WOMEN AND PLANTS— A FRUITFUL TOPIC

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In recent years, feminist scholarship has witnessed a great flowering of analyses about the uses and abuses of the ancient association between woman and nature. Annette Kolodny in *The Lay of the Land* (Chapel Hill, 1975), Susan Griffin in *Woman and Nature: The Roaring Inside Her* (New York, 1978) and, most recently, Carolyn Merchant in *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York, 1980) have explored implications of Western images and attitudes about woman as nature. They help us see that if, for example, woman is Mother Earth, her nurturing power may be apparent but she also may be subject to rape. Or, if woman is matter in a philosophico-religious culture which celebrates the separation between body and spirit, then her moral power and access to intellectuality are undercut. Similarly, if woman is untamed and powerful, then male subjugation of woman can be espoused in the name of human (male) technological control over nature. Clearly, an identification or association between woman and nature reflects ideology. It also lends itself easily to ideological purpose, conventionally to the disadvantage of women.

In this essay I will explore the conjunction between women and plants, as offering a window upon the larger theme of women and nature. The story of women and plants is as old as the Mother of Agriculture, as old as Eve in the Garden, and as old as the first herbal practitioner, who used knowledge of plants to heal, and who at times of witchcraze suffered for her valuable knowledge. We can say in general that the story of women and plants concerns the quest for knowledge and the kinds of control that knowledge can bring. But it concerns as well, barriers placed between women and knowledge, and attempts made to short-circuit female efforts toward control over themselves and their world. The topic of women and plants reveals ideas about women, particularly about what it is appropriate and inappropriate for women to do and to be. The topic is, in other words, a mirror on social and intellectual history.

The eighteenth and early nineteenth centuries in England offer a fertile field for spadework in this area. Indeed, by looking at female involvement with plants in this period, and by following ideas about this sort of female activity during that time, we can chart ideas about female knowledge, curiosity, education and habits. A general fascination for natural history swept across Europe during the eighteenth and nineteenth centuries, and it was fashionable for the aristocracy and the leisured


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middle-class to be involved with plants, along with birds, insects and shells.[1] Botanical gardens, public and private, flourished in England and on the Continent. People collected plants, dried and pressed plants, drew them, named them and categorized them. They wrote about plants and taught about plants.

Women were a very visible part of the public fascination for plants in this period, as audience and as contributors. Their place in the history of plant study is not, however, apparent from the standard histories. This is not surprising, for their activities were not those which historians considered central. Mainstream botany in the eighteenth century concerned itself with hunting out new plants in exotic parts, and also with taxonomy and nomenclature.[2] Given the wealth of information being accumulated at this time about plants, problems about how to organize, systematize and name plants were very real. Women tended not to be deep in the jungles hunting for plants, and their access to the systematic study of botany also was restricted.[3] They had little Latin, which at that time still was the *lingua franca* of botanists. They were excluded from formal scientific societies,[4] and they usually had no entry to the indispensable informal scientific networks.

In looking for women's contributions to botany in the eighteenth and early nineteenth centuries in England, we do not look to the mainstream history of discoveries and theories. We look instead to the social history of science, particularly to the way in which women helped by their activities to spread and to popularize plant study. One large area of contribution had to do with collecting plants. Lady Margaret Cavendish Bentinck, the Duchess of Portland, was a well-known aristocrat who served botany and natural history by her wealth. She commissioned plant hunters to send exotics from all over the world for the botanical garden on her estate, and she was a major patron to botanical artists of the day. A serious collector with scientific interests, her collection of plants, animals and insects is considered to have been much more important for British natural history than the British Museum itself at the time.[5]

Two other well-placed enthusiasts of botany in this period were George III's mother, Princess Augusta, and his wife, Queen Charlotte. The Royal Botanical Gardens, Kew, developed and prospered under the auspices of Princess Augusta, and Queen Charlotte's active interest in botany was central to the upsurge in popularity of plant study among the nobility and the gentry during the second half of the eighteenth century.

