### **NINETEENTH-CENTURY GENDER STUDIES**

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# Harriet Sheppard's (1786–1858) Scientific Writings:

## Nineteenth-Century Canadian Periodicals in Transatlantic Print Culture

By Kimberly Glassman, Queen Mary University of London

<1>During the late eighteenth and early nineteenth century, British and North American women gained unprecedented access to Swedish naturalist Carl Linnaeus's (1707–1778) taxonomic classification system. Originally written in Latin, early English interpretations of the Linnaean system, such as James Lee's (1715–1795) An Introduction to Botany (1776) and Erasmus Darwin's (1731– 1802) The Loves of the Plants (1789), enabled women, for the first time, to read his writings.(1) However, the overt sexual politics that emerged in parallel with Linnaeus's metaphorical descriptions of plant reproduction increasingly ostracized women from botanical and zoological science in print, both as contributors and consumers. In fact, although botany was already considered a popular scientific activity for high-society women in Europe, this newfound access to Linnaean taxonomy—with its explicit, (2) yet accessible language—brought with it on the one hand a movement encouraging botany as the ideal study for young women, yet on the other hand an agenda to keep women on the periphery of the field to further legitimize its position as a serious science. English botanist John Lindley (1799– 1865), for example, summarized the sentiments of a number of botanists in the early nineteenth century who insisted on differentiating the serious botanical science from its female hobbyist form: "It has been very much the fashion of late years, in this country, to undervalue the importance of this science [botany], and to consider it an amusement for ladies rather than an occupation for the serious thought of man" (Lindley 17).

<2>Female readership was largely confined to the familiar formats of botanical writers such as Priscilla Wakefield, Maria Elizabeth Jacson, Jane Marcet, Harriet Beaufort, and Sarah Mary and Elizabeth Fitton (George, "Epistolary Exchange" 12–29). As Sam George demonstrates, despite their contribution to the market for scientific print, the epistolary novel's close association with the conduct book meant that authors were expected to have "carefully modified their Linnaeanism for female readers" (George, "Epistolary Exchange" 12). As such, apart from a few studies of the writings of female botanists in Britain, America, and Canada in nineteenth-century scientific periodicals, (3) there are no in-depth critical analyses of female scientific writings. Instead, a disproportionate amount of current research is dedicated to the popular science writings of women and their gendered orientation and framing, such as the aforementioned epistolary authors.(4)

<3>By providing a close analysis of the publications of Scot Quebecer, Henrietta "Harriet" Sheppard (née Campbell, 1786–1858), I aim to contribute to this underresearched area of early nineteenth-century scientific print culture. This study uses archival material from the Quebec National Archives and the archives at the Royal Botanic Gardens, Kew (hereafter referred to as Kew), to showcase the scientific writings and specimens of Sheppard. Though Sheppard published on ornithology and conchology in addition to botany, I will focus primarily on how her writing style in those articles were used as a means of self-representation to situate herself within interpersonal botanical transatlantic networks. In doing so, Sheppard became acquainted with the then Professor of Botany at the University of Glasgow, Sir William Jackson Hooker (1785-1865) and contributed to his Flora Boreali-Americana; or the Botany of the Northern Parts of British North America (1829– 40). A close reading of Sheppard's scientific publications will provide us with a better understanding of how women in the margins were navigating politeness and decorum to contribute to transatlantic information networks amidst expectations of the female ideal at the turn of the nineteenth century. Though several other female botanists from North America worked alongside Sheppard, she stands out as one of the first female authors in a scientific periodical to successfully implement interpretations of the Linnaean taxonomic system.(5)

#### The Gendered Interpretation of Linnaean Taxonomy

<4>In the late eighteenth and early nineteenth centuries, "science writing was a resource for women, but one bounded by literary conventions and social and political constraints" (Shteir, "Botanical Dialogues" 301). As early as the 1770s, writers in Europe published books advocating for botany to become the suitable pastime for women, as seen in the rising popularity of Jean Jacques Rousseau's Letters on the

Elements of Botany Addressed to a Lady (French edition, 1771; English edition 1785) and the work of Fitton, Jacson, Marcet, and Wakefield, among others (Rudolph 1346). By 1810, Maria Edgeworth (1768-1849) noted, "[b]otany had become fashionable; in time it may become useful, if it be not so already" (39). In many instances, women were given a one-foot-in, one-foot-out entry point into scientific discourse. As Amanda Mordavsky Caleb articulates, "[f]emale science writers were doubly marginalized because their culturally endorsed, gendered identities circumscribed both audience expectations and the purpose of their texts" (67). For the already small number of elite, high-class women partaking in botanical print culture, these limitations meant that the majority of women wrote educational books for children, painted floras (which were appreciated more for their aesthetics than their science), or published travel writings (which were defined by their literary, rather than their scientific, character). In this respect, Sheppard's scientific writings stand out as a rare instance where a woman directly demonstrated her knowledge of and engagement with Linnaeus's taxonomic system. She not only skilfully discussed prevailing discourses on Linnaean taxonomy, referencing notable sources and figures in the field, but in doing so, she also challenged the gendered cultural norm surrounding authors of scientific discovery.(6)

