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Digging for Dye: Colonial Encounters and Native Relations with a Root as Red as Blood

Kate McCowan

A plant known by at least three names—bloodroot, puccoon, or *Sanguinaria canadensis*—has been a longstanding dye and medicine source for many Native peoples of North America’s east coast, central, and northern woodlands. The plant bears small, white flowers in the spring, but is better known for the blood-like, orange-red sap held in its roots.¹ Yet, the history of bloodroot/puccoon’s uses by Native peoples is complex and has been unsettled by the cultural and ecological impacts of colonization. Studying bloodroot/puccoon requires that we detangle colloquial namings, settler understandings of Native relations with the plant, the implications of changes in the plant’s accessibility for Native groups, and the potentialities for ongoing bloodroot/puccoon cultivation.

I became acquainted with bloodroot/puccoon as a graduate research assistant for the Center for Virtual/Material Studies at Pennsylvania State University, where I was tasked with researching the plant as a Native-dye case study amid a broader agenda by the center to study material dye stuffs.² From its conception, my research process interrogated the lack of settler knowledge surrounding Native lifeways on Pennsylvanian land, where no nations are today recognized by the Pennsylvania state or federal governments.³ Penn State is itself the largest beneficiary of the 1862 Morrill Land-Grant Act.⁴

Settler uses of Pennsylvanian land have necessitated Native expulsion and, more recently, involved assimilationist programs. The abuses suffered in Carlisle, Pennsylvania, under the residential school system were traumatic to my own family and Pueblo of Ysleta del Sur, among countless other peoples and nations.⁵ Given this history, I found it informative to turn my attention directly to the land and its shifting relations—from histories of Native cultivation to settler extraction and present-day Anthropocene reckoning. Of course, the scope of bloodroot/puccoon’s Native relations is vast and the archive of colonial documentation is plentiful. Rather than exhaust every source

found to document bloodroot/puccoon, I have aimed to highlight notable shifts in colonial documentation, spanning initial seventeenth-century encounters, the nineteenth-century growth of ethnobotany within a settler-salvage paradigm, and finally, twenty-first-century reflections on revitalization and Native futurity. The history of bloodroot/puccoon speaks to the far-reaching impacts of settler extractivism on Native land. Today, settler-American relations with plants and earth are inextricable from these histories. In my efforts to understand bloodroot/puccoon as a locus of Native kinship and colonial violence, I undertook both historiographic and hands-on investigations.

COLONIAL DOCUMENTATION IN THE SEVENTEENTH CENTURY

Two of the earliest and most significant manuscripts from the colony of Jamestown, Virginia, document the Algonquin language family (in this case, specific to Tsenacommacah, a “nation” comprising approximately thirty-two Virginia Native groups).⁶ Both manuscripts date to 1612, though they were written independently: *A Map of Virginia. With a Description of the Countrey, the Commodities, People, Government and Religion* by John Smith⁷; and *The Historie of Travell into Virginia Britania* by William Strachey.⁸ John Smith’s present-day legacy is extensive, in part due to his “Disneyfication” in the 1995 animated film *Pocahontas*. Historians, however, typically focus on his actions as an agent of the Virginia Company, dispatched from England in 1606 as one of the original claimants to Jamestown.⁹ By 1608, Smith had been elected president of the colony’s council, before ultimately returning to England in 1609 and publishing his manuscript. Also in 1609, writer William Strachey purchased two shares in the Virginia Company and sailed to Jamestown, where he became secretary of the colony.¹⁰ Strachey returned to England after less than a year and completed his manuscript shortly after.¹¹

Smith and Strachey’s manuscripts have both been frequently cited as valuable sources of information from the earliest years of occupation at Jamestown, though they should not be read as objective observational sources. Smith and Strachey were both deeply entrenched in a British ethos of expansion within the broader global politics of colonial competition; each author’s investment in and reliance upon imperial power structures must be accounted for as a lens for his documentation and interpretation. One of the visible consequences is the hierarchy of information at work in their manuscripts, particularly in the identification of resources. For example, it is revealing that Smith describes the land by its “richness,” and the size of different communities by the number of “fighting men” they possess.¹² Though there are points at which the authors voice admiration for Native resourcefulness, the likely intention is to indicate potential British wealth to be gleaned from newly occupied land.

Smith’s *A Map of Virginia* opens with a testament to the global competition for colonial expansion. In a comparison to Christopher Columbus’ “worthinesse” of action for Queen Isabella of Spain, Smith states the following:

Cannot this successfull example [move] the incredulous of this time to consider, to [conceive] and apprehend Virginia, which might be or breed [as] a second India? Hath not England an Izabell as well as Spaine, nor yet a Collumbus as well as Geneua?¹³

This overture frames the entirety of Smith's documentation. Virginia, as proxy for "a second India," is defined by its potential value to the British empire. Information on bloodroot/puccoon is therefore offered on the basis of utility.

Smith's first mention of puccoon appears in a section titled "Of such things which are natural in Virginia and how they vse [*sic*] them." It reads as follows:

Pocones is a small roote that groweth in the mountaines, which being dried and beate in powder turneth red: and this they [use] for swellings, aches, annointing their [joints], painting their heads and garments. They account it very [precious] and of much worth. *Musquaspenne* is a roote of the bignesse of a finger, and as red as bloud. In drying, it will wither almost to nothing. This they [use] to paint their Mattes, Targets, and such like.¹⁴

Smith's paragraph immediately poses a problem for historians of puccoon—it seems that there are actually two dyestuffs here. *Musquaspenne*, a term with no contemporary, vernacular equivalent, names a root "as red as bloud" and the size of a finger, which is an apt description for *Sanguinaria canadensis* (see fig. 1). *Pocones* (a variation on puccoon), then, does not necessarily refer to the plant also known as bloodroot.

In a later section detailing clothing and diplomatic processes, Smith elaborated:

Their [women's] heads [and] shoulders are painted red with roote *Pocone* braied to powder mixed with [oil]; this they hold in [summer] to [preserve] them from the heate and in winter from the cold. Many other forms of paintings they [use], but he is the most gallant that is the most monstrous to behold.¹⁵

This segment appears almost identically in Strachey's manuscript, with only slight variations:

Their heads and showlders they paynt oftenest, and those red, with the roote Pochone, brayed to [powder] mixed with the [oil] of the walnut, or Beares grease. This they hold in Summer doth check the heat, and in winter armes them (in some measure) against the Cold, many other forms of payntings they [use]; but he is the most gallant who is the most monstrous and [ugly] to behold.¹⁶

This confusion continued in the annotated edition of Strachey's manuscript, published by the Hakluyt Society in



FIGURE 1. Breaking open bloodroot, November 1, 2024. Photo courtesy of author.

