

Volume 17

Issue 3 *Women and Gender: Looking Toward
"Caribbeanness"*

Article 6

Jun-2016

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Recommended Citation

O'Donnell, Rachel (2016). The Politics of Natural Knowing: Contraceptive Plant Properties in the Caribbean. *Journal of International Women's Studies*, 17(3), 59-79.

Available at: <http://vc.bridgew.edu/jiws/vol17/iss3/6>

The Politics of Natural Knowing: Contraceptive Plant Properties in the Caribbean

By Rachel O'Donnell¹

Abstract

This paper considers the eighteenth-century 'voyages of discovery' to the Americas within the framework of colonial history and the development of modern scientific practice and method. It uses a feminist methodological approach toward concepts of natural knowledge and knowledge production. The essay looks specifically at knowledges of particular plants from the Caribbean and their properties, focusing on one plant still used for fertility throughout the region. I investigate the centrality of Caribbean natural knowledge to the development of differing historical perspectives on nature as well as the relationship between the development of European botanical sciences and natural knowledge in the Americas.

Keywords: Bioprospecting, abortifacients, botanical exchange, Caribbean science and technology

Introduction

In Jamaica Kinkaid's short story "Girl" (1978), a mother in Antigua gives advice to her daughter in a string of straightforward lessons told sharply and hastily, allowing the child only two brief responses throughout the long monologue. Much of the advice given reflects the mother's particular knowledge of women's daily labors and clear conception of gender roles: She explains to her daughter how to wash clothes and menstrual rags, how to hem a dress, how to behave with men and manipulate them. Some of the instructions she gives contain recipes for preparing food and medicines:

this is how to make a bread pudding; this is how to make doukona;
this is how to make pepper pot; this is how to make a good medicine
for a cold; this is how to make a good medicine to throw away a child
before it even becomes a child...

Jamaica Kinkaid was born in Antigua, where the indigenous Caribs and Taino were among the first to be colonized by Spanish colonists in the fifteenth century. Soon after the mass slaughter of these indigenous peoples, Europeans captured slaves in West Africa and transported them to the Caribbean island, creating in Antigua a violent plantation society based on enslaved labor, as well as a distinct Creole culture that still preserves much of the local knowledges and medicinal plants. "Obeah" practice still permeates much of Antiguan culture, a blend of folk magic, sorcery, and religious practice derived from West African plant-based healing. Contraceptive plant knowledge

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has remained central for Obeah Caribbean women as a political practice and is often part of their everyday lives (Schiebinger 2004, 238-241).²

Eduardo Galeano, in his work *Open Veins of Latin America: Five Centuries of the Pillage of the Continent*, combines fiction and political analysis to provide a more complete history of a land he says has been “condemned to amnesia” (6), cites how the indigenous people of Antigua took poisonous plants to engage in mass suicide shortly after the colonizers arrived, and made use of other plants to poison their children rather than subject them to the massacres and enslavement of the colonists (14-16).

In *A People’s History of the United States*, historian Howard Zinn tells the same story, of fifteenth-century Caribs and Taino using cassava, an everyday plant food staple, to engage in mass suicides shortly after Columbus arrived in 1493 (3-5). Clearly, then, not only did native Antiguans have knowledge of cassava’s existence and food use, but lucid understanding of the levels of toxicity in the plant as well as the fermentation process that usually made it safe to eat. We may have a historical and political knowledge of this kinds of plant usage in select histories or anthropological accounts, or perhaps of medicinal plants that became important monocrops in the developing world, such as tobacco or quinine, but medicinal plants, and especially those used for fertility and contraception, have an important political history often forgotten in the social sciences and contemporary development literature.

To this end, healing activities remain a large part of women’s daily labors, and medicinal plant treatments are well-known among rural Caribbean women,³ so much so that Kincaid includes the preparation of a contraceptive plant in her description of a woman’s everyday life, including its recipe immediately after how to cook some Antiguan specialties and make a cold remedy. One of the plants Kincaid may be speaking of is called guinea hen weed in Antigua, and this plant has remained central to Obeah practice and rural contraception.⁴ This is not to say that the use of these plants is widespread or a frequent topic of conversation; rather, this information belongs to certain people in certain communities, is dismissed easily in scientific circles, or by some, deemed improper or evil. However, plants are central to political history and contemporary understanding of social relations if we understand their impact fully. At the same time, links made between women able to heal and women able to harm reflects the complicated position of women and the role of gender and knowledge throughout history. Work in the past few decades from historians such as John Riddle (1997) suggests that we can use population statistics to imagine how much control over their fertility women exerted throughout the past few centuries, even though no direct records of contraceptive practice exist (Riddle 4).⁵ In *Eve’s Herbs: A History of Contraception*

² Kincaid’s short story is humorous, and the humor in the work strategically demonstrates both the strained relationship between mother and daughter and also the gender prescriptions in twentieth-century Antigua.

³ In *Plants and Empire* (2004), Londa Schiebinger describes contemporary uses of plant contraceptives in the Caribbean, arguing that knowledge of abortifacients that did not move to Europe remained in the Caribbean (239-241). In *Slave Women in Caribbean Society 1650-1838* (1990), Barbara Bush cites an array of contraceptive and abortifacient plants that enslaved women employed to control their reproduction (120-149).

⁴ Guinea hen weed is the local name for *Petiveria alliacea*, an abortifacient plant common in Jamaica and other parts of the Americas. A study in Jamaica in 2010 resulted in an international patent for *Petiveria* as an effective treatment of some kinds of cancer and is now undergoing clinical trials. The raw herb is used in the trials with a warning to pregnant women that its strong sulfur compounds can stimulate miscarriage (Tenney 2).

⁵ One example of the centrality of this knowledge to our understanding of global history and politics is the ignorance of contraceptive practice in population studies. Population increased dramatically in England and Europe in the eighteenth century—a century when women healers were ostracized or hunted as witches, the professionalization of science took hold, and contraceptive practice declined. From 1550 to 1680, the population of Western Europe grew by 18 percent and from 1680 to 1820 by 62 percent. From 1750 to 1850, England’s population alone increased from

and Abortion in the West (1997), Riddle presents an extensive catalog of the substances that were most used by women and their effects in the Western World, but it has proved difficult to offer any similar history of plants women have used in non-Western time periods, contexts and places.