By the mid-nineteenth century plant collecting and plant study offered suitable pastimes to women of varied backgrounds and circumstances. Many local and national flora in Britain acknowledge the work of female collectors who contributed information and plants. Women certainly figure among the key collectors of seaweed in England, this activity belonging in part to the educational amusements of Victorian seaside holidays.[6] There is a Canadian example which displays female work during this time too. The first collection of plants from Prince Edward Island was put together in the years 1849-54 by Anne Haviland, wife of the then Lieutenant-Governor, who sent them to the Royal Botanic Gardens at Kew, as the earliest holdings on record there from the Maritime Provinces.[7]

From the middle of the eighteenth century in England, as in France, fashionable ladies took classes in flower-drawing. While in some cases the interest was chiefly decorative—drawing plants as the basis for needlework—in other

cases the interest had a scientific impetus. Mary Delaney, a member of the highest court circles, produced during the years 1774-84 one thousand "paper mosaics," as she called them. These were cut-outs of paper flowers based on dissections of actual flowers. Mrs. Delaney, for example, took apart a rose, petal by petal, then cut out pieces of thin colored paper which she pasted in layers on a black background, with a strikingly lifelike result.[8]

Other women in this period produced botanical drawings for money. Elizabeth Blackwell's *A curious herbal, containing 500 cuts of the most useful plants* (1737-9) was done to help rescue her ne'er-do-well husband from debtor's prison. For this compilation of medicinal plants, Elizabeth Blackwell drew plants in the Chelsea Physic Garden in London, etched and engraved the copper plates, and handcolored the prints. Her project received strong support from the medical profession of her day.[9] Interestingly, for all the aptitude which the work displays, Blackwell claimed to have no skill in botany, and one sees there powerful female self-deprecation. By the end of the eighteenth century, a few female flower painters ran schools to teach the skill. Starting in the 1790s Mary Lawrence, for example, had her own school in London for teaching botanical drawing, and she also published books illustrating plants, including the first monograph ever done on roses.[10] In the colonies, the Nova Scotian Maria Morris, taught flower painting and pursued botanical illustration as a profession during the years 1835-67, publishing lithographs of her naturalistic watercolours in several series, such as *The Wild Flowers of Nova Scotia* (1840).[11]

In addition to illustrating books, women also wrote the texts for books on botany and on plants. This begins, in England, at the end of the eighteenth century with books chiefly for young people. In 1796, Priscilla Wakefield, a Quaker writer of moral tales and improving travelogues, published *An Introduction to Botany*, a textbook on botany for children and young people. This popular text went through eleven editions by 1841, rivalling various other texts, also by women, which appeared during the early nineteenth century. In the specialized market of natural history books for children, women declared a central place for themselves from the start. By the mid-nineteenth century women writers moved into the adult market as well, Catherine Parr Traill's writing on botany being a foremost Canadian example. Traill wrote the botanical text for her niece Mrs. Fitzgibbon's book *Canadian Wild Flowers* (1869), and she also wrote several other books on botany.[12] Traill's interest in plants was real and scientific. Some of her writing in this area was done explicitly for money, and she was able to till the botanical soil to her financial advantage.

The activities in botany which have been described so far were, for the most part, not renegade acts out of phase with the social mood. Throughout the eighteenth and nineteenth centuries there was much declared encouragement for women to study plants. These recommendations usually were allied to attacks on women for being lazy, idle, silly and frivolous. Attacks of this kind often were part of a campaign for improving female education. Mary Wollstonecraft's *A Vindication of the Rights of Woman* (1792) is a culmination of a whole century of discussion about women's education, particularly about the need to educate women not for their sensibilities but for their minds, not for their feelings, not for their virtues, but for their moral fibre. Botany was seen as one way to improve women and their mental and moral well-being. We see botany advocated as an improving activity in ladies' magazines and in books for women on botany.

Eighteenth-century England gives us the first women's magazines, very self-conscious journals by women for an audience of women. Women's periodicals appeared at this time for the same reason that women novelists appeared at the time, namely, that a newly leisured and increasingly literate group of middle-class women needed something to do with their time. One of the earliest and best-known women's magazines was Eliza Haywood's *The Female Spectator.*

Haywood, impatient with what she saw as the frailties of her sex, attributed these frailties to improper education. She saw her journal as a good way to educate women about manners and morals, and she considered natural history to be a tool in this larger campaign. Accordingly, a letter penned under the name "Philo-Naturae" recommends that ladies should observe plants, butterflies, ants and bees. Nature study, the writer declares, serves a very good social purpose by providing topics for conversation, but the moral and religious purposes are even more important, leading the student from reverence for nature upward to reverence for nature's God.[13]

A Canadian women's periodical one full century later echoes the theme of the benefits of plant study for women. A publication from 1848 of the Burlington Ladies' Academy in Hamilton, Ontario, sought to promote botany as a science which particularly recommends itself to women. Botany is presented as salutary for health, offering physical exercise and a relief from mental toil. As well, it is an activity which inculcates desirable qualities, as we see:

