

A biobibliographical sketch of a naturalist turned rhodologist: François Crépin (1830–1903)

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ABSTRACT

Born in Rochefort, in the Belgian Ardennes, François Crépin (1830–1903) soon developed a taste for wild plants, yet he never received a formal training in botany. By the late 1850s, still without a job but living with his parents, the ambitious naturalist had built a large network of correspondents that included botanists in Belgium and abroad. His *Manuel de la flore de Belgique*, published in 1860, was an immediate and lasting success and yielded him a job as a teacher and a place in the inner circles of Belgian field botany. In the decades following its creation, in 1862, he dominated the Société royale de Botanique de Belgique and wrote numerous book reviews and papers on the flora and biogeography of Belgium. In the late 1860s, his career took a turn: he embraced the idea of evolution and started work on a world monograph of the genus *Rosa* which unfortunately remained unfinished. Although rhodologists had described thousands of species, Crépin arrived at a natural classification that included no more than ca. 60 species. Before becoming director of the State Botanic Garden in Brussels, in 1876, he also did research on paleobotany.

Keywords: François Crépin, botany, rhodology, genus *Rosa*

Introduction

When as a boy François Crépin roamed the fields and forests around his birthplace, Rochefort, in search of plants and butterflies, Charles Darwin, who had recently returned to England from his voyage with the *Beagle*, was silently amassing facts and ideas for his theory of evolution. When towards the end of his life Crépin resigned as director of the State Botanic Garden in Brussels in 1901, the British gentleman naturalist and author of *The Origin of Species* was long dead and his theory was at the risk of being eclipsed by

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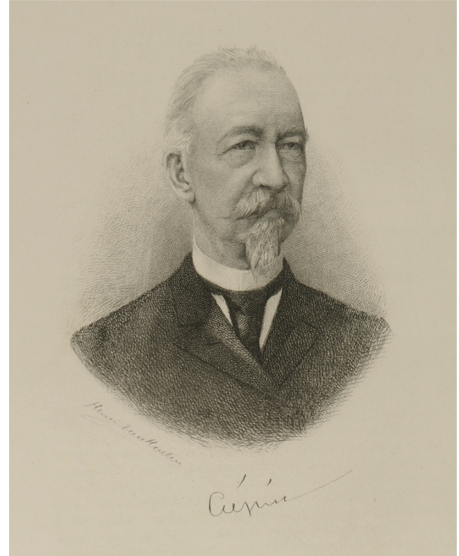


Fig. 1: François Crépin (1830–1903). Engraving by Henri van Haelen, reproduced from vol. 43/1906 of the *Bulletin de la Société royale de Botanique de Belgique*.

new theories thought up and defended by academically trained laboratory scientists.¹ The successes and failures in the career of François Crépin, a self-taught field naturalist and botanist who became director of a state scientific institution and promoter of colonial science in the Congo, can only be understood against this background of intellectual turmoil and professionalization in science, and the political and institutional developments in the young independent state of Belgium.

No recent overview of François Crépin's career and extensive scientific output exists (*fig. 1*). Several aspects of his work are currently being researched on the basis of extensive documentation kept at Botanic Garden Meise.² Here we present a short biography annex commented list of publications. We hope this may contribute to a better understanding of this researcher and of the state of 'high' and 'low' botany in Belgium in the second half of the 19th century. That in the Darwin year 2009 we saw Crépin erroneously described as an unflinching anti-evolutionist was an extra motivation to find out more about this man who strove to name every single botanical rose in the world and whose ideas about what a national field flora should look like still linger in today's *Nouvelle Flore de la Belgique*.

In this biobibliographical paper we describe the life of François Crépin with the emphasis on the researcher and author of numerous papers, short notes and books, the overwhelming majority of which were closely related to botany.³ An updated and annotated list of his

1 P.J. Bowler, *The Eclipse of Darwinism. Anti-Darwinian Evolution Theories in the Decades around 1900* (Baltimore & London 1983).

2 The sources are listed in I. Hoste & N. Hanquart, 'The publications of François Crépin (1830–1903). An annotated chronological list', in: *Studium* 11 (2; digital only) (2018) DOI 10.18352/studium.10171.

3 An interesting exception is *Guide du Touriste. Rochefort et ses environs*, published under the pseudonym F.C. de la Famenne [# 185/1870]. In this guide the author reveals himself as a rather progressive liberal-minded man, with outspoken ideas on topics such as emancipation of the workers and the need for a better education for all.

books and papers is published separately.⁴ Over the years, Crépin's output changed dramatically, illustrating striking reorientations induced by important steps in his career and changing ideas on topics such as transformism. It should be kept in mind that Crépin's publications reflect only part of his activities. The initiatives he took or supported as director of the State Botanic Garden, for instance, hardly ever resulted in publications.⁵

In this annotated bibliography and life sketch we outline the interplay between Crépin's research activities and the broad ideas that guided him on the one hand, and the evolving community of naturalists and scientists with which he was confronted. This leaves no room for an in-depth re-evaluation and update of his studies on the genus *Rosa*, a huge task that remains to be tackled, preferably by a team that combines historical and rhodological expertise.⁶

Furthermore, we largely skip Crépin's activities outside the domain of his own research. These include, for instance, his efforts, as director of the State Botanic Garden, to support young scientists with an interest in laboratory research. Some of these topics have been touched upon in earlier papers.⁷ In the future we intend to add further papers on Crépin's place in, among other things, the debates on evolution in Belgium and the evolving structures of amateur and academic natural history.

The two main parts of this sketch (Belgian floristics and rhodology) are dealt with in a chronological order, but they show a considerable overlap. Roses caught Crépin's attention from his early years, when he botanized in the environs of Rochefort, but it was only later that the study of the genus *Rosa* took precedence over his study of the Belgian flora. In between there was a period, induced by a career move, when he devoted himself to paleobotany, but in the end nothing could distract him from the taxonomic study of roses that would absorb all his available time as a researcher during the entire second half of his life (fig. 2).

Coming of age in Rochefort

François Crépin was born and raised in Rochefort, a small town in the southern part of Belgium, as the eldest of five children in a middle class bourgeois family. In 1847, his father was appointed justice of peace and two of his brothers became medical doctor and lawyer. At the primary school in Rochefort, Crépin showed very little ambition. Looking for a

4 Hoste & Hanquart, 'The publications of François Crépin' (n.2). Throughout the present paper we refer to publications in this list by citing their ranking number between square brackets (plus, if useful, the year of publication and page numbers). The year of publication is the one mentioned on the title page of the book (or the volume in the case of a paper in a journal). This may differ from the real publication date which is sometimes added in a note.

