

BLOSSOMING SCIENTISTS: WOMEN'S TRAVEL WRITING, BOTANY AND SCIENTIFIC ENDEAVOURS

NICOLE VANKOOTEN

DEPARTMENT OF HISTORY, UNIVERSITY OF WATERLOO

ABSTRACT

The diverse spaces occupied by women in travel writing, especially in Scotland, have been increasingly studied by scholars. The traveller can be seen as a data collector in the sciences, either through written observation or preserving physical items. I argue that travel writing historically allowed women to contribute to scientific discourse through their observations of the environment and specimen collection, as highlighted in the Scottish context. This paper draws from the 1903 travel diary of Jennie Fleming by examining her descriptions of the environment and flower pressings. Botany in particular was seen as a respectable way for women to participate in science. This research dives into questions surrounding citizen science and how it has historically been a space for women's contributions, while also discussing how these spaces have been disregarded and continue to be looked down upon by some academics. Lasting misogynistic culture in STEM makes this research instrumental in legitimizing historical women's contributions to the scientific community.

KEY WORDS

Travel writing, Jennie Fleming, gender, science.

METADATA

doi.org/10.4245/sponge.v12i1.24247

CONTACT

nvankooten@uwaterloo.ca

In 2004, Australian botanist Philip Short intentionally wrote women out of his book *In Pursuit of Plants*, stating that “the accounts by some men were more interesting” and that female botanists in the past were “essentially flower painters.” (Short, 2004, p. xi-xii) Contrary to this misleading narrative, women made important contributions to various bodies of scientific knowledge, especially botany. Travel literature provided women the opportunity to explore the sciences, primarily through engagement with the environment, as seen in many works involving Scottish travels. Scotland holds a rich source of travel literature from women's perspectives throughout the 18th, 19th, and 20th centuries, and therefore provides an exemplary geographic location to focus on the historical gender dynamics of science and travel writing. The 1903 Diary of Jennie Fleming, a Canadian shopkeeper in rural Ontario, will be analyzed to explore her unique engagements with science during her travels through Scotland.

Jennie Fleming was an unmarried woman living in Grey County, Ontario who travelled to

Great Britain with her nephew Roy Fleming in 1903 to visit their Scottish family homestead. Her diary from these travels can be found in the McLaughlin Library at the University of Guelph Archival and Special Collections. Fleming's writing will be examined alongside other prominent travel writers of the Scottish environment Sarah Murray, Elizabeth Grant, Georgianna Kennedy, and Isobel Wylie Hutchison to trace the evolution of women's scientific travel writing from the 18th century through the 20th. Furthermore, their perspectives will be investigated within the existing body of literature on travel writing and scientific discourse with a focus on exploration, observation, and collection to demonstrate the diversity of historical women's travel literature as a method of engagement with the sciences.

GENDER, SCIENCE, AND TRAVEL

The misconception that female travel writers were not as adventurous or knowledgeable as their male peers undermines the work of many women who embraced scientific approaches to

their male peers undermines the work of many women who embraced scientific approaches to their travels. Travel writers often advocated for a more phenomenological approach to travel that viewed the environment as an active body that required engagement with the senses and forming connections with the land (Cole, 2015, p.54). The field of botany was often seen to be a “respectable” study for educated women and opened opportunities for women in the sciences to engage (George, 2014, p.674). Flower pressings and plant specimen collecting built on women’s education in botany and plant identification during their travels. In contrast, male authors typically pursued clay and soil samples, stones, pebbles, and deceased birds (Leask, 2020, p.155). Many believed that the classification and identification of plants allowed women to participate in the scientific practices of discipline and rationality central to Western societies from the Enlightenment-era thinking (George, 2014, p.675).