1953, where editors Louis B. Wright and Virginia Freund noted their belief that "*Pochone*, variously spelled, *pocan*, *puccoon*, etc.," was actually "the Virginia pokeberry or pokeweed, which bears profusely of berries staining a purplish red."¹⁷ In a later footnote in the same publication, they claim that *musquaspenn* refers to bloodroot.¹⁸

Smith's most lengthy descriptions of puccoon appear in sections addressing Native spirituality and diplomacy. The detail of these sections exceeds his brief mention of the plant's medicinal applications, framing puccoon most effectively as an index for cultural differences of consequence to Christian and British expansion. For instance, in a section detailing clothing and diplomatic processes, Smith described a process whereby any "great commander" visiting the head leader "Werowance" was offered a woman "fresh painted red with Pocones and oile . . . to be his bedfellow." Evidently, Smith was intrigued by the direct, bodily application of puccoon as both a visual, cultural signifier and a practical, protective substance. His descriptions work to construct a visual regime of "The Other," wherein Native relations with puccoon are reduced to their physical, visual appearance as an indicator of difference.

In a later section entitled "Of their Religion," Smith wrote that "Savages" would "solemnly cast some peece of copper, white beads, or Pocones, into the river, for feare their Oke [deity] should be offended and revenged of them" when near an off-limits sacred site. In addition, when navigating rough, stormy waters, "Their Coniurers runne to the water sides, or passing in their boats, after many hellish outcries and invocations, they cast Tobacco, Copper, *Pocones*, and such trash into the water, to pacifie that God whome they thinke to be very angry in those stormes." Soon after, he described Algonquin belief in an afterlife for "Werowances" and "Priestes," wherein "with their heads painted with oil and *Pocones*, finely trimmed with feathers; and shal have beades, hatchets, copper, and tobacco, doing nothing but dance and sing with all their Predecessors." In conclusion of this section on religion, Smith proclaimed the Natives' actions as "blind idolatrie," and stated, "in this lamentable ignorance doe this poore souls sacrifice themselves to the Diuell [Devil], not knowing their Creator."¹⁹

Smith did not frame the plant he calls puccoon as a resource with extractive value, but instead narrated its use as evidence of stark cultural difference. His condemnation is unequivocal—each description of the Native people as "craftie," "malitious," and "all *Savage*" embraces the Christianizing impulse to proclaim "savagery" in the face of alterity. Puccoon, as a visible, tangible aspect of Native spirituality and diplomacy, was then inevitably implicated into the "savage" or, more likely, sacrilegious. Where British colonial expansion found grounding in claims of civility founded on Christian "righteousness," Smith's quasianthropological and ethnographic manuscript contributed to an ideological justification for Native expulsion.²⁰

William Strachey's manuscript repeats much of Smith's information, and is nearly identical in structure and content, though it does offer the unique addition of a language appendix, "By which, such who shall be Employed thether may know the readyer how to confer, and how to truck and Trade with the People."²¹ In this dictionary, *poughkone* is listed as "the red paint or dye," and an entry for "to paint red" is translated as "Numerathguran pocoon."²² So, by Strachey's account, both *poughkone* and *pocoon* (of



FIGURE 2. “*Lithospermum vulgare majus*. The greater creeping Gromell.” *Theatrum Botanicum: The Theater of Plants* (London: Printed by Tho. Cotes, 1640), 431.



FIGURE 3. “*Lithospermum vulgare minus*. Small wilde Gromell.” *Theatrum Botanicum: The Theater of Plants* (London: Printed by Tho. Cotes, 1640), 431.

similar sound and spelling) were used to indicate any applicable red colorant (paint or dye).²³ Smith’s statement on *musquaspenne* appears in identical form early in Strachey’s manuscript, but it is not included in the dictionary. As this resource was intended to aid Virginia Company employees in trade and exchange with Powhatan people, the discrepancy indicates Strachey’s reliance on Smith while signaling an inability to corroborate *musquaspenne* as a term in active use by the Natives. *Musquaspenne* would be only rarely cited in later scholarship, as by Charles C. Willoughby in 1907 and Frank G. Speck in 1925; *pocoon/poughkone/puccoon* has been frequently cited since the seventeenth century.²⁴

CARL LINNAEUS AND A SYSTEMATIZED TAXONOMY

Documentation shifted with the eighteenth-century advent of scientific naming by Carl Linnaeus’ 1753 *Species Plantarum*, which declared the plant previously called puccoon, bloodroot, or *musquaspenne* to be “bloodroot, *Sanguinaria canadensis* L.” Linnaeus’ naming system has three parts: generic name, species name, and authority—the name of the botanist who labeled the plant. *Sanguinaria canadensis* L. derives from

the Latin *sanguis*, meaning blood, and *canadensis*, referring to an origin in Canada, and bears the mark of Linneaus directly, *L.*, as its attributor.²⁵ This shift is markedly human-centric, and speaks directly to the “myth of discovery” used to claim ownership over Native lands and justify its exploitation. Though agential and alive, bloodroot became a possession as *Sanguinaria canadensis L.*, its existence only confirmed as an index of human encounter.

Linnaeus’ naming system has since been widely adopted and has indeed facilitated new and more efficient research on many plants, aiding the growth of ethnobotany as a discipline. Yet his systematization was also informed by the “immense influx of new plants into Europe as a result of exploration,” which “exacerbated the naming problem.”²⁶ As historian Alexandra Cook has explained, the “information explosion” made naming and identification increasingly unwieldy for sixteenth to eighteenth century botanists.²⁷ So, just as Linneaus’ system was conducive to the colonial project, it was also born from it.

The Linnaean method continues to be criticized for its “linguistic imperialism,”²⁸ and Cook has attested that Linneaus faced opposition in his own time.²⁹ Cook is relatively generous in her analysis; she maintains that Linneaus “never prescribed the elimination of indigenous names,” and effectively advocated the incorporation of Indigenous names as “local names” or “generic names.”³⁰ Regardless, universalization is to be expected in a “language of mediation,”³¹ and Latin was the obvious choice for Linneaus as a European academic. The field of botany was promulgated by Western European colonialism; to critique the erasure of indigeneity from botanical naming only skims the surface. This erasure was borne out of a larger move toward botanical, mineral, and other resource extraction, coupled with Native eradication.