5 For more information on his directorship and other aspects of his life and career we refer to: L. Errera & Th. Durand, 'Notice sur François Crépin', *Annuaire de l'Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique* 72 (1906) 83–190; J. Lebrun, 'François Crépin 1830–1903', in: *Florilège des Sciences en Belgique pendant le XIXe siècle et le début du XXe* (Bruxelles 1968) 635–658; D. Diagre-Vanderpelen, *The Botanic Garden of Brussels (1826–1912): Reflection of a changing Nation* (Meise 2011).

6 Recent tests have shown that a significant part of the old collections in Crépin's gigantic herbarium of roses, preserved in BR (Botanic Garden Meise), can be used with good results for molecular research.

7 As for the topic of Crépin and patriotism in the young Belgian state we refer to: I. Hoste, 'Le Brome des Ardennes, plante emblématique de la flore belge, et le patriotisme de François Crépin', *Natura Mosana*, nouvelle série 69 (2016) 50–58. See for Crépin's involvement in discussions about the role of amateurs and professionals D. Diagre-Vanderpelen, 'La Société royale de Botanique de Belgique (1862–1875): tourments identitaires et éditoriaux d'une jeune société savante', *Mémoires du livre/Studies in Book Culture* 6 (1) (2014) DOI: 10.7202/1027696ar.

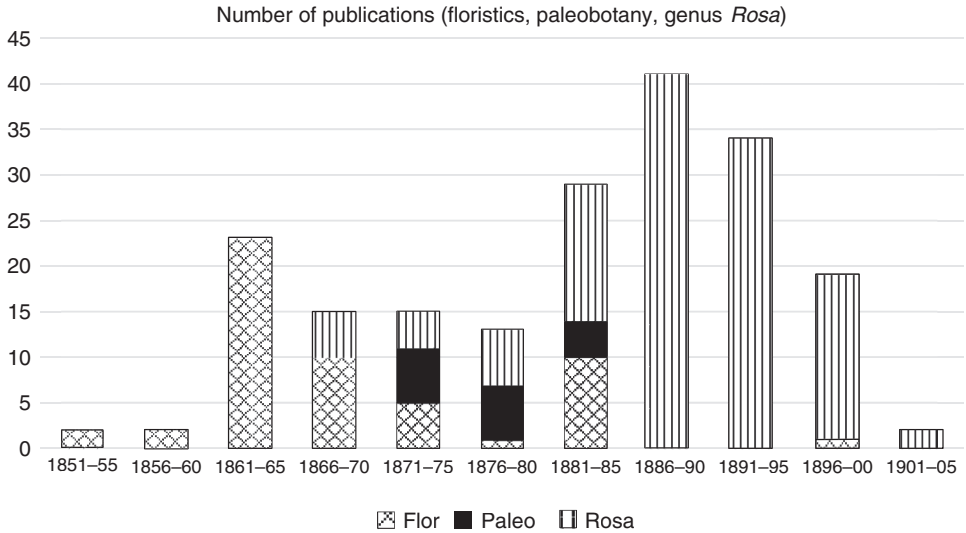


Fig. 2: The publications of F. Crépin dealing with floristics and biogeography of Belgium and surrounding countries (Flor), paleobotany (Paleo) and rhodology (Rosa) divided over periods of five years. Based on Hoste & Hanquart, 'The publications' (n. 2).

solution, his parents finally sent him to a nearby village, Wavreille, where he received private tuition at the home of a local schoolteacher, Romain Beaujean (1822–1906). Both the teacher and his pupil were attracted to the study of nature and soon Crépin was introduced to Beaujean's small collection of natural history books which included *Flore descriptive et analytique des environs de Paris* by Ernest Cosson (1819–1889) and Ernest Germain (1814–1882) and *Flore des environs de Spa* by Alexandre-Louis-Simon Lejeune (1779–1858), whom he would later call the father of Belgian botany. Soon the young naturalist was focused on field botany and started collecting plants from the botanically very rewarding area around Rochefort during excursions with Beaujean.

His schooling in Wavreille finished, Crépin returned to Rochefort to live with his parents again. In the late 1840s and early 1850s he worked as a clerk, but this situation proved untenable. Crépin had only one purpose in mind. He wanted to become a botanist. Quitting his job, he again returned to his paternal home. His father did not like the situation, but his mother seems to have supported her son's pursuit of botany. Throughout the 1850s, he explored most parts of Belgium and started building an extensive network that included botanists from Belgium and abroad, with whom he exchanged herbarium specimens and letters filled with botanical information.⁸

During this long period, Crépin published only two short notes, both in 1853 [# 1, # 2]. In the second note he discussed two taxa from the notoriously difficult genus *Mentha*. The manuscripts had been submitted for publication in the *Bulletins de l'Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique*, to which he had subscribed in 1852. The referees gave both manuscripts a lukewarm reception. Seeing the critical reports printed

⁸ Errera & Durand, 'Notice' (n. 5) 92–98.