It was rare during such exploratory scientific travels “to encounter a woman who had firsthand knowledge of the landscape.” (Hoyle, 2005, p. 61) Women were not always welcomed into the botanical scientific community by everyone. Some believed that the classification models put forward by Carl Linnaeus, known as the founder of botany, were too sexual to be appropriate for women’s studies (George, 2007, p.675). Furthermore, external barriers such as family commitments and a lack of formal education discouraged women’s participation in the botanical sciences. Zoology, the study of animals, was a field that seldom opened opportunities to women and even less for exploration or specimen collection (Medeiros, 2019, p.141). Despite gender differences, women who wrote travel literature demonstrated a clear connection to the environments they wrote about through details such as the feel of the earth on their hands or the sights they observed. Men and women alike travelled in the pursuit of science, though women faced discriminatory barriers that continue to shape our understanding of gender and scientific travel literature.

EXPLORING THE SCOTTISH HIGHLANDS (18TH CENTURY)

The 18th century represents an emerging period of the picturesque tour where the traveller’s focus lay on the environment and its scenery, often credited with the arrival of “men of science” who sought to explore and learn about foreign geographies (Wickman, 2011, p.69). The scenic, or picturesque, tour became associated with different meanings for male and female travellers. Women were often regarded as “passive consumers of scenery” while men were in “pursuit of knowledge.” (Perkins, 1991, p. 155) Of the women who managed to find employment in the sciences, such as in a laboratory or museum, many found it difficult to take their studies outside of these spaces as their employers often limited them from engaging in exploratory fieldwork (Medeiros, 2019).

Despite gendered expectations, women were leaders rather than followers in the travel literature themes of “discovery, travel and escape.” (Macpherson, 2004, p. 194) Travel writing provided a means for women to engage in exploration which brought a scientific element to their writing. For example, Sarah Murray (1744-1811), the prominent English female author of the Scottish Highlands published *A Companion, and Useful Guide to the Beauties of Scotland* in 1799 followed by a second volume titled *A Companion and Useful Guide to the Beauties in the Western Highlands of Scotland* (Murray, 1803). Her guidebooks uniquely encouraged female participation in the exploration of the strenuous Highland environment in fierce opposition to the many other travellers discouraging it (Perkins, 1991, p. 165). The Highlands were often regarded as inappropriate for women to explore due to its rugged terrain that would be too physically demanding (Perkins, 1991, p. 165).

Murray challenged these misogynistic ideas of female travellers interested in exploring the environment as her travel writing of the Highlands came to be some of the earliest published tourist guides (Perkins, 1991, p.165). Murray’s descriptions of slipping, hanging by trees, and clinging onto rocks highlight her adventurous side when exploring the Falls of Foyer (Perkins, 1991, p. 166). Though it is

unclear if Fleming read any of Murray's guidebooks, their legacy is certainly influential as Jennie Fleming similarly explores the various Scottish environments as a female traveller nearly a century later, including the more rugged and mountainous terrain as she writes "Craigie ban is the first mountain and a great height-rocky bluffs with trees all up the mountain side." (Fleming, 1903) There is a real sense of awe as Fleming explores the mountains with her own eyes and transcribes what she sees onto the pages of her diary in a scientific manner. While she may not have explored the Highlands to as great a physical demand as Murray due to her age of 60, Fleming's writing emphasized the exploratory elements of her travels. She did not fear the terrain but rather appreciated the landscape with a desire to explore Scotland's natural environment.

THE FACTUAL TRAVEL ACCOUNT (19TH CENTURY)

As Murray and Fleming highlight, women actively engaged with the environment through exploration and were not passive in their enjoyment of the scenery. In the 19th century, female authors began creating a space for their work in manuscript styles that emulated their domestic roles as women, including diaries and travel journals (King, 2014, p. 266). Elizabeth Grant (1797-1885), married name Smith, is a remarkable Scottish author known for her insightful observations on the physical and social environment in her 1911 manuscript *Memoirs of a Highland Lady*, published posthumously by her family. Grant is known for her "extraordinary capacity for visual recall" in her writing by describing detailed images of her memories and observations (Butter, 1997, p. 208). Though it was not written as a typical travel narrative as it did not follow a specific trip, her commentary on the changing Scottish landscape similarly recalls observations and events in great detail.