<5>In response to the growing need for a uniform and universal system for naming specimens of the natural world, Linnaeus created a set of rules for assigning a taxonomy to plants and animals which consisted of two names, what would become the now widely used binomial naming system. When Linnaeus published Systema Naturae in 1735 and Philosophia Botanica in 1751, he was met with fervent believers and staunch opponents. Though many were hesitant to adopt it, Linnaeus's system of classification, radical binomial naming method, and even controversial theory on the sexual reproduction of plants eventually became extremely popular because of their practical use. He described, for instance, the imagery of pollination as taking place on the marital bed between husband-and-wife plants and described flowers that pollinate with numerous pistils as concubines. In doing so, Linnaeus essentially mapped human sexuality onto plants. This type of language can be found throughout his scientific texts. This includes, for example, the 1729 excerpt from his Praeludia Sponsaliorum Planatarum:

The flowers' leaves ... serve as bridal beds which the Creator has so gloriously arranged, adorned with such noble bed curtains, and perfumed with so many soft scents that the bridegroom with his bride might there celebrate their nuptials with so much the greater solemnity. When now the bed is so prepared, it is time for the bridegroom to embrace his beloved bride and offer her his gifts ... (qtd. in Schiebinger 110)

<6>Erasmus Darwin (1731–1802), grandfather of Charles Darwin (1809–1882), was one of Linnaeus's followers. In Darwin's scientific poem "The loves of the plants," published in 1789 as part II of his *The Botanic Garden*, he was inspired to describe the polygamous ways of the *Gloriosa superba* in a parodied "Linnaean style" to make the science accessible to a wider public:

Proud Gloriosa led by three chosen swains, The blushing captives of her virgin chains When time's rude hand a bark of wrinkles spread Round her limbs, and silver'd o'er her head, Three other youths her riper years engage, The flatter'd victims of her wily age (Darwin 13).

However, others were not as thrilled with what they saw as the debased sexuality of an otherwise logical system. Robert Thornton, illustrator of the *New Illustration of the Sexual System of Linnaeus* (1797, 1799, 1804), wanted nothing to do with "Erasmus Darwin's dangerously French attitudes" (Kemp, "Visualizations" 49). For example, Thornton was worried about the implications of having the *Strelitzia reginae* depicted as the target of Cupid's allegorical arrow in one of the publication's plates. The flower *Strelitzia reginae* was named after the wife of King George III, Queen Charlotte of Mecklenburg-Strelitz (1744–1818). Thornton felt the need to explicitly include a dedication clearing up any misconceptions readers might have about the moral character of the Queen, which was most definitely *not* sexually awakened by Cupid or any other stamens for that matter. Thornton stated, "These plates are most humbly inscribed to Her Gracious Majesty the bright example of conjugal fidelity and maternal tenderness" (Thorton and Linnaeus 90). As it is plain to see in these examples (of which many more exist), (7) people were anxious about the sexual connotations in the Linnean system.

<7>Thus, with his "sexy stamens and provocative pistils" (Kemp, "Sexy Stamens" 36), Linnaeus, according to Patricia Fara, "imposed the sexual discrimination that prevailed in the human world onto the plant kingdom" (21). His system did not only mirror social prejudice but also reinforced it. During the mid-eighteenth century and leading into the nineteenth century, botany as a female pursuit was explored and codified as Linnaeus's theory of plant sexuality was being developed and disseminated. While fields such as botany and entomology were considered relatively safe subjects for girls in the early nineteenth century, zoology and ornithology were viewed exclusively as the subjects of men until the late nineteenth century. This was due to the fact that these scientific studies required the shooting of live birds and the dissection of animal specimens seen as improper for ladies and,

according to Kim Tolley, "few middle-class ladies would have felt it proper to venture forth into the fields with a shotgun" (107). So how did women such as Sheppard manage to publish their work on botany and conchology, let alone ornithology?

<8>In the early 1800s, epistolary scientific publications emerged, according to historians, to "ensur[e] that no botanical textbook would bring 'the blush of injured modesty to the innocent fair" (George, "Epistolary Exchange" 11). The familiar letter format, George explains, served as a way for women to write about Linnaean botany, as seen for example in Priscilla Wakefield's An Introduction to Botany in a Series of Familiar Letters (1796) and Sarah Waring's A Sketch of the Life of Linnaeus in a Series of Letters Designed for Young Persons (1827). This method of accessing botanical scientific discourse was predicated, in large part, on Rousseau's Letters on the Elements of Botany Addressed to a Lady (1785), which was published just one year before Sheppard was born and only eleven short years before Wakefield's book hit the market. The study of conchology (8) and ornithology (9) were similarly viewed in the context of censoring gendered "Linneanisms."

<9>While these publications provided an outlet for women to publish their interpretations and understanding of Linnaean taxonomy in the public sphere whilst adhering to contemporary moral conventions, Sheppard's writings reveal a different dance played to the same tune in navigating her way through progress and propriety. The following sections will investigate Sheppard's involvement in her local intellectual societies and closely analyse her scientific writings published between 1829 and 1833 to investigate how she scientifically engaged with discussions on Linnaean taxonomy, specifically that of botanicals, shells, and birds, without seeming 'indecorous'. Such an analysis will help us situate her publications within the printed transatlantic scientific debates of her time, and those who followed her lead in the decades that followed.

