

CASE STUDY: RANGE OF BUSH PLANTINGS IN GARDENS DESIGNED BY LANDSCAPE ARCHITECT JOSEF VANĚK

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Identification of the original planting range used and its specific applications in the objects of historical landscape works can significantly help in art monuments reconstruction. Concerning the work of interwar Czech landscape architects, the issue of a perennial flower bed has been intensively studied. By the tree and bush floors, the problem is more complex. The work of Josef Kumpán has mostly been documented by fully preserved planting plans. The present case study on a uniquely discovered specific planting plan of the landscape architect Josef Vaněk provides insight into how bush groups were handled, composed, and what was their specific composition. These documents allow comparing the creative approaches of landscape designers of this era. The study contributes to the reconstruction or maintenance of monument objects created in the interwar period.

Landscape architecture, Josef Vaněk, shrubs



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INTRODUCTION

Josef Vaněk was born on February 6, 1886 in Bukovina near Hradec Králové. In 1918–1948, he built a thriving gardening area of over 30 acres in Chrudim. He was involved in growing fruit trees, shrubs, perennials, annuals, roses, etc. At the same time, he published his findings through extensive publication activities in his own magazine *Gardens of Home and School*, later renamed *The Garden*, and in professional books as well. He published more than 100 books during his 40-year tenure (Ottomanská, Steinová, 2017; Steinová, Ster, 2017). The so far highly prized titles include the fruit series *Folk Pomology* (Prokeš, 2019). His work covered over 4 000 plans for family gardens, parks, sport venues, cemeteries etc. Josef Vaněk earned a reputation of an excellent garden architect (Steinová, Ster, 2017). Ottomanská, Steinová (2017) stated that about 2 000 plans have been preserved in Vaněk's personal estate.

A book of plans in which all projects were chronologically recorded covers 4054 items. Ottomanská et al. (2016) stated that for example Josef Kumpán, op-

erating at the same time as Josef Vaněk, produced over 1 329 plans. Zamecník (2016), Steinová, Ster (2017), Steinová et al. (2017), Ottomanská, Steinová (2017) and Mareček (2018) agree on that Josef Vaněk ranked among the garden architects of the European format due to his overlap and volume of his design work.

In the interwar period in our country and the world, the garden was seen as an extension of housing. For example, a porch or a paved terrace built directly by the living room was considered as an extension of the living space. In addition, seating was needed alternatively to lie down, both in the sun and in the shade. More generally, the emphasis was put on the orientation of the house and the land towards the four cardinal directions, so that the garden could be set up as effectively as possible (Kumpán, 1920, 1938; Batek, 1922; Fierlinger, 1938; Beranek, 1940). This principle is further described and established in the broader framework of Geelhaar (1992; 2000), Kalusok (2003), and Schweizer, Winter (2012). The starting point of European garden architecture was the Art and Crafts movement, the ideas of which were undertaken by the German landscaping

school. Following this, Prokeš (2019) reported that the book *Gardens for Small Country Houses* published in 1914 by a prominent garden architect Gertrude Jekyll (1843–1932) creating in the Art and Crafts style became a part of Josef Vaněk's personal fund. The gardens were composed according to basic compositional principles. The main supporting principles were differentiation of regular and irregular compositions. The regular composition worked with regular layout and basic geometric shapes. By contrast, the irregular composition was based on the use of free lines, natural terrain modelling and free horizon. These principles were further elaborated by applying symmetry, repetition, gradation, etc. (Kumpán, 1920; Batek, 1922; Fierlinger, 1938; Beranek, 1940; Nahunek, 1941; Kalusok, 2003; Schweizer, Winter, 2012; Ottomanská, Steinová, 2017; Steinová et al., 2017).

The compositional principles mentioned above were then in greater detail reflected and specified in the gardens. Framing views by planting, dominance in the form of a statue or vase at the end of the views. The importance of knowledge of plant material, flowering times etc. was also emphasized, helping to enhance and to distinguish regular and irregular composition (Kumpán, 1920; Batek, 1922; Fierlinger, 1938; Ottomanská, Steinová, 2017; Steinová et al., 2017).