A paradox exists in that the knowledge women once possessed still survives in pockets of mostly rural parts of the world, but is not generally known in modern science, particularly among Western populations. Not only was this knowledge not passed on but it also disappeared in an ongoing imperial process beginning with the colonial period and continuing today. According to Foucault, a ‘fact’ is a contestable component of the theoretically constituted order of things (1973, 66). The politics of knowledge has been a principle concern of feminist analysis, in the course of not only examining the history of thought and discipline, but also determining the most productive avenues for feminist research. Feminist scholarship has also pushed against the current of mainstream science and knowledge to assert the relevance of the body as a site of investigation into political, social, and cultural dynamics. It is not surprising then, that since scholars like Michel Foucault have privileged the body in their work, helping to achieve the concept’s contemporary credibility, feminist scholars have adopted Foucault’s and others’ theoretical framework and categorizations. In Naomi Adelson’s “Visible/Human/Project: Visibility and Invisibility at the Next Anatomical Frontier,” she finds Foucault’s concept of the construction of the body via the medical ‘gaze’ useful: through the process of observation and the social authority given to science and medicine, knowledge of the make-up and processes of the human body creeps into “the most intimate recesses of” actual bodies (366). The contemporary analysis, as many have suggested, must take knowledge to be a social body. Further research is required on which particular plants women continue to employ in their reproductive labor, but there is not much place for women’s knowledge that is not profitable in an increasingly ‘global’ information age. The goal here, then, is to avoid reducing individuals and their many varied contexts to female identity and ‘third world’ geographical location (Mohanty 1991, 59),⁶ and understand how plant knowledges can have palpable effects on the lives of contemporary women that differ according to location.

This article outlines the way in which the politics of contraceptive plants, and particularly Apacina, are gendered at multiple levels. Each section considers why the disappearance of Apacina in Caribbean history matters. First, I locate botanical sciences within the political, outlining the racialized and gendered politics of contraceptive plant knowledge and classification and the explicit and implicit categories they defined, as well as the histories they made and the subsequent violences they generated. Historically, I begin with the colonial development of the ‘new science’

5.7 million to 16.5 million. Some account for the increase with lower mortality rates attributable to smallpox inoculation and an improved diet (Robbins 278). Others attribute the rise to an increase in fertility because of the disappearance of knowledge of contraception (Riddle 10-34). Indeed, families were larger in the eighteenth century. In England between 1680 and 1820, the average number of children per family grew from four to almost six (Robbins 82-87), which suggests that some eighteenth century European women had many more children than their grandmothers and much less knowledge of birth control. Though there was in this time period an expansion of agriculture and a need for larger families, but favoring that history while ignoring women’s previous everyday access to particular plant-based contraceptive medicines as well as the rise of the ‘new science’ alongside the demise of female healers who had previously accessed and shared this information exemplifies what Sandra Harding refers to as a ‘relative truth’ (1998, 8), knowledge which seems to have no objection and is factual but requires further explanation. Feminist scholars have also clarified how the reorganization of the household in the sixteenth and seventeenth centuries left women subject to new marriage laws and primarily responsible for home work (Mies 100-112, Schiebinger 2004, 24-5), creating a patriarchal family structure in which there was no room for contraceptive practice.

⁶ Here, the concept of gender is central, but since this story is one of women’s knowledge of their own bodies, ‘women’ as a category remains a legitimate and central point of analysis.

which came about during the Enlightenment. Enlightenment science greatly valued empiricism and rational thought, and was embedded with the Enlightenment ideal of advancement and progress. This 'new science' developed the botanical sciences significantly, highlighting the classification of plants and the botanical voyages of discovery, continued throughout the twentieth century expansion of science and the pharmaceutical development of Western forms of contraception, and continues today with the contemporary intensification of medical control exerted over women's bodies.

Barbara Bush cites how many enslaved Caribbean women used a number of methods to knowingly refuse to provide more slaves for the violent plantation system, meaning that they exerted enough reproductive control that Caribbean slave populations did not naturally reproduce themselves (Bush 122). Methods women used to control this decrease included the late weaning of infants, self-induced sterility through mechanical or medicinal means, infanticide, and a variety of abortifacient plants, such as yam, papaya, lime and the roots and barks of cotton trees (Bush 124-142).

Petiveria alliacea is a plant 'named' and 'discovered' in the Linnaean classification system, as at the beginning of the eighteenth century, Swedish naturalist Carl Linnaeus attempted to make a complete and systematic classification of tropical plant families. *Petiveria* is a specialized genus, dedicated by Linnaeus to Jacob Petiver, an English naturalist and apothecary who died in 1718. The plant has been widely used for fertility control and as an abortifacient in the Americas. It is called Guinea Hen Weed in Jamaica and Trinidad, *Anamu* in the Dominican Republic, *Apacin* and *Apacina* in Guatemala, and *Mucura* in Peru. Other English popular names are Gully-root, Garlic-weed, and Conga-root. Though its name appears to have transferred to European botanical knowledge bases, many of its properties initially did not, demonstrating an effort among explorer-botanists to remove plants with known fertility properties from publications of 'New World' botany, include abortifacient plants in lists of plants of the Americas without writing of these medicinal properties, include some medicinal uses of plants but not others, or including warnings against using particular plants by pregnant women, or listing them as 'poisonous'.⁷ More recently, pharmaceutical corporations have been searching the Americas for a plant that may provide Western women with fertility control without hormonal 'side effects,' and *Petiveria alliacea* continues to hold a prominent place in contemporary research. It is especially relevant that the UN Industrial Development Organization has released a report (2006) on the future of products in the Andean High Plateau that reports on the market value of botanical products and includes *Petiveria alliacea* as one of the ten most 'important plants' for the future of biotechnology and pharmaceutical development. This report includes a regional market study of the selected plants, establishments of specific agrotechnological parameters and pharmaceutical technology (extract characterization, selection of markers, formulation and production). In addition to traditional medicinal use, the plant has been at the attention of a number of organic chemists. At least twelve different biologically-active compounds have been assayed from the plant seeds, root, and leaf (Caceres 2005).

The contemporary politics of *Petiveria alliacea* is closely aligned with questions about women's knowledge of and access to natural forms of contraception through the centuries, as its history coincided with colonization, the development of science as a professional field of expertise and data analysis, and the loss of women's control of the relative ability to regulate their fertility.

⁷ The European fates of such 'New World' plants with reproductive properties have been suggested by Schiebinger (2004) and Federici (2004). This will be demonstrated more completely in the colonial history of *Petiveria* in Chapter 3.

Of course, some women have always demonstrated more fertility control than others, determined by social and cultural positioning. White women in the Caribbean, for example, were more likely to make use of plant-based contraceptives than white women in the southern United States, perhaps suggesting a differing cultural-racial dynamic between enslaved women and European women in each place (Bush 121-2).

Feminists have theorized the development of the modern family at the same time, and argued that it has been a method for the appropriation and concealment of women's labor, including the historical processes such as the eighteenth century creation of the 'housewife', following the sixteenth and seventeenth centuries characterized by women slowly losing ground in many areas of social life, including control over reproduction (Federici 133-155, Mies 53-58). These historical and political processes offer a window into the ever-changing view of the relationships among women, nature, and science.

In a genealogical account of plant knowledge, we can demonstrate the difference between a plant as a variety characterized by look, touch, taste, and smell and a plant as an object to be characterized scientifically, marked only by the dissimilarities in its number of leaves, flowers, color, etc. General plant knowledge in the West today concerns not how to recognize plants or how to use them, but often merely how to categorize them. The everyday 'known' properties of plants in Western culture clearly demonstrate the historical production of ignorance in the Western world, where knowledge of a plant concerns merely its recognition and decorative properties, to such an extent that we cannot even imagine what knowledge we lack about the natural world. Medicinal properties of plants are not necessarily denied in our contemporary political situation, but they are carefully cultivated to avoid certain societal scripts, so much so that a connection in thought or conversation between plants with abortifacient properties and everyday contraception rarely happens, unless it is to disdain their uses. 'Natural' medicines are rarely tested or subject to scientific experiment and publication. Normative definitions distinguish alternative medicine from the medical mainstream, which argues that non-pharmaceutical therapies are unproven, invalidated or ineffective and support of theories in support of theories that have been tested through the scientific method.

