THE SCHOOL OF BOTANY IN THE BRUSSELS BOTANIC GARDEN AND ITS SUCESSORS (1797-...): FROM CENTRE TO MARGINS

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ABSTRACT

This work sketches the history of the School of (Systematic) Botany that was planted in the Brussels Botanic Garden since its early establishment in 1797 to our days. It depicts the changes that were brought to this very peculiar areaas well as the evolving attention it underwent under the gun of several factors. These factors not only included switches in scientific paradigms, but political changes also, changes in mentalities, among other things, that impacted the Belgian society. As a case study, the following pages tend to focus on local situations and sources. In addition it intends to encourage further studies not merely on the Schools of Botany and the different kinds of botanic gardens they were embedded in, but on the other types of Schools that surfaced with time and the roles they were given too.

KEYWORDS

School of Systematic Botany; Brussels Botanic Garden; XVIII century; Botanic Gardens.

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Introduction

Comprehensive studies about the history of botanic gardens were uncommon a couple of decades ago. Since then,outstanding works have been written and have unveiled the long-lasting, yet overlooked, importance of scientific institutions and their collections not solely for the history of knowledge, science and what Pierre Bourdieu called the « champs », but for the history of mentalities, economic development, colonisation, universities and society in general as well[2]. The present contribution does not intend to depict the complete story of a European Capital botanic garden. Instead, it wishes to describe the evolution of a particular area that once embodied the botanic gardens and which is hardly visited today: the School of Systematics or School of Botany. We will suggest that the evolution of the roles and the symbolic place given to the School of Botany – and to other schools that gradually sided it – reflects the unfolding of botanical science, the emergence of new questions and research programmes, democratisation of society, changes in attitudes and, actually, the past an present of taxonomy. Our work was made possible thanks to the Botanic Garden Meise's extensive collections of memoirs, pamphlets, journals, old printed catalogues and guides to worldwide botanic gardens. We read a considerable amount of them to taste the atmosphere and enter the world of botanic gardens as they were one or two centuries ago[3]. A huge amount of archives kept in the same institution, formerly known as the National Botanic Garden of Belgium, was another major and valuable source of information. In 1795, France annexed the soon-to-be Belgium. The history of this very institution began shortly after and extends to our days. In the long run, the Botanic Garden and its School of Botany made several turns and twists to adapt to the developments in science and science policies, to the institutional and political evolutions and to the problems and changing requirements of the Belgian society[4].

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2 See, for instance :Letouzey, Y., Le Jardin des plantes à la croisée des chemins avec André Thouin (1747-1824), Editions du Muséum de Paris, Paris, 1989, 678 p. ; Mickulas, P., Britton's botanical empire : The New Botanical Garden and the American Botany, 1888-1929, NYBG Press, NY, 2007, 317 p. ; Spary, E., Le spectacle de la nature : contrôle du public et vision républicaine dans le Muséum jacobin in : Le Muséum au premier siècle de son histoire, Editions du Muséum National d'Histoire Naturelle, Paris, 1997, p. 457-479 ; Spary, E., Le jardin d'utopie, l'histoire naturelle en France de l'Ancien Régime à la Révolution, Editions du Muséum National d'Histoire Naturelle, Paris, 2005, 407 p. ; Mc Cracken, D.P., Gardens of Empire. Botanical Institutions of the Victorian British Empire, Leicester U.P., London-Washington, 1997, 242 p.

3 See, for instance :De Candolle, A.-G., Mémoires et souvenirs, Georg Editeur, Bibliothèque d'histoire des sciences, Genève, 2004, 591 p. ; Desmond, R., The history of the Royal Botanic Gardens Kew, The Harvill Press and the Royal Botanic Gardens, Kew, 1995, 468 p. ; Drapiez, P.-A., Notice sur l'Etablissement géographique de Bruxelles fondé en 1830 par Ph. Van der Maelen, 15e édition, Bruxelles, 1854 ; Garside, G.H. & Curtis,E.W., A Guide to Glasgow Botanic Gardens, Glasgow Corporation Printing and Stationery Department, Glasgow, 1958, 47 p. ; Gilbert-Carter, H., A Guide to the University Botanic Garden, Cambridge, University Botanic Garden, 1947, 195 p. ; Gilbert-Carter, H., Guide to the University Botanic Garden Cambridge, Cambridge Univ. Press, Cambridge, 1922, 117 p. ; Guia de la Universidad de Madrid, Madrid, 1956, 418 p. ; Guide to the Botanic Garden of the Faculty of science, Imperial University of Tokyo, Tokyo, 1923, 21 p. ; Jardin botanique d'Anvers. Rapport de M. le Dr H. Van Heurck, in : Bulletin de la Fédération des Sociétés d'Horticulture de Belgique (?), s.l.n.d., p. 353-356 ;; Parlatore, Ph., Les collections du Musée royal de Physique et d'Histoire naturelle de Florence, Florence, 1874, 163 p. ; Peters, K., Fürher zu einem Rundgang durch die Freiland-Anlagen des Königl. Botanischen Gartens zu Dahlem bei Berlin, mit einem Vorwort von A. Engler, Dahlem-Steglitz bei Berlin, 1908, 48 p. ; Petit Guide du Jardin botanique de Bruxelles, Bruxelles, 1877, 16 p. ; Pynaert, L., Le jardin botanique de Calcutta (Sibpur), s.l.n.d. (Tribune Horticole ?), 12 p. ; Royal Botanic Garden Edinburgh Guide Book, Royal Botanic Garden Edinburgh, Edinburgh, 2007, 47 p. ; Royal Kew Gardens. Official Guide to the Royal Botanic Gardens and Arboretum, 29th Edition, London, 1885, 184 p.;Tableau de l'Ecole de Botanique du Jardin du Roi, par Monsieur Desfontaines, seconde édition, Paris, J.A. Brosson, 1815, 274 p. ; Tableau de l'Ecole de botanique systématique, Jardin botanique de l'Etat à Bruxelles, s.d. ; The Belgian State Botanical Garden, Brussels, Fred. Tilbury (English Printer), 1904, 30 p. ; The Montreal Botanical Garden, Montreal, s.d. (1947), 24 p. ; Trimen, H., Hand-Guide to the Royal Botanic Gardens, Péradeniya, 4th edition, Colombo, 1894, 40 p. ; Smith, H. H., Some European Botanical Gardens, 1924, p. 149-186. ;Van Heurck, H., Situation du Jardin botanique d'Anvers en 1878, Rapport présenté par le Directeur au Conseil communal, Anvers, 1878, 8 p.

4 Diagre-Vanderpelen, D., The Botanic Garden of Brussels (1826-1912) : Reflection of a changing nation, National Botanic Garden of Belgium, Meise, 2011, 312 p. Also in French : Le Jardin botanique de Bruxelles,

In a nutshell, we shall try to outline several pole shifts – or pole multiplications? – which occurred not just in the international scientific community but also on the Belgian political, social and botanical scene, giving by the way another perspective on the School of Botany.

A garden for the brain or for the stomach ?

Before the creation of the « Ecole centrale » of the Dyle Department by the French Directoire in 1797[5], there was no botanic garden in Brussels. The French Ecoles centrales were supposed to offer a good education in sciences, including botany. Thus, the capital cities of the Departments that would later make up Belgium all had their own small botanic garden. As places devoted to education, those botanic gardens were provided with a « Jardin des Plantes » which included a School of Systematic Botany, or « Ecole de Botanique ». In Brussels, it was planted by AdrienDekin[6] as early as An VI, i.e. 1797 or 1798. Even though the Linnean system had been adopted by most Central Schools[7], in Brussels the School followed the system of the natural families, at least from 1809[8]. Anyway, too heavy costs caused the French administrations to abandon the Ecoles centrales as early as1802. As a consequence, in Brussels like in other cities of the French Empire, the botanic garden was then left to the care of the City administration[9]. Apparently with success since Bory de Saint Vincent (1778-1846), who visited it, wrote : « In Brussels, one must initially favour the School of Botany (…)[10]. »

There is one important question to deal with : Who in this early XIXth Century walked down the beds of the Brussels botanic garden? It seems that the « teinturiers » (dyers) and « dessinateurs » (drawers and painters) of the local manufactures and the students of the Medical School of Brussels were the most committed visitors to the School of Botany[11]. While the first ones should pay attention to the attractive and exotic species for their creative and practical jobs, the students should walk down the beds of the School of Systematics in order to sharpen their knowledge in medicinal and poisonous plants. Yet, correspondences between the City administrators show that the so-called « Jardin des Plantes » was far from flawless and looked rather obsolete or inadequate. In 1818, for instance, Minister Repelaer van Driel claimed that the premises were too small « to change it into a garden of botany »[12]. Then three years later, due to severe lack of space in the school of botany, someone suggested to prioritise the needs of the students of the local Medical school[13]. Hence was it advised to keep genera and species only, while « varieties » would be rejected from the systematic collection.

Shortly before 1820, the lack of space, the greenhouses' fixing costs and the expansion of the City all made the situation of the small botanic garden very uncomfortable[14]and several people began to plead for a new, modern botanical

1826-1912. Reflet de la Belgique, enfant de l'Afrique, Académie Royale de Belgique. Classe des Sciences, Bruxelles, 2012, 296 p.

5 De Vreught, J., L'enseignement secondaire à Bruxelles sous le Régime français : l'Ecole centrale - le Lycée, in : Annales de la Société royale d'Archéologie de Bruxelles, 42, 1938, p. 5-134.

6 Bory de Saint-Vincent ; Drapiez, P.-A. ; Van Mons, Annales générales des Sciences physiques, Bruxelles, t. 1, 1819, p. XXXVI.

7Duris, Pascal, L'enseignement de l'histoire naturelle dans les écoles centrales (1795-1802), in Revue d'histoire des sciences, 1996, tome 49, n°1, p. 40-42.