Landscape architects working in the time of The First Czechoslovak Republic counted on challenging alterations of the terrain-walls, staircases and terraces. The gardens were composed of the composition elements – technical, fine arts and vegetation (Steinová, Ottomanská, 2018). The range of used vegetation can be derived from specific plans or from gardening exchanges and sales catalogues (Ottomanská, 2011; Steinová, Šter, 2017; Slabochová, 2018). According to Pozspysil (2018), catalogues and the range of horticulture always contain a contemporary range that was subject to the fashionable waves of the time.

Numerous authors have been particularly concerned with the issue of the herbal palate. Lord (1994), Wimmer (2018) and Kuhn (2018) mentioned the standard perennial flower bed as a part of larger compositional units. Josef Vaněk, on the other hand, proposed standard perennial flower beds that anyone could set up in the garden (Vaněk, 1925).

Steinová, Ottomanská (2018) presented surviving planting plans for specific works. This is for example the preserved part of perennial planting of landscape architect Markéta Mullerová. The plan contains an inventory of perennials and a few conifers supplementing perennial planting. Steinová et al. (2018) published several blueprints with an assortment of woodlands in the works of Josef Kumpán. These are inventories or only sub-sections of the plans listed in the periodicals of that time. An exception presented

Ottomanská (2012) dealing with the woodland range offered by the nursery production at the time.

Difficulties during the restoration of Karel Čapek's garden founded in the interwar period were described by Slabochová (2018). No documentation for this significant garden restoration indicating where certain plants were originally planted has been preserved. The only object that could be considered authentic for this restoration was the preserved woodland. To restore the range, catalogues, orders and correspondence were eventually used. It was a regularly maintained garden and the plants were worked with after the establishment. The utilized documents provided only the basic frame for the garden restoration; on how the garden looked like during Karel Čapek's life we may only speculate to regular replanting, planting new species etc. From the content of Josef Vaněk's inheritance we know that the complete coloured documentation of the garden including the planting plan and the list of plants was always given to the client. Today, 90% of technical plans of studies have been deposited in archives. Final prints copied with planography were coloured by pastel and water colours and remained with the contracting authorities. Thus, in the archive, there are only black-and-white documents for planography on the pausing papers of different grammage (Steinová, Ottomanská, 2018). The absence of specific garden planting plans and inventories of the range has led to numerous problems during the reconstruction of historical landscape works (Prokeš, 2019).

MATERIAL AND METHODS

The case study deals with the evaluation of particular garden plans found in the inheritance of the original owners. The evaluation has always been preceded by a search for the location of the particular garden and a field survey.

Prior to field work consisting in localizing the garden and assessing its preservation state, map document sources must be established.

In the case of Josef Vaněk's estate, there exist two basic sources: The Book of Plans and his publishing activities, namely the magazine *Gardens of Home and School* (later renamed *The Garden*). The Book of Plans is the crucial publication showing the extent of his project activities, and covers all the projects Josef Vaněk realized during his career. The record always includes the plan number, the name of the contracting authority, and the address. In most cases it is not the address of a particular garden but the original seat of the contracting authority. It is not known where specifically the garden was founded (Prokeš, 2013). The magazine published by Vaněk (*Gardens of Home and School*, later *The Garden*) can be used as a supplement. The magazine was chosen as a source given

that it features articles and depictions in some of his garden designs.

Each article describing a specific design is always accompanied by a blueprint, and/or by a figurative material. These are either perspectives or photographs after a particular garden has been established. Some articles deal with different compositional units and setting them up. For example, ornamental walls, current range of selected plans, etc. This is a complex source of information indicating a specific form of elements used in his projects.

Choosing a specific plan is followed by a remote survey using map servers. Map servers with aerial images from the 1950s are the best suited for the needs of a survey, as well as those supporting the cadastral map. It is always necessary to navigate the plan according to the cardinal directions so that North is heading 'upwards'. Changing the orientation, for example in the case of corner plots, simplifies their identification in built-up areas.