RECORDING *SANGUINARIA CANADENSIS*

Half a century after the publication of *Species Plantarum*, *Sanguinaria canadensis* was documented in one of the first American publications on botany to feature color illustrations, self-made by William Barton in his 1817 *Vegetable Materia Medica of the United States; or Medical Botany: Containing a Botanical, General, and Medical History, of Medicinal Plants Indigenous to the United States*. Barton’s information on the plant is extensive; it includes a highly detailed physical description and sketch (see fig. 4), attests to abundant native growth from Florida to Canada, and offers a unique account of the plant’s potential for color.³² His first emphasis was on the oozing of color from various parts of the plant; as indicated by its scientific and common names, blood-root/puccoon/*Sanguinaria canadensis* had long been recognized for the blood-like liquid released from its roots when broken. Barton made further distinctions between the brown exterior color, the red interior color, and the released liquid, which he likened to orange:

The external color of the root is brownish, inclining to copper; but being cut, it appears of a red hue, and a bright orange-colored juice is abundantly discharged.³³



FIGURE 4. William P. C. Barton, *Sanguinaria canadensis*, in *Vegetable Materia Medica of the United States* (Philadelphia: M. Carey & Son, 1817), 30.

He also went beyond the root and broke leaf stalks and scapes to discover a similar, though paler, liquid to that of the root, which apparently left a faint yellow stain on paper.³⁴ This examination was far more granular than past studies, which merely associated bloodroot with the color red.

Barton's first mention of Native peoples is in reference to the plant's name. He says of Dr. Thatcher, an early American medical writer,

[he] has given the Indian name as *Puuson*. After many enquiries, I believe this to be incorrect, and a mere corruption of the true aboriginal name, Puccoon. . . .³⁵

Barton then proceeds to itemize medicinal properties, especially the plant's function as an emetic and purgative, in the most extensive segment of his writing on bloodroot. Native uses are entirely omitted in this section, and are only mentioned in the context of artisanship. Barton stated the following:

The juice of the root of Puccoon makes a fine dye of an orange color, and is used by the country people for staining flannels and woolen cloths. The Indians paint themselves with it, and use it as a dye for their baskets and articles of ornament; hence one of its vulgar names, *Indian-paint*.³⁶

Soon after, Barton shifts to exploitative language and contemplates the plant as a capitalist resource, largely calling upon the research of Dr. Downey, his former student at the University of Pennsylvania.

William Downey's 1803 doctor of medicine dissertation, "An Investigation of the Properties of the *Sanguinaria canadensis*, or Puccoon," included extensive experiments in coloration and medical testing on human subjects.³⁷ Downey experimented with multiple potent chemical agents with which to brute-force the plant into producing color on a variety of fibers: nitric acid, muriatic acid, sulphate of alumine (alum), acetate, cream of tartar, murio-sulphate of tin, and other additives in his attempts to dye flannel, silk, cotton, and linen. His goal was to produce a vivid and stable color and, frankly, to chemically force the plant into submission by any means necessary. Downey clearly espoused the ongoing settler desire to exploit Indigenous materials and technologies:

The colors produced by the puccoon are rich, and might undoubtedly, if taken in hands by one conversant in the business of dyeing, become one of their most valuable articles.³⁸

Barton echoed this sentiment in his own conclusion, stating that "there can be no doubt that the dye obtained from puccoon will become a highly important article in domestic manufactures."³⁹ Of course, this has not been the result.

Downey's dissertation had also invested considerable effort into a study of the roots' poison content.⁴⁰ He reported consuming "twenty grains of the recent root" and experiencing a "considerable nausea," irregular heartbeat, and headache, concluding that it "purged [him] gently two or three times."⁴¹ Downey then gave "twenty-three grains of the pulverized root, made into pills, with honey" to a Mr. Young, his "friend and fellow graduate," who experienced especially violent vomiting.⁴² Again, Downey gave "eight grains of the extract obtained by alcohol from the dried root" to his friend Mr. Rees, who "had one gentle motion to vomit."⁴³ The subsequent experiments continued in this fashion; the roots of bloodroot, consumed through various means, were found to produce unpleasant purgative and emetic reactions in its (presumably consenting) test subjects.

Today, Downey's process comes across as surprisingly violent, and speaks to the extensive efforts undertaken to understand the plant's extractive potentials. Bloodroot/puccoon/*Sanguinaria canadensis* weakened each consumer's body and expelled its contents, but Downey's framework of rationalized, quantitative evidence demanded repetition and consistency. This work, in conjunction with the range of chemical dye tests undertaken, aimed to document bloodroot's potential as a capitalist tool under systems of industrialized medicine and dye making. In conclusion to his surely unpleasant tests of consumption, Downey classified bloodroot as an emetic and purgative, and made several additional suggestions for medicinal applications: "intermitting

fever,” dysentery, jaundice, “ulcerous sore throats,” amenorrhea (or, as an abortifacient), and gonorrhea.⁴⁴

Notably, the hand-painted illustration in Barton’s 1817 publication is markedly similar to that of Downey’s dissertation, made fourteen years earlier (see figs. 4 and 5). Downey’s illustration was created by William Bartram, a botanist, illustrator, and writer living (by that time) in Philadelphia, who was also one of Downey’s test subjects for bloodroot consumption. As multiple scholars have noted, Bartram’s illustration oeuvre is marked by a “tremendous vitality,” produced by “the mimetic, the aesthetic, and the emotive.”⁴⁵ This is certainly true of his bloodroot; the plant is pictured in multiple, simultaneous stages of life, positioned carefully for the gaze of the viewer (see fig. 5). The flower petals open strategically outward, a large leaf arcs forward to display its surface, and the root is positioned for a convenient profile view. Each detail is precise, even exaggerated, and the plant is nearly anthropomorphized through its strategic posture.

Barton’s self-made illustration is clearly inspired by, and nearly a copy of, Bartram’s earlier work (see fig. 4). The most notable difference is in coloring—though Barton describes the root’s exterior appearance as a brownish-copper, he opts for a brighter red-orange in his illustration. His illustration, then, conflicts with his text, but effectively emphasizes the color-oozing potential of the plant. Barton’s caption reads as follows:

Figure 1. Represents the *Sanguinaria canadensis* of the natural and most common size, in the early part or middle of April. During the heat of the day, the petals are more horizontal that they can be well represented in a drawing; toward evening they converge; and at night they are wrapped up.⁴⁶

Lacking any context on the illustration’s inspiration or coloring, the image is largely left to communicate for itself, to impress the importance of its color upon the reader.