#### Sheppard in Local Scientific Journals and International Networks

<10>In 1829, Sheppard published her first paper entitled, "On recent shells which characterize Quebec and its environs" in the proceedings of the Société pour l'encouragement des sciences et d'arts en Canada (or the Society for the Encouragement of Science and the Arts, SESA) and, shortly after, in the first Transactions journal of the Literary and Historical Society of Quebec (LHSQ). (10) In both publications, Sheppard was identified as the recipient of an award by the SESA for her contribution to the advancement of knowledge in

Quebec conchology.(11) Notably, she was the only woman to receive recognition amongst the other five male recipients in 1829. Her accomplishments made the news appearing in The Quebec Gazette in March 1829 and The Quebec Mercury in November of that same year. While The Quebec Gazette provided an English translation of the SESA's French proceedings (216), The Quebec Mercury provided further commentary on Sheppard's paper in the LHSQ Transactions noting, "[i]t is pleasing to find a contribution from a Lady in this Volume" (607). The reporter goes on to opine, "[t]he time is past when literary and scientific pursuits were considered as beyond the attainment of the female mind: [...] It is a fact highly creditable to the sex that very many contributors to the Annals and Periodicals of the highest literary character now published in England are ladies: and we are happy in seeing those of Canada contributing by their talents to the support of the cause of Literature and Science" (607). British author Mary Sommerville, for instance, had recently presented and published her paper "On the magnetizing power of the more refrangible solar rays" in 1826, and several popular science writers became increasingly well known in the late nineteenth century (such as in the works of Warring, Marcet, and the Fittons).(12) Therefore, the value female publishing could bring to the international public forum via print was not lost on members of the learned societies and the public.

<11>Scientific societies throughout North America were also known to participate in the exchange of publications, both at home and abroad. For example, in a letter addressed to Hooker in 1829 whilst he was a professor at Glasgow Botanic Garden, Sheppard's husband, William Sheppard, informed Hooker that Hooker had been elected an honorary member of the LHSQ and "w[ould] shortly receive the first volume of Transactions just published" (W. Sheppard, fol. 157).(13) This connection was maintained for years as another letter, written this time by William Kelly, was sent to Hooker in May 1833 offering to send him the second volume of their Transactions and the first and second parts of the third volume (Kelly, fol. 137), potentially confirming the positive reception of the first publication and an expressed desire to be sent subsequent volumes. We might assume, then, there is a good chance that Hooker would have read—or at the very least been made aware of—Sheppard's articles. We can see, when reviewing Hooker's printed notes in his Flora Boreali-Americana, that he engaged in scientific debate and discourse with Sheppard, demonstrating an attentiveness and serious consideration of her scientific writings. For example, in his *Flora Boreali-Americana*, Hooker writes as a comment for his entry on Z. tricarpum: "This was sent to me by Mrs. Sheppard as the Z. fraxineum; but it has decidedly and strongly aculeated petioles, and quite agrees with Z. tricarpum of Michaux, which has only been considered a native of Carolina and Georgia" (Hooker 119). Though Hooker dismissed Sheppard's classification,

we might wonder why he mentions her theory in the first place? I believe such comments fit within the debate culture of scientific networks popular at this time. That being said, it seems it may have been the case that Sheppard was more accurate than Hooker, given that Kew's current entry on this species defined by Hooker, today known as *Z. americanum*, lists Sheppard's identification (*Z. fraxineum*) as a synonym, but not that of Hooker's, *Z. tricarpum*.(14)

<12>Moreover, the commentary flowing through Quebec's newspapers speaks volumes when considering the opposing views held by the two supposedly "partner" societies of the SESA and the LHSQ, the former of which was subsumed by the latter in 1830.(15) Sheppard and her husband initially disagreed with the LHSQ's policy to restrict its membership to wealthy men of Québec's British elite. Three years after the LHSQ was founded in 1824, the Sheppards took central roles in establishing the SESA, which officially opened in 1827. The new group was more democratic in its membership policy, welcoming women and businessmen, and published its rules and orders in English and French. By 1829, both societies were directed by the same president and became incorporated into one entity under the LHSQ's name. Even though the merger date is historically set as 1830, we find mention of it in the very volume in which Sheppard's paper was awarded a medal by the SESA. In fact, a footnote in her article highlights her award and informs the reader that she was later asked to present her paper a second time for the first Transactions of the LHSQ.(16) Based on current archival evidence, it is unclear to what extent Sheppard was involved in this merger. What is evident, however, is that she was valued and respected by both societies, and each had made a claim of ownership of her research findings.