Further, a survey of the specific location, urban area of municipality, focusing on the major garden identifiers follows. This is primarily the shape of the house and its orientation, gazebos, water elements, etc. (Prokes, 2013, 2019; Steinova, Ottomanska, 2018).

In the next step, the remote identification of the garden is followed up with a field survey. Prior to

this, the existing owners are addressed. In the case of a successful contact, a field exploration of the present state of the garden in the owner's estate follows on condition he is recorded in the archives of the current owners.

For this case study, gardens with the best preserved planting plan have been selected.

RESULTS

For the purpose of this case study, two specific gardens have been selected which the author has managed to trace to the place of implementation, and can illustrate the scope of the documentation preserved in private ownership by the descendants of the original contracting authorities. The gardens, identified as those reported in Vaněk's magazine *The Garden*, are recorded in *The Book of Plans* under the No. 1254 J. Jauriš – Roztoky u Prahy and No. 3664 F. Paroubek – Hanspaulka, Praha. On the owners' request, the exact addresses of the detected gardens are not published.

The garden of J. Jauriš – Roztoky u Prahy

The garden design is from 1928. The villa garden remained with the family Jauriš even after the year

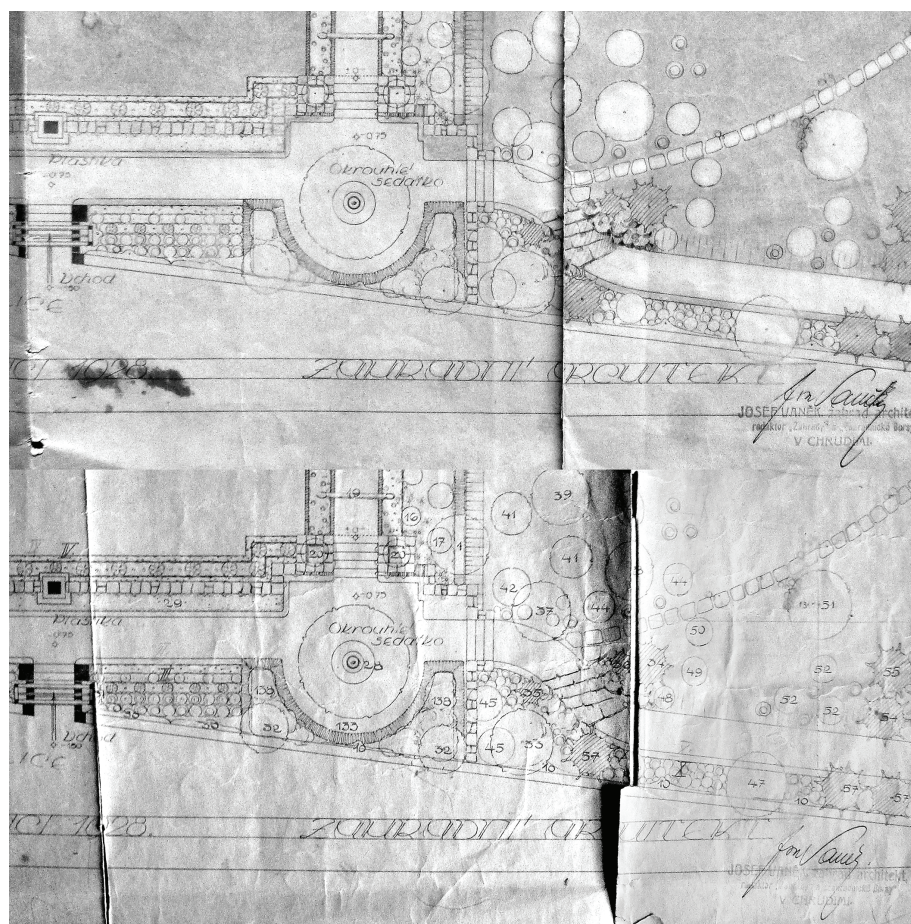


Fig. 1. Comparison of a detail of the study and the planting plan. At the top, there is the coloured study, at the bottom then the same detail of the planting plan with legible numbers of individual plants