8 Crocq, A.J., Tableau synoptique du Jardin des Plantes de Bruxelles, Bruxelles, s.d.

9 Diagre-Vanderpelen, The Botanic Garden… op. cit., p. 18-19.

10« A Bruxelles, on doit placer en première ligne l'école de botanique (…) ». See : Bory de Saint-Vincent ; Drapiez, P.-A. ; Van Mons, Annales générales des Sciences physiques, Bruxelles, t. 1, 1819, p. XXXVI.

11A.V.B. [Brussels City Archives, Brussels], IP, n° 103, 1ère série, D1, 22/12/1806.

12 A.V.B., IP, n°99, 25/03/1818.

13A.V.B., IP, n°99, Anonymous report on the Botanic Garden, s.d.

14 Bory de Saint-Vincent ; Drapiez, P.-A. ; Van Mons, Annales générales des Sciences physiques, Bruxelles, t.

institution in Brussels[15]. At this occasion, one notices the importance given to botanic gardens, markers of modernity and civilisation. No such European city at that time would do without that tremendous place dedicated to both leisure and « instruction »[16]. To those who wanted a new Botanic Garden in Brussels, the next one should be able to educate people « in the art, a necessity by now, of cultivating food and medicinal plants as well as ornemental ones »[17].

It wasn't long before a team of Brussels bourgeois decided to make the move towards what was regarded as modernity. In 1826 they released a prospectus to boast their project and gather the funds it required. This 7 pages pamphlet strategically unveiled the main aim of the soon-to-be created botanic garden : achieve economical independence from other nations by growing plants and products that should otherwise be imported[18]. This reflected the concerns of the leading-class of the Kingdom of Netherlands– manufacturers and merchants –, which then included Belgium. To succeed, the founders of the company – the Société royale d'Horticulture des Pays-Bas – enumerated the most important features of the next botanic garden. The creation of a « complete school of systematic botany, of a school of horticulture and of a school of forestry » came in first place[19]. While the school of systematics might be regarded as fully dedicated to pure science – the science of classification – historical sources tend to show that it was still mainly designed to support the students of the Brussels medical school. As such, the forthcoming School of Systematics was of the same « utilitarian » nature as the other schools the founders of the company intended to create (the School of Horticulture and the School of Forestry). The down-to-earth, very practical mentality of the founders, of the local and royal administrations that were expected to support the company, and of the expected shareholders as well, was materialised in these priorities. Then, to make the project even more appealing, the Botanic Garden would conduct trials to develop viticulture and silk industry in the country and, last but not least, to provide the social elites and the City of Brussels with a lovely place to mingle[20]. In a nutshell, the new botanic garden was created using new typical bourgeois means – a company – and fostered or embodied some of the most important bourgeois values of its time[21].

In 1826, the company was a reality. The Board had secured annual subsidies from national and local administrations. The royal family had bought shares, which led the local elites to follow the path the King had paved. Soon works began on the charming estate that the Board had purchased right next to the city limits. The following year though, one of the founders deplored that the School of botany had not yet been planted. A member of the Board and the head gardener were immediately asked to proceed[22]. One must notice that the circular pattern was chosen to echo the rotunda of the main building. Systematics and elegance walked hand in hand to make the Botanic Garden a place where reason and dream unite. The new institution was inaugurated in August1829, some weeks before the School of Botany was properly labelled[23].

1, 1819, p. XXXVI.
15 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 18-19.
16 A.V.B., IP, n°99, 25/03/1818.
17« dans l'art devenu nécessaire de cultiver les plantes alimentaires et médicamenteuses comme celles d'agrément ». See : A.V.B., TP, n°33419, Letter from Pollart de Canivris to the Brussels Regency, 29/09/1824.
18Société Royale d'Horticulture des Pays-Bas, à Bruxelles, s.d.[1826], p.3.
19Société Royale d'Horticulture des Pays-Bas, à Bruxelles, s.d.[1826], p.4.
20Société Royale d'Horticulture des Pays-Bas, à Bruxelles, s.d.[1826], p.5.
21 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 114-119.
22 A.S.R.H.[Archives of the Royal Horticultural Society], Minutes of the B.D., vol .1, 16/08/1827.
23 A.S.R.H., Minutes of the B.D., vol .1, 15/10/1829

The Brussels Botanic Garden as it used to be in the 1830's. The circular pattern of the School of Botany was meant to echo the elegant rotunda of the main buildings. From the collection of Maria "Mia" Grosjean, Sag Harbor, NY.

The « Belgian » school of systematics (1830-1870)

The first botanic garden of Brussels was created under the French Regime (1795-1814). The second one was created under the reign of William of Orange (1814-1840), King of the Netherlands. But after the Belgian revolution of independence (1830-1831), the company that ran the botanic garden faced a couple of thorny issues. Firstly, its creators and administrators were regarded as supporters of King William of Orange – as « Orangists » – and therefore suspected of antipatriotic tendencies; secondly, due to the national revolution, the Belgian financial situation was rotten and the Chambers were not eager to support those institutions which activities did not seem to bring anything positive to the country as a whole[24]. And such was the case of the Botanic Garden. On the one hand, because they did not pay any entrance fee, the botanic garden only seemed to favour the shareholders of the company, that is to say the local social elites; on the other hand, the garden so far had never discovered anything that could boost the national economy or soothe the fear of starvation. In short, it was recognised as a mingling place for the local rich and famous, and the company seemed dedicated only to profit through plant sale[25]. The whole company life – it lasted until 1870 – was marked by suspicions. For that reason, the Board had no other choice but to spend considerable time and energy trying to show the city administration, the Chambers and the ministers that supported the Botanic Garden with mild reluctance, that the institution was helping the development of Belgian economy and science. Moreover, the Board strategically managed to lend or rent the attractive premises to the local elites to promote social life in the capital. Since the aforementioned financial supports were insufficient to

24 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 36-38.
25 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 36-38, 47-49.

keep the company alive, fancy-fairs, concerts, exhibitions and other commercial activities were always welcomed by the administrators and the shareholders of the Botanic Garden[26].

But it was not enough : while the Botanic Garden sold thousands of expensive plants in its « Bazar », it must also pretend to experiment with plants (tobacco, barley, potatoes etc.) that could support the national industry or feed the growing Belgian population[27]. To make the ill-willed politicians less reluctant, the Board also decided to establish a « Museum of Botany ». Despite pure scientific shine, the Museum was mostly designed to inspire Belgian manufacturers. As for the pisciculture installed in the garden in the 1850s, it intended to show the policy makers that the company was a driving force against fish shortage and starvation. Another attraction was the set of aquariums built in the late 1850s. Twenty or so tanks were filled with plants and animals originating from the Belgian sea and rivers and, as such, were supposed to have both didactic and scientific purposes. They surely helped the company to survive the competition with the new Brussels Zoo created some hundreds meters away from the Botanic Garden[28]. However, to our knowledge this amazing new attraction never prompted any scientific research in the country. Like other creations of the company, the aquariums were established in the Botanic Garden to tease the curiosity of those who would pay to see them… and to please the Brussels City administrations by adding respectability and attractiveness to their City on the European scene.

So what was the actual place given to the austere school of botany during the 45 years the company managed to survive ? Archives show that the School suffered serious damage during the battle that occured in Brussels in the early days of the Belgian national revolution and that, three years after the combats, the wounds had not yet healed. The School of botany had been trampled underfoot, leaving taxonomy in a complete mess; the School of Forestry (Arboretum) and the School of Horticulture were in bad shape too. A problematic situation indeed[29]. We know for a fact that the Prime Minister, who supported the Botanic Garden, was aware that the Chambers would not follow him unless the schools were resurrected. To them, it seemed clear that a Botanic Garden deprived from a good School of Botany would stand on one leg and could never be useful to the City and the nation[30]. This also appeared in the attempt to franchise the Botanic Garden, in 1835. At this occasion, it is found that one out of three head gardeners would have been entirely devoted to the School of Botany. Although this project was rejected, it tended to prove that, for the Board, the non profit oriented School of Botany really mattered[31].

In 1836, one founder of the Garden, P.-A. Drapiez (1778-1856) wrote to the City administration that the School of Botany was still lame and that it had been planted following a Linnean pattern. As for the School of Botany following the principles of the Natural Families, he added that it was nowhere to be seen. To him, the Botanic Garden had thus become a mere nursery and had nothing to offer to those who would need or wanted to study botany[32]. Drapiez's disappointment also showed in the press: the very same year he published a des-

26 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 62-64.
27 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 64-68.
28 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 65-66.
29 A.S.R.H., Minutes of the B.D., vol .1, 14/02/1833 and 21/02/1833.
30 A.S.R.H., Minutes of the B.D., vol .1, 14/02/1833 and 21/02/1833.
31 A.S.R.H., Minutes of the B.D., vol .1, 17/12/1835.
32 A.V.B., TP, n°33418, Letter to the City Mayor, 29/06/1837.

cription of the famous «Etablissement géographique de Bruxelles ». This private institution had recently been created by Philippe Vandermaelen (1765-1869) and extended its expertise to botany and horticulture. One could feel Drapiez's bitterness and the weaknesses of the Botanic Garden in the way he protrayed the Etablissement géographique and in the mention of its two schools of botany. One followed the Linnean system and the other followed the order of the Natural Families[33]. But, Drapiez did not grieve alone.

In 1838, Louis Van Houtte (1810-1876) the Director (head gardener) begged for plants, and wrote to the Director of the Botanic Garden of Liège « we have naught ». He added : « With your help, our School of Botany would be resurrected. You know too well how it looks : this former battlefield where the winds used to meet has now turned into a cemetery »[34]. Had the Board not signed an agreement with the City authorities allowing the local students to use the School of Botany freely, the problem might have been less dramatic.