BLOODROOT/PUCCOON IN THE TWENTIETH CENTURY

Two essays involving bloodroot/puccoon appeared in the same *American Anthropologist* issue in 1907. Charles C. Willoughby’s “The Virginia Indians in the Seventeenth Century” drew almost entirely from Smith and Strachey’s respective manuscripts,



FIGURE 5. *Sanguinaria canadensis*; Puccoon, illustration by William Bartram. In William Downey, *An Investigation of the Properties of the Sanguinaria canadensis* (Philadelphia: Eaken & Mekum, 1803), opposite title page.

describing the plant's root as that most commonly used for body painting when ground to a powder and mixed with oil.⁴⁷ Willoughby called it "red puccoon," a vernacular name still in use today, and claimed that *musquaspenne* was a different root with a brighter pigment that was used for mats, shields, and other objects.⁴⁸

Published simultaneously, William R. Gerard's "Virginia's Indian Contributions to English" made no mention of *musquaspenne*, despite calling on the same sources. Gerard noted what he called *puccoon* or *puckoon*, and included "earlier" spellings, *pohcoon*, *poughkone*, and *pocone*.⁴⁹ By his account, *puccoon* was a "popular name" for *Lithospermum vulgare*—a name that is now obsolete. *Lithospermum vulgare* had received notable documentation in *Theatrum Botanicum*, a 1640 treatise by the early, "great" John Parkinson, published before Linnaeus' genus-species naming system. Parkinson used two names: *Lithospermum majus sive vulgare*, "The greater creeping Gromell," and *Lithospermum minus vulgaris*, "Small wilde Gromell" (see figs. 2 and 3).⁵⁰ Contrary to Gerard's claim, Parkinson's illustrations bear no significant resemblance to *Sanguinaria Canadensis*; to date, no clear identification of the namesake of *Lithospermum vulgare* has yet been made.⁵¹ Gerard offered no reasoning for his inclusion of *Lithospermum vulgare* as a popular puccoon, nor for his later assertion that puccoon was the root described by Smith as the source for body paint when mixed with "acorn or hickory-nut oil or bear's-grease," when, in fact, it was Strachey who spoke of nut oil and bear's grease.

Later in the article, Gerard categorized *Sanguinaria canadensis* as another type of puccoon, and noted its alternate names of "red puccoon" or "coon root."⁵² He described it thus:

... a plant with a thick rootstock surcharged with an acrid red-orange juice, which was used by the Indians for staining their pelts, mats, basketry, etc., and, mixed with oil or bear's grease, for painting their body and head.⁵³

Etymologically, Gerard traced the term *puccoon* to the "Renâpe [Algonquin] of Virginia pakon," meaning *blood*.⁵⁴ By this account, puccoon was in use as a name for multiple plants capable of producing red pigments and dyes. *Musquaspenne* was not once mentioned by Gerard, likely due to a lack of corroboration in the two centuries since Smith and Strachey's documentation.

This complicated dialogue among Willoughby, Gerard, Smith, and Strachey exemplifies a broader network of misinterpretation and misattribution that exacerbated the ambiguity of puccoon as a term—in spite of the consolidation efforts championed by "scientific naming." Smith and Strachey's initial inconsistencies, often arising from cross-cultural misunderstanding, inconsistent spelling, and preprinting transcription errors, continued to have a lasting impact three centuries later.⁵⁵

By the late nineteenth century, scholarship on bloodroot/puccoon was inflected by two major cultural trends: 1) American anxiety about "the vanishing race" and lost Indigenous knowledge; and 2) increased commercial interest in capitalist uses of botanical products, particularly by pharmaceutical industries. As is summarized in the 2019 article "Historical Perspectives of Ethnobotany," the field gained considerable legitimacy and support in the late nineteenth century, when both private and public

institutions increased investments in ethnobotanical expeditions as a means to advance pharmaceutical research.⁵⁶ Simultaneously, fears surrounding lost traditions and the myth of the “vanishing Indian” dominated the public imagination—encouraged by such cultural phenomena as James Fenimore Cooper’s novel *The Last of the Mohicans*, published in 1826 and adapted into a popular film in 1992, and Edward S. Curtis’ 1907 multivolume text and photo compilation *The North American Indian*. As ethnobotany became increasingly standardized (and therefore legitimized), public interest reinvested in the American Indian, and bloodroot occupied a paradigmatic position in that interest.⁵⁷

Alongside such anthropologists and ethnographers as Francis Densmore (1867–1957), Melvin R. Gilmore (1868–1940), and Frank G. Speck (1881–1950), Huron H. Smith (1883–1933) published prolifically throughout the era of salvage ethnography. Smith was the curator of botany at the Milwaukee Public Museum from 1917 to 1933, focused primarily on Native groups in the Great Lakes region. *Ethnobotany of the Menomini Indians*, published by the museum in 1923, opens with a nostalgic, paternalistic claim, emblematic of settler salvage sentiments:

The use of many plants is rapidly being abandoned by most tribes, and knowledge of their ethnobotany will soon be no longer even a memory.⁵⁸

Huron Smith proceeded to list uses of *Sanguinaria canadensis* (which he also called bloodroot) as a face paint for warriors and a red or orange-red dye for mats and baskets, and recorded Menominee words for bloodroot, *wapitcika’wi*; vermilion root, *ona’mûn utci’pa*; and red dye, *maskwa’we*.⁵⁹ Similarly, Smith’s 1932 *Ethnobotany of the Ojibwe Indians* listed *meskwa’ dji’* bikûk as the term for “red root.”⁶⁰ Per its medicinal uses, he recorded bloodroot in recipes for menses, stomach trouble, and “flux,” and cited its use as an expectorant, sternutatory, and emetic.⁶¹ Each of these entries is brief and systematized, organized as a database rather than an anthropological narrative. Accordingly, Smith’s chosen photograph of bloodroot primarily acts as an index of his having encountered the plant (see fig. 6). It is blurry, dark, and unpromising for any serious,



FIGURE 6. “Bloodroot (*Sanguinaria canadensis* L.). Source of medicine and dye.” Huron H. Smith, *Ethnobotany of the Menomini Indians* (Milwaukee: Milwaukee Public Museum, 1923), 131.

specialized study, but contributes to a broader display of botanical diversity and bolsters Smith's claims to expertise.