Londa Schiebinger has done much to advance the study of the expropriation of botanical knowledge including questions about in what ways gender relations have guided European naturalists and how enslaved women and Caribbean populations used abortifacient plants.⁸ By making use of early records of physician-botanists who traveled from European to the Caribbean, such as Alexander Humbolt and Hans Sloane, she tracks the European classification of the Caribbean plant known as the peacock flower. The most important theoretical question addressed in her work is how to account for the knowledge that women once had of contraception that does not exist in a present Western worldview. Schiebinger addresses historical questions as well: why did the Caribbean abortifacient, the peacock flower known as *flos pavonis*, not enter the pharmacopoeia of doctors in Europe? Though well known among women in the Caribbean, and though identified by various visitors, the peacock flower was disregarded by conventional medicine in Europe. She describes how this elegant plant made its way to Europe, where it was highly prized as an ornamental, and grew to a great height in well-tended greenhouses (Schiebinger, 2004, 151). It was also used there for medicinal purposes, but only for curing fever and stomach pains, never for its contraceptive properties. Her historical work, however, only suggests the ways that contemporary biopiracy retains the connection between colonialism in history and the contemporary knowledge base, where colonized peoples, especially women, are

⁸ *Plants and Empire*, 2004; *Colonial Botany*, ed. with Claudia Swan, 2005.

treated as nature itself, allowing Eurocentric notions of property to take hold, employing the same logic John Locke used to advance colonialism to define medical knowledge as nature and genetic engineering as its improvement, or as Vandana Shiva writes a world in which “the cultural and intellectual contributions of non-Western knowledge systems are being systematically erased” (1997, 5). Adam Smith also elevated particular forms of knowledge in which this process became invisible, in which he saw that only ‘labor’ produced value, forever linking the economic to the scientific, where productive power belonged to masculine productive labor and ways of scientific knowing.

Historically, women have served as vessels for reproduction, especially enslaved women whose breeding expectations intensified when the slave trade ended in the 1790s. Physician and naturalist Sir Hans Sloane wrote of enslaved Caribbean women in the early eighteenth century: “They are fruitful and go after the birth of their children to work in the fields, with the little ones tied to their backs”⁹ (cited in Bush 121), reinforcing the idea that only white European women were subject to pain in childbirth and that African women could produce an endless number of children. Barbara Bush, in her work on the system of Caribbean slavery, tracks the low rate of natural increase of the Caribbean slave population, often assumed to be a result of poor living conditions, but broadening the question of the impact that attitudes to childbearing and resulting contraceptive practices in slave society had on fertility rates.¹⁰ The resistance to serving the slave system in their reproductive capacity, enslaved women in Jamaica resisted the creation of weaning houses, aimed at separating mothers from young babies to restore their fertility soon after giving birth. This understanding suggests that slave women understood well that later weaning would reduce their fertility, so much so that one planter in Jamaica at the turn of the nineteenth century could not get women to accept two dollars to wean their infants in the first twelve months of life (Bush 127). Andrea Davis writes that black women have been aborting themselves since the earlier days of slavery. This, she argues, had nothing to do with current discussion of freedom, but was an act of desperation motivated by the oppressive conditions of slavery (205).¹¹ Other scholars have cited an anti-motherhood attitude as a form of resistance, after colonization, in slavery. In the Caribbean, a ‘birth strike’ was spoken of until the mid-nineteenth century, when women were more often forced to reproduce. Previously, it is cited that they used ‘bitter herbs’ to produce abortions (Mies 91).

Enslaved women may also have used amenorrhea, the absence or stoppage of menstruation, as contraception, if only as a stress-induced defense mechanism. Recent understandings of the physiological role of regular ovulation have demonstrated a connection between emotional well-being and fertility,¹² and what is termed ‘emotional amenorrhea’ is now considered a method of psychological contraception and may have been used among enslaved populations (Bush 135-8). It was recorded that enslaved Caribbean women “aborted themselves by means of well-known plant poisons” and Fray Juan de la Concepcion wrote that the Marianas Indians “made themselves

⁹ Indeed, it has also been shown that many physician-botanists of the seventeenth and eighteenth centuries promoted the ideas that medicines derived from certain areas were only appropriate for the bodies that came from those parts of the world, arguing that certain peoples were more connected to the natural objects themselves.

¹⁰ Bush, Barbara. *Slave Women in Caribbean Society* (1990), 121-132.

¹¹ As Davis points out, any feminist movement for reproductive rights needs to be clear in dissociating itself from racist notions of ‘population control’ and eugenics movements, and make opposition to involuntary sterilization an integral part of its politics (206).

¹² “Hypothalamic amenorrhea is caused by emotional shock, anxiety, fear, some psychotropic medications, or injuries to the midbrain.” Caronia, Lisa, et al. “A Genetic Basis for Functional Hypothalamic Amenorrhea.” *N Engl J Med*. 2011 January 20; 364(3): 215-225.

deliberately sterile” (cited in Bush 139). Sir Hans Sloane noted again that “The procuration of abortion is very prevalent... there being herbs and powers known to [slaves], as given by obeah men and women, these observations respecting abortion have been collected entirely from Negroes, as the white medical men know little, except from surmise” (1707, 33).

Hans Sloane, a physician and collector who founded the British Museum published a description of *Petiveria* in his *Natural History of Jamaica* in 1704, illustrated with immense figures of many of the plants he describes, which he writes “have not been heretofore engraved” and presents them in large copper-plates that reflect the size of the actual plants. In 1704, *Petiveria* was not yet called *Petiveria*, as it had not yet been classified in the Linnean binomial system. Sloane lists the plant as was common at the time, with a long Latin description that might allow one to identify it: “*Verbena* or *Scordonia*, related to nothing else, white flowered, rough calyx, garlic odor. Guinea-hen weed.”¹³ In his 1707 publication, he writes five paragraphs describing the plant, and includes its local name, Guinea hen weed. He includes its physical description, where it can be found, and again mentions its strong odor, a sign that he understood its use as an abortifacient, “All the parts of this Plant have a very strong unsavoury smell, like to Wild-Garlick”¹⁴ (172) and reports that it grows in “Shady Woods, in the Savannas, every where.”