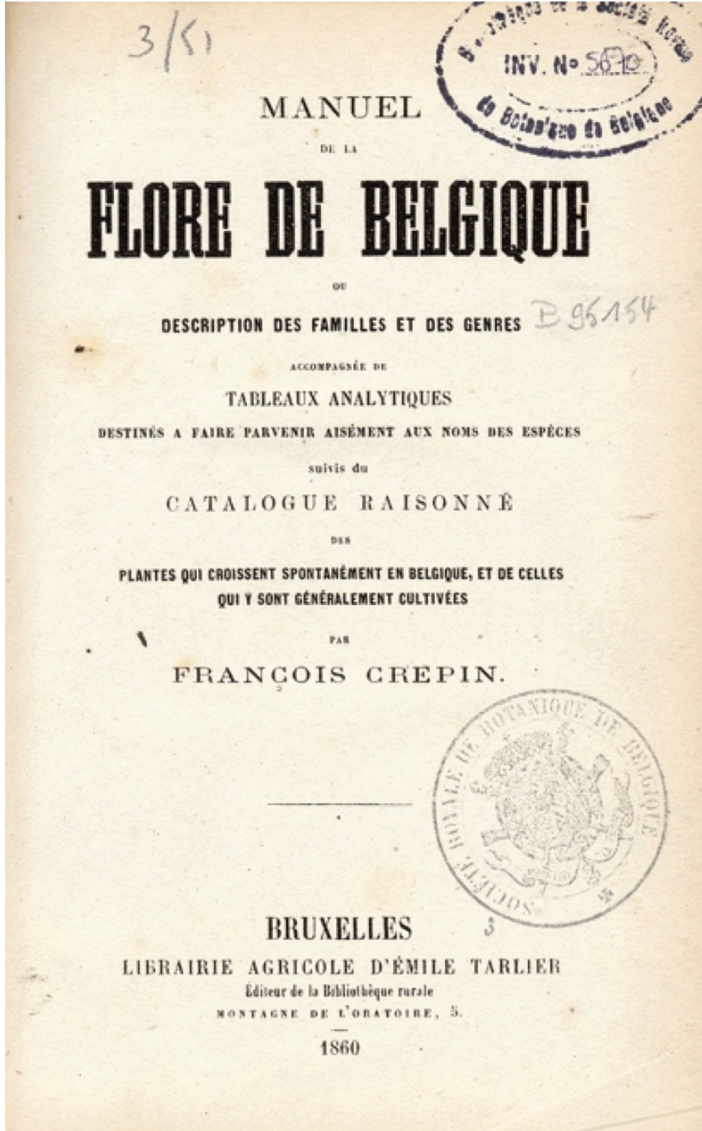


Fig. 3: For almost three-quarters of a century, the *Manuel de la Flore de Belgique*, published in 1860, remained an essential tool for all Belgian botanists. Botanic Garden Meise, Library.

in the *Bulletins* probably stung the ambitious young naturalist, giving rise to critical self-reflection and the announcement, in a letter to his parents from October 1853, of his intention to compile a critical catalogue ('catalogue raisonné') of the Belgian flora. It was finished before the end of the year but was never published.⁹

Although in subsequent years Crépin kept far from the limelight, his reputation was growing. In 1859, he submitted a first series of notes on some 50 species of the Belgian flora

⁹ Errera & Durand, 'Notice' (n. 5) 99–102.

for publication in the *Bulletins* of the Academy [# 3]. These and further notes, published between 1859 and 1866, were building blocks for a future flora. In the meantime he finished a *Manuel de la Flore de Belgique* [# 4/1860], which received very positive reviews in Belgium as well as the neighbouring countries, and went through five editions and numerous reprints (fig. 3). Aiming, in the author's words, 'de venir en aide aux nombreux élèves de nos écoles et aux amateurs de botanique indigène', the *Manuel* was conceived as no more than a first step toward a scientific flora. In reality, in using his unrivalled knowledge of plants to adapt the flora for the environs of Paris by Cosson and Germain to Belgium, Crépin produced the undisputed Belgian standard flora for both professional and amateur botanists, a status the book retained until the 1930s. Being an excellent field flora, the *Manuel* was a valuable tool for all those involved in making the inventory of the natural riches of the young Belgian nation.

Thirty years of age in 1860, the author of the *Manuel* was still without a job. Just weeks before the *Manuel* came from the presses, however, Barthélemy Dumortier (1797–1878) – the Catholic politician and from 1862 lifetime president of the Société royale de Botanique de Belgique whose relation with Crépin would always remain a complex one – told Crépin he was 'un homme d'avenir', adding that 'une belle carrière vous attend'.¹⁰ And, indeed, before long things started to change. Soon he would exchange Rochefort for Gentbrugge, near Ghent, where he found a job as a teacher in botany and an inspiring group of enthusiastic field botanists.

The study of the flora and phytogeography of Belgium

Set in motion with the publication of the *Manuel* in 1860 and concluded with the first fascicule of *Primitiae monographiae Rosarum* in 1869 [# 135], the 1860s were a key period in Crépin's life as a researcher. During this decade, it was especially thanks to him that Belgian floristics prospered. Along the way, Crépin's early interest in the difficult genus *Rosa* only grew larger, preparing him for the project that would dominate the second half of his career.

Although without a university degree or any experience as a teacher, his knowledge of botany and his recently published *Manuel* made Crépin the best choice for nomination at the Ecole d'Horticulture at Gentbrugge, near Ghent, after the death of M.J.F. Scheidweiler (1799–1861). It was a modest position, but one with the additional advantage that it introduced him to an active circle of botanists in and around Ghent that included not only amateur naturalists and horticulturists, but also Jean Kickx (1803–1864), occupant of the chair of botany at Ghent University. It was an ideal environment to participate in the goings of a highly varied community of enthusiastic students of wild and cultivated plants. During his years in Gentbrugge, Crépin published a number of papers in horticultural journals. Those on the wild flora are based on first-hand experience, whereas those on horticultural topics are largely based on existing literature and rather dull. Louis Van Houtte (1810–1876), the director of the Ecole d'Horticulture, regretted that Crépin had little interest in exotic and cultivated plants as compared with the indigenous flora.

Another important event in Crépin's life during the early 1860s was the creation of the Société royale de Botanique de Belgique. From the very beginning, in 1862, Crépin was elected as a member of the board. Without ever aspiring at the position of president, he

¹⁰ Archives Jardin botanique (AJB) 116: 1209 (letter from B. Dumortier to F. Crépin, 11.01.1863 [sic: 1864]).



Fig. 4: Crépin (on the left, with pipe) in the coastal dunes near Nieuport during an excursion of the Société royale de Botanique de Belgique in 1891. Several participants carry a vasculum (botanical box) in which they store the plants they collect during the excursion. Photo (glass plate): Botanic Garden Meise, Library.

soon became and remained for decades – initially in the shadow of Barthélemy Dumortier – the dominating figure of the Société until his resignation in 1901 (fig. 4). During the first quarter century of its existence, most papers in the pages of the *Bulletin* of the Société dealt with the Belgian flora and Crépin was its most prolific contributor. In the early years, between 1862 and 1869, he filled 29% of the *Bulletin*'s pages. Between 1863 and 1894, his contributions accounted for over 25% of its content in 13 years, including 7 years when it exceeded 35%. Between 1864 and 1877 he wrote numerous book reviews, including some that took the form of short papers in which Crépin also presented some of his own research results and ideas. He was convinced that presenting the members of the Société with an overview of relevant publications, including papers in foreign journals, was an important task for the editor of the *Bulletin* [# 9/1862: 326].