When in 1841 the Board asked the Government to double its annual subsidy, it wanted the Ministers to consider the hybrid institution as « public » and « national ». The Board had certainly learned from the past 10 years of recurring discussions in the Chambers about the Garden's suspected uselessness. Although the School of Botany and the more practical schools were supposed to reveal the Botanic Garden's attention for public interests, critics kept on hammering. In 1843, for instance, an association of Belgian nurserymen asked the Government to cease the financial support to the Garden. Arguing that they could not compete with a supported-by-the-State garden which also acted commercial, they pinpointed the lack of scientific drive in the institution and its frantic commercial activities. This drift was especially obvious when one looked at the School of Botany. The complainants insisted that this most crucial part of a scientific garden – according to them, at least – « looks, every summer, like a battlefield where lie the dead bodies of even the toughest plants (…) and where labels looks like gravestones erected by pious hands »[35]. The Board refuted vigourously… but, the very same year, it began to reorganise the School of Botany from top to bottom[36].

Despite ups and downs in the course of its chaotic life, criticism on the scientific weaknesses of the Company's Botanic Garden never ceased. The Board, until the ultimate death of the Company in 1870, did its best to give the institution a scientific shine and lure the City administrations, the Ministers and the Chambers. Still, it never worked too well. The would-be National Botanic Garden only survived its poor scientific reputation thanks to the social role it played in the Capital and to the symbolic plus to the City[37].

As for the School of Botany, several documents reveal that it did not complete its mission assigned by the local University and the City administration. As soon as 1837, if not before, Professor George, from the University of Brussels, argued that Brussels lacked a sound School of Botany with a full-time gardener dedicated to it and able to provide him and his students with samples for the Botany and Plant Physiology lessons[38]. In 1845, he complained again that the

33 Drapiez, Lettre sur l'Etablissement géographique de Bruxelles fondé en 1830 par Philippe Vandermaelen, Bruxelles, 1836, p. 28-29.
34 A.R.S.H., n°253, Letter to Ch. Morren, 05/03/1838.
35 N°1 des publications de la Société des Horticulteurs belges, Gand, 1843, p. 13.
36 A.S.R.H., Minutes of the B.D., vol .2, 04/10/1843.
37 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p.109-119.
38 Archives of the Free University of Brussels (U.L.B.), Minutes of the B.D. , t.1, 1834-1840, n°168 (16/11/1837).

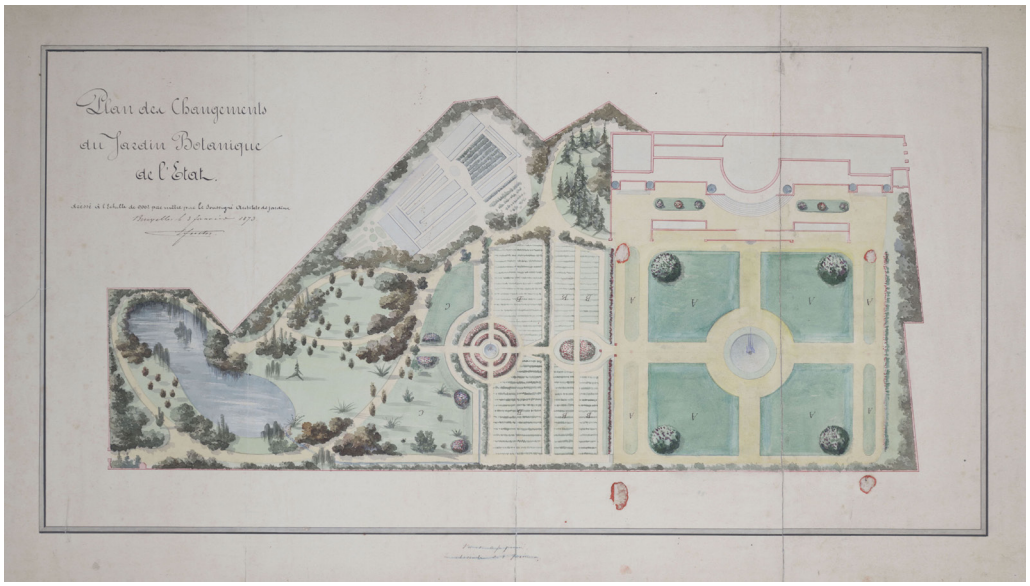
short-on-time gardeners were not eager to give his students plant cuttings[39]. That is how, that year, the University of Brussels finally planted its own School of Botany. One should mention that, although the new school design was merely dedicated to the needs of the students in Medicine and Pharmacy, it would also fit the requirements of the students of the Faculty of sciences or anyone who followed the lessons in Botany[40]. To achieve this, the Professor suggested using the classification system adopted in Paris rather than the one of the Company's Botanic Garden, unfit for the planned school[41]. Unfortunately, he did not specify which French institution he was referring to: the famous Museum of Natural History or the Faculty of Medicine?

In 1846, the Board of the Company faced bad press once again about the poor labelling that made the School of Botany worthless to science[42]. Later correspondences tell us that in 1855 the Director of the collections, Henri Galeotti (1814-1858), eventually begged William Hooker (1785-1865) in Kew for « crumbs and surplus » to improve the collection of the Botanic Garden dedicated to instruction[43]. A similar kind of request was sent to the Director of the Faculty of Medicine in Paris[44].

In the mid 1860s, while the Company was facing bankruptcy and called the Brussels administration to the rescue, comments on its inadequate scientific collections echoed again. A Paris Head Gardener, Neumann (1800-1858), had been crystal clear on this point[45]. A new agreement between the City and the Company was finally reached in 1865. Interestingly enough, it insisted on the fact that the Botanic Garden should be open daily, that it must hire a scientific director as soon as possible and that the collections should be at the disposal of the public schools of Brussels[46]. All this pointed out severe deficiencies. The Botanic Garden was only readily accessible to those who would pay an entrance fee and it failed in scientific robustness for long. A year after the agreement was signed, the President of the University of the Brussels' Board – also City Mayor – had to ask personally the Company to let the students walk down the School of Botany[47], once more. The Company argued that, because it could not afford the costs of a janitor to accompany the students, it was reluctant to let them wander alone in the Garden[48].

As an important quality marker for the mid-XIXth Century botanic gardens, the School of botany of the Brussels Botanic Garden, as lame and poorly accessible as it were, did nothing to improve the institution's reputation of unsatisfactory social return. When, in 1870, the shareholders accepted to sell the Botanic Garden to the Belgian State, a big herbarium had already been bought in Germany. This huge dried collection of plants was a priority to Barthélemy Dumortier (1799-1878), the politician and renowned botanist who had supported the project of a real State Botanic Garden in the Chambers. He drew his inspiration from the famous Kew Gardens and their extensive scientific collections, of which the herbarium was the cornerstone. What the future had in store for the School of Botany is unveiled in the second leg of this contribution.

39 A.S.R.H., Minutes of the B.D., vol .2, 15/05/1845.
40 Archives of the Free University of Brussels (U.L.B.), 01 BC-1845, Letter to the B.D., 07/04/1845.
41 Ibidem.
42 A.S.R.H., Minutes of the B.D., vol .2, 04/08/1846.
43 A.S.R.H., Correspondences, t.4, 23/06/1855.
44 A.S.R.H., Correspondences, t.4, Letter to L'Homme, 08/10/1855.
45 A.S.R.H., n° 116, Letter from de B.D. to the City administration, 25/4/1865.
46 A.S.R.H., n°116, Text dated from 24/06/1865.
47 A.S.R.H., n°272, Letter to the B.D., 15/09/1866.
48 A.S.R.H., n°116, Letter from the B.D. to the City Mayor, 17/05/1864.



In this 1873 project the School of Botany has been removed from its symbolic place to small rectangular beds. Due to the opposition from a famous botanist and politician, this project was never realized. Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

The State Botanic Garden

The first steps

The shareholders of the Company that ran the former botanic garden could have made much more money in selling the property for real estate. Thus, the creation of the State Botanic Garden was some kind of a miracle. From day one, the fledgling State institution was supposed to devote itself mostly to taxonomy and floristics. This tendency reveals itself in the acquisition of the big aforementioned herbarium by the Belgian Government in 1869, even before the place was bought from the shareholders. Dumortier had indeed persuaded his colleagues of the Chambers with the unexpected opportunity to grab the vast collection of the late Filip von Martius (1794-1868) from Munich. His plan was to lay the first stone of his kewesque project in Brussels. In less than 2 years, the dreams of the old fashioned Belgian botanist who paid attention mainly to floristics and taxonomy had come true: Belgium had a tremendous State herbarium, located in a nice building designed for botany in the Capital city of the country. Although the centre of gravity of the Botanic Garden was now the herbarium collections, the School of Botany was not neglected. The early rules of the State Botanic Garden proved it. In both the provisional rules of 1870 and the rules of 1871, the School of Botany, albeit mentioned after most of the other collections kept in the Institution, was dedicated to « grow all the plants necessary to the study of Botany »[49]. The Curator with the help of an « Assistant-Naturalist » should care for it, under the authority of the Board itself[50]. Although the School of Botany was supposed to be « open to the public and accessible to anyone who studied botany » from 10 to 12am, and from 2 to 4pm, a card signed by the Director was nevertheless requested for any visit. The rules also stated: « [the School of Botany] is not a place for promenading where ordinary visitors are allowed »[51]!