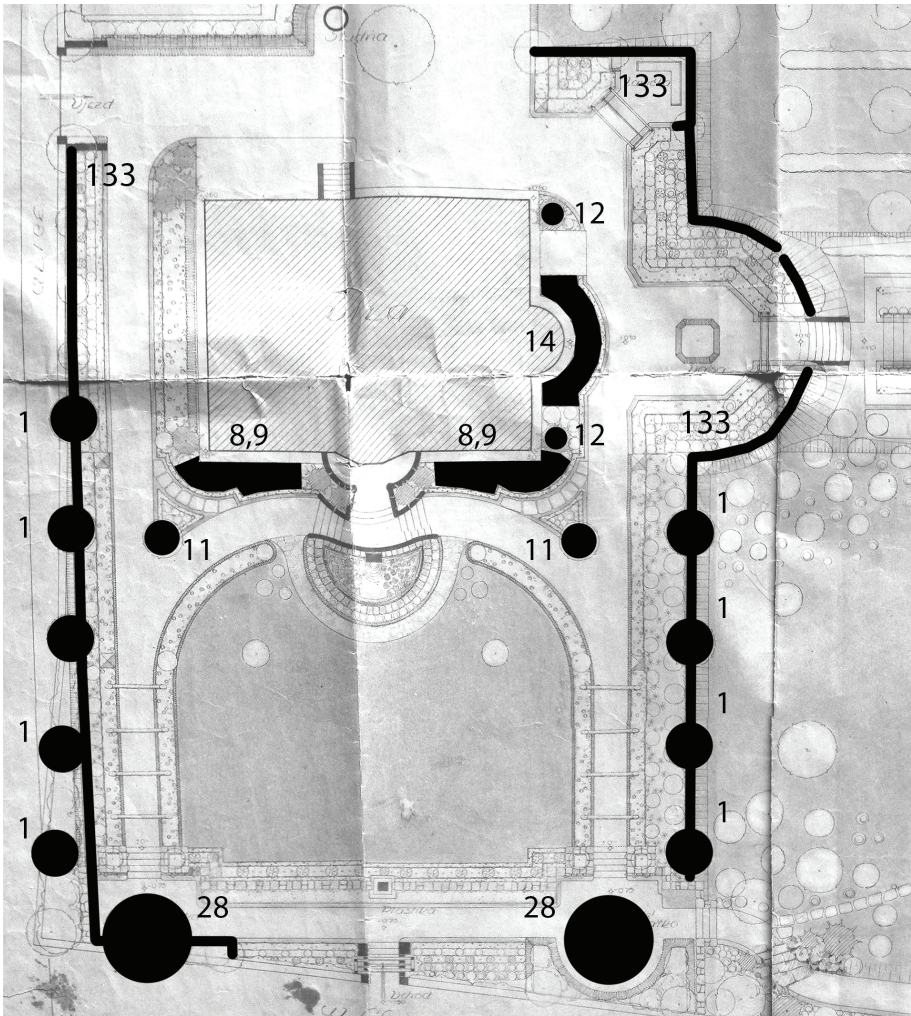
Table 1. An inventory of woodlands with a serial number according to the location in the planting plan and a description from the original text (Vanek, 1929). It is not possible to identify the woodland and to say from the preserved materials what species and cultivars were involved. They are not mentioned in the planting plan and the description of the garden is basic, focused mainly on the layout

No.	Name of woodland	Description of location
28	mourning willow	landing rear axis composition
19	climbing roses	trellis
20	climbing roses	stone pillars
22	low polyanks	rebate lining main grassy parter
11	pyramid oak	sharp corners between paths in the main parter
8	bush hortensie	underpinning the main staircase
8	<i>Prunus triloba</i>	underpinning the main staircase
133	hornbeam hedge	hem main parter separating it from the rest of the garden
14	rhododendrons	under awning
12	cypresses	on the axis of the house at the northeast part
1	polypetalous hawthorn	planted into hedge of hornbeam

1948. It also preserved the original coloured study with a planting plan. The documentation shows a high degree of wear and tear due to transforming the plans to a smaller format. The places of folding are cracked.