The "factual travel account" was a common narrative method among scientific travel writers, male and female alike, to introduce their readers to other places in an age of expansion and improving communication (Smethurst, 2013, p.44-45). This scientific approach to travel writing included recording environmental observations,

cultural customs, geographical positions, and collecting specimens (Smethurst, 2013, p.44-45). The main observations in Fleming's diary focus on the scenery, such as her notes about whale sightings and icebergs on June 30th. Fleming indicated confidence in scientific calculations such as nautical measures of distance on her way overseas to the United Kingdom. She recorded the distance they had travelled on the St. Lawrence to be "356 knots in the last 24 hours" and further noted that "a knot is a mile and an eighth." (Fleming, 1903) She continued these calculations throughout her diary, estimating that on June 5th they were 155 miles from Ireland (Fleming, 1903).

Elizabeth Grant similarly adopted a "factual travel account" style to her Scottish Highland life manuscripts, especially regarding natural environments. Logging practices, such as timber floats, are a recurring theme in her memoirs. After hearing the news of the death of her neighbour Allan on his way to a timber float, she wrote, "it was a wild night, wind and hail changing to snow, and he had eleven or twelve miles to go through the forest full of paths, and across the heath that was trackless." (Butter, 1997, p. 210) Her description of the Highland winter environment gave readers a vivid sense of the landscape and climate which asserted a sense of credibility given her level of detail. This passage commented on the harsh realities of logging within Highland communities, observing its toll on man and nature alike. Grant's discussion of Scottish logging coincided with the transition from oak forest management for charcoal production to the more exploitative practice of timber felling (McCarthy, 1998, p.86). In fact, by her death in 1885, the lowest amount of historical woodland likely remained in Scotland at approximately 750,000 acres of forest (McCarthy, 1998, p.86).

Jennie Fleming also commented on natural resource extractions during her travels nearly 60 years after Grant's memoirs. As she sailed past the Isle of Ailsa Craig in Scotland, Fleming noted the ongoing quarrying and how the people living on the East side were "devoted to this industry." (Fleming, 1903) Fleming did not describe the scene with such detail as Grant, perhaps because she was living in Canada and

likely would not have much knowledge about Scottish natural resource management practices. Nonetheless, the observations made by these female authors show clear engagement with the environment and its resources even though women were not at the forefront of its management. These observations highlight how female travel writers did not passively enjoy their environments but sought to learn from them and share their knowledge with their readers through a factual travel account.

CONNOISSEURSHIP AND TRAVEL LITERATURE (19TH CENTURY)

By the time Jennie Fleming wrote about her travels in 1903, women had established themselves professionally in the sciences, though they continued to face discrimination and many barriers to their education. Asserting credibility was one of the biggest challenges that female travel writers faced in the 19th century. Women's travel writing was often deemed "unserious" and rather "light reading" in comparison to their male counterparts (Perkins, 2017, p.181). Enlightenment ideas of rationality and order were characteristic elements of connoisseurship commonly used by male travellers as they aimed to record their trip with precise, objective thought (Palmer, 2015, p.255). Connoisseurship was a professional space for women to participate in scientific thought in their visual art critiques (Palmer, 2015, p.251). This practice involved honest and knowledgeable criticism of art pieces and many connoisseurs, including women, approached it with scientific objectivity (Palmer, 2015, p.251-252). Many female writers found that adopting common strategies that men used in their writing allowed them to mitigate prejudice against their work (Medeiros, 2019, p.14).

Travel writing can be seen as an act of connoisseurship of the natural environment. Fleming carefully and objectively noted some of the more scientific details of her travels. Her observations carried picturesque sentiments, such as when she described the Irish Donegal as an "oasis" or the St. Lawrence as "beautifully smooth," but also emphasized careful attention to objective detail that a passive scenic tourist would not have noted (Fleming, 1903). These

descriptions of beauty may at first seem like passing comments during her travels, but there is a scientific approach in the way she reported the sights of the natural environment. She was awed by the beauty of the Laurentian Mountains while also scientifically recording their height at 2695 feet (Fleming, 1903).