> Surely no lady can investigate the perfect order of nature in the formation and growth of flowers without receiving lessons in regularity and system—traits so essential to the female character.[14]

The orderliness of botany supplies a corrective upon an ostensible defect in the female nature. Another advantage of examining the plant kingdom is that one can pick up tips about proper behavior by imitating the habits of particular flowers. The example given, splendidly Victorian, is that of the shrinking violet:

> But not least among the virtues of the study of flowers is their acknowledged influence upon the affections of the heart. Who can look upon the loveliest gem of the floral kingdom, the violet, partially concealing itself in the leafy bower, from the garnish [sic] gaze of the sun, without feeling an instinctive yearning to imitate that beautiful symbol of retiring modesty.[15]

A document such as that enables us to read back, through popular reading matter and through educational tracts, to ideas about what women should know and how they should be: informed but not learned or intellectual, healthy but not too active, and, we might say, engaged but not *engagée.*

And indeed limitations were put on female botanical study. "Philo-Naturae," cited earlier from *The Female Spectator*, supports only certain aspects of nature study for women, writing "I would not be thought to recommend to the ladies that severe and abstruse part of it which would rob them of any portion of their gaiety."[16] It would be inappropriate, on that view, for women to turn their minds to large systems, women's minds being considered unsuited to theorizing.

A most interesting area in which limitations are placed on female knowledge about plants concerns plant sexuality. Eighteenth-century botany rested upon a vast data base of information about individual plants. As people

combed the world for exotic plants, the need arose for a way to organize the wealth of individual specimens in the Vegetable Kingdom. Trying to bring all the detail about plants into some system, various botanists looked for one quality or one aspect of plants which would help distinguish groups of plants from each other. The Swedish botanist Linnaeus, arguing that plants, like animals, reproduce by sexual means, proposed a taxonomy of plants based upon the reproductive parts. His classifications within the plant kingdom derive from details of the male organ (the stamen) and the female organ (the pistil). By counting the sexual parts of a flower, noting the number, size and placement of the stamens, for example, Linnaeus delineated an elaborate system of plant families.[17]

Linnaeus' sexual system aroused much indignation in many circles across Europe. Some botanists disputed it on scientific grounds, others on grounds of outraged propriety. Linnaeus portrays plants anthropomorphically, referring, for example, to brides, bridegrooms and nuptial beds. His description of a pansy with its petals open in a very languid manner led one writer to refuse to cite that passage because he considered it "too smutty for British ears."[18] But the ease of Linnaeus' system, which allowed one to categorize and to identify plants simply by counting the male and female parts of flowers, helped to make plant study widely available to the ordinary fashionable lady or gentleman who wanted to know about plants.

No doubt some people also enjoyed the titillation of it all. In the 1790s, Erasmus Darwin (Charles Darwin's grandfather) tried to lay out Linnaeus' botanical system in poetic form, in a long poem, "The Loves of the Plants." Darwin took obvious delight in passages which describe seductions, flirtations, copulations, and adultery in the plant world, where he tells of "Beaux and Beauties [who] . . . woo and win their vegetable Loves."[19].

At this point the reader may well wonder how such emphasis on plant sexuality in the eighteenth century squares with the belief, also of the time, that plant study can cultivate modesty and virtue in the women who were encouraged to pursue it. These approaches to the lovely world of flowers would seem incompatible, and the problem did not go unnoted by various educators and guardians of the female commonweal. The most common solution in the late eighteenth and early nineteenth centuries to the problem of the incompatibility of plant sexuality and female moral improvement was bowdlerizing, a portent of the Victorian world.

In 1798 the Reverend Richard Polwhele published a poem, "The Unsex'd Females." In this poem Polwhele joins the crowd of detractors of the ideas and morals of Mary Wollstonecraft, who by this time was a notorious advocate of female education and emancipation. Polwhele charges her with having transformed gentle and moderate literary ladies into zealous Wollstonecraftians. Among the disgusting habits of ladies of the 1790s, Polwhele tells us, is botanical activity:

> With bliss botanic, as their bosoms heave,
> [they] Still pluck forbidden fruit, with mother Eve,
> For puberty in sighing florets pant,
> Or point the prostitution of a plant;
> Dissect its organ of unhallowed lust,
> And fondly gaze the titillating dust;[20]

Botanizing obviously does not accord with Polwhele's idea of female modesty. For him, any woman who engages with the plant realm can be said to have jettisoned sweetness and

poetic feeling in favor of unfeminine arrogance and impiety.