Still the blueprint and drawing technique are legible. The study is coloured with water colours. Unfortunately the planting plan lacks an explanatory numerical table. The quality of the documents indicates Fig. 1.

Fig. 2. The coloured study with the compositional elements marked according to Table 1. The number is always given under the planting plan assigned to individual woodlands based on the description from an article in the magazine The Garden (Vanek, 1929)



Before 1948, the garden had been maintained by a gardener. After 1948, the property was seized and as a result, the gardener was dismissed. The original area of the garden has been split into smaller plots. Only the main parter in front of the building has survived (Fig. 2). Currently, beneath the main parter lawn, there is a gravel-filled sinkhole serving as a part of a heat pump. From all plantings, only the perimeter planting on the southeast side of the property has been preserved. The species composition does not indicate that there were woodlands planted at the time of the garden establishment.

Josef Vaněk described selected vegetation elements including trees and shrubs used in this garden in his article called Home garden (Vaněk, 1929) (Fig. 2, Table 1).

The garden of F. Paroubek – Hanspaulka, Praha

Like the previous garden, this one remained as the original owners' property. Only fragments of certain woodlands and terrain morphology of the original composition have been detected. Despite the non-expert storage, part of the original documentation has been preserved. The documentation contains a coloured site plan in a scale (Fig. 3) and coloured axonometry of pool area. A planting plan with the numbers of individual trees has also been found. The planting plan lists the Latin or Czech names of a particular taxon for most shrubs and some trees and perennials.

The quality of the surviving documentation required digitalization and adjustment of contrast and sharpness for transcription into the table section. Then the taxa found were written into a table and classified into a compositional unit depending on their position in the plan. The division is always in logical units which form

a sub-compositional unit. There are the serial number, Latin name, Czech name, and compositional unit the plant refers to. The positions are apparent from Fig. 3.

Selected vegetation compositional elements are described in Table 2. These are a loose bush group, solitaires in the lawn and groups of conifers lining the main parter lawn. The free bush group in this composition acts as a hedge that is designed from different types of not recurring shrubs. This is a varied mixture of different tall shrubs with different flowering times and leaf texture.

As solitaires in the lawn, very prominently blooming woodlands were used. The tree *Prunus* 'Pendula' is the most variable in shape. It can grow up to a few metres (*Prunus subhirtella* 'Pendula'), so it could serve as a distinctive solitaire thanks to its overhanging branches and larger growth.

In the groups of conifers, we can observe a varied mosaic of stunted cultivars completed with unbred species. With stunted cultivars it is clear that they will not grow to large proportions, whereas some species such as *Tsuga canadensis* are capable of growing to a height of 12–25 m according to their habitat conditions.

DISCUSSION

Both the above-mentioned preserved plans confirm that Vaněk's archive does not contain all the documentation his office prepared for the project. These plans further confirm that the contracting authority was given a coloured study with a spatial distribution of the garden and a planting plan as reported by Steinová, Ottomanská (2018). The coloured studies show two methods of colouring, namely the use of pastel or water colours. Steinová and Ottomanská

