temple of Diana in Arcadia, 1795, ink, sepia, paper



Fig. 8. Meeting Square, Sofiyivka, XIX century



Fig. 7. Zygmunt Vogel, View of the Temple of Diana in Arcadia, 1795, ink, sepia, paper

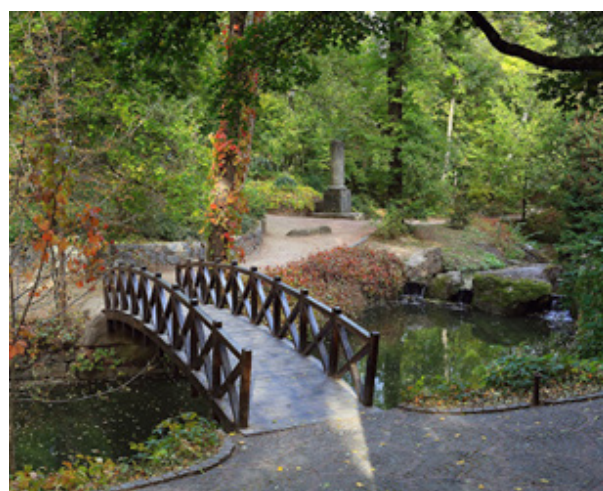


Fig. 8. Meeting Square, Sofiyivka, XIX century



Fig.11. Chinese gazebo, «Sofiyivka»



Fig. 12. Grotto of Venus, garden and park landscape «Sofiyivka», 1820

ings. The main compositional axis of the objects of study are river valleys, which determine the general configuration and direction of man-made landscapes. Garden and park landscape «Arcadia» is an example of a river channel-flood type of garden and park landscapes. Garden and park landscape «Sofiyivka» is a valley-beam type of garden and park landscapes. The area of «Arcadia» is 14.5 hectares, and «Sofiyivka» - more than 200 hectares. Today, they are not only objects of landscape art, they perform aesthetic, historical, cultural and representative functions. Landscape and park landscape «Arcadia» is part of the museum in Neboriv, which was established in 1945, and «Sofiyivka» is a scientific institution, National Dendrological Park «Sofiyivka» of the NAS of Ukraine, which deals with the introduction and acclimatization of plants in the Right Bank Forest-Steppe of Ukraine. Garden and park landscapes «Arcadia» and «Sofiyivka» are models for the reconstruction of other Central Europe landscapes and the creation of new ones.