The most interesting part of Sloane’s description comes when he describes the plant, ‘Guinea Hen-Weed’ as food for cattle, “Hence Cows Milk in dry Seasons, in the Savannas, tast[e] so strong of it as not to be savoury, and the Flesh of Oxen tast[e] of it so much as scarce to be endured, and their Kidnies after a very intolerable manner” (172). Here it can be seen that Sloane and others were well aware of the effect of *Petiveria* on mother’s milk, meaning that its use of an emmenagogue, or plant that could restore menstruation, was most likely well-understood. John Riddle, who offers us the most complete description of abortifacient plants throughout history, argues that any ‘emmenagogue,’ or plant known to ‘bring down the menses’ was perhaps a coded term for contraceptive use or abortifacient, for, indeed, a woman who is pregnant may have a great need to resume her menses, and up until the nineteenth century, a woman was not necessarily considered pregnant until the child’s quickening or movement could be felt, allowing a woman time to figure out a way to force her menstruation to return and not speak of a pregnancy (Riddle 179-182). The importance of listing a plant that ‘induces menstruation’ is more appropriate here, given Sloane’s context and time period, than one that ‘procures abortion.’¹⁵

Sloane listed *Petiveria* in his *Natural History of Jamaica* in the early eighteenth century, and it is notable that it is a detailed reference for a plant unknown to Europe. He provides a full and easily understood description of its characteristics and uses, including its tainting of cow’s milk and meat, and its remedy as a pain reliever that can cure an aching tooth. Sloane says more than once that Jamaicans call the plant Guinea Hen Weed. Half a century later, in 1753, Linnaeus published his *Species Plantarum*, in which *Petiveria* can be found. It reads like this:

Tetragynia. *Petiveria*. I. *Petiveria*. Hort. Cliff 141. Hort. Upf. 91. Adflockh 1744
p. 287. 4.7

¹³ Strong odor like that of garlic characterizes a number of contraceptive plants and abortifacients, so we can assume that Sloane was aware of this, even though he does not describe the plant as an abortifacient.

¹⁴ A number of additional publications throughout the seventeenth and eighteenth centuries list the properties of garlic smell (Lamarck 224).

¹⁵ ‘Contraindications’ listed in herbals and flora also seem to be offering European women clues to how to terminate pregnancies with abortifacient plants and natural remedies, and most likely reflected knowledge women already possessed.

Petiveria nightshade leaves spiny locules. Plum. Gen. 50.

Verbena or Scordonia Related to Nothing Else, White Flower, Rough Calyx, Garlic Odor Sloan. Jam. 64. 172. Ray Suppl. 287.

Habitat in Jamaica. Forests.

Here Linnaeus lists only the ‘scientific’ information of the plant. He names it ‘Petiveria’ for British naturalist James Petiver, and includes it in Tetragynia, his class of higher plants comprising those with four styles or pistils. He notes no other local names of the plant, though at this time, it seems more than twenty were known to European naturalists.¹⁶ He abbreviates previous flora where Petiveria is mentioned, such as Plumier’s *Nova Plantarum Americanum Genera*, and Sloane’s *Natural History of Jamaica* described above, illustrating that those reading *Species Plantarum* are expected to be familiar with those prior publications. Further, Linnaeus had eliminated all physical description of the plant that might allow anyone other than a well-schooled botanist to locate the plant or ascertain its uses. That it can be found in ‘forests’ is certainly an inadequate description of location to anyone unfamiliar with the plant, and none of Sloane’s description of cattle feeding on it is mentioned, though Linnaeus was certainly very familiar with it, as he repeats Sloane’s classification and points to the page where it can be found. The 1200-page two-volume text *Species Plantarum* was said to contain all known plants and listed more than 7,300 specimens. It is still considered the authoritative and first valid work of the botanical sciences.

As the marked differences in these two eighteenth-century botanical texts demonstrate, naturalists in early modern Europe set forth to create natural inventories and did so amid an expanding array of new encounters and colonial processes. Fuchs’ herbal from 1542 is said to list the first European descriptions of plants of the Americas (Arber 69-71). Spanish physician and botanist Nicholas Monardes did much to popularize this information with his work translated into French and English, *Joyfull News out of the New Found World* (1565-1574). Botanists of the eighteenth century came to take on nature as Linnaeus suggests, viewing the botanical world as a great variety of inventory. This inventory was ultimately derived from ‘local’ informants around the globe.

This section and the next offers a brief history of botany and contraceptive plant properties in the Americas from the early modern period through the twentieth century, as I center the work around *Petiveria alliacea* and look at its known and unknown properties in a variety of botanical texts. I interpret the textual evidence from these documents as a symptom of larger trends within botanical study during the sixteenth, seventeenth, and eighteenth centuries. Indeed, I suggest that the gendered dynamics manifested here are emblematic of the history of botanical encounters and biocontact zones, terms coined by Mary Louise Pratt and Londa Schiebinger, respectively.¹⁷ The Linnean method for categorizing plants has become an authoritative voice in understanding made for one small group (European physician-botanists) and closed off from all others. The written works referred to here, often capture a modality that limits the scope of plant science to discovery, ‘naming,’ and listing, while neglecting substantive insights about the meaning and uses for these plants and ignoring structures of science and politics that continue to link the processes of colonialism and the creation of botanical knowledge to ongoing modes of global authority.

¹⁶ See appendix of local names for *Petiveria alliacea*.

¹⁷ These theories are described more fully in Pratt’s *Imperial Eyes* (2007) and Schiebinger’s *Plants and Empire* (2004).

There is no doubt that the people of the Americas made use of a wide variety of medicinal plants and had a complex system for the identification and preparation of herbal medicines. At the same time, the violence of Cortés and the Spanish conquistadors was recorded by Friar Bartolome de las Casas in 1540, when he wrote that the Caribbean islands “where there were once about five hundred thousand souls, today there is not a living creature” (de Las Casas 7). More closely tied to European apprehension about contraception and population control is his recording of events like these: “They [the Europeans] hung any doctor or female sorcerer who gave potions to expel infants from the womb, and they did the same to pregnant women who took something to achieve the same end” (de Las Casas 17).¹⁸ Sixteenth-century Spanish historian Gonzalo Fernández de Oviedo describes indigenous women using abortifacients in his *Historia general y natural de las indias* in 1535, suggesting that from the point of colonial contact, pregnancy and reproduction were politically charged issues for Europeans: “They are so friendly with lust that if they become pregnant they take a certain herb, that later stirs up and casts out the pregnancy” (Oviedo 7).¹⁹ Oddly, at the same time, the Spaniards showed a certain respect for the botanical knowledge of American peoples, and included a great many Mexican names in a 1615 herbal²⁰ and an even earlier illustrated manuscript herbal from 1552 by two Aztecs, one listed as an “Indian physician... who is not theoretically learned, but is taught only by experience” (Arber 109-110).