Within a few years, his *Manuel*, his position as a teacher of botany in Gentbrugge and his central position in the Société royale de Botanique quickly expanded Crépin's prestige as a naturalist and young *savant*. During that early stage of his career as a botanist he reflected on his position and outlooks for the future. In two contributions in *La Belgique horticole*, he elucidated his ideas about the study of plants. Both were published anonymously, possibly indicating he was eager to give his opinion, yet also aware of his low status as 'simple floriste'. In the first paper, from 1862 and signed 'Un Membre de la Société de Botanique de Belgique', he welcomed the opportunities the Société would soon offer its members to publish on a level intermediate between the horticultural journals and the *Bulletins* of the Académie royale. He further tried to downplay, sometimes using rather awkwardly chosen phrases, the importance of hierarchical differences between *savants* and less ambitious amateurs, or between taxonomists and physiologists, stressing the importance of each group for the advancement of botany: '... ces collectionneurs [d'herbiers] sont utiles à la science.' [# 9/1862]

In a second paper in *La Belgique horticole*, one year later, Crépin returned to the topic of hierarchical divisions. The botanist, he declared, looks down upon the horticulturist, and

among botanists the physiologist looks down upon ‘le simple floriste, le phytographe’. All too often ‘l’homme au microscope’ despised ‘le botaniste à la grosse boîte, ce plébéien de la science’ instead of accepting that ‘la haute botanique’ and ‘la petite botanique’ need one another. In defence of the phytographer, who belonged to the latter category, he wrote: ‘C’est à ce dernier que revient naturellement la solution du vaste problème de l’origine des espèces et de leur distribution sur la terre.’ [# 22/1863] This statement seems to suggest that Crépin – who, as an autodidact struggled to reconcile the limitations of his roots in ‘la petite botanique’ with high aspirations in botany – had embraced evolution. In the early 1860s, however, that was certainly not yet his position. After reading the English second edition of *The Origin of Species*, in the spring of 1860, Crépin was of the opinion that Darwin’s theory ‘a peu de chance d’être adoptée, d’autant plus que les faits avancés pour l’étayer sont envisagés d’une façon partielle.’¹¹ It would take some more years before he realized that the theory of evolution offered the best framework for the study of the species problem.

Looking back on Crépin’s long career as a researcher it is difficult not to see in these early papers an effort to stress the importance of his own preferred phytographic research area. It’s a position the ambitious phytographer would unflinchingly stick to till the end. In 1888, he ended a lecture on roses for the Académie royale des Sciences expressing the hope that his example ‘engagera les jeunes phytographes à creuser plutôt qu’à étendre leurs recherches et à les faire désormais concourir à la solution du problème qui domine aujourd’hui les sciences naturelles, celui de l’origine des êtres organisés.’ [# 383: 717]

Crépin witnessed the rise of university-based science in the second half of the 19th century which also affected the Société royale de Botanique and its *Bulletin*.¹² However ambitious he may have been, he always knew his place in the large house of botany and never attempted to exchange his reliance on field trips, the vasculum and herbarium collections for the lures of experimental science and the modern laboratory. At most, he cultivated wild plant species in order to observe the occurrence of morphological variation within populations or from generation to generation.

During the 1860s, Crépin spent a great effort in consolidating his position as the leading expert on the flora and phytogeography of Belgium. In the early years of the Société, he promoted – in line with its statutes – the study of the Belgian flora and biogeography by hinting at topics that required closer attention [# 11/1863] and writing critical comments on old herbaria [# 14/1863]. Soon after he was appointed secretary of publications, the president of the Société warned Crépin that in aspiring for high quality contributions to the *Bulletin* he ought to take care not to put off the badly needed amateur members who were also eager to see their contributions in print.¹³

In 1862, the publisher G. Mayolez, from Brussels, distributed an inscription form for a forthcoming comprehensive review of the Belgian flora compiled by Crépin. It would include information on the history of botany in Belgium since 1750, synonyms, herbaria, chorological data, species descriptions, and critical notes on a large number of plants.¹⁴

11 F. Crépin, *Manuel de la flore de Belgique* (Bruxelles 1860) XLIX-L. See for more information about Crépin and evolution: D. Diagre-Vanderpelen & I. Hoste, ‘La Guerre des Roses. François Crépin (1831–1903) contre Paul Evariste Parmentier (1860–1941), un antique contre un moderne?’, *Jahrbuch für Europäische Wissenschaftskultur* 4 (2008) 117–159.

12 D. Diagre-Vanderpelen, ‘La Société’ (n. 7).

13 D. Diagre-Vanderpelen, ‘La Société’ (n. 7) § 36–38.

14 Botanic Garden Meise, Library, BEL 208.

Nothing came of this *Revue de la Flore de Belgique*, although the thoroughly revised and greatly expanded second edition of the *Manuel* [# 62/1866] clearly was of a higher scientific level than the first and included numerous comments on rare and 'difficult' species. This new edition gave Crépin an opportunity to include at least some of the material that initially was intended for the *Revue*.

Already in the first edition of the *Manuel*, Crépin had announced he was preparing a work on 'la géographie botanique' of the Belgian Ardennes. Soon, however, he was gathering data on the distribution of plants all over Belgium. In the first and second volumes of the *Bulletin* of the Société royale de Botanique, he published phytogeographical papers on the two areas he knew best, Han-sur-Lesse and the Belgian Ardennes [# 6/1862, # 17/1863]. This was followed, in 1864–1865, by 'Matériaux pour servir à l'histoire de la géographie botanique de la Belgique' and comparative studies on the floras of Belgium and parts of Germany [# 26, # 36, # 44, # 45]. Before long, the first global screening of the diversity of vascular plants was largely finished, allowing Crépin to compile a sketch of the biogeography of Belgium destined for volume one of the national encyclopedia *Patria Belgica* [# 230/1873]. His phytogeographical publications and his insistence on the use of geological maps when preparing field excursions established Crépin as a field naturalist with higher aspirations than the average collector of dried plant specimens: 'Ce n'est plus uniquement pour étudier les plantes en elles-mêmes qu'il herborisera; car il a, de plus, en vue les relations qui peuvent exister entre la végétation et le sol.' [# 287/1878: 38–40] This proto-ecological interest later largely disappeared from his work when he concentrated almost exclusively on the taxonomy of *Rosa*.