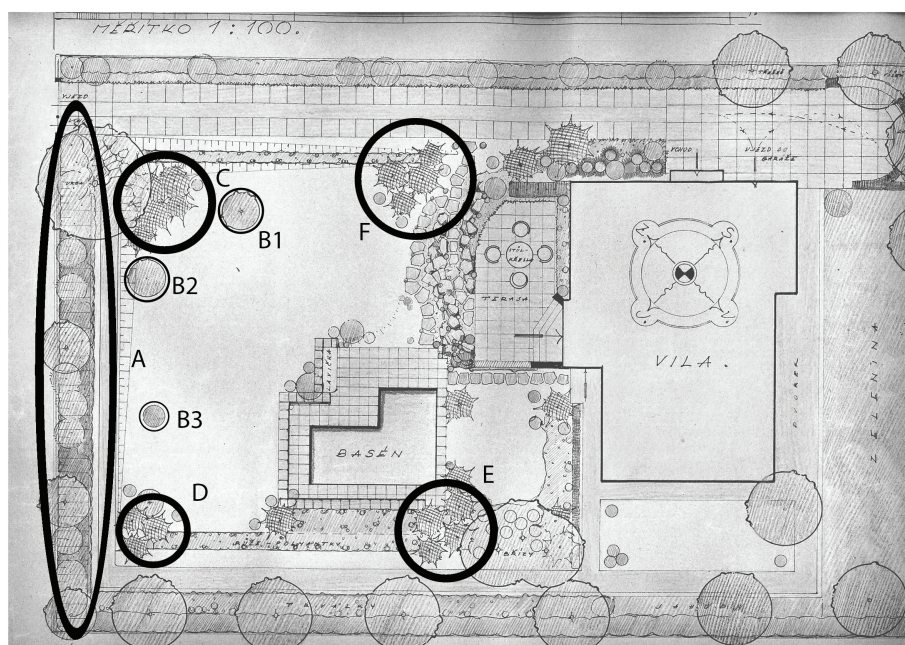


Fig. 3. The coloured study identifying the individual compositional groups listed in Table 2

Table 2. Identified compositional units – a loose bush wall, conifer groups and a solitaire in the lawn. There is always a serial number, the name of the woody plant and its compositional unit. Location of these groups is indicated in Fig. 3. Latin names have been derived according to the current state of botanical knowledge

No.	Name according to planting plan	Latin name	English name	Compositional unit	Note
Fig. 3A					
72	Hippophae rhamnoides	Hippophae rhamnoides	Sea buckthorn	loose shrub wall	
73	Forsythia suspensa	Forsythia suspensa	Forsythia suspensa		
74	Philadelphus virginal	Philadelphus ‘Virginal’	Sweet mock-orange		
75	Berberis vulgaris ,Atropurpurea’	Berberis vulgaris ‘Atropurpurea’	Common barberry		
76	Spiraea vanhouttei	Spiraea x vanhouttei	Vanhoutte spirea		
77	Spiraea sp.	Spiraea sp.	Spirea sp.		
78	Kerria Japonica	Kerria japonica	Japanese marigold bush		
79	Lonicera sp.	Lonicera sp.	Honeysuckle		
80	Cornus alba ,Argentea’	Cornus alba ‘Argentea’	Red-barked dogwood		
81	Spiraea billardii	Spiraea x billardii	Spirea		
82	Euonymus europaeus	Euonymus europaeus	European spindle		
83	Crataegus coccinea	Crataegus coccinea	Scarlet hawthorn		
84	Cornus ,Flaviramea’	Cornus stolonifera ‘Flaviramea’	Red-osier dogwood		
85	Cornus alba	Cornus alba	Red-barked dogwood		
86	Forsythia viridissima	Forsythia viridissima	Forsythia		
87	Philadelphus sp.	Philadelphus sp.	Mock orange		
88	Potentilla	Potentilla sp.	Shrubby cinquefoil		
89	Rhus glabra ,Laciniata’	Rhus glabra ‘Laciniata’	Smooth sumac		
90	Viburnum lantana	Viburnum lantana	Wayfarer		
91	Spiraea arguta	Spiraea x arguta	Spirea		
92	Spiraea prunifolia	Spiraea prunifolia	Bridalwreath spirea		
93	Viburnum rhytidophyllum	Viburnum rhytidophyllum	Leatherleaf viburnum		
94	Spiraea japonica macrophylla	Spiraea japonica	Japanese spirea		
Fig. 3B					
3	Prunus triloba	Prunus triloba	Flowering almond	solitaires in the lawn	B1
35	Prunus pendula	Prunus subhirtella ‘Pendula’	Autumn cherry		B2
37	Spiraea arguta	Spiraea x arguta	Spirea		B3
Fig. 3C					
32	Pinus Caricio	Pinus nigra subsp. laricio	Austrian pine	group of conifers	2 pcs in a group
33	Pinus mugo	Pinus mugo subsp. mughus	Mugo pine		
34	Juniperus chinensis Pfitzeriana	Juniperus chinensis ‘Pfitzeriana’	Pfitzer Juniper		
Fig. 3D					
38	Picea abies ,Nidiformis’	Picea abies ‘Nidiformis’	Norway spruce	group of conifers	2 pcs in a group
39	Pinus monticola	Pinus monticola	Western white pine		
Fig. 3E					
41	Juniperus virginiana	Juniperus virginiana	Red cedar	group of conifers	
42	Tsuga canadensis	Tsuga canadensis	Eastern hemlock		
43	Picea abies ,nidiformis’	Picea abies ‘Nidiformis’	Norway spruce		
44	Taxus baccata cuspidata	Taxus x media	Anglojap yew		
45	Juniperus sabina	Juniperus sabina	Savin juniper		
Fig. 3F					
25	Picea Nana Compacta	Picea abies ‘Nana Compacta’	Norway spruce	group of conifers	
26	Juniperus tamariscifolia	Juniperus sabina ‘Tamariscifolia’	Savin juniper		
27	Picea remontii	Picea abies ‘Remontii’	Norway spruce		
28	Thuja ,Rheingold’	Thuja occidentalis ‘Rheingold’	Northern white-cedar		