<13>By the time Transactions I (1829) went to print, Sheppard was already recognized as a reliable botanical collector. Four years before, in 1825, she caught the attention of Hooker while he was a professor of botany at Glasgow University. Sheppard's friend and fellow botanizer Anne Mary Perceval (1790–1876) lived on the land next to that of the Sheppards on an estate known as Spencer Wood. The two became acquainted when Sheppard and her husband had moved into Woodfield in 1816. Perceval settled into her estate when her husband was appointed as His Majesty's Director of Customs for the Port of Québec in 1810 (Shteir and Cayouette 4). Their friendship flourished over the course of five years, during which time Sheppard's botanical prowess became well known within her local community.(17) In October of 1825, Perceval, in a written letter, formally introduced Sheppard and her husband to Hooker, for whom Perceval had already begun work amassing botanical specimens from Canadian territories. Believing to have provided Hooker with the best resources at her disposal, Perceval claimed "[...]

in introducing Mr. and Mrs. Sheppard to your notice, I acknowledge to have done your work a real service than it is possible any offerings could avail" (Perceval, fol. 117). Perceval proceeds to set out their specialisations, "He, being remarkable for his science. She, for her extreme patience and accuracy" (Perceval, fol. 117). Veiling Sheppard's skills within an acceptable discourse, Perceval gives the title of *science* to the work of William but assures Hooker that it is Harriet who is best known for her *accuracy*. Hooker depended on many correspondents and consequently placed a lot of stock in reliable people. Sheppard's qualities in this context were seen as nothing short of indispensable.

<14>Though, Hooker may have already heard of Sheppard since she and her husband had developed friendships with Frederick Traugott Pursh (1774-1820) and were known contributors to the botanical publication of American botanists John Torrey (1796-1873) and Asa Gray (1810–1888), whose A flora of North America: containing abridged descriptions of all the known indigenous naturalized... (1838–43) was compiled around the same time as that of Hooker. A few months before Perceval's introduction of the Sheppards, a letter from Scottish naturalist Sir John Richardson (1787–1865) was sent to Hooker in April 1825 warning him that "J Torr[e]y is at present publishing a compendium of his flora and intends very soon to proceed with – general flora of North America" (Richardson, fol. 140). Richardson continues with his gossip, revealing "He [Torrey] has correspondents of Quebec from whom he receives plants and shewed me a list of Canada plants around whereby a Lady is resident there" (Richardson, fol. 140). Given that Hooker was already well acquainted and working closely with Perceval in Québec and Lady Dalhousie (1786–1839) in Montreal by this time, it is likely that Richardson was referring to Sheppard. It is perhaps also why Perceval felt confident in telling Hooker in October 1825 that "[t]o them [Mr and Mrs Sheppard] I now resign the department of Quebec" (Perceval, fol. 117). Perceval was evidently convinced that the Sheppards had sufficient knowledge, expertise, and connections to take over an entire region of Lower Canada, which was needed for the completion of Hooker's ambition to document all the flora of Britain's American colonies in service of the empire. (18) The contributions of Sheppard, Perceval, and others resulted in the publication of Hooker's Flora Boreali-Americana, released in multiple parts between 1829 and 1840.

<15>In the same year that Pursh died, 1820, Sheppard met Lady Dalhousie and close friendships quickly formed between them and Perceval, "awaken[ing] the interest of these latter two women in plant collecting, already an important hobby for Lady Dalhousie" (M. Creese and T. Creese, *Ladies in the Laboratory* 7). Peter Lowe, writing in 1846 to Canadian author James MacPherson LeMoine (1825–1912),

remembers a time when "Lady Dalhousie and Mrs Sheppard of Woodfield would visit Spencer Wood for their botanical excursions" (qtd. in Dorion-Poussart 187). As Suzanne Hardy explains, and Mary Creese corroborates, "The three of them [Perceval, Lady Dalhousie, and Sheppard] met regularly not only in the field to share precious hours of herborization but also during their ceremonial activities, when they participated, among other things, in the magnificent evenings organized by the Sheppard couple for Quebec's elite at their luxurious Woodfield villa."(19) It was through these friendships, which doubled as botanical networks, that Sheppard became well known for her accuracy in botanical identification, helped found scientific societies, and was introduced to Hooker and his Flora Boreali-Americana project. Sceptical that they conducted their work on their own (that is, without the help of men), James S. Pringle investigated whether these ladies received any assistance in collecting and identifying the specimens they sent to Hooker. Pringle concluded that, apart from using the extensive libraries at the homes of Lady Dalhousie and Sheppard, "[w]hat expert assistance Lady Dalhousie and her friends in Québec may have had is uncertain because only Sheppard published any papers on plants, and these contain no acknowledgement of such aid" (16). We can therefore glean from these commentaries an image of Sheppard as someone who was considered a reliable, sought-after botanist and who, dissimilar to her fellow botanizing friends, had made the jump from simply donating specimens from her private garden to entering the public forum of published scientific texts.

<16>This can be clearly observed through Sheppard's progressive involvement in the LHSO from their second to third Transactions publication. In Transactions II, William Sheppard appears as one of the vice-presidents and Sheppard's brother Archibald Campbell (1790–1862) appears as the treasurer. As the society was largely made up of colonial and political officials, as well as businessmen, it made sense for Sheppard's husband, who was in the lumber trade, and Campbell, who was a loyalist notary, to take up leading roles. We get a first glimpse of Sheppard's discoveries in the "List of Donations to the Library and Museum, since June 4, 1829," wherein she is acknowledged for her contribution of a Dipus candensis, "The Canadian Jerboa," that she caught at St. Foi ("List of Donations" 435). In 1835, Sheppard published a paper in Transactions III entitled, "Notes on some of the Canadian Song Birds." This part of the third volume of *Transactions* was described by the then-president of the LHSQ, Joseph Skey, in the Report [of] the Council of the Literary and Historical Society: 1835 as "containing original papers, which will bear no unfavorable comparison with the previous ones; and which had certainly given to its proceeding a character in Europe, quite equal to every reasonable expectation of its friends" (Transactions, vol. 3). Later in the report, Skey goes on to say, "it is in the Zoological branch of Natural History, and ornithology, that we

have most reason to pride ourselves from the additions of last year," referring to the contributing papers, including those written by Sheppard (*Transactions*, vol. 3).