Some of Crépin's papers from the 1860s treated more technical or academic topics, such as nomenclature and the species problem. It is perhaps not a coincidence that most of these were not published in the *Bulletin* of de Société royale de Botanique. It is tempting to see this as a deliberate choice to avoid conflict with members of the Société, such as its president, Dumortier.¹⁵

One of Crépin's rare papers in English was an attack against the creation of numerous micro-species as practiced by the French botanist Alexis Jordan (1814–1897) [# 33/1865]. At the other end of the spectrum he also criticized the approach of an author 'dont je tairai le nom' – but easily identified by insiders as Georges Bentham (1800–1884), author of a British flora first published in 1858 – who radically reduced the number of accepted species [# 34/1864]. Crépin steered clear of both excessive splitting and lumping. As a keen observer, he knew that species varied, but at the same time he believed in the concept of species as 'de véritables entités qui se réalisent, se manifestent dans certaines limites infranchissables'. Until the late 1860s, this belief took a central place in the thinking of this man with a mission: 'prouver qu'il y a des espèces immuables dans leur essence et combattre par là la théorie de l'évolution progressive.' [# 60/1866: 5]

The importance Crépin attached to descriptive botany (together with biogeography indisputably his strong point) made him sensitive to matters of nomenclature. In the second edition of the *Manuel*, he applied new nomenclatural rules that intended to show

15 Of a short note on dwarfism and atrophy published in *The Naturalist* [# 32/1864] we know that the original manuscript in French had been submitted first for publication in the *Bulletin de la Société royale de Botanique de Belgique*, but was refused because it contained insufficient original data and its wording was too aggressive. (AJB 117, 1337–1339, correspondence between L. Piré and F. Crépin, January 1864.)

greater respect for the phytopographer who originally described a new species. One year later, a commission presided by B. Dumortier discussed the problem at the International Botanical Congress in Paris and rejected the new notation.¹⁶ Crépin, however, stuck to his position [# 35/1867] and was heavily criticized for that by Dumortier.¹⁷ Later he accepted defeat and returned to the old system in the third edition of the *Manuel* [# 239/1874].¹⁸

From the 1870s, Crépin spent less time on Belgian floristics, with the exception of work on new editions of the *Manuel de la flore de Belgique* or reports of botanical excursions. Due to changes in the school curriculum, the demand for floras rose sharply in the 1880s and Crépin attempted to make the *Manuel* more attractive for this potentially huge group of new users. In this he was only moderately successful, due to competition by other new floras, but also to his reluctance to tone down the scientific character of the book [# 340/1884: v–vi].¹⁹

A new challenge: a monograph of the roses of the Northern Hemisphere

The scientific career of François Crépin changed decisively in the late 1860s. In July 1868, B. Dumortier, Crépin's eternal mentor and botanical sparring partner, challenged him to start writing monographs: 'Vous qui observez si bien, pourquoi ne faites vous pas des monographies de genres (...)? Ce genre de travail est extrêmement utile et recherché.'²⁰

During this period, Crépin's confidence in the fixity of species was faltering. In the 1869 volume of the *Bulletin de la Société royale de Botanique de Belgique* he published a long book review of *Traité de Paléontologie végétale* by W.P. Schimper (1808–1880) in which he stated that the author 'montre de plus en plus combien la théorie de l'évolution répond mieux que la théorie des créations successives aux faits déjà acquis à la science et aux lois de la nature' [# 143]. Evolution was rarely mentioned in the *Bulletin* in these years, and Crépin probably elaborated on this theme to prepare the *Bulletin's* readers for his next move. In the next fascicule, he announced, in words reminiscent of the book review, his conversion to Darwinism or, perhaps more accurately, evolutionism: 'J'ai bien repoussé la théorie de l'évolution, mais avec le temps mes idées se sont modifiées et aujourd'hui j'avoue que cette même théorie satisfait mieux l'esprit que la théorie contraire.' A little further he explained that he had decided 'de réunir et d'élucider les matériaux d'une monographie générale du genre *Rosa*', a project he thought might take him 10 or 12 years to complete [# 135: 227–228, 230].²¹

The study of the taxonomy of the genus *Rosa* within the framework of evolution would dominate the rest of Crépin's career as a researcher. All he ever wrote on evolution amounts to a minimal number of pages, but judging him on this basis misses the point. He was never firstly a student of evolution, but as an overarching idea transformism gave meaning to his taxonomic work, not as a 'dogma' that replaced his earlier belief in fixed species, but rather

16 E. Fournier (ed.), *Actes du Congrès international de Botanique tenu à Paris en août 1867* (Paris 1867) 177–225.

17 AJB 120, 1949: letter from B. Dumortier to F. Crépin, undated (1867? 1868?).

18 It is most probably no coincidence that the only reference lacking from the long list of Crépin's own publications in *Guide du botaniste en Belgique* (Bruxelles/Paris 1878) [# 287] was the paper on *La nomenclature botanique au Congrès international de botanique de Paris* [# 35].

19 I. Hoste, 'Une escarmouche territoriale dans l'empire de Flore: Gaston Bonnier, François Crépin et la «Nouvelle Flore» de 1887', *Natura Mosana*, nouvelle série 70/2 (2017) 1–14.

20 AJB 120, 1950: letter from B. Dumortier to F. Crépin, undated, but with added note 'reçu le 13 Juillet 1868'.

21 D. Diagre-Vanderpelen & I. Hoste, 'La Guerre des Roses' (n. 11) 129–132. Crépin's publications are devoid of comments on the mechanism of natural selection.

as an attractive hypothesis to work with. His early opinion – ‘Je crois sage de réserver mon jugement sur cette délicate question’ [# 135/1869: 228] – seems to have remained unchanged until the end of his life. Fortunately for him, the idea of evolving species was not incompatible with the ‘stability’ of species that was required by the practitioner of phytography. Crépin understood that ‘La nature est toujours en travail d’enfantement, travail caché à nos yeux, mais que les siècles à venir décèleront d’une façon manifeste, comme l’ont fait les siècles innombrables qui les ont précédés.’ [# 342/1884: xii] That confirms a point underlined by Endersby who concluded that for J.D. Hooker (1817–1911) a crucial attraction of natural selection was that ‘it was slow; on the time scale of individual lives, and botanical careers, species did not change at all.’²² From this it followed that the fixist Crépin could become an evolutionist without being forced to change his routine activities. In the very same publication in which he told his readers that he had embraced evolution, Crépin left no doubt about his focus on recent times: ‘En parlant ici de l’espèce, je n’ai en vue que nos temps géologiques modernes et n’ai pas à m’enquérir de ce qu’étaient nos espèces dans le passé et de ce qu’elles seront dans l’avenir.’ [# 135/1869: 302] As before, he could stick to the principle formulated by A. De Candolle (1806–1893) that ‘Les descriptions ne doivent pas se ressentir de théories et d’hypothèses.’²³ Philosophical statements had no place in phytographic papers.