The prominent status of the School of Botany in the eyes of the president of the Board, at least, was made very clear on several occasions. One of the most

49A.S.R.H., n°193, p.3.
50A.S.R.H., n°193, p.5.
51 A.S.R.H., n°193, p.10.

significant of all occured in 1871 and lasted no less than 5 years. During an early meeting of the Board in 1871, President Dumortier thus claimed that the School had first been planted following a Linnean pattern, then following the system of de Candolle. To him, it was now scientificallyout of date and, as such, of no use to the students[52]. The Board agreed with him and the decision was made to enlarge and relocate it elsewhere in the garden. The circular School of Botany that had occupied since 1826 a central part of the Botanic Garden in front of the main neoclassical buildings and echoed the famous rotunda, was condemned to leave the place… This move, as it was then said, was supposed to give the School of Botany extra room and a much better soil. The place where the School used to be would become a « jardin à la française »[53]. Two years later, Edouard André (1840-1911), a famous French garden architect, came to visit the very place and discuss with the Board the new project he had designed for it. To them, the School of Botany with its patchwork of small beds was simply ugly, especially when viewed from the elegant boulevards surrounding the Botanic Garden[54]. Yet, someone protested – most probably Dumortier: « [moving the School] means that science will come second to the ornamental point of view in the Botanic Garden »[55]. As the tone of Dumortier and his contenders was rising, the Minister asked the botany professors of the Belgian universities to give him a scientifically square and fair opinion about what should be done with the School of Botany. They visited the institution, met some members of the Board, assessed the pros and cons of both parties and obtained a balanced opinion. Finally, they suggested to the Minister to transfer the School of Botany, that the ornamental displays of the garden should be changed as to become scattered parts of the School of Botany and to keep the same global appearance for the lovely plateau where the School used to be, yet without taxonomic patterns anymore.

Just when one expected Dumortier to be tamed by the soft and academic tone of the survey, he went mad. On this occasion, he clearly expressed his views of a perfect botanic garden and his opinion on the importance of the School of Botany. He said to the Minister:

> « Why transfer the School of Botany? To please the whim of some hobbyist of the Board for whom the School is a disgrace, that's all. (…) It is nothing but a whim (…) it is a crime against Science. »

He added :

> « the School is the open book where Science – the essence of a botanic garden – can be studied, and this is precisely what the hobbyists are unable to understand (…). Hobbyists and gardeners think that knowing the plants names is the sole meaning of botanical science, but they are wrong. Botany aims at sorting plants in classes, families, genera and species. This unveils the affinities between plants (…). The method, that is to say the coordination of the Vegetal Kingdom, is the true purpose of Science (…) »[56].

Soon, Dumortier sent his own personal plan for the Botanic Garden to the Minister. The administration of the Home Office warned the Minister : should Dumortier's project be approved, the central part of the Botanic Garden – the

52 A.J.B. [Archives of the Botanic Garden], n°1, Minutes of the Supervisory Board, 02/03/1871.
53 A.J.B., n°1, Minutes of the Supervisory Board, 16/03/1871.
54 A.J.B., n°1, Minutes of the Supervisory Board, 07/03/1873 and 04/06/1873.
55 A.J.B., n°1, Minutes of the Supervisory Board, 04/06/1873.
56 A.J.B., n°110, Letter to the Home Office, 15/09/1874.

large and beautiful circular School of Botany – would look pretty much like a patched kitchen garden, and the population of Brussels would never admit it[57].

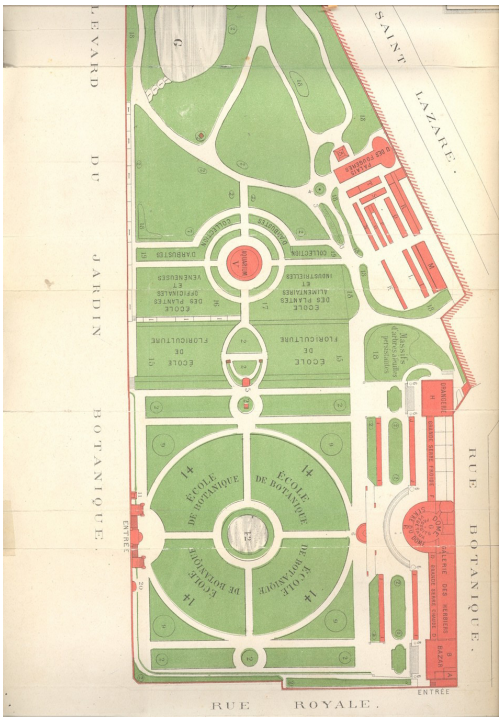
The confrontation between Dumortier and the other members of the Board lasted until 1875. The deeds were done, but the Minister did not want the argument to hinder any longer the development of the scientific institution. Nor did he want to cross swords with an old and influencial politician who belonged to the same party as he did, as revealed in a secret note from the Home Office[58]. That is why he implored the members of the Board to let Dumortier calm down and seized the hand offered by the State Architects: the Botanic Garden is a wonderful place where each and every detail keeps the aesthetic balance right; any change could ruin this house of cards[59]. Shortly after that, Dumortier began to supervise the workers busy ploughing the soil of the circular School of Botany, safe once again. In November 1875, 163 plant families, 1387 genera and 4500 plant species were selected for plantation. The old taxonomist had won the war against those he disdainfully called« the horticulturalists ». The victory was so complete that the very classification method Dumortier had brewed was now used in the iconic circular School of Botany. No one was familiar with this method and some of the most famous Belgian horticultural journals published articles about it in an attempt to make it popular. It never was.

The new rules and the impact of the 1881 Decrees on education

The rules were reformed afresh in 1876. This had no significant impact on the accessibility to the School of Botany and to the other parts of the scientific collections. The structure of the institution, though, changed dramatically. The collections were divided into 5 parts : Living Collection in open air ; Living collection under glass ; Herbaria ; Plant Fossils ; Carpology, Industrial and Medicinal Plants etc. The new Living Collection in open air had three divisions : the School of Botany, the Arboretum and the Open air plants. A new director, François Crépin (1830-1903), was appointed. He and Dumortier knew each other well, since they were the most influential Board members of the Société royale de Botanique de Belgique founded in 1862. Crépin would reign on the Botanic Garden for the next 25 years. Like many self taught botanists, floristics and taxonomy were his things, but mid 1870s his expertise had extended – evolved – to plant geography as well[60]. It would soon show in the Botanic Garden.

Whatever the case, the Living Collection in open air had a two fold pattern: scientific collections and horticultural collections. The School of Botany, of course, belonged to the first category, but it now sided with a School of Medicinal and Poisonous Plants. Moreover, two schools were about to be created: the Horticultural School and the Food Plants School. These novelties originated in the awe-inspiring visit Elie Marchal (1839-1923), a scientific collaborator of the Garden, had made to Kew in 1875[61]. Thanks to a pile of Marchal's annual reports

57 A.J.B., n°110, Letter from Ronnberg to the Minister, 14/12/1874.
58 A.J.B., n°110, Letter from Bellefroid to Ronnberg, s.d.
59 A.J.B., n°110, Letter from two State Architects to the Minister of Public Works, 03/03/1875.
60 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p. 150-152 ; Diagre-Vanderpelen & Hoste, I., « La Guerre des Roses. François Crépin (1831-1903) contre Paul Evariste Parmentier (1860-1941), un antique contre un moderne ?, in : Jahrbuch für Europäische Wissenschaftskultuur, Bd. 4 (2008), p. 117-159 ; Hoste, I. & Diagre-Vanderpelen, « Omgaan met flora-vervalsing en exoten in de 19de eeuw. Van natuurstudie naar natuurbehoud », in : Natuur.focus, September 2013, Jaargang 12, nummer 3, p. 103-108; Diagre-Vanderpelen, D., « Traces de fleurs et de floristes : ce que nous apprennent les correspondances de François Crépin (1830-1903), rhodologue, directeur du Jardin botanique de l'Etat belge », in : Actes du Colloque Traces du Végétal, Université d'Angers, juin 2012, in press.
61 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p.



As can be seen on the upper section of this 1885 State Botanic Garden map, new schools have been created near the original School of (systematic) Botany. Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

to the Director[62] and to reports sent by the latter to the Ministers, we are able to figure out the amount of consideration given to the schools in the State Botanic Garden. Crépin indeed boasted the schools and underlined their benefit to the Ministers. Steadily growing figures helped him out: in 1876, 313 cards were issued for students eager to visit the schools; in both 1877 and 1878 some 400 visitors came on a regular basis for the same reason, while they were 566 in 1880 and 627 in 1881[63]. Unfortunately, one cannot tell which of the School of Botany or of the other schools was visited in priority.

When in 1881 the Liberal Belgian Ministry of Education reformed the education programmes, natural sciences were given a very important role. In this new vision, the decrees not only insisted on observation and handling of botanic samples, but also on the fact that secundary schools should have collections in order to delineate the taxonomic groups[64]. As for primary schools, they were also urged to provide the pupils with fresh plants and, whenever possible, to visit the State Botanic Garden[65]. The schools for schoolteachers were each summoned to set up their own « small school of botany »[66]. This, for sure, spurred interest for botany and for the schools of the Botanic Garden, but it also brought a rather negative impact. According to the Director, it had no other choice but to grow plants by the thousands to honour the requests of the students, the pupils and the school teachers. The success of the schools had turned them into some sort

136 and p. 148-149.
62 A.J.B., n° 214-219, Reports to Director Crépin, 1871-1881.
63 Moniteur Belge, n°108, 18/04/1877, p. 1140 ; Partie non officielle, n°37, 06/02/1879, p. 435-436 ; Partie non officielle, n°36, p. 491 ; n°102, 12/04/1882, p. 1343.
64 Pasinomie, Programmes de l'enseignement des écoles moyennes de l'Etat pour garçons, Bruxelles, t.XVI, 1881, n°223, 11/07/1881, p. 216.
65 Pasinomie, Enseignement primaire. Programme de l'enseignement à donner dans les écoles normales et les sections normales d'instituteurs et d'institutrices, t.XVI, 1881, n°234, 18/07/1881, p. 253.
66 Idem.

of burden for the gardeners[67]. Yet, Director Crépin's words in the report for the year 1881 were quite clear about the significant role played by the Schools (sic) of Botany in the early 1880s : « [they] are one of the most important sections of the Botanic Garden (…) »[68]. One must notice that the report was undoubtfully meant to adapt to the philosophical inclinations of politicians and that, more than ever, the Botanic Garden had to show its dedication to scientific education and popularisation, both cornerstones of the Liberal ideology.