<17>In the 1891 Index of the Lectures, Papers and Historical Documents Published by the Literary and Historical Society of Quebec Sheppard's early contributions were listed under the name "Mrs. W. Sheppard, of Woodfield." She appears both in the index of contributing authors and the index of contributions outlined by subject. The index was compiled by Frederick Christian Würtele (1842–1920) who was, in addition to the society's librarian and curator, "not-so-incidentally" also a close relative of the Sheppards. (20) In 1934 (originally published in 1918), Sheppard appeared in the 49th volume of The Canadian Field-Naturalist as a major figure in the field of conchology: "To Mrs. Sheppard, then, goes the honour of publishing the first list of Quebec shells. Six undoubted species and nine doubtful ones are listed which is remarkably good considering the books at her disposal and the state of conchology at that time" (148-149). In 1939, Sheppard's name was listed as the contributor of the Carocolla dubio in Henry Augustus Pilsbry's (1862–1957) Land Mollusca of North America (north of Mexico) for versions of a land snail found on the banks of the St. Lawrence River (571).

<18>Knowing Sheppard's accomplishments and recognition for her scientific writings, especially given that her husband also contributed to the LHSQ's *Transactions* (and did not win the same honour), we are left questioning how Sheppard managed to bypass the linguistic decorum which impeded women from publishing on the science of botany, conchology, and ornithology in the first half of the nineteenth century. The following section will conduct a close reading of Sheppard's two main scientific papers from 1829 and 1835 to gain a better understanding of how she operated within and against the gendered cultural norms of her age by navigating the treacherous minefield of scientific linguistic decorum.

#### Using Linguistic Decorum to Challenge Scientific Discourse

<19>The language used by nineteenth-century women in scholarly publications reflects the prevailing attitudes towards how women were expected to take part in scientific activities. In 1966, Barbara Welter coined a phrase describing the position of women during the nineteenth century: the "culture of true womanhood," sometimes also referred to as the cult of domesticity (151). Centred around the idea that the woman was the centre of the home, Welter claims the conduct literature of these years indicated how women were expected to possess four cardinal virtues: purity, piety, domesticity, and submissiveness (151–174). Since Welter's provocative text, a number of scholars have further problematized investigations into

the domestic, female ideal. Mary Poovey examines how the image of the woman as a "Proper Lady" made life difficult for those who "became professional authors despite the strictures of propriety" (x). More recently, Poovey revisited the idea of propriety and gender in nineteenth-century society through an investigation into women's *ideological work*, wherein "representations of gender constituted one of the sites in which ideological systems were simultaneously constructed and contested" (2). Though today Welter's work is considered by several scholars to lack complexity and nuance (Rupp 149), her categories provide a framework to discuss the construction of early nineteenth-century femininity and problematize its relationship with class, wealth, and nationality. With regards to Sheppard, this involves considering her scientific publications as deliberate actions to develop a professional identity that was "in large measure defined by the social and psychological force of this idea of the proper—or innate—femininity" (Poovey xi).

<20>Quebec women of British elite circles knew how to optimize their social positions through their domestic roles. According to Shteir and Cayouette, the Percevals and Dalhousies were the perfect model of "polite and genteel sociability" (10). They each held elegant receptions and grand dinners at their respective estates. As Elizabeth Errington explains in her study of gentility and entertainment in imperial outposts, British immigrants were able to establish themselves through social rituals, refined cordial manners, and public responsibilities (177-179). Within the private sphere of the home, Sheppard, similar to Perceval and Dalhousie, played her role as hostess, mother, and wife. (21) The writings of women were likewise organized by such rituals and regulations, relegated to the domestic sphere with a preference for letter writing.

<21>Catharine Maria Sedgwick's (1789–1867) parody story "Cacoethes Scribendi" (1830), for instance, features a character named Anne who demonstrates "the increasing tension between presenting nature from a stance of objective perceptual accuracy versus that of subjective sentimental piety" (Gianquitto 19). Sentiments and emotions, while valued in the ideal motherly figure, struggled to fit within the increasingly objective turn in nineteenth-century science. (22) The letter-format books discussed earlier demonstrate the channels through which women were permitted to communicate with those outside the domestic sphere (and even then, they were usually intended to be read by others in private). However, unlike the letter-format books on science published by Wakefield or Waring, Sheppard wrote in a direct style and, in so doing, contested the "Linnaeanism for female readers," and female authors alike (George, "Epistolary Exchange" 12). Moreover, as Tina Gianquitto articulates, "Linnaean botany, with its explicit reliance on sexual characteristics and its implicit confirmation of gender hierarchies, bec[oming] the