Crépin would never move away from herbarium based descriptive phytography. Observing, collecting, describing and classifying remained his core business, but on accepting evolution the field botanist made a move toward becoming a more scientific student of natural history or, in short, a ‘philosophical naturalist.’²⁴ This was a difficult step, not only because it required Crépin to distance himself from fixism. Throughout his career, he always steered clear of speculation and believed that insight would come from sustained pure observation. The problem was that, however beautiful as a theory, one could never observe the extremely slow process of evolution in action and therefore ‘il est évident que cette preuve [de la transformation des espèces] ne peut pas être fournie’ [# 316/1881: 112]. In 1888, when discussing ‘la question capitale’ of the origin of species, he concluded that ‘On a vraisemblablement épuisé tout ce que le raisonnement peut fournir sur les faits connus. Il importe, avant de reprendre la discussion, de recueillir de nouveaux faits, observés sans préjugés et avec la plus entière indépendance.’ Crépin was hopeful that phytography would play a role in this, but in the meantime the cautious rhodologist insisted that ‘Par prudence scientifique, laissons à l’avenir le soin de répondre à ces obscures et délicates questions’ [# 383/1888: 709–710, 712].

After 1869, two important career changes did little in the long run to divert Crépin from his work on roses. In the early 1870s, he exchanged his teaching duties in Gentbrugge for a job at the Musée royal d’Histoire naturelle in Brussels, where he studied the rich paleobotanical collections of Eugène Coemans (1825–1871). Later he was also asked to assist in preparatory work for the geological map of Belgium. This work resulted in a series of short papers on the fossil flora of Belgium published between 1873 and 1881. Crépin’s interest

22 J. Endersby, *Imperial Nature* (Chicago 2008) 327.

23 A. De Candolle, *La phytographie ou l’art de décrire les végétaux* (Paris 1880) 56. Crépin considered this an indispensable book for all descriptive botanists; see # 388/1888: 33.

24 J. Hodge & G. Radick, ‘Introduction’, in: J. Hodge & G. Radick (eds.), *The Cambridge Companion to Darwin* (Cambridge 2003) 10–11.

in the fossil flora of Belgium was seamlessly connected with his taxonomic and phyto-geographic studies: 'C'est elle [= la paléontologie] qui doit nous expliquer l'origine et la distribution de nos flores vivantes;...' [# 296/1880: 23]. Charles Bommer later described his publications on paleobotany as a 'magnifique préparation d'une grand œuvre' that unfortunately remained unfinished.²⁵

With his appointment as director of the State Botanic Garden (Jardin botanique de l'Etat) in Brussels, in 1876, Crépin finally reached what one of his former friends from Ghent would later describe as the 'but secret de ses aspirations'.²⁶ For a quarter of a century the Botanic Garden was headed by a man who appreciated the progress of modern botany as exemplified by young scientists such as Leo Errera (1858–1905) and Jean Massart (1865–1925).²⁷ For himself, however, he saw no need – or no possibility? – to change direction. Painstaking observation and description were the methods by which the self-taught botanist would tackle the classification of the genus *Rosa* for the rest of his career.

In figure 2, the sharp rise of the number of publications on the genus *Rosa* after 1881–1885 is somewhat misleading, while between 1869 and 1882 Crépin grouped 27 short and long studies that were published in the *Bulletin de la Société royale de Botanique de Belgique* in six bulky fascicules titled *Primitiae Monographiae Rosarum*; together these papers comprised 856 pages. Two long articles in the *Primitiae* about the roses of Asia and America were important building blocks for his planned monograph of the entire genus. Initially, Crépin described quite a few new taxa of roses. In the second fascicule he felt compelled to explain that this had been misunderstood by some of his readers. The 'formes secondaires' or 'petites espèces' he had described were not 'de vrais types spécifiques', but only variations within the larger units which he recognized as 'de véritables espèces, des types réellement distincts' [# 206/1872: 104–107].

During the 1880s and 1890s, Crépin revised thousands of herbarium sheets and prepared numerous papers on the genus *Rosa*. His personal herbarium of roses, which he donated to the State Botanic Garden, grew to over 40,000 sheets (fig. 5). All these efforts and materials were aimed at reducing the superabundance of described taxa to a limited number of clearly distinguished species and establishing the true historical relationships between them. It was a dreary task, especially for someone who, unlike Charles Darwin (1809–1882), refused to let speculation take flight as a more pleasant (and fruitful) part of his work as a naturalist. Darwin, who himself also spent long years and countless dull hours on the preparation of a monograph of barnacles, once mused that 'Systematic work w[oul]d be easy were it not for this confounded variation, which, however, is pleasant to me as a speculatist though odious to me as a systematist'.²⁸ As for Crépin, systematic work on roses was hardly ever easy, with variation a permanent source of doubt and unsolved questions.

In the 19th century, the flowering of the study of the genus *Rosa* turned into a dogged battle between splitters and lumpers, with Crépin decidedly on the side of the lumpers. He

25 Errera & Durand, 'Notice' (n. 5) 131–134; AJB 151: correspondence and reports.

26 Anon. ['Réd.'], 'M. Fr. Crépin', *Bulletins d'arboriculture, de culture potagère et de floriculture* s.n. (1?) (1903) 190.

27 Crépin's appreciation for both the traditional and the new in botany, and for both academics and amateurs, is demonstrated in the chapter 'Enseignement de la botanique en Belgique' in *Guide du botaniste en Belgique* [# 287/1878].

28 Charles Darwin to Joseph D. Hooker, June 13, 1850. Cited in R. Stott, *Darwin and the Barnacle* (New York & London 2003) 146.



Fig. 5: Two folders from the unique herbarium collection of roses assembled by Crépin. Kept at Botanic Garden Meise and comprising over 40,000 sheets, this herbarium is today an indispensable source for both morphological and molecular research on the genus *Rosa*. Photo: L. Tytens (BGM).

criticized ‘la buissonnomanie’ in rhodology that had produced the description of thousands of species of roses, often only differing in minute and futile details [# 354/1886]. Among those who sided with Crépin was the Swiss K.H.H. Christ (1833–1933), a man whose 1873 study on the roses of Switzerland has been hailed as a milestone in the history of ‘der synthetischen Betrachtungsweise’ in rhodology.²⁹ Already in this publication, Christ guardedly concluded that in the long run Crépin – ‘dieser sehr erfahrene Monograph’ – was also working toward a strong reduction of the number of species.³⁰ In a speech he gave in 1888, Crépin told his audience that he accepted only some 60 species [# 383: 714]. By the time of *Nouvelle Classification des Roses*, he had reduced that number to 55 [# 427/1891].³¹

The reluctant Crépin was sometimes less outspoken when writing about the natural relationships between species, preferring the use of question marks rather than exclamation marks. In the same 1888 speech he wondered: ‘Le genre Rose ne serait-il pas enfin l’une de ces mille ramifications vivantes du gigantesque tronc paléontologique, dont la souche plonge au sein des strates les plus profondes du globe, tandis que sa cime, émergée à l’aurore des temps quaternaires, est seule visible à nos yeux?’ [# 383: 712] Such careful wording can cause one to doubt the truthfulness of Crépin’s belief in evolution, yet in other papers he was more outspoken. At the end of the final fascicule of *Primitiae*, he used the idea of primary and secondary species to bring order in the genus *Rosa*, thereby taking into account the

29 H. Henker, ‘Rosa’, in: H.J. Conert et al. (Hrsg.), *Gustav Hegi Illustrierte Flora von Mitteleuropa*. Band IV. Teil 2C (Berlin 2003) 32.