Whatever the case, in 1885 there were some 6.000 species in the School of Botany, some 250 in the Medicinal and Poisonous Plants School and 275 in the School of Crop, Food, Dye and Textile Plants[69]. The latter echoed almost word for word one of the Decrees of 1881 on education[70].Crépin had provided the School of Botany with a feature of his own : boards illustrating the distribution of plants were placed in front of the botanical groups. In a sense, it illustrated the relatively recent rise of phytogeography within the ever specialising botanical science[71]. It also demonstrated Crépin's own personal scientific maturing. The same comes for the Alpine Plants Collection – aka the Rockery. It also partly originated in the same scientific problems Crépin was dealing with: adaptation, variations within a species and their causes and, of course, how to delineate species[72]. That is why he had become an alpinist spending weeks in the European mountains in search of plants that would ultimately be grown in the Brussels Rockery. Not to mention that mountain hiking was very fashionable among social elites of this period[73] and that the European mountains were home for countless Rosa species, the very group on which Crépin planned to write a monograph[74].

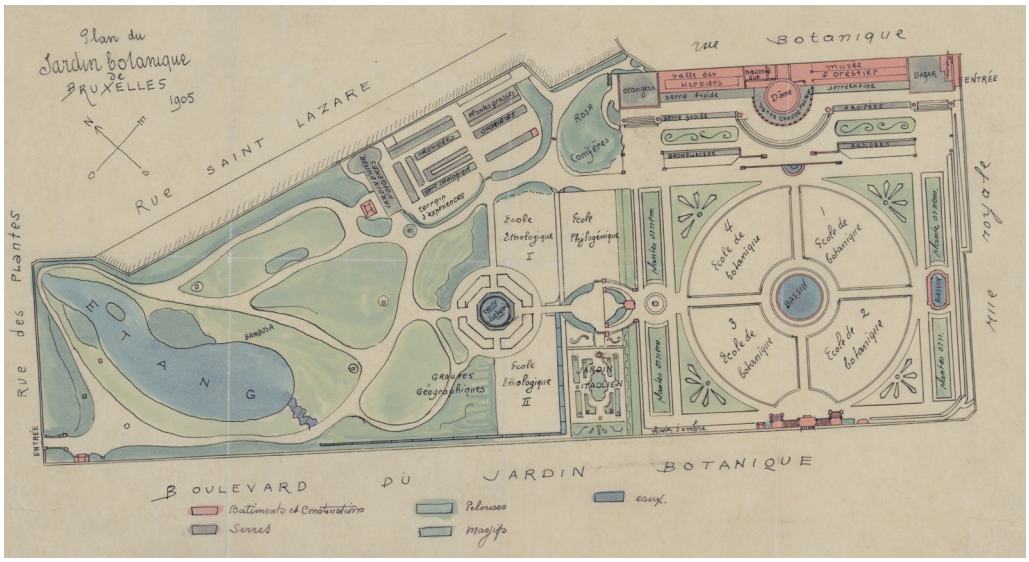
The aforementioned School of Floriculture was not forgotten. It was the third part of Crépin's vision for the Botanic Garden. One, it must have sound scientific collections for the public (mostly for scientists, in fact); two, it must provide the Belgian schools and universities with plants and seeds; three, it must encourage the Belgian liking for gardening[75]. In the 1880s, Crépin stated that, thanks to its beauty and the novelties that were grown there, this school was a huge public success[76].

No such words could be used for the planned Arboretum. The Botanic Garden was too limited in space to grow any tree collection extensive enough to be mentioned[77]. The future had something more appealing in store…

At the end of the XIXth Century, there nevertheless remained an unsolved problem in the School of Botany: Dumortier's system of plant classification was unfamiliar to students and dedicated amateurs who visited the School of

67 A.J.B., n°214-219, Annual Report by E. Marchal, 31/02/1882.
68 Moniteur Belge,n°102, 12/04/1882, p.1343.
69 Petit Guide du Jardin botanique de Bruxelles, 2e édition, Bruxelles, 1885, p.23-25.
70 Pasinomie, Enseignement primaire. Programme de l'enseignement à donner dans les écoles normales et les sections normales d'instituteurs et d'institutrices, t.XVI, 1881, n°234, 18/07/1881, p.255.
71Matagne, P., Des jardins écoles aux jardins écologiques in : Le Jardin entre science et représentation, Editions du CTHS, Paris, 1999, p.311-315.
72Bange, Ch., « La culture et l'hybridation peuvent seules décider de la question de l'espèce » : une nouvelle fonction pour les jardins botaniques en 1850 in : Le Jardin entre science et représentation, Editions du CTHS, Paris, 1999, p. 317-329.
73Matagne, P., Des jardins écoles aux jardins écologiques in : Le Jardin entre science et représentation, Editions du CTHS, Paris, 1999, p.313.
74 Crépin, F. Les excursions alpestres dans leurs rapports avec l'histoire naturelle, in : Bulletin du Club alpin belge, t.1, Bruxelles, 1886, p. 38-41 ; Diagre-Vanderpelen & Hoste, I., La Guerre des Roses… op cit., p. 117-159.
75 Moniteur Belge, n°108, 18/04/1877, p.4.
76 Idem.
77 A.J.B., n°214-219, Annual Report by E. Marchal to the Head of Department (?), 31/07/1875.

The famous School of Botany pictured from the roof of the main buildings (early XXth Century). Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.



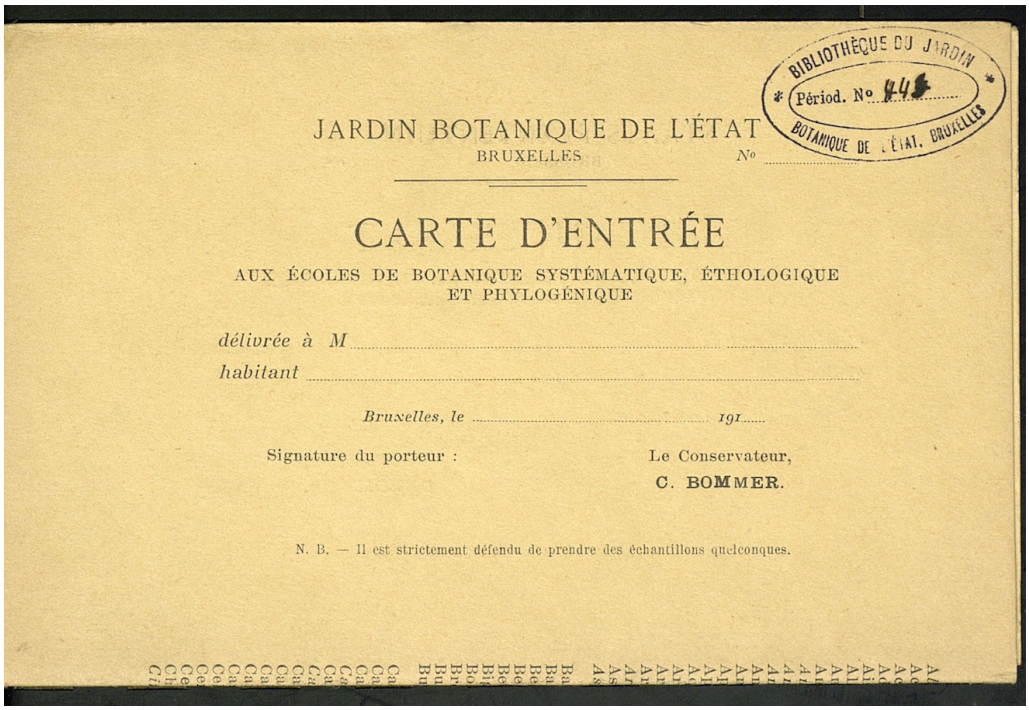
Map of the State Botanic Garden after the 1902 reform : the School of Ethology and the School of Phylogeny show that evolutionism had stepped into the institution. As for the "Groupes géographiques", they show that phytogeography had also found a home in the Botanic Garden. Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

: On this early XXth Century picture, one can see the School of Ethology on the foreground. Right next to it a so-called Italian Garden has been created. Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

Botany. Despite insistence from some Board Members in the 1880s and despite the fact that Dumortier died in 1878, it remained unchanged until 1902. Howewer surprising, this fact seems understandable somehow: chosing taxa, purchasing, exchanging and sowing seeds, growing seedlings, planting the schools, containing excessive growth, erasing mislabelling and putting displaced labels back in place… were the painstaking and daily job of those in charge of the school ! Therefore, redesigning the School of Botany, again, would have been an enormous time and money consuming task.

Elie Marchal was the man in charge of the schools.He was both a teacher in Botany and a Curator at the State Botanic Garden when he wrote a fascinating contribution entitled « Organisation des écoles de botanique destinées spécialement à l'enseignement » (1881). Not only did it reverberate the speech he had given at the International Congress of Botany and Horticulture held in Brussels in the summer of 1880, but it also echoed and warmly applauded the aforementioned decrees on education of the Liberal Government[78]. As expected, he pleaded that botanic gardens were of course useful to the would-be physician, druggist or school teacher, but also to the confirmed botanist, the gentleman and anyone in search of data about plant uses[79]. In a nutshell, botanic gardens had three missions: support education, development and popularisation of science[80].To him there must be various types of schools of botany depending on the education or school level for which they were destined. Like many supporters of the Liberal Party, Marchal was convinced that the spirit of science would never spread in the Belgian population without proper programmes in

78 Marchal, E., Organisation des écoles de botanique destinées spécialement à l'enseignement, Congrès de Botanique et d'Horticulture de 1880, tenu à Bruxelles du 23 au 26 juillet 1880, Bruxelles, Jardin Botanique de l'Etat, p.19.
79 Marchal, E., Organisation … op. cit., p.17.
80 Idem.