## References

1. Bilous V.I. (2001). Landscape art. A brief history of development and methods of creating art gardens. K.: Naukovui Svit, 299 p. [In Ukrainian]. Білоус В.І. Садово-паркове мистецтво. Коротка історія розвитку та методи створення художніх садів. К.: Науковий світ, 2001. 299 с.
2. Large Atlas of the World (2007). Singapore: Reader's Digest, pp. 168–169. [In Russian]. Большой атлас мира. Сингапур: Ридерз Дайджест, 2007. С. 168–169.
3. Gudzevich A.V. (2005). Regional Physical Geography (Europe and Asia). Vinnytsia: «Windruk», 464 p. [In Ukrainian]. Гудзевич А.В. Регіональна фізична географія (Європа та Азія): навчальний посібник. Вінниця: «Віндрук», 2005. 464 с.
4. Denisyk G.I. (2012). Anthropogenic landscape science. Part I. Global anthropogenic landscape science. Vinnytsia: PE «Edelweiss and K», 336 p. [In Ukrainian]. Денисик Г.І. Антропогенне ландшафтознавство: навчальний посібник. Частина I. Глобальне антропогенне ландшафтознавство. Вінниця: ПП «ТД «Едельвейс і К», 2012. 336 с.
5. Denysyk G. I., Kravtsova I. V. (2012). Garden and park landscapes of the Right-Bank Forest-Steppe of Ukraine: monograph. Vinnytsia: PP «Edelweiss and K», 211 p. [In Ukrainian]. Денисик Г.І., Кравцова І.В. Садово-паркові ландшафти Правобережного Лісостепу України: монографія. Вінниця: ПП «Едельвейс і К», 2012. 211 с.
6. Kosenko I. S. (2003). Sofiyivka: monograph. Uman: LLC «PRONIX», 230 p. [In Ukrainian]. Косенко І.С. Софіївка: монографія. Умань: ТОВ «ПРОНІКС», 2003. 230 с.
7. Kucheriavui V. P. (2005). Landscaping of settlements. Lviv: Svit, 456 p. [In Ukrainian]. Кучерявий В.П. Озеленення населених місць. Львів: Світ, 2005. 456 с.
8. Marton E. (1932). Central Europe. M.: State educational and pedagogical publication NARKOMPROSA RSFSR, 452 p. [In Russian]. Мартонн Э. Центральная Европа. М.: Государственное учебно-педагогическое издание НАРКОМПРОСА РСФСР, 1938. 452 с.
9. Molochko V. V., Bonk J. E., Drohushevska I. L. (2010). Teacher's Atlas. K.: DNVP «Cartography», S. 136. [In Ukrainian]. Молочко В.В., Бонк Ж.Є., Дрогушевська І.Л. Атлас вчителя. К.: ДНВП «Картографія», 2010. С. 136.
10. Rohotchenko A.P. (1980). Uman miracle. K.: Budivelnik, 96 p. [In Russian]. Роготченко А.П. Уманское чудо. К.: Будівельник, 1980. 96 с.
11. Rodichkin I.D., Rodichkina O.I., Grinchak I.L., Sergeev V.S., Feshchenko P.I. (1985). Gardens, parks and reserves of the Ukrainian SSR: Reserved nature; Transformed landscape; Gardening art. K.: Budivelnik, 167 p. [In Russian]. Родичкин И.Д., Родичкина О.И., Гринчак И.Л., Сергеев

- В.С., Фещенко П.И. Сады, парки и заповедники Украинской ССР: Заповедная природа; Преобразованный ландшафт; Садово-парковое искусство. К.: Будивельник, 1985. 167 с.
12. Smal I., Kharchenko O. (2013). Socio-economic geography of the world. Regions and countries: Europe. Nizhyn: NDU. M. Gogol, 499 p. [In Ukrainian]. Смаль І., Харченко О. Соціально-економічна географія світу. Регіони і країни: Європа. Ніжин: НДУ ім. М. Гоголя, 2013. 499 с.
13. Arkadia (powiat łowicki). URL: [https://pl.wikipedia.org/wiki/Arkadia\\_\(powiat\\_%C5%82owicki\)](https://pl.wikipedia.org/wiki/Arkadia_(powiat_%C5%82owicki))
14. Curl James Stevens. Arkadia, Poland: garden of allusions. Garden History. Vol. 23, № 1, pp. 91–112.
15. Google Earth. URL: <https://www.google.com.ua/intl/ru/earth/>
16. Lichanski Jakub Z. Arkadia, Poland: a homage to Romanticism (Arkadia kolo Nieborowa: Homagium dla romantyzmu). Rocznik Historii Sztuki. 2009. Vol. 34, pp. 81–93.
17. Muzeum w Nieborowie i Arcadii. URL: <http://www.nieborow.art.pl/>
18. Ogród Arkadia i Pałac w Nieborowie – miejsca idealne dla wszystkich zakochanych. URL: <https://skomplikowane.pl/na-trasie/arkadia-park/>
19. Park romantyczny w Arkadii: historia, zwiedzanie, zabytki. URL: <https://www.podrozepoeuropie.pl/park-romantyczny-arkadia/>
20. Park romantyczny w Arkadii. URL: <http://www.kultura.lodz.pl/pl/poi/2535>
21. Śleszyński Przemysław, Solon Jerzy. A map of the landscape diversity of Poland. Geographia Polonica. 2017, Vol. 90, Issue 3, pp. 369–377.
22. Wojciechowski K.H., Skowronek Ewa, Tucki Andrzej. An outline of landscape science in Poland. Belgeo. 2004. Vol. 2 – 3, pp. 1–8.