30 H. Christ, *Die Rosen der Schweiz* (Basel, Genf, Lyon 1873) 29. In a short note, Crépin praised the quality of this book (# 234/1873). A decade later, in 1884, Christ underlined the importance of *Primitiae Monographiae Rosarum* for the study of *Rosa*: ‘Namentlich verdanken wir F. Crépin das kräftige Wiedereinlenken zu einer gedeihlichen, zusammenfassenden und sichtenden Richtung.’ (H. Christ, ‘Allgemeine Ergebnisse aus der systematischen Arbeit am Genus Rosa’, *Botanisches Centralblatt* 5 (1884/Band 18, No. 10) 311). A copy with annotations by Crépin of Christ’s publication ‘Le genre Rosa’ (1885) in the library of Botanic Garden Meise has a dedication by the author on the title page that reads ‘A son ami et maître en rhodologie’.

31 Today, estimates vary widely. D.J. Mabberley, *Mabberley’s Plant-Book*, Third edition (Cambridge 2008) assesses the number at 100–150 species, including c. 45 in Europe.

unequal value of the huge numbers of described species. To explain their inequalities and relationships, Crépin pointed to evolutionary processes and freely talked about ‘l’existence de branches généalogiques ramifiées’ and secondary forms that were not ‘de même âge, autrement dit de même valeur’ [# 321/1882: 194]. In the late 19th and early 20th centuries, the use of similar divisions to underline the unequal value of species was not rare.³²

In the margins of his trying struggle with the genus *Rosa*, the eternal bachelor and director of the State Botanic Garden still found time for the compilation of less demanding publications, such as excursion reports for the journal of the Club alpin belge, of which he was a founding member. Starting with a note on plant hunter Henri-Guillaume Galeotti [# 304/1880–1883], he became a contributor to the *Biographie Nationale*. Over the next two decades, he penned 20 more short biographical notes for this book series. Throughout his long career, his position in the Société royale de Botanique gave him opportunity to accumulate biographical information on numerous botanists. Apart from his work for the *Biographie Nationale*, this documentation was also put to use in *Guide du botaniste en Belgique* [# 287/1878] and necrological notes for the *Bulletin de la Société royale de botanique de Belgique* and *Annuaire de l’Académie royale de Belgique*.

The final years: praise, nagging doubts and an unfinished monograph

In the closing decades of the nineteenth century, Crépin had become a world authority on roses. Botanists appreciated his efforts to bring order in the genus *Rosa* and ‘d’avoir tiré ce genre du chaos et des griffes de «l’Ecole multiplicatrice». Au moins, votre Tableau analytique est rigoureusement clair...’³³ When, in 1895, Simon Pons (1861–1933) and Hippolyte Coste (1858–1924) published the first fascicule of *Herbarium Rosarum*, Ernest Malinvaud (1836–1913), secretary of the Société botanique de France, welcomed this initiative and noticed that Crépin’s collaboration gave the publication ‘une valeur sur laquelle il serait puéril d’insister.’³⁴ Due to his reputation and the revision work on collections from numerous herbaria, Crépin was requested to write or revise the treatment of the genus *Rosa* for several different floras.³⁵ Requests for collaboration or advice increasingly also came from horticulturists, including Jules Gravereaux (1844–1916) from the renowned French Roseraie de l’Haÿ. In 1889, Crépin submitted a sketch of a new classification of roses for publication in the *Journal of the Royal Horticultural Society* [# 405].

For years, Crépin received letters from botanists who were eagerly looking forward to see his monograph in print. Rather than making him feel good, such questions must have created stress with a man who continued to gather additional data and observations to strengthen or correct his opinions. Already in 1880, K.H.H. Christ, a man highly respected by Crépin, wrote a very positive review of *Primitiae Monographiae Rosarum*, in which he added a couple of short sentences that must have rendered the Belgian rhodologist nervous. First Christ noticed Crépin’s lack of decisiveness – ‘eine zu grosse Scheu vor abschliessender Entscheidung’ – and then, towards the end of the review, he added: ‘Möge es Crépin

32 An example is G. Bonnier who distinguished between ‘grandes espèces’ and ‘petites espèces’ in *Flore complète de la France, Suisse et Belgique* (Neuchâtel, Paris, Bruxelles 1911–1935). Christ, *Die Rosen* (n. 30) used the expressions ‘Grundformen’ and ‘abgeleitete Formen’.

33 AJB 140, 3039: letter from S. Pons (Pyrénées-Orientales, France) to F. Crépin, September 15, 1893. ‘Tableau analytique’ refers to # 433/1892.

34 Book review in *Bulletin de la Société botanique de France* 42 (1895) 526–527.

35 In the list of Crépin’s publications (see n. 2) some of these contributions to floras may have escaped attention.

vergönnt sein, noch den Abschluss seines Werken zu sehen!³⁶ As late as 1897, Alfred Cogniaux (1841–1916) reminded Crépin of the shadow side of his perfectionism: ‘La manière d’étudier et de décrire l’espèce telle que vous l’exprimez, serait certainement la perfection, l’idéal vers lequel on doit tendre. Mais combien cet idéal est encore loin de nous.’³⁷

At last, in 1894 (?), a subscription form was printed by publisher Gustave Mayolez, in Brussels, that announced the publication of *Prodrome de la Monographie des Roses* by François Crépin, expected for the winter 1894–1895.³⁸ In the leaflet, Crépin stated that, after more than thirty years of research ‘je crois être en mesure de donner une monographie complète et détaillée du genre’. But nothing came of it, on the contrary. Hunting for the last missing parts of the puzzle, he continued his research and, in 1895, published a study based on extensive counts of inflorescences of roses. In the conclusion he bluntly wondered ‘si je ne me suis pas livré à des recherches assez vaines et sans grande valeur’ [# 465/1895: 52]. Contrary to the hope Mayolez may have fostered, Crépin was not yet ready to complete his *magnum opus* and let it go in print.