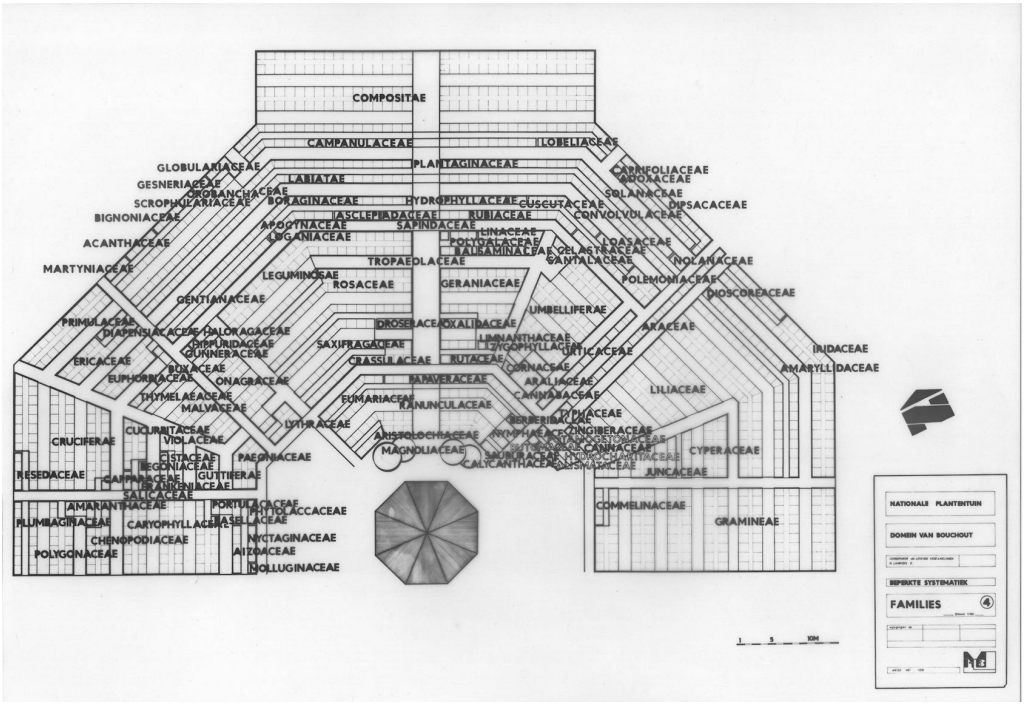
No one was allowed to visit the schools without the duly signed « carte d'entrée ». Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

the primary and secundary school levels. To achieve this, he claimed that each school should harbor a school of botany. Without this, botany would stay a mere cohort of dry Latin names, as it used to be laimed. Marchal wanted botany to be a science of observation. As for the upper level schools of botany – like in the State Botanic Garden – he pleaded a three sight kind of strategy. For a start, taxonomy according to the « familles naturelles » must be easy to understand. Then, plants should be chosen not only according to morphological characteristics but also to reflect physiological phenomenons. Finally, useful plants should find a place in those highly didactic places[81]. When possible, one would chose taxa from the national flora, because they were less challenging to grow, of course, but also because beginners should preferably be acquainted with them before paying attention to exotic taxa[82]. As for the classification system to be used in the School of Botany, Marchal had a down-to-earth approach: any natural system would fit provided it followed the pattern of programmes in local schools and universities, or the pattern of the best guide to the national flora[83]. Although some botanic gardens tended to modify their schools in accordance with the last monographs, Marchal did not support that method. According to the Curator, it would definitely puzzle many students[84].

The Botanic Garden and its schools in a Catholic and democratising country

In 1902, the Botanic Garden underwent a thorough reform. It originated in the victories of the Catholic Party in all polls since 1884 and in the next step towards democracy in the Belgian society. It did so because, on the one hand, the Catholic Party had an anti-urban ideology that favoured the countryside, the

81 Marchal, E., Organisation … op. cit., p.20-23.
82 Marchal, E., Organisation … op. cit., p.23.
83 Marchal, E., Organisation … op. cit., p.24.
84 Idem.



A 1976 Project for the planting of the Herbacetum – soon to be renamed Herbetum – of the National Botanic Garden after it had been moved outside the Brussels city limits. Collection de l'Etat fédéral en prêt permanent au Jardin botanique Meise.

landowners and the farmers and, on the other hand, because the large amount of new voters created by a 1893 Decree, made changes in the propaganda strategies inevitable. Consequently, the Botanic Garden that had been discarded as a Liberal chauldron since 1884 became an opportunity for the Catholic Party[85]. As part of the Ministry of Agriculture since its establishment (1884), the State institution would then be asked to reform in order to target the new voters, while securing the old ones. Regarded as obsolete and static for three decades, it was now urged to hatch again in a form that would emphasize pure science and, above all, popularization of science and applied science, including forestry and horticulture[86].

And it did. While the Department of Herbaria remained untouched, the new Department of Museums and Palaeobotaby had two fold collections : each had one part dedicated to researchers and the other to laymen (collections de vulgarisation), so to speak, to new voters. A very attractive Museum of Botany was created, as well as aMuseum of Forestry. The latter was born in the wake of the deep concerns about the future of the Belgian wood production and wood imports.It was coupled with a huge suburban Arboretum where different types of temperate forests of the World were planted. It was, among other things, meant to document the growth of exotic trees of potential value for the Belgian industry[87]. The large Belgian landowners and manufacturers would love it.

There was also an Experimental and Colonial Department that reflected both the presence of Belgians in the soon-to-be Belgian Congo and the applied sciences turn that was required from the Botanic Garden[88]. The School of Botany, among other things, belonged to that Department.In fact all « living

85 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.165-171 & p. 191-204.
86 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.165-171 & p. 191-194.
87 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.198-200.
88 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.192.

collections devoted to education to Botany and to Horticulture » belonged to the new Department. Its Curator was a fascinating young botanist – Jean Massart (1865-1925) – who had visited Tropical countries, who supported the theory of evolution and was an early Belgian ecologist[89]. There were now four schools: the school formerly known as the School of Botany – now the School of Systematics –, the School of Ethology, the School of Phylogeny and the School of Horticulture. The latter was spread over the garden and trendy, tremendous flowers and plants were now distributed in its dispersed beds. Although it was mentioned and as it was supposed to make the Botanic Garden more beautiful than ever[90], it is fair to say that the School of Horticulture did no longer formally exist.

The School of Systematics stood several improvements. Firstly, the system of classification was changed to the system of Engler[91]. This was probably the most famous system at that time and it was adopted by many botanic gardens[92]. It requiredreproducing on a small scale numerous types of ecosystems. As a result, water tanks, shady places, rockeries etc., were added to the School and groups that were previously not grown at all – such asMosses, Algae, Mushrooms…– were there given a place[93]. It also reflected the growing scientific interest for the « biology » of plants.

As for the Ethological School, it depicted adaptations of plants' organs against cold, predators, dryness etc. It also included a quarter devoted to adaptations that secured the preservation of the species (propagation, pollination, seed dissemination through various means etc.). Two small greenhouses sided the aforementioned quarter. They housed epiphytic and creepingplants, plants protected by ants, etc[94]…

The School of Phylogeny itselfwas meant to illustrate « the two factors of evolution that can be proved with living plants in a botanic garden, that is to say : variation and heredity »[95]. Since natural selection, although regarded as crucial, was impossible to illustrate, Massart lamented the new school having to drop this chapter of the evolutionary process[96]. The origins of the new varieties and species – mutation, artificial selection – were also illustrated with living plants[97]. The famous Succulent Plants Collection of the State Botanic Garden – inherited from a well known Belgian amateur[98] – added a final touch to the School of Phylogeny. Thanks to potted Cacti, Massart portrayed the evolutionary tree of this family. It showed the anatomical transformations that were supposed to have happened in the course of geological times. One must notice that Karl

89 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.96.
90Le Jardin botanique de l'Etat et la réorganisation de ses diverses sections. Notice publiée à l'occasion de l'ouverture du Musée Forestier par M. le Ministre de l'Agriculture, le 22 octobre 1902, Bruxelles, Hayez, 1902, p. 24.
91Le Jardin botanique de l'Etat et la réorganisation… op. cit., p. 22.
92 Among many others : Carlos L. Thays, El Jardin botanico municipal de la ciudad de Buenos Aires, Buenos Aires, 1928, p.21 ; K. Peters, Fürher zu einem Rundgang durch die Freiland-Anlagen des Königl. Botanischen Gartens zu Dahlem bei Berlin, mit einem Vorwort von A. Engler, Dahlem-Steglitz bei Berlin, 1908, p. 48 ; Guide to the Botanic Garden of the Faculty of science, Imperial University of Tokyo, Tokyo, 1923, p.11 ;H. Gilbert-Carter, Guide to the University Botanic Garden Cambridge, Cambridge Univ. Press, Cambridge, 1922, p.V ;Smith, H. H., Some European Botanical Gardens,1924, p. 173 ;Magnin-Gonze, J., Histoire de la Botanique, Delachaux et Niestlé, Paris, 2004, p.197-199.
93Le Jardin botanique de l'Etat et la réorganisation… op. cit., p. 22.
94Le Jardin botanique de l'Etat et la réorganisation… op. cit., p.25-26 ; Jardin botanique de l'Etat, Notice sur les collections éthologiques, Ministère de l'Agriculture, Bruxelles, 1904, p.1.
95Jardin botanique de l'Etat. Notice sur la collection phylogénique, Ministère de l'Agriculture, Bruxelles, 1905, p.1-2.
96Jardin botanique de l'Etat. Notice sur… op. cit., p. 22.
97Jardin botanique de l'Etat. Notice sur… op. cit., p. 22-27.
98 Diagre-Vanderpelen, The Botanic Garden… op. cit., p.146.