rage in the early nineteenth century" (17), women struggled to engage with Linnean taxonomies without being viewed as a woman who would "fondly gaze at the titillating dust" while "plucking fruit with mother Eve" (Polwhele 8–9). In fact, Richard Polwhele (1760–1838), quoted in the previous statement, openly criticized popular science authors such as botanist Mary Wollstonecraft (1759–1797) as part of his denouncement of her controversial belief in the rights of women. In his 1798 publication, Polwhele threatened those who intended to follow Wollstonecraft's lead; Polwhele warned, "if they do not take heed of their ways, they will soon exchange the blush of modesty for the bronze of imprudence" (9). Sheppard's careful use of language in her published papers and correspondence were therefore strategic in distancing herself far enough from the immodest botanic women of Polwhele's description to have her scientific discoveries communicated in a respected public forum such as the LHSQ.

<22>Though Sheppard was officially brought on to Hooker's Flora Boreali-Americana project in 1825, only one letter survives between Sheppard and Hooker dated 26 October 1829.(23) Nevertheless, their conversation refers to events shared months beforehand, leading us to believe that other letters were exchanged. In addition, there are several letters from William Sheppard to Hooker archived at Kew that communicated updates on Sheppard from the 1820s to the 1850s. In her letter from 1829, Sheppard begins by assuring Hooker that it is her husband who insisted she write to him: "Mr Sheppard will not be prevailed on to send off his letter until I have written a few lines to acknowledge the receipt of your valuable and muchadmired present; for which allows me to return your many thanks" (H. Sheppard, fol. 158). Sheppard deliberately underplays her agency in the correspondence, a pattern that can be equally seen in the letters sent to Hooker by Perceval and Lady Dalhousie. Each woman reassured their recipient that they had been prompted, encouraged, or instructed to write to them by a respected male figure, usually a family member. Thus, in Sheppard's letter, we encounter a tenant of the domestic cult described by Welter: submissiveness. However, Poovey would, I believe, stipulate that the construction of the female writer as submissive needs to be considered in relation to her recipient. Women of privileged classes were able to produce their own voice, dissimilar to the silence of the lower classes who are not easily found in this small subset of women in science. Sheppard's social status and wealth, especially in the early decades of the nineteenth century when her husband's lumber trade was doing exceptionally well, increased the likelihood of her entering into a transatlantic network. Moreover, we must not forget the two-way nature of a correspondence. Hooker played his own role in enabling the ladies of North America to write to him and in crediting them by name in his Flora Boreali-Americana.

<23>With a library of over three thousand volumes and as an active participant in local female botanical circles, it is likely Sheppard would have been aware of texts such as Polwhele's and knowingly situated her writing within a framework compliant with a culture of domesticity and ideal femininity. In her text "On the recent shells which characterize Quebec and its environs," Sheppard commenced by assuring her readers that it was "[a]t the earnest solicitation of a member of the Society of Arts and Sciences" that she "had endeavoured to compile a list of such few shells, inhabiting the grounds and waters in the neighbourhood of Quebec" (188). Even though Sheppard did not clarify whether this member was male or female, we can assume that she was referencing a male colleague given that most members were male and that Sheppard was the only woman published in the first Transactions (apart from Dalhousie who, though she provided a list of donated specimens, did not share any thoughts on her collection). Likewise, in Sheppard's 1833 paper "Notes on Canadian Song Birds," she formulated her observations through that of a distinguished man, namely "through the assertions of Buffon" (222).(24) When offering an opinion counter to that of Buffon, Sheppard again referred to the work of another man, "Professor Rennie," who in turn took his details from "Wilson" (222).(25) Finally, before she began recounting her detailed observations, Sheppard once again reminded her readers that it was only "in compliance with the request of a friend who must not be denied" that she ventured to offer "a few additional examples of singing birds, not mentioned by Wilson" (222). By prefacing her writings as a response to a request by a man and within the context of the existing scientific discourse established by these men, Sheppard emphasized her subordinate place, a position of secondary agency the primary form of which was ceded to someone else. In doing so, she was able to publicly publish her findings without as much sexist backlash from society.

<24>A similar text on Canadian songbirds was written by James MacPherson LeMoine (1825–1912). LeMoine lived at Spencer Wood (later named Spencer Grange) when Perceval left and he later served as president of the LHSQ in 1871. In 1866 he published the article "The Birds of Canada," which lacked Sheppard's timid, apologetic preface. LeMoine placed himself as the decision-making entity in devising his work stating, "Natural History [...] is, however, a study so comprehensive that I find myself to-night, under the necessity to take up one department only: let it then be the most interesting" (3). Whereas LeMoine used his introductory remarks to assert the necessity of his study, Sheppard assured her readers that other men had highlighted the need for her studies and made the decision to request her services. It is the difference between a push and a pull; by allowing herself to be pulled into the discourse by a man instead of pushing her way into the largely male dominated space of science, Sheppard navigated from the outset the

expected societal decorum through the linguistic form of submission and displaced agency.