An important factor that would finally bring Crépin’s work on the monograph to a halt was the appearance in his life, in 1895, of the young French anatomist, Paul E. Parmentier (1860–1941), who had obtained his doctorate a few years earlier, in 1892. Initially, Parmentier asked and received help from the old master to apply his recently acquired skills in anatomy and histology to the classification of the genus *Rosa*. Soon, however, the relation between the two botanists soured. The bomb exploded when Parmentier presented his draft of a new classification of the genus *Rosa*. Judging the classification as too iconoclastic and insufficiently respectful of the achievements of traditional morphology, Crépin, still the phytographer of old, felt deeply hurt. Violating the rules of scientific ethics, he briefly commented on the not yet published manuscript sent by Parmentier in the *Bulletin de la Société royale de Botanique de Belgique*. In it, he complained that ‘Si ces prétentions étaient fondées, les morphologistes n’auraient qu’à s’incliner devant une découverte merveilleuse...’ [# 492/1898: 8]. As soon as Parmentier’s paper was published, Crépin, still unrelenting, wrote a long critique on it for the next fascicule of the *Bulletin* [# 493/1898]. By then he was almost seventy years old and the fierce exchange of letters during this episode exhausted him both mentally and physically. The affair undoubtedly hastened the end of a fruitful yet unfinished career in botany.³⁹

Approaching the end of a century full of scientific upheaval and contemplating his own life dedicated to botany, Crépin would undoubtedly have agreed with a sad reflection by W.B. Grove in the *Midland Naturalist*: ‘The glory of the field naturalist has departed. The biologist or physiologist is the hero of the hour, and looks down with infinite contempt upon the luckless being who is still content to search for species.’⁴⁰ Rooted in old style descriptive botany, Crépin’s botanical studies had been one long argument to uphold his position in the face of a growing gap that separated naturalist and biologist, and at the end Paul Parmentier coldly told him he was on the wrong side of the cleft.

After 1898, Crépin added only a few short rhodological papers of minor importance to his list of publications. In 1901, he resigned as secretary of the Société royale de Botanique

36 Review in *Botanisches Centralblatt* 1 (1880/No. 42–43) 1315–1316.

37 AJB 144: letter from A. Cogniaux to F. Crépin, December 18, 1897.

38 Botanic Garden Meise, Library, ROS 35.

39 See for more details Diagre-Vanderpelen & Hoste, ‘La Guerre’ (n. 11).

40 W.B. Grove, ‘The happy fungus-hunter’, *Midland Naturalist* 15 (1892) 158–162 (quoted in D.E. Allen, *The naturalist in Britain. A social history* (London 1976) 193–194).

de Belgique and, a few months later, as director of the State Botanic Garden. In the session of May 2, 1903 Jean Massart, president of the Société and professor at the Université libre de Bruxelles, announced the death of François Crépin, the honorary president of the Société.⁴¹

Conclusion: A man of old habits in times of multifarious change

On comparing Crépin's early *Notes sur quelques plantes rares ou critiques de la Belgique* (1859–1865) with the late publications on roses from the 1890s, one is struck by the similarities these papers exhibit. Crépin was not blind for the big changes that were transforming science and society. After a long struggle he embraced the idea of transformism, yet as a field naturalist, observer and phytographer he never changed his practices.

It has been said that in Belgium, throughout the 1860s, Darwin's *Origin* and evolution only rarely generated debate among intellectuals and scientists.⁴² The story of Crépin's struggle with and ultimate acceptance of evolution suggests that, if hardly or not in the meeting rooms of the major scientific institutions, the topic did generate discussions among naturalists outside academia. Unfortunately, records relating to such less formal events lay scattered in a wide range of sources.⁴³

As far as we can judge from his publications, Crépin was foremost interested in evolution as a scientific idea and did not discuss its implications for man and society. He expressed the hope that traditional descriptive botany would one day help solve the species problem, but in the end his aversion to speculation and lack of decisiveness prevented him from playing a more significant role in this quest. His purely descriptive approach yielded interesting results, but undoubtedly also contributed to his failure to convert the impressive pile of preliminary studies on *Rosa* into a coherent monograph.

Held in high esteem among both the 'lower' and 'higher' echelons of natural history and science, Crépin's career can only be described by using a multitude of key words and phrases: self-taught amateur naturalist and director of a state botanic garden, author of the standard flora for Belgium, biogeographer, paleobotanist, surefooted fixist turned evolutionist, world authority on the taxonomy of the genus *Rosa*. Making the best of job opportunities and at the same time hampered by insurmountable barriers resulting from a lack of formal training, Crépin's professional and scientific accomplishments mirror the growing chasm, during the second half of the 19th century, between the novel laboratory-based experimental biology and the traditions of Linnean descriptive botany.

Notwithstanding all these changes, stability is perhaps one of the best words to characterize Crépin's life story. Already as a young naturalist in Rochefort, roses caught his attention. His work on the Belgian flora and, later, on paleobotany, prepared him for his

41 No recent publications exist that give an overview of the significance of F. Crépin for the study of the genus *Rosa*. Today, the classification of *Rosa* remains far from resolved. Old but still useful information can be found in Errera & Durand, 'Notice' (n. 5); G. A. Boulenger, 'Les roses d'Europe de l'herbier Crépin', *Bulletin du Jardin botanique de l'Etat*, Bruxelles 10 (1924) 3–192; P. Herring, *François Crépin* (Kjøbenhavn 1930 – In Danish; the authors thank Eldbjørg N. Hansteen for providing them with an English draft translation of this text).

42 P. Holvoet, *De receptie van het Darwinisme en de evolutietheorieën in België (1859–1925)* (1979–1980, unpublished dissertation Ghent University); R. De Bont, *Darwins kleinkinderen. De evolutietheorie in België, 1865–1945* (Nijmegen 2008) 26–28.

43 See for example D. Diagre, 'Darwin s'invite à Mons: une querelle entre Auguste Houzeau de Lehaie (1832–1922) et Le Hainaut, en 1867', *Mémoires et Publications de la Société des Sciences et des Arts et des Lettres du Hainaut* 107 (2014) 13–54.

A biobibliographical sketch of a naturalist turned rhodologist

later work on roses. He trained himself as a phytographer and persevered in this vein for almost half a century. Even his interest and promising work in phytogeography or, later, his position as director of the State Botanic Garden never distracted him from the chosen path. As a rhodologist he rose to the highest level in his field, but toward the end of a long career his morphology-based taxonomic work no longer had the lustre of former times in the quickly changing hierarchy of knowledge in biology.