confirmed the drawing techniques used by Vaněk's design office.

Concerning Vaněk's contemporaries such as Josef Kumpán, we can find the planting plans of selected villa gardens in his personal fund deposited in the National Agricultural Museum (Steinová et al. 2017). These plans describe specific species of tree, bush and herb floors. With the archive material in Josef Vaněk's personal archive the situation is different. He did not list plants in the plans. The source of information about the basic composition of woodland is thus a comparison of the floor plan and the description of the designs in the magazine published by Josef Vaněk himself, as seen in the case of the first garden (Fig. 2, Table 1). However, these do not list specific species and cultivars, only a simplified description of the woodlands. To track down cultivars, we can use comparative methods with contemporary nursery material as mentioned by Ottomanská (2012). However, this method is interpretive, and only at points where there is no doubt about the particular species, e.g. the mourning willow where we can claim that this particular taxon has been used in the garden.

The degree of detail of the found and documented planting plan by the second garden (Fig. 3, Table 2) completes the so far under-research work of Josef Vaněk with a bush and tree floor. Unlike in the case of the comparative method, there is no doubt what trees and shrubs were planted together. This provides a unique insight into the way of creativity of Josef Vaněk as well as other garden architects of the interwar period. At the same time, one can infer from this how the garden would evolve without the intervention of a gardener.

A loose bush wall, which is clearly bounded and defined by a particular range, is a very impressive element (Fig. 3A). The shrubs used differ both in leaf colour and their texture. The bushes were selected to flower mostly in May–June and would eventually attain different growth rates. A similar bush group can also be found in Josef Kumpán's garden designs (Kumpán, 1920). It can therefore be concluded that this was the classic type of perimeter planting typical of interwar period gardens. The taxa variety and their minimal repetition are also evident in the work of Josef Kumpán (Kumpán, 1920).

An interesting thing is that lawn solitaires are mostly smaller bushes. Kumpán (1920) uses solitary trees more frequently than bushes in some depictions. It may be due to the scale of the garden composition; this phenomenon would require further research. On the other hand, Josef Kumpán does not work with conifer groups. This feature is more typical of Josef Vaněk's work. The unconventional combination of low and high-rise species indicates the necessity of special care when maintaining the garden.

A question arises how the garden planted this way would be handled in the future. According to the species composition, after a few years, the entire composition

could slowly begin to disintegrate due to the different growth rates of particular trees ultimately leading to the necessity of selection or substitution. The change in composition over time and the associated subsequent maintenance have still been an understudied and undescribed issues associated with garden architecture of The First Czechoslovak Republic period.

CONCLUSION

The original garden plans by Josef Vaněk from the archives of his clients descendants evidently enrich the existing knowledge. They represent a unique so far unpublished testament of Josef Vaněk's work with bushes. The degree of detail provides an insight into the particular way of Josef Vaněk's work.

More planting plans at disposal would complete the set of compositional units used by Josef Vaněk. It would significantly help in the restoration methodology of the author's interwar landscape works and in establishing closer principles for their protection.

At the same time, this documentation will significantly help in restoration of specific gardens.

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