Edward Bancroft wrote an essay on the Natural History of Guiana in 1769 that describes indigenous women’s use of ‘gully-root,’ a local name for *Petiveria*, in Barbados, and also their use of *Mimosa Pudica* in Guiana “by which they lubricate the uterine passages, and afterwards expel their contents” (372). He writes also that, “The female Slaves who intend to procure abortion, have found the advantage of previously lubricating the uterine passages, by a diet of these pods.” Herbal medicine books from the eighteenth century including two variants of the “Book of the Jew”²¹ (Andrews Heath 1979; Barrera and Barrera V. 1983) categorize plants by Mayan name. Many of these names are still current, and clearly apply to the same plants they did then, so most species can be identified. The sap of chicosapote (*Manilkara zapota*), for instance, whitened teeth and soothed the rash caused by the chechem (which is basically a giant poison ivy); the Maya name of the chicosapote, *ya’*, was equated, wrongly, with *ya* (*ya’* or *yaab*) “love” (Barrera and Barrera V. 1983:26). At least a few plants used, it is written, when there is a ‘suspension of menses’ or ‘interruption of menstruation’ (42, 43), and in fact, precise recipes are given:

Chalché- Santa Maria. When menstruation is interrupted, a stew is made of 6 or 8 leaves for drinking periodically; in case of a difficult delivery, childbirth soon follows after this infusion is taken.

¹⁸ De Las Casas also writes of the ease indigenous women experienced in childbirth and in fertility “because of the nature of some secret remedy” (22), but interestingly offers a cultural explanation that their work patterns and diets led to ease of birth and early fertility.

¹⁹ In this quote, Oviedo ties knowledge of contraceptive plants with representations of indigenous women as sexualized and available, a common depiction in the writings of early modern explorers and fully theorized in works such as *Imperial Leather* (Anne McClintock 1993), and *Third World Women and the Politics of Feminism* (Chandra Mohanty et al. 1991).

²⁰ Hernandez’s herbal, by physician to Phillip II (Arber 109).

²¹ A Jewish settler of uncertain identity, from Maya curers, apparently collected the book in the early eighteenth century.

Cháczinkin. These are colored and yellow flowers, when there is suspension of the period it is taken in an infusion sweetened with honey, twice a day (Barrera Vásquez and Barrier 42, 43).²²

These examples demonstrate that botanical abortifacients were common in the Americas and were part of everyday life. The word ‘abortifacient’ is used to describe any type of natural method of pregnancy termination, those that occur before or after implantation. Modern science still does not often understand the precise difference or method in natural or pharmaceutical abortifacients; that is, no one seems to understand how they work, only that they work to terminate or prevent pregnancies.²³ Some medical literature differentiates between contraceptive and abortifacient properties of plants or chemical, but there is not an obvious dividing line between something that interferes with conception and something that interferes with fertilization or terminates an already fertilized egg from developing into an embryo. Riddle argues that “any agent that interferes with the ovary transport... and prevents and impairs implantation, is nonetheless a contraceptive” (1991, 10). I would add that any agent that terminates an early pregnancy or begins menses after a period of amenorrhea has historically been considered a method of contraception, not necessarily an abortifacient. The history of abortifacients has only become complicated in the modern political landscape, especially in the twentieth century.

Petiveria alliacea was known by indigenous peoples of the Americas and has a long list of common names including Gully-root, which suggests that it was well known as where to find it (in gullies). Indeed, many common names suggest it was similar to or named for the Congo (root of the Congo), perhaps because it was recognizable to enslaved Africans who arrived the Americas. German naturalist Maria Sibylla Merian (1705) recorded how African and indigenous women in Surinam used the seeds of *Caesalpinia pulcherrima* to induce abortion because they did not want their children to grow up as slaves like themselves. Apart from the harsh living conditions, the frequent use of herbal abortifacients was the reason for the reduced fertility of female slaves, which created the need for the continuing import of new workforce from West Africa (Schiebinger 2004, Bush 1990).

Daniel Solander was a Swedish botanist and student of Linnaeus who traveled to Suriname in the eighteenth century. Although it seems from his diaries that Solander frequently saw an abortifacient called the ‘Peacock flower’ or ‘Red Bird of Paradise’ (*Caesalpinia pulcherrim* in Linnaeus’s binomial system), he never reported that it was used to end unwanted pregnancies. In 1755, he mentioned in one of his works that *Chloris radiata*, another known abortifacient, “induces menstrual cycle - something that is unknown in Suriname.” Later he reported various other emmenagogues, such as the fern *Acrostichum aureum*, which has “driving... expellant properties... white people suspect black people use it for abortions secretly,” and that the liquid obtained by pressing the green scales of pineapple fruits was “famous throughout this land for its driving and emmenagogic properties. Pregnant black women, after drinking this liquid are said to spontaneously abort embryos already older than four months. They have been, accordingly, strictly

²² Chalché- Santa Maria. “Cuando se interrumpe la menstruacion se hace el sancocho de 6 ó 8 hojas para beber a ratos; en caso de parto difícil con tomar esta infusion viene en seguida el parto. Cháczinkin. La hay de flores coloradas y amarillas, cuando hay suspension del periodo se toma en infusion endulzada con miel de abeja, dos veces al diazz” (Barrera y Barrera Vásquez 42, 43). In-text English translation by author.

²³ See John Riddle’s “Oral Contraceptives and Early-Term Abortifacients during Classical Antiquity and the Middle Ages,” *Past and Present*. No 132, 1991.

forbidden to use this effective abortifacient” (Solander’s diaries, 5 Jan 1756, also partially cited in Andel 2012).

Petiveria alliacea is listed in a number of collections as dedicated to the ‘memory’ of James Petiver, London apothecary and naturalist, who died of smallpox at age 32. The plant, in some cases, is listed as ‘named’ for Petiver in 1742, the year that Linnaeus published his *Genera Plantarum*, which later became *Species Plantarum*, published in 1753 (Lamarck 224). Yet Royal Botanist to France Charles Plumier in *Nova Plantarum Americanum Genera* (1703), based on three botanizing expeditions to the Caribbean between 1693 and 1695, lists *Petiveria* and includes a drawing (Plumier 50, figure 39), so the plant must have been somewhat known as *Petiveria* in the early eighteenth century, if only ‘discovered’ by Plumier during those same expeditions. Later writings on *Petiveria* often comment on the specific name that is “supposed to allude, not only to its garlic scent, but also to the caustic humour of the botanist whom it commemorates” (Smith 419). Petiver’s biographer, Raymond Phineas Stearns, notes Petiver’s demand for specimens from his ‘field representatives’ abroad did not come with the supplying of materials for collecting. Often Petiver refused to send supplies and demanded instead that collectors coerce natives into collecting in areas too remote for ‘convenient European penetration’ (letter by Petiver in Stearns 27). Petiver made use of a large number of unnamed local collectors and one he referred to as ‘Isaack the Butterfly boy’ (Stearns 269-307). *Petiveria alliacea*, named for Petiver, was of great consequence to indigenous and enslaved women of the Americas, and remains a valuable abortifacient in many communities in the Central American highlands today. The act of its ‘renaming’ to honor an individual, especially an upper-class European physician-botanist, is more than distressing. It is particularly poignant that Petiver was well-known for his poor treatment of European and indigenous plant collectors (Stearns 269), those that performed the laborious course of plant collection. These unnamed individuals communicated this intricate scientific knowledge to Petiver and his colleagues, who in turn received prestige as scientists, fame for their discoveries, and continue to receive scholarly recognition of their ‘knowledge creation.’ The indecency of this act of renaming and the violence of this colonizing practice cannot be overlooked.