The report concludes by lamenting "the passing of the olden times," with several racialized comments on the Menominee inability to "ape the white man."⁶² Huron Smith surmised that "they are certainly more interesting and happier among themselves, to follow their own ways, and only a small percentage will ever be absorbed into our population."⁶³ This work was published at the height of the Native American boarding school era, when assimilation proceeded forcibly nationwide. By 1926, approximately 60,889 Native children (83 percent of those who were "school-age") were in boarding schools, including many of the Menominee.⁶⁴ Still, Smith lamented disappearing, "abandoned" traditions, with no note of the assimilation programs imposed upon Native communities. His claims are somber: "Young people are not interested in retaining the lore of their grandparents," and "The older people, who have this lore, are fast dying out."⁶⁵ The result is a paternalistic narrative that renders the Menominee helpless, in need of settler intervention, while simultaneously condemning them for otherness or nonwhiteness. Smith calls for preservation aid and documentation, but not restoration, reparation, or Native sovereignty.

INTO THE TWENTIETH AND TWENTY-FIRST CENTURIES

Scholars have continued to revisit the tensions of colonial identification, naming, and taxonomy well into the twenty-first century. In 1989, Helen Rountree attempted to lay a common groundwork with *The Powhatan Indians of Virginia: Their Traditional Culture*. In her aim to make this a "basic preliminary reading" for scholars, she noted several issues in Smith's primary documentation, namely the discrepancies between puccoon and *musquaspenne*.⁶⁶ Rountree also made her own suggestion for the plant to be considered "real" puccoon, *Lithospermum carolinense*.⁶⁷ She, too, stated her belief that the name *bloodroot* referred to *Sanguinaria canadensis* (as Wright and Freund had previously), and cited Strachey's description of its dye use for "Mattes, Targets [shields], and such like."⁶⁸ Rountree's assessment differs from the recent work of Smith, Speck, Gilmore, and Densmore; she is not invested in identification as a means for utilization. Rather, Rountree presents her work as a "historical ethnography," wherein bloodroot is incidental to a broader examination of early settler records on the Powhatan.⁶⁹

Kathryn A. Jakes and Annette G. Ericksen cited this work by Rountree in their 2001 publication on eastern North American dye plants—specifically, the elucidation of Smith and Strachey's mixed terminology.⁷⁰ They additionally sourced information on bloodroot's use as a Native dye material from many of the previously mentioned twentieth-century ethnobotanists (Frances Densmore, Melvin R. Gilmore, Huron H. Smith, and Frank G. Speck)—though to very different ends. Their study, grounded in a combination of archaeological methodologies, ethnohistorical literature, natural dye research, and more, simultaneously testifies to the existence of dyestuff technologies in prehistoric eastern North America and advocates for the continued relevance of such practices in the twenty-first century.⁷¹

As Jakes and Ericksen state, “Modern environmental concerns have led to a renewed interest in natural dyes as alternative to synthetic textile colorants.”⁷² This is surely a contributor to the use of bloodroot (*Sanguinaria canadensis*) and other plants as materials for “hobbyists and craftspeople to color textiles and yarn.”⁷³ Redress is thus especially pertinent as an increasing number of dyers turn to sources in nature. “Modern environmental concerns” are not siloed from the same ideologies of utility that have turned dyers back to the land. These concerns emerge directly from the environmental effects of colonization; new frameworks for settler-land relations must be adopted to avoid further overextraction and ecological damage.

TWENTY-FIRST-CENTURY RESTORATION AND CARE

Today, numerous Native nations have launched their own restoration and preservation projects with the goal of conserving traditional practices. Approaches are multifaceted, but often focus on language revitalization, cultural and ceremonial practice, and artistic production. Efforts have additionally been implemented into federal policy, as in the recently approved “Ten-Year National Plan on Native Language Revitalization” (December 2024). Bloodroot (*Sanguinaria canadensis*) was the focus of a revitalization project in 2012–14, conceptualized and funded by the nonprofit organization Revitalization of Traditional Cherokee Artisanal Resources in support of traditional basket-makers from the Qualla Arts and Crafts Mutual cooperative, and run by North Carolina State University under the management of Jeanine Davis, Alison Dressler, and Margaret Bloomquist.⁷⁴ The project addressed a worrisome diminishment in wild bloodroot growth, which had hindered traditional harvesting processes for Cherokee artisans and illuminated the Anthropocene-era pressures on bloodroot.

The NC State Extension (NCSE) findings helped me frame my own approach to a mindful harvest. Many sources had alluded to Native traditions of harvesting bloodroot in the fall, and the NCSE researchers confirmed that fall harvests allow seedpods to mature and disperse seeds for propagation. Premature harvest is a likely risk for those unfamiliar with the plant—bloodroot flowers in the spring, lacking any visible, above-ground presence throughout the fall and winter. A sustainable harvest can only occur if the location of roots is identified at the time of flowering and then returned to for harvest months later, once the leaves and flowers above ground have died back. As the NCSE researchers attest, non-Native demands for bloodroot (particularly, a recent uptick in international market demands for the plant as an herbalist ingredient) have damaged wild populations by disregarding sustainable practices.⁷⁵

Climate shifts have put additional pressures on the plant: from several 1980s and '90s studies by M. A. Morales, E. R. Heithus, S. D. Porter, and D. A. Savignano, researchers Mary L. Predny and James L. Chamberlain deduced that a northward migration of fire ant populations had disturbed native ant species, and thus inhibited a process of bloodroot seed dispersal by native ants.⁷⁶ Drawn to the lipids held in a bloodroot appendage called *elaiosome*, native ants typically collect seeds, transport and consume the elaiosome, then discard the remainders in “refuse areas.”⁷⁷ Though fire ants undertake a similar process, they were found to deposit seeds in less favorable

environments or damage them past their ability to germinate.⁷⁸ The disruption is twofold: fire ants attack native ant populations and indirectly inhibit germination processes, and fire ants directly damage bloodroot seeds and prevent new growth.

With these pressures and risks in mind, I was eager to find a bloodroot source that wouldn't harm wild growth. I reached out to Penn State's Shaver's Creek Environmental Center and was soon connected with Doug Wentzel, a Shaver's Creek program director. Doug had sourced native bloodroot from a plant rescue project around Shaver's Creek and relocated them to his private garden. Thanks to Doug's exact knowledge of their location, we were able to harvest efficiently and sparingly from several bloodroot plants in mid-November (see fig. 7).



FIGURE 7. Searching for bloodroot with Doug, November 1, 2024. Photo courtesy of author.

I decided to test the dye capabilities of the plant on wool and commercial weaving canes, which would allow me to observe dye adherence to both plant and animal products. My research turned up numerous testaments to the technique of boiling the roots, specifically from twentieth-century ethnobotanists—Melvin Gilmore, on Omaha and Ponca uses in 1919; Huron Smith, on Menominee uses in 1923; Frances Densmore, on Chippewa uses in 1928; Diamond Jenness, on Ojibwa uses in 1934; and John Witthoft, on Cherokee uses in 1947.⁷⁹ In search of more recent information, I turned to artisan blog posts, emailed briefly with two authors, and found the tactics to be nearly the same.⁸⁰ My final recipes, with notes, are attached as an appendix.