As one might expect, male censoring of female activities has a counterpart in censorship by women, particularly by women teachers and authors who worry in a very traditional way about female manners and morals. Although this approach to female learning becomes more current during the nineteenth century, the conservative stamp is already fully apparent in *A Poetical Introduction to the Study of Botany* by Frances Arabella Rowden, published in London in 1801 (3rd edition, 1818). Rowden ran a school in Chelsea for girls of good families, and she taught botany there for the assorted standard reasons of health, manners, morals and spiritual wellbeing. Describing plants in her book, Rowden skirts sexual reference as much as possible, and she directs attention to the moral lessons which can be derived from individual plants, "so that the improvement of the heart might keep pace with the information of the mind."[21]

Rowden explains in the preface of her book that she sought initially to render Erasmus Darwin's work on plants into a form more accessible to her readers. Finding his language, however, "too luxuriant for the simplicity of female education," it became necessary for her to rewrite and to expurgate Darwin on plants, and Rowden does this enthusiastically in the service of female delicacy. For instance, in "The Loves of the Plants" Darwin describes the Mimosa, a plant which droops when touched. In the full botanical name for this plant, *mimosa pudica*, "pudica" refers to chastity or virginity. Darwin depicts the plant as "chaste" and "timid," an Eastern bride "quivering as the night approaches," who soon will enter the seraglio of her lord. (Canto I, 11, pp. 255-8). By contrast, Rowden renders "pudica" as "humble," and the plant as a young maiden whose guardians "control each rising tumult of [her] erring soul." (pp. 153-5). Emphasis falls there upon sexual suppression and not upon sexual anticipation!

It should not surprise us that the topic of plant sexuality produced strong reactions. Consider that Eve's apple or tomato in the Garden of Eden may be seen as the knowledge of sexuality, and that her sin may be interpreted as having been a wish for the knowledge of sexuality. The subject of plant sexuality is, in fact, a specific instance of the larger matter of woman's access to knowledge which cultural norms deem dangerous or threatening in female hands.

Two examples of the conjunction between women and plants will serve to draw this essay into the twentieth century. In 1909 a woman's request to bring a pram into the Royal Botanic Gardens at Kew was refused as not befitting the gardens as a scientific institution. A public furor ensued, and this ditty appeared in a newspaper:

> O, Mr. Barrie, what shall I do?
> I want to study botany, but prams are barred in Kew.[22]

It appears that women were barred from plant study precisely because they reproduce; babies, books and plants are taken to be fully disparate. The suggestion would seem to be that a woman must demarcate activities, choosing either babies or plants. That traditional split between the maternal and the intellectual was, we know, at work among certain advocates in early nineteenth-century feminism. Women were urged to imitate a male model of intellectual achievement, sidestepping the maternal and the sexual. Control meant denial of the female.

But a still more recent yoking of women and plants recommends precisely that women should act like plants and reproduce like them. After a female journalist in England had argued, in 1978, that women should be allowed to be promiscuous and that sex should not be tied to procreation, a male botanist replied by drawing an analogy between female human beings and female plants:

> The human female accepts coitus predominantly and instinctively for its reproductive content. In plants pollination is normally followed by fertilization, and those individual plants in which fertilization does not follow pollination are ruthlessly weeded out. In the human species those females who experience coitus without conceiving are immediately weeded out as biological failures.[23]

Viewing woman as plant, the botanist insists that, "A woman's body has not been evolved to experience continuous pollination without fertilization."

This deeply atavistic view, a traditional panicked Romantic response to emancipatory ideas, elicited reply from a female botanist who, she admits, "enjoys being pollinated as often as possible." The writer uses ecological grounds to explore and reject the prescriptive analogy between women and plant sexuality:

> Unlike plants human females are capable of being fertilized about twelve times a year. Even if they conceive as often as the human gestation period allows, this would imply that nature makes allowances for a number of pollinations from which fertilization does not ensue. As [the correspondent] must know, a natural plant community can only flourish to the level at which any given habitat is able to support it. If every human female were nothing but a breeding machine, . . . the human species would, and still may, soon dominate this planet to such an extent that the ecological system would collapse completely, and the plants so beloved by [the correspondent] and myself would completely vanish.[24]

The feminist botanist might add that the breeding woman often lacks time and opportunity for learning about her context, and so may lack the possibility for control which that knowledge can bring.