How Apacina became *Petiveria*: The ‘Discovery’ of a Well-Known Plant

Lindley’s 1830 *London Introduction to the Natural System of Botany* writes of *Petiveria* that “nothing is known” of its qualities except that it “yields a strong smell of garlic,” though other plants in the same volume are listed as remedies for such things as “allaying syphiloid pains” (166). His later *Elements of Botany* (1841) lists under uses of *Petiveria*, “acrid, sudorific and emmenagogue: (156). In his even later book, *The Vegetable Kingdom* (1846), he writes an entire page on *Petiveria*, describing first its physical characteristics and then its uses:

All the parts of *Petiveria alliacea*, the Guinea-hen weed of the West Indies, are excessively acrid; a small portion of the leaves chewed is said by Burnett to render the tongue as dry and black and rough as it appears in cases of malignant fever. The Negroes consider it a sudorific, and say that vapour baths or fumigations of it will restore motion to paralysed limbs. The roots are used in the West Indies as a remedy for toothache; the Negresses also administer it to procure abortion (386).

Though *Petiveria* was noted in the works of Linnaeus and Plumier in the eighteenth century, as we have seen in earlier sections of this chapter, Professor Lionel and Benjamin Siliiman, Jr, in 1841, described *Petiveria* as a plant that had only been published very recently and not yet recorded as a native of North America (9). In Bentley's *Manual of Botany* in 1870, *Petiveria* is again listed as a remedy for toothache and an emmenagogue (625). In the *Gardeners' Chronicle*, a weekly illustrated English journal for general distribution, an 1881 edition explains in plain language that *Petiveria* is put into warm baths and in some countries as a "valuable specific for the cure of toothaches" (25). This popular reference makes no mention of its contraceptive properties, and lets us know that this "peculiar species is now blooming in the Palm-house at Kew" (25).

Before *Petiveria* was named *Petiveria* in the Linnean system, early writings still categorized it. John Ray was an English naturalist who traveled many times to the Americas in the late seventeenth century. His original *Historia Plantarum*, considered an important step in the history of taxonomy, where he classified plants using the differences among seeds, was first published in 1686, but did not include any reference to *Petiveria*, though it did include other plants of the Americas. His supplement to *Historia Plantarum* was published in 1704, and is attributed to Sloane as originally catalogued in Jamaica and listed as plant number sixteen. Sir Hans Sloane also listed *Petiveria* as a plant grown in London in the Chelsea Physic Garden and presented to the Royal Society in 1737 (Catalogue of Fifty Plants No. 786). The Guinea-hen Weed name that Sloane recorded in Jamaica was retained for quite a while. An 1878 dictionary of scientific terms (Rossiter 153) lists Guinea hen weed as *Petiveria alliacea* and an 1887 Manual of Botany again lists *Petiveria* or Guinea-hen Weed as a reputed emmenagogue (Bentley 652).

Descourtilz, a French naturalist, who published a book he called "The Natural History of Common Plants from the Colonies" in 1823, did not include *Petiveria* in that first edition. By the time he published the second edition in 1833, he recorded *Petiveria* as an obvious women's medicine, known to be used in injections against "suffocation of the uterus"²⁴ and provides a recipe that includes *Petiveria* with ammonia and salt in a linen bag to be boiled and reduced; Descourtilz repeats that this recipe is from the colonies (268) and includes a picture (264).

In George Gould's *1894 Illustrated Dictionary of Medicine*, *Petiveria* is listed as a plant "of the West Indies and Guinea, is stimulant, diuretic, sudorific, anodyne, and depurative" (1057), something used for pain relief or as a purifier. An agricultural journal of British Guiana (1889) writes that "gully-root" is also called "guinea-hen weed" and is "an important ingredient in certain nostrums of the local wise women (Quelch, ed. 324) and in 1911 "for abortions" (Nunan and Rodway, eds. 186). Interestingly, a 1904 *Apuntes de Botanica Medica* includes note of the use of fresh leaves from *Petiveria* that can be used in an abortive vaginal injection,²⁵ and the plant uses include both a stimulant and an emmenagogue.

It is not unrelated that throughout the second half of the eighteenth century, political theorists and naturalists repeatedly urged the importance of economic botany. Carl Linnaeus, with his botanical classification and taxonomic reforms, had hoped that coffee plantations could be created in Sweden to avoid trading expenses. European explorers brought cargoes of seed, live plants, as well as natural collections and ethnographical materials at this point in history more than any other, using botanical gardens and natural history cabinets and museums as training centers,

²⁴ "Quelques praticiens emploient cette Petivière dans les ischuries spasmodiques et en injections contre les suffocations de l'uterus" (Descourtilz 267). "Suffocation of the uterus" refers here to 'hysteria' that appears widely in medical literature in the nineteenth century, a diagnosis given to women over centuries whose symptoms included faintness, nervousness, and sexual desire (King 5).

²⁵ "Las hojas frescas empleadas en inyección vaginal pasan por ser abortivas" (Duranoña and Dominguez 232).

sources of funding, and sites for experimentation, engaging in widespread networks of correspondence that characterize the political economy of natural history of the time. Hans Sloane's many travels to Jamaica in part inspired the British Museum with his own collection of natural history objects in 1753. This moment of his collection being 'acquired by the nation' is widely discussed as marking the beginning of the national museum and signaling the national interest in natural history objects, whereas they had been spectacles in public places such as coffeehouses up until this point (Todd 120-122). Profitable nature was particularly alluring to the Spanish empire, as it hoped the rediscovery of American nature might improve its standing in the world (Few 27-50).²⁶ Indeed, a number of botanical gardens in Europe regularly exchanged 'exotic' plants and seeds, including those in London, Edinburgh, Paris, Florence, Turin, Parma, Zurich, Amsterdam, The Hague and Leiden (cited in De Vos 119).

Petiveria was not only known as an abortifacient in the Americas, but its contraceptive properties were well known among European scholars and physician-botanists of the early eighteenth century onward.²⁷ As the chain of knowledge about contraceptive plant properties was broken and medicine was professionalized in Europe in the same century, early modern medical and botanical publications either show restraint upon divulging birth control information or omitted it altogether, as the writings on Petiveria suggest. The largest change during this period seems to have occurred in the late eighteenth century, when anything explicitly causing abortion is extremely limited in official botanical publications. Discussions of menstrual regulators and stimulators and more subtle descriptions of abortifacient plants were sharply reduced in botanical and pharmaceutical publications. Herbals almost disappeared. It seems that European pharmacists must still have had access to these drugs throughout the nineteenth century, if they were only published as available for different purposes. We do not know if they were explicitly offered to patients for contraceptive and abortifacient use. The contraceptive properties of *Petiveria* and other abortifacient plants became a subject to be dealt with cautiously or not at all.

Scientific and technological institutions, as well as universities and corporations, have become more integrated. Indeed, feminist scientific research offers possibilities for transforming the divide between 'science' and the political—and for changing both. Significant changes in recent decades have led to questions about all forms of nature and the human relationship to nature. Politically, we see how nature, gender, race, life forms, science and knowledge all coincide.