I had collected 86 grams of bloodroot with Doug, which came down to 84 grams after washing and chopping the roots. I measured out 27 grams for about 1.5 ounces of wool, and reserved 57 grams for portions of two rounds of weaving canes (of different sizes) (see fig. 8). Ethnobotanical sources (such as Downey's dissertation) spoke to the toxicity of bloodroot when consumed, and contemporary sources recommended



FIGURE 8. *Preparing to dye with bloodroot, November 4, 2024. Photo courtesy of author.*



FIGURE 9. Bloodroot beginning to boil, November 4, 2024. Photo courtesy of author.



FIGURE 10. Bloodroot after boiling, with commercial weaving canes, November 4, 2024. Photo courtesy of author.

dyeing in a well-ventilated area, so I set up my dye vat outside and wore gloves. The roots quickly turned boiling water to a golden-brown color with an earthy, bitter smell (see fig. 9). With prolonged boiling, the water settled into a deep reddish brown (see fig. 10). The canes took on the bloodroot dye quickly and easily, while the wool had to soak for several hours and still produced a milder color (see fig. 11). Some difference was expected; dye adherence varies across plant and animal fibers. Dyes bond to cellulose in plant fibers (weaving canes) and keratin protein in animal fibers (wool).

When the dye process was complete and the materials had been rinsed and dried, they were ready to be processed. I watched the light orange wool take on a darker appearance as I spun it by hand, and I smelled traces of the earthy, bittersweet scent of the root sap (see fig. 12). Tighter fibers hold less air and light, so the final spun and plied yarn is a deeper yellow-brown. I had some familiarity with the process of yarn-spinning, but the weaving canes presented a new challenge.

With some canes dyed a rich orange-brown and others remaining an undyed soft white, I began to dream up my first woven basket. Over the course of weeks, I experimented with crafting small baskets of varying shapes, regrettably learning from the generalized online sources I could find rather than a skilled community member. The time and space to work with my hands was gratifying and welcome; I reflected on my connections to materials, to Pennsylvania, to community. I took a personal trip to the Carlisle Indian School to experience the land my great-great-grandfather was forced to walk on. I spoke to him, I cried for the children and left them gifts, and I returned to the basket.

As the semester progressed, I learned how to sense the canes' limitations (see fig. 13). I sought the balance between a tight weave and a strain that could snap. I enjoyed showing others my work and encouraging them to attempt their own



FIGURE 11. After boiling: commercial canes drying and unprocessed wool continuing to soak, November 4, 2024. Photo courtesy of author.



FIGURE 12. Unprocessed, dyed, and dried wool next to carded, spun, and plied yarn, December 2, 2024. Photo courtesy of author.



FIGURE 13. Kate's first basket, in progress, December 2, 2024. Photo courtesy of author.



FIGURE 13. Kate's first basket, in progress, December 2, 2024. Photo courtesy of author.

project. I enthusiastically dyed extra canes with purple corn alongside some visiting artists, and I leaned into the creative, visual process of weaving (see fig. 14). My basket became a site of learning, reflection, and creativity. It required focus, but afforded me a space to reflect that had been hard to carve out while in graduate school.

I was aware, previously, of the colonial traumas imposed on the land, but my singular focus on bloodroot afforded me a new understanding. Ever-present but only sometimes visible, bloodroot requires a special attention. It is equipped for a specific ecological network, and it bares pleasurable (and perhaps functional, medicinal) color to those who respect its limitations. Bloodroot, in its uses by Native peoples, became a signifier for colonial fears of alterity. Its extractive potentials held intrigue, but considerations of Native land stewardship had no place in the colonizing agenda. Now, as Zoe Todd attests in the article “An Indigenous Feminist’s Take on the Ontological Turn: ‘Ontology’ Is Just Another Word for Colonialism,”⁸¹ recent academic “realizations” of environmental sentence risk erasing millennia of Native kinship with land.

Material histories are inextricable from ecological, colonial violence—there has never been a *terra nullius*. One path of redress may look something like my project here: hands-on learning and site-specific listening, watching, and waiting.

APPENDIX: RECIPES

Bloodroot Dye for Commercial Canes

Requirements

- ♦ Two-gallon pot
- ♦ Tongs or spoon
- ♦ Knife and cutting board
- ♦ Salt (to set dye)
- ♦ Strainer or cheesecloth and string to preserve bloodroot
- ♦ Optional: distilled water
- ♦ Optional: alum (can produce a red orange)

Process

- ♦ Combine approx. 1½ gallons water, ½ cup table salt, 1 cup cut bloodroot
- ♦ Boil for about ten minutes
- ♦ Add cane
- ♦ Boil for about five minutes
- ♦ Remove from heat, let sit for one to two hours
- ♦ Assess: if color is too light, add more bloodroot and boil another ten minutes; color ranges from pale yellow to dark, burnt orange

Additional Information

- ♦ Remaining dye bath and root can be frozen
- ♦ More water = more consistent
- ♦ More root = darker
- ♦ Recipe is best made outdoors

Kate's Notes

- ♦ I used a couple of handfuls of cane rounds and 57 grams of bloodroot
- ♦ My dye bath boiled to a golden color, then golden-brown, then dark orange-brown
- ♦ I let the canes soak for two hours after boiling, and flipped them over a few times to help get an even distribution of color

Bloodroot Dye for Wool

Requirements

- ♦ Two-gallon pot
- ♦ Tongs or spoon
- ♦ Knife and cutting board
- ♦ Alum
- ♦ Strainer or cheesecloth and string to preserve bloodroot
- ♦ Optional: distilled water

Process

- ♦ Use approx. two capfuls of alum per 4 ounces of wool
- ♦ Boil bloodroot
- ♦ Place yarn in dye bath off heat for about three hours

Additional Information

- ♦ You can attempt multiple rounds of boiling the roots with fresh water and combine the batches for the dye bath, depending on how much dye is needed
- ♦ Recipe is best made outdoors

Kate's Notes

- ♦ I used 27 grams of wool with 1.5 gallons of water
- ♦ My dye bath boiled to a golden color, then golden-brown, then dark orange-brown
- ♦ I added the wool after boiling and left it to soak overnight