The travel writing of Georgianna Kennedy (1805-1843) provides a first-hand perspective on the role of connoisseurship and art in Victorian-era women's engagement with the sciences. Kennedy was an English woman who, after moving to Scotland to live with family, sketched, collected, and wrote extensively during her time among the Highlands until her marriage to Captain John Molloy. Though some authors today may discredit the importance of botanical arts, they were highly esteemed and encouraged for women of the upper classes. *Lettres élémentaires sur la botanique*, written by famous philosopher Jean-Jacques Rousseau, was intended for a female readership (George, 2007). *Botanical Magazine* similarly targeted its audience towards "ladies, gentlemen, and gardeners, as they wish to become scientifically acquainted with the plants they cultivate." (George, 2007, p. 19).

Furthermore, Kennedy artistically documented the scenery she encountered as she writes, "I essayed a sketch of Loch Striven with which I was much pleased." (Molloy, 1828) She skillfully recorded her observations of the beauty of the environment she was capturing using art to convey the factual travel account. Kennedy was also an avid collector of flower specimens, many of which she expertly pressed and preserved. In fact, her pressing of *Drosera macrantha x stricklandii*, a hybrid specimen of the Australian bridal rainbow plant, remains today in the Royal Botanic Gardens at Kew. Collecting specimens provided women with an artistic hobby, or in many cases, a scientific career. Though Fleming never sketched the views from her travels, her prose reveals her intimate thoughts about the environments she encountered. Travel literature encouraged women to document their explorations and observations in creative ways to engage with the sciences through connoisseurship.

TRAVEL WRITING AND BOTANY (20TH CENTURY)

Georgianna Kennedy was not unique in her collection and preservation of plant specimens. Botanical specimen collection represents a prominent intersection between science and travel writing, highlighting women's active engagement in the sciences. Botany in the 19th century was largely associated with the broader field of natural history and coincided with increasing scenic travel (Smethurst, 2013, p.8). Men and women continued to follow scenic tours to pursue scientific engagements like collecting into the 20th century when global travel became easier with transportation innovations such as railways, large watercraft vessels, and road vehicles. Travellers were essential to "perform the key labour of 'gathering' and 'bringing'" scientific material (Vanek, 2015, p. 558). Perhaps the most famous female specimen collector was Isobel Wylie Hutchison (1889-1982), born and raised in Scotland.

"A Walking Tour Across Iceland" is an article written by Hutchison and published in the April 1928 edition of *National Geographic*. Botany is a prevalent topic in her rendition of the Icelandic journey. She writes, "for not on the most barren moorland did I lose touch with the beautiful little Alpine flora, the cushion pink, the white mountain saxifrage, the sea pink..." (Hutchison, 1928) Her keen eye for botany and knowledge of plant species is evident in her account of her Icelandic travels. Jennie Fleming similarly boasted impressive awareness of flower identification in her diary. She noted the flowers used to adorn the tables on the ship and identified them as "decorated with roses, carnations and palms." (Fleming, 1903) On June 25th, Jennie Fleming pressed flowers between the pages of her diary entry from Toronto to Quebec City, an act which is emblematic of the greater culture of the gender-appropriate method of specimen collection through flower pressing. It is unclear where exactly she picked the flowers from along this journey.

Greenland was Hutchison's target destination, however it only allowed a narrow set of visitors which included government officials and scientists (Hoyle, 2005, p.44). In 1927, Hutchison's application as a private botanist was

approved for travel to Greenland from July until November (Hoyle, 2005, p.44-47). Unmarried women like Hutchison and Fleming, without the restraints of a husband or children, were predominant in the fields of natural history and botany (Shteir, 2006, p.53). Motherhood often signalled the end of a woman's career advancement in the sciences (Shteir, 2006, p.51). Hutchison chose to advance her career with successful travel writings published in *National Geographic* among other journals and newspapers that helped fund her expeditions (Hoyle, 2005, p.45).