At the same time, continuing negative associations with women's bodies, pregnancy, contraception, and menstruation help to maintain women's subordinate political, economic, and social positioning in contemporary culture and society. We must remember, however, that this is particular to our time and place. As we have seen throughout the Caribbean knowledge base surrounding plant-based abortifacients, the concepts of contraception differ throughout history in a variety of knowledge bases and even contemporarily among local communities. Knowledge is

²⁶ By the middle of the nineteenth century, it was the botanic gardens that began to initiate and sponsor the collection of plants for commercial production. Competition between European governments to 'establish botanical monopolies and to break the monopolies of their rivals... was a spur to plant development' (Brockway 16). Lucile Brockway demonstrates the centrality of Kew Gardens in England as part of the development of imperialism, and the control science took globally. For example, a protected plant indigenous to Latin America might be transferred to Asia or Africa for development as a plantation crop in their colonies, so Latin America then, may have lost a native industry and Asia may have acquired them in a geographical sense, but the real benefits going to Europe (Brockway 48). Further, the botanical garden became a centerpiece for knowledge of plants among the upper classes as a place to explore the exotic.

²⁷ I am referring here to Sir Hans Sloane's *Historia Plantarum* (supplement 1704), which is the earliest reference to *Petiveria alliacea* I have found.

varied and specific to its geographic space and culture, and a genealogy of *Petiveria alliacea* demonstrates the need to recognize how much of the world's knowledge exists outside of what is considered 'science' and the Western medical tradition. In addition, as postcolonial scholars consistently remind us, 'woman' has in Western history been a developed social construction, as a more carnal being, and Western culture has perverted nature alongside this concept. Still, in much contemporary scholarship in both politics and history, the sexuality of women is often deemed unimportant or not mentioned at all.

Petiveria alliacea is an important plant to many people of the Americas. It is not only 'important' in the sense of its possibility of a variety of treatments, but like much of the natural world, it represents knowledge that local communities have that is periodically being removed, stolen, and transferred from these communities to laboratories and reclaimed as the knowledge of individual scientists, universities, and corporations.

Most importantly, women of the Americas continue to resist this. Through their work maintaining this knowledge and passing it down through generations, as well as finding the plant and making use of it in their everyday lives, they are resisting the theft of this knowledge by refusal to share it with those outside their communities. *Petiveria alliacea* also serves to highlight the contemporary processes of the intensification of control over women's bodies and the increasing medicalization that serves to reshape embodiment itself. For many contemporary women, health care and fertility maintenance are disciplining processes wherein medical technologies are used to transform our corporeal selves, signaling a shift in our view of bodies and nature. Where our relationship to a disconnected 'nature' was once external, it is now a transformation of our internal nature (biological processes and the transformation of "life itself,") and we have seen how this is the current trend and continual shift under globalizing capitalism. This is part of what has been the pharmaceutical industry's marketing of medications to be used for a new and improved body rather than restoration of health.

The Linnean classification system forever changed Europe's relationship to the rest of the globe (Pratt 15-18). This process of reshaping the human relationship to the natural world has been mirrored by capitalism and intensified under postcolonialism. There has long been an effort to take and maintain local knowledge outside of local communities, and Western science and Western medicine is often where this official and professional knowledge resides. Linda Tuhiwai Smith, for example, calls the production of the imperial scientifically 'natural' world a 'second' nature (225). It is necessary to seek out, map, invent, and discover the processes by which the transformation of colonial space takes place. Early physician-explorers who began the professionalization and classification of botany knew they were keeping this information from lay individuals, and prided themselves on doing so. Early physician-botanist explorers who traveled to the Caribbean, such as Hans Sloane, had an understanding of these plants and recorded them.

In herbals of the sixteenth and early seventeenth century, plants were classified by 'virtue,' their uses considered significant for understanding and classifying them (Arber 171), not merely their directly observable physical parts. Linnaeus urged the omission of any sort of potential uses in the floras. This reflects widespread fears among Linnaeus and his colleagues that lay people may treat themselves without a physician's care (and often without paying for a physician's 'expertise'). Indeed, the cryptic names and charts reserved for physician-botanists and accessible only to experts effectively sealed this information from lay people for centuries. To this day, without special botanical training, it is nearly impossible to make sense of botanical flora or catalogues of herbs, as they read much the way any scientific publication reads. Foucault writes in *The Order of Things* that the process of science often reduces the natural landscape to a list; indeed,

this was most often the process of botanical science as it became ‘taxonomy’ by the end of the eighteenth century. Linnaeus urged a reorganization of botanical relations and enabled a universalization of botanical knowledge, at the same time effectively eliminating all of the recorded uses for a plant, and over the course of what developed into purely Linnean botany and taxonomy, the known medicinal properties of Caribbean abortifacient plants like *Petiveria alliacea* have been incorrectly disseminated and obscured.

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APPENDIX I

Image 1: Charles Plumier's *Plantarum Americanarum*, 1703 drawing of *Petiveria alliacea*