NOTES

1. For more information on the botanical features of bloodroot, the NC State Extension offers a helpful guide. Visit “*Sanguinaria canadensis*—Common Name(s): Bloodroot; Red Puccoon,” North Carolina Extension Garden Plant Toolbox, accessed March 2, 2025, <https://plants.ces.ncsu.edu/plants/sanguinaria-canadensis/>.
2. The Center for Virtual/Material Studies is housed in the Department of Art History at Penn State. Sarah K. Rich currently serves as its director, and John Russell, its associate director. I am grateful for the time, resources, and support the CVMS team offered me for this project. Thank you, Sarah Rich, Carolyn Lucarelli, Catherine Adams, and others.
3. The Lenape Nation of Pennsylvania has been petitioning for recognition for three decades. Samantha Spengler, “For Years, People Said There Were No Lenape Left in Pennsylvania. This Group Begs to Differ,” *Philadelphia*, November 6, 2021, <https://www.phillymag.com/news/2021/11/06/lenape-nation-pennsylvania/>.
4. The Morrill Land-Grant Act designated federally claimed lands to colleges in support of “the agricultural and mechanical arts.” It signed into law by President Abraham Lincoln on July 2, 1862. Visit “Morrill Land Grant College Act,” United States Senate, accessed March 2, 2025, https://www.senate.gov/artandhistory/history/common/civil_war/MorrillLandGrantCollegeAct_FeaturedDoc.htm; Margaret A. Nash has elaborated on the logic of Native dispossession that undergirded this Act. Visit Margaret A. Nash, “Entangled Pasts: Land-Grant Colleges and American Indian Dispossession,” *History of Education Quarterly* 59, no. 4 (2019): 437–67, <https://doi.org/10.1017/heq.2019.31>.
5. The Carlisle Indian Industrial School was a federally funded boarding school for Native children, located in Carlisle, Pennsylvania, that operated from 1879 to 1918. It was the first off-reservation school to receive federal funding for an all-Native student body, and it served as a model for many. It was recently designated to be a National Monument by President Joe Biden. Visit “Carlisle Federal Indian Boarding School,” National Park Service, accessed March 2, 2025, <https://www.nps.gov/cibs/index.htm>.
6. “Powhatan (d. 1618),” in *Encyclopedia Virginia*, accessed March 2, 2025, <https://encyclopedia-virginia.org/entries/powhatan-d-1618/>.
7. John Smith, *A Map of Virginia. With a Description of the Countrey, the Commodities, People, Government, and Religion by John Smith* (1612), in *Encyclopedia Virginia*, December 7, 2020, <https://encyclopedia-virginia.org/primary-documents/a-map-of-virginia-with-a-description-of-the-countrey-the-commodities-people-government-and-religion-by-john-smith-1612/>.
8. William Strachey, *The Historie of Travell into Virginia Britania* (1612), eds. Louis B. Wright and Virginia Freund (London and New York: Routledge, 2016).
9. The Virginia Company was formed by King James I of England to fund colonization in North America. It was a joint-stock company, and Smith and Strachey were both investors. For more information, visit “Virginia Company of London,” in *Encyclopedia Virginia*, accessed March 2, 2025, <https://encyclopedia-virginia.org/entries/virginia-company-of-london/>.
10. “William Strachey (1572–1621),” in *Encyclopedia Virginia*, accessed March 2, 2025, <https://encyclopedia-virginia.org/entries/strachey-william-1572-1621/>.
11. For general information on Smith’s time in Jamestown, visit “John Smith (bap. 1580-1631),” in *Encyclopedia Virginia*, accessed March 2, 2025, <https://encyclopedia-virginia.org/entries/smith-john-bap-1580-1631/>.
12. Smith, *A Map of Virginia*.
13. Ibid.
14. Ibid.
15. Ibid.

16. Strachey, *The Historie of Travell into Virginia Britania*, 71.
17. Ibid.
18. See this remark in end note 2: Strachey, *The Historie of Travell into Virginia Britania*, 122.
19. Smith, *A Map of Virginia*.
20. Bernard Sheehan has written extensively on the mythology of savagery as a function of Western Christendom and justification for colonial violence. See Bernard Sheehan, *Savagism and Civility: Indians and Englishmen in Colonial Virginia* (Cambridge: Cambridge University Press, 1980).
21. Given the timing of Smith's departure just before Strachey's arrival, it is likely that Strachey copied segments of Smith's manuscript for his own work. See also Appendix A in Strachey, *The Historie of Travell into Virginia Britania*, 174.
22. Strachey, *The Historie of Travell into Virginia Britania*, 197.
23. Ibid.
24. Charles C. Willoughby, "The Virginia Indians in the Seventeenth Century," *American Anthropologist* 9, no. 1 (1907): 57–86; Frank Goldsmith Speck, *The Rappahannock Indians of Virginia* (New York: Museum of the American Indian, 1925), 65.
25. Several other names had been proposed prior to Linnaeus' publication, including *Cehlidonium americanum flore albo*, by Cornuti (1635), *Ranunculus virginienis albus*, by Parkinson (1640), and *papaver corniculatum*, by Plunket (1696). Information sourced from Andrew Croaker, Graham J. King, et al., "Sanguinaria canadensis: Traditional Medicine, Phytochemical Composition, Biological Activities, and Current Uses," *International Journal of Molecular Sciences* 17, no. 9 (2016).
26. Alexandra Cook, *Jean-Jacques Rousseau and Botany: The Salutary Science* (Oxford: Voltaire Foundation, University of Oxford, 2012), 234.
27. Ibid.
28. Ibid., 235.
29. Michel Adanson, Johann Amman, and José Antonio Alzate were among those advocating for the retention of Indigenous names. See Cook, *Jean-Jacques Rousseau and Botany*, 237.
30. Cook, *Jean-Jacques Rousseau and Botany*, 237.
31. Ibid., 239.
32. William Barton, *Vegetable Materia Medica of the United States; or Medical Botany: Containing a Botanical, General, and Medical History of Medicinal Plants Indigenous to the United States* (Philadelphia: H.C. Carey & I. Lea—Chestnut Street, 1825), 33.
33. Ibid.
34. Ibid., 34.
35. Ibid.
36. Ibid., 40–41.
37. William Downey, *An Investigation of the Properties of the Sanguinaria Canadensis; or Puccoon* (Philadelphia: Eaken and Mecum, 1803),
38. Ibid., 30.
39. Barton, *Vegetable Materia Medica of the United States*, 41.
40. Similar processes were undertaken to test the edibility of the leaves, the seed vessel, and the seeds—with similar results.
41. Downey, *An Investigation of the Properties of the Sanguinaria Canadensis*, 15.
42. Ibid.
43. Ibid., 16.
44. Today Bloodroot consumption is largely warned against, for risk of vomiting and loss of consciousness. Visit "Bloodroot Project," NC State Extension, May 23, 2022, <https://newcropsorganics.ces.ncsu.edu/herb/bloodroot/>; see also Downey, *An Investigation of the Properties of the Sanguinaria Canadensis*, 31–33.