The Royal Botanic Gardens at Kew allowed women to share their scientific contributions apart from travel writing. The Gardens at Kew were historically a center for botanical studies to educate the British population (Short, 2004, p.xi). Kew accepted and encouraged women's engagement in scientific inquiry by adding their specimen collections to the Gardens, which includes the work done by Isobel Wylie Hutchison as well as Georgianna Kennedy. Hutchison's collections from Arctic ecosystems were recognized and sought after on behalf of distinguished botanical institutions such as Kew and Cambridge University (Hoyle, 2005, p.150-151). Although Jennie Fleming's pressings are not displayed in any institution, she certainly exemplified characteristics of scientific inquiry in regard to botany. Fleming writes "there is a nice park inside the wall with two plane [also known as sycamore] trees and elm, some of which might have been planted by Mary Queen of Scots," at Loch Leven, highlighting her clear curiosity about the plants' histories and how they came to be (Fleming, 1903). As shown through the specimen collections of Isobel Wylie Hutchison, Georgianna Kennedy, and Jennie Fleming, their preservation of plant specimens opened opportunities for some female travellers to pursue careers in the sciences or informal methods of scientific contribution.

CONCLUSION

Travel writing was an influential literature movement from the 18th, 19th, and 20th centuries, particularly in Scotland. A traveller today can document their journey through pictures and social media posts, but for historical travellers

the best way to preserve their memories of the trip was on paper. Travel literature was an essential part of the sciences and notably provided women with opportunities to participate in scientific inquiry through exploration, observation, and botanical collection within the natural environment. Women faced many barriers in doing so, even though their writing was quite similar to their male peers in most respects. This

can be seen in the comparison between the 1903 Diary of Jennie Fleming on her trip to Great Britain and important Scottish writers like Sarah Murray, Elizabeth Grant, Georgianna Kennedy, and Isobel Wylie Hutchison. Lasting misogynistic culture in STEM proves this research instrumental in legitimizing and giving credit to historical women's contributions to the scientific community.

ACKNOWLEDGEMENT

I would like to acknowledge Dr. Kevin James and the Scottish Studies Department at the University of Guelph for the inspiration and support of this research.

BIBLIOGRAPHY

- BuButter, P. (1997). Elizabeth Grant. In D. Gifford and D. MacMillan (Eds.), *A History of Scottish Women's Writing* (pp. 208-215). Edinburgh University Press.
- Cole, E. (2015). Impetuous torrents: Scottish waterfalls in travellers' narratives, 1769–1830. *Scottish Geographical Journal*, 131(1), 49-66.
- Fleming, J. (1903). *Diary of Jennie Fleming: Trip to Europe with Roy Fleming 1903*. University of Guelph: Centre for Scottish Studies.
- George, S. (2007). *Botany, Sexuality, and Women's Writing 1760-1830: From Modest Shoot to Forward Plant*. Manchester University Press.
- George, S. (2014). Carl Linnaeus, Erasmus Darwin and Anna Seward: Botanical Poetry and Female Education. *Science & Education*, 23(3), 673–694.
- Grenier, K. H. (2017). *Tourism and identity in Scotland, 1770–1914: Creating Caledonia*. Routledge.
- Hoyle, G. (2005). *Flowers in the Snow: The Life of Isobel Wylie Hutchison*. University of Nebraska Press.
- Hutchison, I. W. (1928). A walking tour across Iceland. *National Geographic*, 467-497.
- King, R. S. (2014). Letters from the Highlands: Scribal Publication and Media Shift in Victorian Scotland. *Book History*, 17(1), 298-320.
- Leask, N. (2020). *Stepping westward: Writing the Highland Tour c. 1720-1830*. Oxford University Press.
- MacArthur, E. M. (2009). Fresh fields for inquiry: Travellers to the Highlands in the eighteenth century. In C. MacLachlan (Ed.), *Crossing the Highland Line: Cross-currents in Eighteenth-Century Scottish Writing* (pp. 153-160). Association for Scottish Literary Studies.
- Macinnes, A. I. (2015). Contacts and tensions: Highlands and Lowlands in the nineteenth century. In C. MacLachlan & R. W. Renton (Eds.), *Gael and Lowlander in Scottish literature: Cross-currents in Scottish Writing in the Nineteenth century* (pp. 1-21). Scottish Literature International.
- Macpherson, H. S. (2004). Women's travel writing and the politics of location. In K. Siegel (Ed.), *Gender, Genre and Identity in Women's Travel Writing* (pp. 193-208). Peter Lang Publishing Inc.
- Martin, A. E. (2016). Outward bound: Women translators and scientific travel writing, 1780-1800. *Annals of Science*, 73(2), 157–169.