Schumann's master work had guided the nomenclatural work in this collection[99].

Moreover, a Phytogeographical collection of plants was supposed to take shape[100]. In 1905, it only consisted in potted plants that were moved from a coldhouse to a couple of places in the Garden, but Massart hoped that it would soon develop further[101].

The education and popularization of sciencepurposes of all these collections were demonstrated in a set of 4 booklets that were published[102].

With the 1902 Reform, besides the applied science programme that was requested by the Catholic Ministry of Agriculture, emerging disciplines in botanical science had thus broken through in the State Botanic Garden. They made it through very visible means : the schools. The former School of Botany – now School of Systematics –presentlyneighboured the modern Schools of Ethology and Phylogeny. It was quite a paradox, since evolution had not been generally – at least not openly – accepted by the Catholic milieu. With this modern toolbox, the State Botanic Garden had hopped into the XXth Century and offered superb educational means to schools and universities… presenting the politicians with outstanding opportunities to seduce voters.

The Post WWI period : a long way out of the Capital

The decades that follow World War I and extend to the Eigthies are, as strange as it may seem, to be considered as one big and consistent time span. During this long period the Botanic Garden will beconfronted year after year with the necessity of moving out of the Capital. It will be a toilsome process with consequences felt until the Eighties, if not later. A bunch of topics continuously stressed the long decades : lack of gardeners, lack of space, lack of light, air pollution in the city, taxonomic revision, lame identifications of the collections, public access… public transports.

Public transports plotted with air pollution, lack of light and lack of space to squeeze the Botanic Garden out of the Capital. It all began in the early XXth Century when the junction between two Brussels railway stations was planned. The junction would take decades to be completed. The matter was that a tunnel would have to pass right through the Botanic Garden, threatening greenhouses and open air collections. New public transports and collections able to attract more people in the Botanic Garden were part of the same social phenomenon : democratization of the Belgian society. It reveals itself in the way the Annual Reports of the institution insisted on the number of visitors who walked down the School of Botany and the other collections alongside[103].

The year before the Belgian State bought the new location for the Botanic Garden, Director W. Robyns (1901-1986) visited several botanic gardens in Europe (Kew, Berlin, Geneva, Paris…) and even in the United States to draw some

99Ministère de l'Agriculture. Jardin botanique de l'Etat. Notice sur la serre des plantes grasses, Bruxelles, 1905, p. 14-15.

100Jardin botanique de l'Etat, Notice sur les collections éthologiques… op. cit., p.1.

101 Idem

102Le Jardin botanique de l'Etat et la réorganisation de ses diverses sections. Notice publiée à l'occasion de l'ouverture du Musée Forestier par M. le Ministre de l'Agriculture, le 22 octobre 1902, Bruxelles, Hayez, 1902, 28 p. ; Jardin botanique de l'Etat à Bruxelles. Tableau de l'Ecole de botanique systématique, s.d. (after1903), Bruxelles, Ministère de l'Agriculture, 22p. ; Jardin botanique de l'Etat. Notice sur la collection phylogénique, Ministère de l'Agriculture, Bruxelles, 1905, 27 p. ; Ministère de l'Agriculture. Jardin botanique de l'Etat. Notice sur la serre des plantes grasses, Bruxelles, 1905, 31 p. ;

103 A.J.B., n°10 ; A.J.B., n°13, p. 18 ; A.J.B., n°15 (1930, p.15 ; 1931, p.14 ; 1932, p.14 ; 1933, p.15 ; 1934, p.14 ; 1935, p.17 ; 1936, p.21 ; 1937, p.31).

inspiration from the most famous counterparts[104].

In 1938 a park in the suburban locality of Meise was purchased[105]. It was so vast that the future Arboretum would have no problem to grow and expand freely. One also planned a collection that would show the various vegetation types of Belgium[106]. Sucha project was a consequence of a new scientific impulse given by two Curators of the Botanic Gardens in the early XXth Century, when Jean Massart and Charles Bommer (1866-1938) edited a master work entitled « Les Aspects de la Végétation en Belgique »[107]. A benchmark in history of ecology in Belgium[108]. Massart was also one of the most famous promoters, if not a forerunner, of plant preservation in Belgium[109]. Although the new project for Meise would never take shape,Massart's and Bommer's influences can be detected in itas well as in the introduction of native Belgian species in the scientific collections of the Botanic Garden. Native plant collecting began during the occupation by the German armies in 1917, as far as we know, and never ceased. Native plants were supposed to give an educational plus to the living collections and attract people to the Schools[110]. Since love for the Mother Country fed not only on cultural aspects like arts, but on national landscapes and national « nature », one may suggest that a complete collection of native plants played a role in reinforcing Belgian patriotism[111]. This trend was officially confirmed in 1921, when new rules of the State Botanic Garden stated that its mission was to pile up scientific collections mainly of native and Congolese plants in order to support research in botany[112].

While the School of Botany stayed in Brussels, the new School of Ecology and the School of Phylogeny had to move to Meise in 1942[113]. Reports do not say why the School of Botany's name was changed for Herbacetum[114]. Nor do they say what happened to the old School of Ethology, or why its name was changed to « School of Ecology ». Whatever the case, the modern concept of ecology had finallymade its way to the Botanic Garden, a sign of the times.

If one were to question the importance of the School of Botany during the six or seven decades we have covered here, one should focus on a couple of somewhat contradictory indicators. Time and energy dedicated to labelling, to improving the nomenclature, to polishing the taxonomy are just some of them. These pains taking processes were almost constant[115]and seemed to prove that the Herbacetum – today's Herbetum – and the other schools were of some im-

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104 A.J.B., n°15, Annual Report Year 1937, p.8.
105 Diagre-Vanderpelen, The Botanic Garden… op. cit., p. 263-272.
106 A.J.B., n°15, Annual Report Year 1937, p.6.
107 Massart, J. & Bommer, Ch., Les aspects de la végétation en Belgique : Les districts littoraux et alluviaux, Bruxelles, 1908 ; Massart, J. et Bommer, Ch., Les aspects de la végétation en Belgique : Les districts flandriens et campiniens, Bruxelles, 1912.
108Hoste, I. & Diagre-Vanderpelen, « Omgaan met flora-vervalsing … op. cit.,p. 103-108.
109 Idem ; Massart, J., Pour la protection de la nature en Belgique, in : Bulletin de la Société Royale de Botanique de Belgique, t.LI, Bruxelles, 1912, 308 p.
110A.J.B., n°10, Annual Report for the Year 1917, n.p. ; A.J.B., n°12, Annual Report for the Year 1927, p.4 ; A.J.B., n°13, Annual Report for the Year 1928, p.17 ; A.J.B., n°15, Annual Report for the year 1930, p. 15.
111Stynen, A., Vaderlandse weelde op de kaart gezet. Belgische botanici, metenschappelijke ijver en nationale motieven, in : BMGN- Low Countries Historical Review, vol. 121, n°4 (2006), p. 710 ; Dias Duarte, L.-F., La nature nationale : entre l'universalisme scientifique et la particularité symbolique des nations in : Civilisations, vol. LII, n°2-Museums-Collections-Inperprétations, p. 21-44 ; Hoste, I. & Diagre-Vanderpelen, « Omgaan met flora-vervalsing… op. cit., p. 103-108; Mickulas, P., Britton's botanical empire… op. cit., p. 204 ssq.
112Demaret, F., La structure et le rôle du Jardin botanique national de Belgique, in : Boissiera 14, 1969, p.120.
113 A.J.B., n°27, Annual Report for the Year 1942, p. 26.
114 A.J.B., n°27, Annual Report for the Year 1941, p. 30.
115 See, for instance : A.J.B., n°46, Annual Report for the Year 1955, p.50 ; A.J.B., n°54, Annual Report for the Year 1963, p.38 ; A.J.B., n°56, Annual Report for the Year 1965, p.29 ; Annual Report for the Year 1971, p.53-54 ; Annual Report for the Year 1978, p. 80 ssq.

portance even in the second half of the XXth Century Botanic Garden. It definitely had something to do with the educational purposes of these places. Data about the number of visitors that the Botanic Garden never failed to mention in the Annual Reports ascertains it. From 1969, education – one could also call it « popularization of science » – wasindeed held as a main mission for the institution[116].

Another indicator is the time it took to complete the School of Systematics on its new location in Meise. In 1956, all the outdoor living collections were eventually established in Meise, while the Herbarium and most parts of the Botanic Garden stayed in Brussels[117]. Yet, inaccurate determinations of plants, the hard work it urged and a lack of gardeners postponed the project of a new Herbacetum to 1964[118].Then, due to the same lack of gardeners once again, the grounds assigned to the Herbacetum and to the Schools of Phylogeny and Ecology were neglected[119]. In 1971, the School of Ecology was almost finished. Seven years later, only 50 percent of the species needed in the Herbetum had been planted[120],the very same year the guide to the impressive Plant Palace was edited. It would take another eight long years to release the guide to the Herbetum[121]. It told a lot about the priorities of the existing Botanic Garden. The Plant Palace and its tremendous, exotic and above all attractive collections had really taken over the shy, austere in some regard, School of Botany.