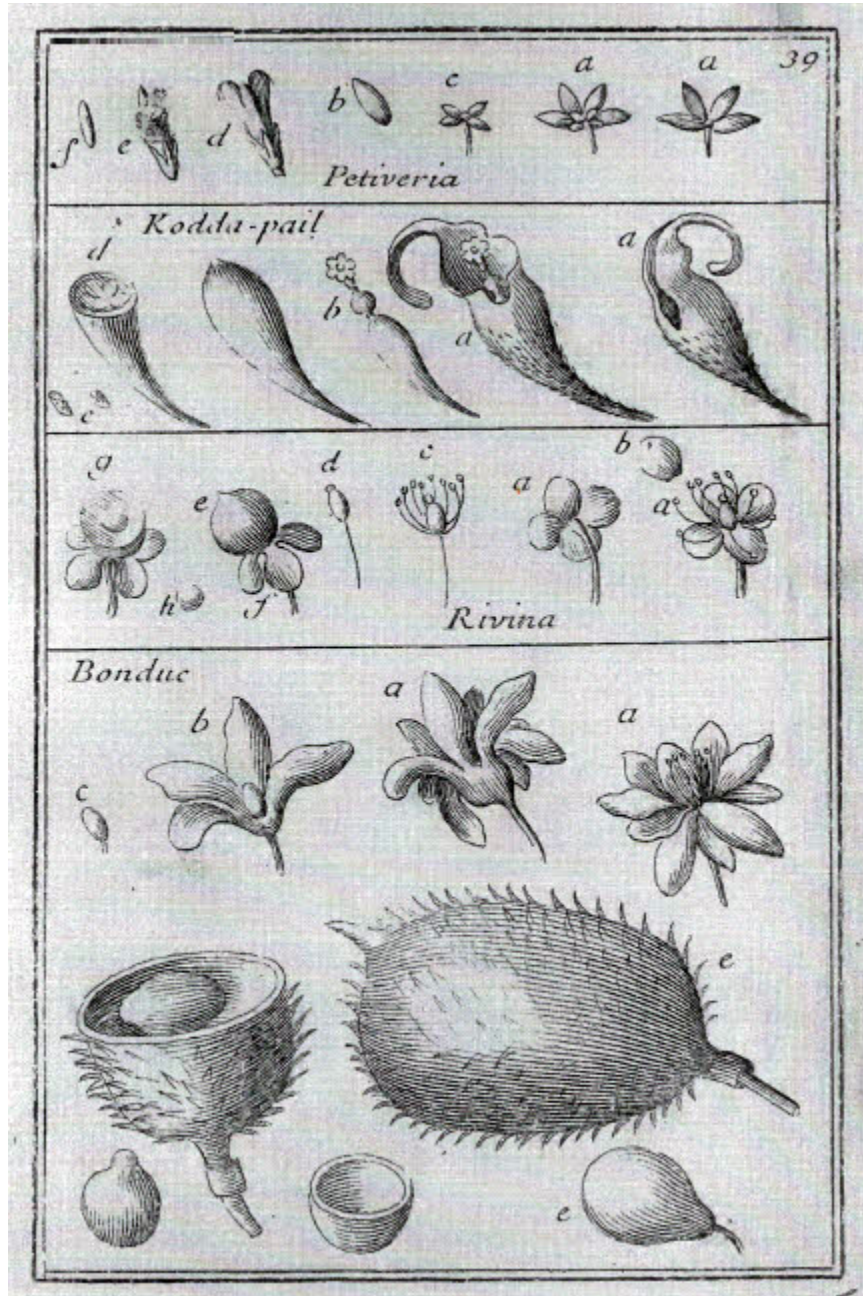


Image 2: Sloane Herbarium original cutting of *Petiveria alliacea* from Natural History of Jamaica, 1704

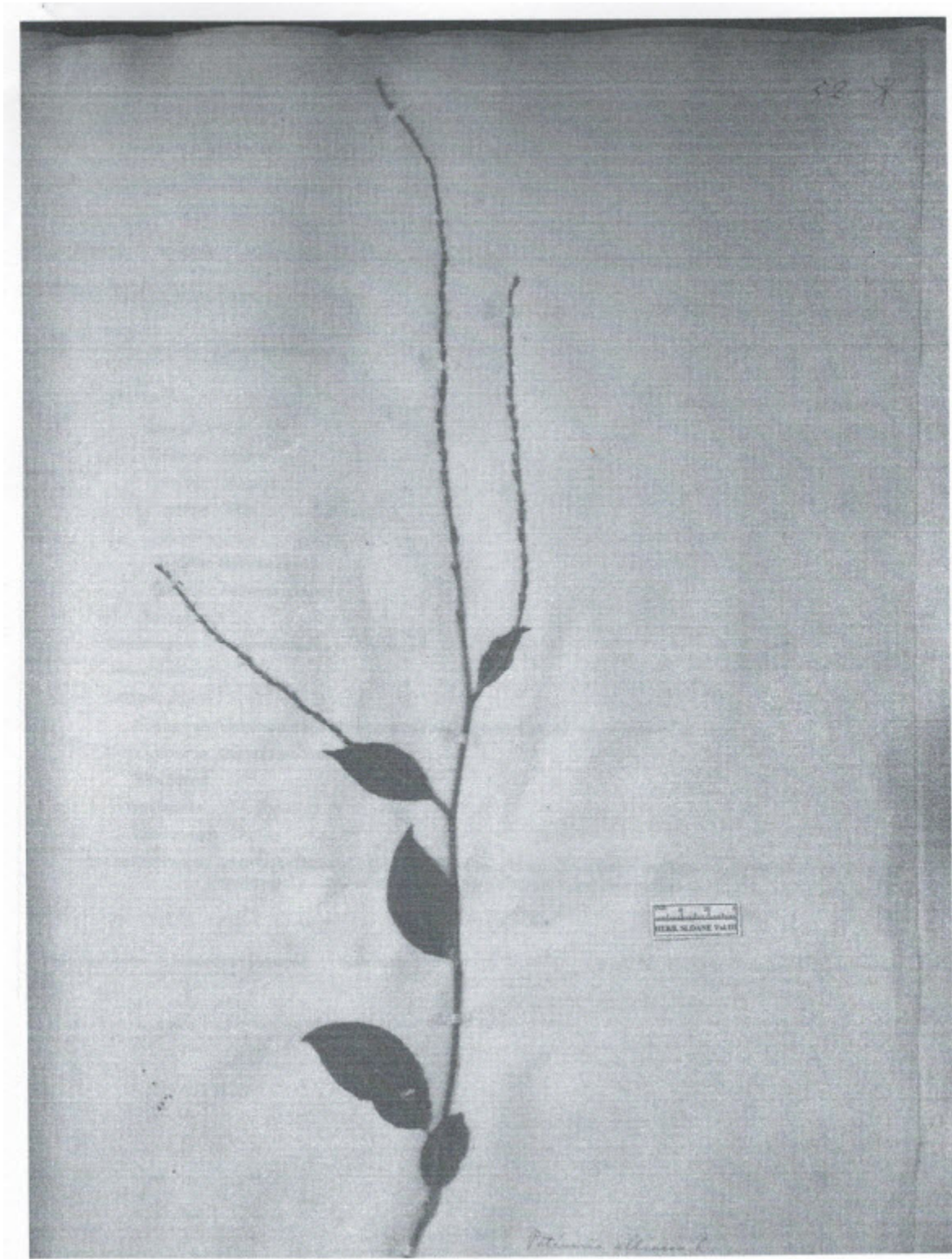
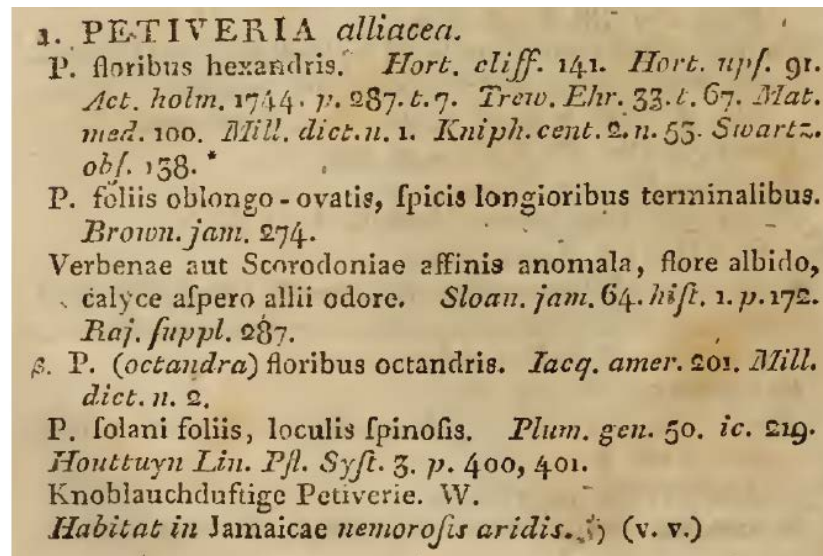


Image 3: Description of *Petiveria* from Linnaeus' *Species Plantarum*, 1753



1. *Petiveria alliacea* Linnaeus, *Sp. Pl.* 2, pg. 284