<25>Once married, a middle-class white woman was expected to be, above all else, a mother and educator to children of the family, which brings to the fore the second tenant of female morality: domesticity.(26) In her 1829 letter to Hooker, Sheppard made sure to share news of her children before attending to any discussions on botany. She recounted their activities over the summer, foregrounding her botanical finds with her motherly responsibilities. "Early this summer," she wrote to Hooker, "I took the children down to the salt water and although our object was not Botany (but health), we made it our constant amusement and employment while there" (H. Sheppard, fol. 158). In doing so, she placed emphasis on the health of her children and contextualized botany as an amusing and productive pastime. Sheppard played into the prevailing public opinion that considered collecting specimens as an amusement for women and children to keep them active and occupied. Though it is nuanced, the choice of words and the order in which they were told would not go unnoticed by Hooker, who experienced a similar if not more elaborate and talkative version when reading the letters of Perceval and Dalhousie. However, once Sheppard entered the public space of the LHSQ, predicated on the permission she received on both accounts by society members, she adopted a professionalism that arguably prioritized objective science over domestic piety.

<26>After only a few lines of required decorum, relative to the rest of the letter, Sheppard jumped into a tale of botanical adventure and discovery. She listed several plants, some of which she "had never before seen," including Marchantia polymorpha, Goodyera pubescens and Pyrola uniflora (H. Sheppard, fol. 158). She was direct in her account, commenting on her "gathered specimens," where she found them, and whether they were new to her. Sheppard not only lamented that she had "been very unsuccessful in pressing" a species of seaweed, but in the same breath also offered a logical explanation, proposing the failure was "perhaps owing to our not having immersed them in fresh water" (H. Sheppard, fol. 158). The letter continued much in the same fashion, describing adventures over cliffs and enormous rocks, and acknowledging the personal danger she encountered in her botanical pursuits.

<27>Similarly, in her 1829 essay referring to the existing scholarship on Quebec shells, Sheppard listed what was needed to provide the specimen's scientific identification and laid out a plan of action for how it may be discerned with future efforts: "We have three different ones here, perhaps unio sinuata, radiata and nanca; but it is almost impossible to decide without figures, or

very elaborate descriptions, neither of which are to be had; could either be met with, the species of this intricate genus might perhaps be decided upon to some degree" (Sheppard, "On the Recent Shells" 191). Sheppard demonstrates a clear understanding and use of the scientific method in her measurement, examination, and questioning of specimens.

<28>Perhaps most telling, however, are Sheppard's parting salutations in her letter where, shortly after the conclusion of her tale, she rather bluntly requested a favor. Referring to issues she encountered when trying to collect seaweed, she implored "[m]ay I beg the favor of you to inform me whether immersing the seaweed in fresh water is all that need be done before pressing them" (H. Sheppard, fol. 158). Sheppard falls out of her familial language, no longer referring to her children or domestic duties, and instead gets right to the point. Similarly, while her brief, introductory set-up placed the botanical activity that followed within the realm of domestic amusement, her concluding farewell made no such efforts. It came directly after her seaweed inquiry and reads simply, "I remain dear sir, yours very truly..." (H. Sheppard, fol. 158). When comparing this letter to that of her husband from the same envelope and those of Perceval and Dalhousie, it becomes apparent that Sheppard calculated the approximate minimum politeness required of her to discuss scientific inquiries and progress with her botanical work without jeopardising the expected social conventions. Without additional letters written from Sheppard to other men or women, it is not yet possible to know just how much of her language she changed to achieve this effect.

<29>Once Sheppard established herself within the realm of the domestic by submitting to the request of her male colleagues, she prioritized her scientific rigor and objective observations over what was perceived as female piety and purity. Sheppard reassured her readers that presenting her papers was at the behest of others and made her colleague Hooker aware that she only made these discoveries while on a vacation to prioritize the health of her children. In a time when reading a Wollstonecraft or Wakefield book on botany was still seen as provocative in the eyes of many, Sheppard's active scientific research into the names of potential new North American flora, shells, and songbirds using Linnaean taxonomy contested the role of women in botanical print culture. Through a clever balancing of family small talk and humble displacement of agency, Sheppard produced scientific writings without seeming indecorous, cushioning her work in submissive and domestic tones.

<30>As one of the three female contributors from Québec to Hooker's transatlantic botanical network, Sheppard's work draws attention to the gendering and othering within colonial botany, as well as the complex identity politics at play within

nineteenth-century international scientific practices that divided countries, gender, and social classes. Though I have only scraped the surface of what can be discerned from Sheppard's scientific writings, this study aims to provide an entry point for further research into the politics of language and gender in the scientific writings of early nineteenth-century women. It also prompts further investigation into the progressive migration of women in science from the private space of their domestic gardens into the public forums of intellectual discussion alongside conversations on the intersectionality between class, gender, and wealth in British North America. By pursuing further research in this area, we may provide a better framework for situating the female scientific author of pre-Confederate Canada within the history of British colonial science.