Conclusions :

Botanic Gardens are no palimpsests. They are places whose past missions and roles are seldom erased. Those roles rather multiply, get upgraded or downgraded, depending on the relevance –sometimes symbolic and somewhat changing – of the scientific programme they embody. Not to mention the social factors, like politics, competition between institutions, fashion, etc. that also keep moulding these multi-purpose urban green patches.

This is particularly obvious for the School of Botany, also known as School of Systematics. These peculiar beds planted in a geometrical way had at first no other function than supplying the students in medicine with medicinal plants. In fact, they should rather be considered as Schools of Drug Plants. They originate in the XVIth Century Italy and spreaded all over Europe in the wake of the creation of the universities[122]. It is relevant to claim that, at this point in time, the Schools of Drug Plantswere the Botanic Gardens, in a sense. Then, botany became more autonomous and taxomomy – that embodied it to a certain extent – became a scientific programme in its own right[123]. Yet, schools of botany stayed an intricate part of the local schools or faculties of medicine. This situation changed slowly and according to the tempos assigned by local conditions.

The Brussels Botanic Garden and its School of Botany were born later, in the wake of the French Revolution, when a new vision of the State and the

116 Demaret, F., op. cit., p. 120-121.
117 A.J.B., n°47, Annual Report for the Year 1956, p. 4.
118 A.J.B., n°55,Annual Report for the Year 1964, p. 42.
119 Annual Report for the Year 1970, p. 58.
120 Annual Report for the Year 1978, p. 80.
121 Petit, E., Bref aperçu de 101 familles de plantes. Guide du Jardin systématique, Jardin botanique national de Belgique, Meise, 1986, 45 p.
122Morton, A.G., History of Botanical Science, Academic Press, London-Orlando-New York- San Diego-Austin- Boston- Tokyo-Sydney-Toronto, 1981, p. 115-148 ; Greene, E. L., Landmarks of Botanical History, 2 vol., Standford University Press, 1983, part.1, p. 702 ssq.& part.2, p. 967-974 ; Allain, Y.-M., Une histoire des jardins botaniques. Entre science et art paysager, Editions Quae, Versailles, 2012, p,15-33.
123 Greene, E.L., Landmarks… op. cit., part.2, p. 967-974 ; Magnin-Gonze, J., Histoire… op. cit., p. 105 ssq.

citizenship was created[124]. The Muséum National d'Histoire Naturelle, founded in 1793, had very important missions in the brand new society project: it must bring the core values of the Enlightments to all citizens[125]. Collections – and this is particularly true for the School of Botany that followed the « familles naturelles » pattern – not only became common national patrimony, but also highly edifying places that brought the Natural Order to light. The very one order the new regime wanted for France. The « Ecoles centrales » were supposed to bring the ideals and means brewed in Paris[126]. That is how an educational "Jardin des Plantes" was created in Brussels[127]. It will keep practical roles until the company's– it had taken it over in 1826 – ultimate death in 1870. One must mention that the company's School of Botany occupied a very special place in the Botanic Garden, at least symbolically: on the main plateau, right in front of the tremendous buildings. This might reveal that science – taxonomy, that is – stood high on the to-do list of the then Botanic Garden. Yet, it was mostly, if not only, visited by sporadic flocks of students in medicine who, unlike the laypersons, had free access to the four quarters. But « free » did not mean that they walked down the area alone. The School and the scientific collections, in general, were in the custody of employees and, like in many other botanic gardens, fenced. In these institutions, Schools were often regarded as a summary of the « Book of Nature », as some kind of sacred place dedicated to a moral elite, a place for studious persons. One might add that control on plants and labels was also a painstaking and costly job. Consequently, the Brussels company rather considered the School of Botany only as a non-profit area that had to be reluctantly polished for a bunch of students for the sake of a contract with the City of Brussels. In a nutshell, the Botanic Garden, while focusing on promenading, commercial and mingling oriented activities, just tended to mimic botanical science and practical science. New scientific trends, like phytogeography, were nowhere to be seen in its collections, for instance. Even good old taxonomy found no place in this Botanic Garden but in the School of Botany. To our knowledge no scientific work was ever based upon it.

Everything changed in 1870, when the Botanic Garden became a real State institution, based on the model of Kew Gardens. Even though the herbarium, the very place where taxonomic and floristic work happened, became the centre of gravity of the new institution, special attention was paid to the School of Botany and, to a lesser extent, to the School of Medicinal Plants, the School of food plants and the School of horticulture. The last three schools only had practical purposes. The outstanding position of the School of Botany was clarified when some members of the Board wished to relocate it in the Garden. At this occasion, even politics jumped on the scene. When ashes and smoke of the quarrel cleared away, the School of Botany kept its central situation. It was certainly difficult to use because of Dumortier's classification system, but its important place –maybe symbolic – for a national botanic garden was confirmed.

Ideology and politics, again, showed in the 1881 Decrees on Education. Liberal politicians wanted to promote science programmes and Schools of Bo-

124Spary, E., Le spectacle de la nature : contrôle du public et vision républicaine dans le Muséum jacobin in : Le Museum au premier siècle de son histoire, Editions du Muséum National d'Histoire Naturelle, Paris, 1997, p. 457-479 ; Spary, E., Le jardin d'utopie, l'histoire naturelle en France de l'Ancien Régime à la Révolution, Editions du Muséum National d'Histoire Naturelle, Paris, 2005, 407 p.

125 Spary, Le spectacle… op. cit., p. 457-459, 468-478.

126Duris, Pascal, L'enseignement de l'histoire naturelle dans les écoles centrales (1795-1802), in Revue d'histoire des sciences, 1996, tome 49, n°1, p. 23-52.

127 De Vreught, J., L'enseignement secondaire… op. cit., p. 5-134.

tany were therefore promoted at various levels of education. Observationwas a keyword in this vision. In the Botanic Garden, the Curator in charge of the School of Botany followed this path with enthusiasm. He also suggested that the School should not only be planted with taxa of taxonomic relevance, but also with indigenous plants and plants illustrating physiology. This shift paved the way for the next developments in the Botanic Garden supply in Schools. While Curator Marchal devised new ideas for the School of Botany, Director François Crépin managed to create a trendy Alpinetum in the Garden. This rockery was a limited illustration of Crépin's taste for mountain climbing… and for phytogeography, a discipline never shown in the institution until that moment.

Democratisation of the Belgian society is an underlying cause of the big reform the Botanic Garden underwent with the Catholic Governements that extended from 1884 to 1914. This period was stamped with a dramatic increase of the voters that urged new propaganda strategies. Popularisation of science, this time, became a major concern in the eyes of the Ministers. New people were hired and collections were restructured. At this occasion, Jean Massart provided the Botanic Garden with a handful of novelties, like the School of Ethology and the School of Phylogeny. Not to mention a major turn in the School of Botany : it finally followed the most famous system of classification of the time. In the School of Ethology and the School of Phylogeny surfaced the paradigms of evolution and ecology. New trends in science had eventually found a place in the State Botanic Garden. It even created some experimental plots in the country. They represented the most typical Belgian plant associations. From that moment, the School of Botany seemed to step back in the shadow of more promising Schools, fashioned by exciting new scientific programmes. Yet, in 1909, the new statuses of the Botanic Garden claimed that research in those new fields would be forbidden. Even theexperimental plots were abandoned and some were turned into nature reservations. Such was the price of competition with the Belgian universities that the State Institution ended up as a mere databank[128].

Nature conservation was next to impact the Botanic Garden and the School of Systematics. Massart and Bommer, both Curators in the Botanic Garden, were among the first to draw attention on the decaying Belgian flora and landscapes. This concern led the institution to collect Belgian species in priority. One must mention that this very impulse might also have been spurred by vivid patriotism. Whatever the case, while the 1921 statuses of the Botanic Garden confirmed this special interest given to Belgian (and Congolese) plants – including in the living collections – , those of 1965 confirmed that nature conservation – including the Belgian one – was now part of the missions of the State institution[129]. At that point in time, the School of Botany was far from being completed in the Botanic Garden's new location in Meise. It is obvious that completion of the tremendous Plant Palace, among other things, was more important than austere taxonomic beds planted with humble taxa from the temperate regions of the world, including Belgium… Once again, the School of Botany had taken a step back, while the Schools of Ecology and Economical Plants were erased in the late Seventies[130].

What the future holds for the good old Schools of Botany remains a mystery. Missions of today's Botanic Garden Meise stillinclude research – in taxonomy, floristics and conservation of biodiversity –education, but tourism

128 Diagre-Vanderpelen, D., The Botanic Garden… op. cit., p.230-232.
129 Demaret, F., Op. cit., p.122.
130De Meyere, D., Ontwikkelingsperspectieven… op. cit.,p. 6

as well[131]. The two latter activities tend to strongly develop and the Herbetum is part of the toolbox of the Service dedicated to education in a broader sense. Since it now follows the old system of Cronquist and Takhtajan[132], one may suggest that the APG (Angiosperm Phylogeny Group) should quite severelyinfluence the beds based on morphologic similarities. What will happen to those beds if groups, with sometimes veryelusive morphological similarities, are plantedside by side because of molecular data? This might be the next challenge for the School of Botany... Or, just like for any national institution, wouldn't it be the convergence of science and new forms of patriotic narcissism, as suggested by Duarte[133] ? Howewer, with Slézec, Allain and Lemarquand, it seems right to claim that « La mise en scène des végétaux dans leur présentation reflète l'époque historique et culturelle » (« How plants are exposed mirrors history and culture")[134]… and that historians are not supposed to know what the future may bring.

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131Jardin botanique Meise. Rapport annuel 2014, p.3.
132 De Meyere, D., Op. cit., p. 18.
133Dias Duarte, L.-F., La nature nationale… op. cit., p. 39.
134Slézec, A.-M., Allain, Y.-M., Lemarquand, B., Qu'est-ce qu'un jardin botanique… op. cit., p. 331.