45. Robert Sayre, "William Bartram and Environmentalism," *American Studies* 54, no.1 (2015): 79.
46. Barton, *Vegetable Materia Medica of the United States*, 41.
47. Willoughby, "The Virginia Indians in the Seventeenth Century": 66–67.
48. Ibid., 67.
49. William R. Gerard, "Virginia's Indian Contributions to English," *American Anthropologist* 9, no. 1 (1907): 103.
50. John Parkinson, *Theatrum Botanicum: The Theater of Plants* (London: Printed by Tho. Cotes), 431.
51. The translation of *vulgare* as "common" suggests that common gromwell, now *Lithospermum officinale*, may be the plant in question. Curiously, *Lithospermum* still refers to a genus of the Boraginaceae family commonly termed "gromwells" or "stoneseeds," and several plants in the *Lithospermum* genus carry *puccoon* in their common names: *Lithospermum rudemale*, puccoon; *Lithospermum canescens*, hoary puccoon; *Lithospermum incisum*, narrow-leaf or fringed puccoon; and *Lithospermum carolinens*, golden, Carolina, or hairy puccoon. It is beyond the scope of my inquiry to trace back each of these names, but the ambiguity and fluidity of terminology at hand should, by now, be evident.
52. This terminology is complicated. The term "coon" has been used as a racist insult against Native American and African American peoples, an abbreviation of "raccoon." Notably, "raccoon" is itself adapted from an Algonquin word, which Smith transcribed as *aroughcun* in *A Map of Virginia*. Here, "coon root" is most likely an abbreviation of "puccoon root," or a derogatory name akin to "Indian root." On the etymology of "raccoon," see Edward A. Goldman, "Raccoons of North and Middle America," United States Department of the Interior, Fish and Wildlife Service (Washington: US Department of the Interior, 1950).
53. Gerard, "Virginia's Indian Contributions to English," 103.
54. Ibid., 104.
55. Editors Louis B. Wright and Virginia Freund note such details on inconsistencies throughout Strachey's manuscript; Strachey, *The Historie of Travell into Virginia Britania*. For more information on transcription and language, see Philip L. Barbour, "The Earliest Reconnaissance of the Chesapeake Bay Area: Captain John Smith's Map and Indian Vocabulary," *Virginia Magazine of History and Biography* 80, no.1 (1972): 21–51.
56. Inayat Ur Rahman, Aftab Afzal, et al., "Historical Perspectives of Ethnobotany," *Clinics in Dermatology* 31, no. 4 (2019): 382–88.
57. Samuel J. Redman takes a deep dive into the myth of the vanishing Indian and salvage anthropology in his 2021 publication. See Samuel J. Redman, *Prophets and Ghosts: The Story of Salvage Anthropology* (Boston: Harvard University Press, 2021).
58. Huron H. Smith, *Ethnobotany of the Menomini Indians* (Milwaukee: Milwaukee Public Museum, 1923), 8.
59. Ibid., 44 and 78.
60. Ibid., 377.
61. Ibid., 197.
62. Ibid., 82.
63. Ibid.
64. So damaging was this era for the Menominee that, today, the Menominee Indian Tribe of Wisconsin website has a historical trauma education video series, which holds space for community reflections on the impact of federal boarding schools. Visit "Historical Trauma Education," Menominee Indian Tribe of Wisconsin, accessed on March 2, 2025, <https://www.menominee-nsn.gov/CommunityPages/FosteringFutures/FosteringFuturesMain>.
65. Smith, *Ethnobotany of the Menomini Indians*, 180.

66. Helen C. Rountree, *The Powhatan Indians of Virginia: Their Traditional Culture* (Norman: University of Oklahoma Press, 2013), vii.
67. Ibid., 76.
68. Ibid.
69. Ibid., vii.
70. Kathryn A. Jakes and Annette G. Ericksen, "Prehistoric Uses of Sumac and Bedstraw as Dye Plants in Eastern North America," *Southeastern Archaeology* 20, no. 1 (2001): 58.
71. Ibid., 56.
72. Ibid., 59.
73. Ibid., 56.
74. Visit "Bloodroot Project," NC State Extension, May 23, 2022, <https://newcropsorganics.ces.ncsu.edu/herb/bloodroot/>; see also "Bloodroot (*Sanguinaria canadensis*)," NC State Extension, accessed March 2, 2025, <https://content.ces.ncsu.edu/bloodroot-sanguinaria-canadensis-1>.
75. The researchers note the use of bloodroot/*Sanguinaria canadensis* as an oral medication used in Europe to fight plaque and gum disease. Visit "Bloodroot Project," NC State Extension, May 23, 2022, <https://newcropsorganics.ces.ncsu.edu/herb/bloodroot/>.
76. Mary L. Predny and James L. Chamberlain, *Bloodroot (Sanguinaria canadensis): An Annotated Bibliography* (Asheville: US Department of Agriculture, Forest Service, Southern Research Station, 2005), 3.
77. Ibid.
78. Ibid., 10.
79. Melvin R. Gilmore, "Uses of Plants by the Indians of the Missouri River Region," in *Thirty-Third Annual Report of the Bureau of American Ethnology* (Washington: Government Printing Office, 1933), 83; Smith, *Ethnobotany of the Menomini Indians*, 78; Frances Densmore, "Uses of Plants by the Chippewa Indians," in *Fourty-Fourth Annual Report of the Bureau of American Ethnology* (Washington: Government Printing Office, 1928), 371–74; Diamond Jenness, *The Ojibwa Indians of Parry Island: Their Social and Religious Life* (Ottawa: J. O. Patenaude, I.S.O., Printer to the King's Most Excellent Majesty, 1935), 114; John Witthoft, "An Early Cherokee Ethnobotanical Note," *Journal of the Washington Academy of Sciences* 37, no. 3 (1947): 74.
80. "Dyeing with Bloodroot," *SlowYarn*, accessed March 5, 2025, <https://slowyarn.com/dyeing/742-2/>;
- Charlotte Coates, "Blood Root the Recipe," *Cherokee Natural Dyes*, August 23, 2006, <https://cherokeeenaturaldyes.blogspot.com/2006/08/bloodroot-recipe.html>.
81. Zoe Todd, "An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' Is Just Another Word for Colonialism," *Journal of Historical Sociology* 29, no. 1 (2016): 4–22.