#### **Notes**

- (1)This era of making Linnaean nomenclature more available to literate but unlearned women is defined by Sam George (2011) as 1760-1820 and by Ann B. Shteir (1990) as 1790-1840, with the former emphasizing its translation into epistolary novels and the latter on popular books on botany in general (see George, "Epistolary Exchange" 1-16).( $^{\land}$ )
- (2)Mary Wollstonecraft (1759–1797) "defended botany against prudery in *A Vindication* [1792], attacking those who would limit women's access to Linnaean knowledge" (see George, *Botany, Sexuality & Women's Writings* 6).(^)
- (3)In 1822, Amos Eaton claimed "I believe more than half the botanists in New England and New York are ladies." Rudolph 1346-1355. M. Creese and T. Creese's first and third volume of the series *Ladies in the Laboratory* include bibliographies of papers in scientific periodicals from 1800–1900 by women in America and Britain (vol. 1, 1998) and in Canada (vol. 3, 2010).(^)
- (4)Here I am referring to the recent publications of leading historians in this field who focus on the female contributions to scientific writings such as Secord, Shteir, George, Zeller, Powell, and Munroe. This overview does not, however, include female contributions in the form of botanical art and illustration.(^)
- (5) This assertion is based on the comprehensive bibliography of papers in scientific periodicals, 1800–1900, by women in Canada (see M. Creese and T. Creese, *Ladies in the Laboratory* 309–312).(^)

- (6)For more information on the history of women in scientific publishing, see Jones et al.(^)
- (7) For more on this subject, see George, *Botany, Sexuality & Women's Writings*.(^)
- (8)For example, Sarah Hoare (1777–1856), *Poems on Conchology and Botany* (1830). According to Fabienne Moine, male conchologists such as Thomas Brown and John Mawe were considered experts who wrote specialized science books, whereas women such as Hoare were "simply perceived as collectors, cleaning shells, organising cabinets, and arranging specimens according to Linnaean classification" (see Moine 220).(^)
- (9)According to scholars, "The cultural association with activities typically pursued by upper-class men gave early ornithology a quality of privilege as well as sexist social standing" (see Matthews 155).(^)
- (10) "To the writer which a silver medal was adjudged. This article was kindly communicated by the [the Society of Arts and Sciences] to which it was presented, to the Literary and Historical Society" (see Sheppard, "On the Recent Shells" 188).(\_)
- (11)Author's own translation of the original French: "Une médaille honorifique à Madame SHEPPARD, de Woodfield, pour un écrit scientifique sur la Conchologie des environs de Québec." The Society for the encouragement of the arts and sciences is here noted, in 1829, in their second year and proud to be associated with the Literary and Historical Society of Quebec (see *Société pour l'encouragement des arts et des sciences en Canada* 159).(^)
- (12)See those named and others discussed in George, "Epistolary Exchange."(^)
- (13)All letters cited in this paper are taken from the Director's Correspondence Project (DC) in the archives of Royal Botanic Gardens, Kew. Henceforth, all citations will be marked by author and folio number. For example, W. Sheppard, Letter from William Sheppard to Sir William Jackson Hooker, from Woodfield, [Quebec, Canada] (26 Oct 1829) DC/44/157 will be cited in-text as (W. Sheppard, fol. 157).(^)
- (14)See Kew's entry on *Zanthoxylum tricarpum* Hook: <a href="https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:7760">https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:7760</a>
  <a href="mailto:72-1">72-1</a>. (^)

- (15)In both *La bibliothèque Canadienne* and the *Transactions*, each society refers to the other as an esteemed partner in some way (see Stanworth 49–54).(^)
- (16)Several studies point to this same conclusion (see Shteir and Cayouette 18; Stanworth 45–49).(^)
- (17)According to James McPherson LeMoine, the Sheppards had, since moving to the Woodfield estate in 1816, "improved the house and grounds greatly, erecting vineries and a large conservatory; changing the front of the house so as to look upon a rising lawn of good extent, interspersed with venerable oaks and pine, giving the whole a striking and pleasing aspect" (see LeMoine, *Picturesque Quebec* 80).(^)
- (18)Quebec became Lower Canada as part of the Constitutional Act of 1791, it was only in 1841 with the Act of Union that Lower Canada became Canada East, which in turn became the Province of Quebec in 1867 (see Gough 254).(^)
- (19) Several studies point to the same conclusion. See Hardy n.p.; M. Creese and T. Creese *American and British Women in Science*.(^)
- (20)Her sister Louisa Sophia Campbell (1801–1886) married into the seigneury owned by Jonathan Würtele (1792–1853), who inherited the seigneuries of Deguire and Bourg-Marie-Est in 1836.(^)
- (21)For further discussions on female spaces in the interiors of 1820s British North America, see Kross 385–408.(^)
- (22)For context on the difference between eighteenth-century networks of trust and impersonal objectivity of nineteenth-century science, see Easterby-Smith (180–208) for the former and Daston (597–618) for the latter.(^)
- (23)Several letters from William Sheppard and Anne Perceval mention Harriet Sheppard. However, I claim only one has *survived* as the one letter refers to a single letter archived at Kew.(^)
- (24)Referring to French naturalist Georges-Louis Leclerc, Comte de Buffon (1707–1788).(^)
- (25)Referring first to Scottish naturalist James Rennie (1787–1867) and second to English botanist William M. Wilson (1799–1871).(^)

(26)Other avenues have, since Welter, been explored including the fringe benefits of spinsterhood and the increased freedom of royal, elite, and extremely wealthy classes. Though even in these cases, such privilege did not often make its way into the nineteenth-century scientific periodical (see Berend 935–957).(^)

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