I have cited these recent voices at some length because they show that plant study can be an ideological enquiry like any other, as we project upon nature our own beliefs, fears and wishes. The identification or association of woman and plants has been directed for many centuries to the detriment of those of us who are daughters of Eve. Interpreters have presented plants as locked into tight cycles of fertilization and reproduction. Plants have been praised as ornamental, as soothing beauty to the harsh realities of life. Plants have been described as passive, as dependent upon the skilled hand of the gardener to awaken possibilities. Recall, in this connection Rousseau's statement that the mind of Sophie, Emile's wife-to-be, is "well-tilled land . . . waiting for the grain."[25]

The analogy between woman and plants can be recast to our advantage, however, by emphasizing other aspects of plant process: the passionate search of the unfolding seed for light, the fierce urge for growth and the intrinsic possibility for full flowering. Interpreters of nature can highlight environmental influences upon plant growth: the state of the soil, the amount of sun and rain,

the sensitivity of the gardener to the burgeoning power of the plant. In our day we are repossessing our own powers as gardeners and self-gardeners, cultivating the soil with respect and reverence for natural forces. As participants in, and as students of nature, the future is ripe with possibility.

NOTES

1. See David E. Allen, *The Naturalist in Britain: A Social History* (London, 1976), esp. Chapter 2.
2. See Blanche Henrey, *British Botanical and Horticultural Literature before 1800* (London, 1975), Vol. II.
3. For late nineteenth-century examples of this, see Dorothy Middleton, *Victorian Lady Travellers* (London, 1965).
4. Women were not admitted to the Linnaean Society until 1904 and to the Royal Society until 1945.
5. Allen, *The Naturalist in Britain*, pp. 29-30.
6. *Ibid.*, pp. 125-28.
7. *Kew Bulletin*, Vol. 3 (1948), p. 236.
8. On Mary Delaney and other female flower-painters, see Wilfrid Blunt, *The Art of Botanical Illustration* (London, 1955).
9. Henrey, *British Botanical and Horticultural Literature before 1800*, Vol. II, pp. 228-36.
10. *Ibid.*, pp. 577-81.
11. Mary Sparling, " 'The Lighter Auxiliaries": 'Women Artists in Nova Scotia in the Early Nineteenth Century," Vol. 5, No. 1 (Fall 1980), pp. 98-104.
12. See Elizabeth MacCallum, "Catherine Parr Traill: A Nineteenth-Century Ontario Naturalist," *The Beaver* (Autumn 1975), pp. 39-45, and, for example, Mrs. Traill's *Pearls and Pebbles; or, Notes of an Old Naturalist* (London, 1894).
13. *The Female Spectator*, Vol. 3 (Glasgow, 1775), pp. 123-136.
14. *The Calliopean*, Vol. 1, No. 6 (February 9, 1848). For bringing this document to my attention, thanks to Beth Light, Researcher in Department of History and Philosophy of Education, and Frieda Forman, Women's Research and Resource Centre, both at the Ontario Institute for Studies in Education.
15. *Ibid.*
16. *The Female Spectator*, p. 125.
17. In his *Species Plantarum* (1753) Linnaeus combined the sexual taxonomy with a simplified way of naming plants, adopting binomials in place of the complex phrases then in use; binomial nomenclature remains Linnaeus' enduring contribution to botany. On Linnaean taxonomy and nomenclature, see W.T. Stearn's Appendix to Wilfrid Blunt, *The Compleat Naturalist: A Life of Linnaeus* (London, 1971), pp. 242-248.
18. Charles Alston, "A Dissertation on the Sexes of Plants," *Essays and Observations, Physical and Literary* (Edinburgh, 1771), Vol. 1, p. 266.
19. (rpt. London, 1973), Canto I, 11, pp. 9-10.
20. (rpt. New York, 1974), pp. 8-9.
21. (London), "Advertisement."
22. Wilfrid Blunt, *In for a Penny: A Prospect of Kew Gardens* (London, 1978), p. 170.
23. "Letter to the Editor," *The Guardian*, December 14, 1978.
24. "Letter to the Editor," *The Guardian*, December 28, 1978.
25. Jean Jacques Rousseau, *Emile: Selections*, ed. William Boyd (New York, 1970), p. 153.