- McCarthy, J. (1998). *An Inhabited Solitude: Scotland, Land and People*. Edinburgh, Luath Press.
- Medeiros, M. (2019). *Gender, Science, and Authority in Women's Travel Writing: Literary Perspectives on the Discourse of Natural History*. Lexington Books.
- Molloy, G. (1828–29). *Notebook diary in the handwriting of Georgiana Molloy*. Transcribed by H. M. Wilson, updated by P. Richardson-Bunbury & M. G. Hopner. ACC4730A/18, Battye Library, Perth, Australia.
- Murray, S. (1799). *A Companion, and Useful Guide to the Beauties of Scotland*. London: George Nicol.
- Murray, S. (1803). *A Companion and Useful Guide to the Beauties in the Western Highlands of Scotland*. London: W. Bulmer and Co. Cleveland-Row
- Palmer, C. (2015). 'I will tell nothing that I did not see': British women's travel writing, art and the science of connoisseurship, 1776-1860. *Forum for Modern Language Studies*, 51(3), 248–268.
- Paterson, A. (2009). *Scotland's landscape: Endangered icon*. Edinburgh University Press Ltd.
- Perkins, P. (2017). "News from Scotland": Female Networks in the Travel Narratives of Elizabeth Isabella Spence. *Women's Writing*, 24(2), 170–184.
- Perkins, P. (1991). Tourist Sites and Travellers: Women and Late Eighteenth-Century Scottish Tourism. In D. Simonton & K. Barclay (Eds.), *Women in Eighteenth-Century Scotland: Intimate, Intellectual and Public lives* (pp. 153-169). Routledge.
- Rural Diary Archive. (2023). Jean (Jennie) Fleming. Retrieved December 11, 2023, from <https://uoguelph.ca/ruraldiaryarchive>.
- Siegel, K. (Ed.). (2004). *Gender, Genre and Identity in Women's Travel Writing*. Peter Lang Publishing Inc.
- Short, P. (2004). *In Pursuit of Plants*. Timber Press.
- Shteir, A. B. (1996). *Cultivating Women, Cultivating science: Flora's Daughters and Botany in England, 1760-1860*. Johns Hopkins University Press.
- Smethurst, P. (2013). *Travel writing and the Natural World, 1768-1840*. Palgrave Macmillan.
- Smethurst, P. (2012). Peripheral vision, landscape, and nation-building in Thomas Pennant's tours of Scotland, 1769–72. In B. Colbert (Ed.), *Travel Writing and Tourism in Britain and Ireland* (pp. 13-30). Palgrave Macmillan.
- Smith, E. G. (1911). *Memoirs of a Highland lady; the autobiography of Elizabeth Grant of Rothiemurchus, afterwards Mrs. Smith of Baltiboy, 1797-1830*. London J. Murray.
- Turnock, D. (1982). *The Historical Geography of Scotland since 1707*. Cambridge University Press.
- Vanek, M. (2015). The Uses of Travel: Science, Empire and Change in 18th-century Travel Writing. *Literature Compass*, 12(11), 555–564.
- White, J. (2021). "The proud & haughty rocks": Gender, Botany and Archipelagic Travel Writing in Scotland. *Nineteenth-Century Contexts*, 43(3), 309-327.
- Wickman, M. (2011). Travel Writing and the Picturesque. In M. Pittock (Ed.), *Edinburgh Companion to Scottish Romanticism* (pp. 61-71). Edinburgh University Press