In England's first attempts to plant an American colony, the Roanoke settlers' knowledge of the natural world could make the difference between, at the very least, comfort and misery and quite possibly between life and death. In this essay, I suggest that the Roanoke colonists' uncertainties about the reliability of their 'natural knowledge' may have contributed to the colony's mysterious fate. More specifically, I look at the connections between human survival and knowledge of plants in the Roanoke expeditions from 1584 to 1590, the years when John White and Thomas Harriot were England's closest observers of North America.

As the Roanoke 'enterprisers' confronted the perils of the New World, there was little they could do to control the hazards of storms, shipwrecks, 'murdering, or pestilence'. The dangers posed by a host of unfamiliar plants were a somewhat different matter: in this realm, the use of experts, firsthand observation, and cautious experimentation could, in principle, tip the odds in the colonists' favor. What informal and formal knowledge of natural history did the English bring with them? What did they take for granted about the properties of plants? How did these expectations shape their assessments of the Algonquians' natural knowledge and their own direct encounters with American plant-life? To address these questions, I draw upon White's watercolors and words, Harriot's *A briefe and true report of the new found land of Virginia* (1588), other accounts of the Roanoke voyages sponsored by Sir Walter Raleigh between 1584–90 and contemporary works of natural history and travels.

**First impressions: delight and disorientation**

For early European explorers, natural knowledge of North America began with landfall. After weeks at sea, the first sight of the New World stirred intense sensations that affected their interpretation of everything that followed. Their first emotion was delight – not just in their safe arrival, but also in the natural bounty that greeted them.

The first Roanoke venturers were no exception. For Captain Arthur Barlowe, the leader of the reconnaissance expedition that Sir Walter Raleigh sent in April 1584 (the first of John White's five Virginia voyages), the good impression began even before 'the coastes of America' came into view. Barlowe reported to Raleigh that on 2 July 1584, he had sailed into:

*shole water which smelt so sweetely, and was so strong a smell, as if we had bene in the midis of some delicate garden, abounding with all kind of odoriferous flowers, by which we were assured, that the land could not be farre distant.*

Two days later, the expedition set foot on North America:

*the lande about vs ... [was] full of grapes ... we found such plentie, as well there, as in all places else ... that I thinke in all the world the like abundance is not to be founde.*

The island's forests were full of deer, rabbits and wildfowl, and the woods themselves were:

*not such as you find in Bohemia, Moscouia, or Hyrcania, barren and fruitless, but the highest and reddest Cedars of the world ... Pynnes, Cypres, Sassaphras ... and many other of excellent smell, and qualitie.*

Still better, the 'people of the Countrey' greeted them with canoes brimming over with 'the goodliest and best fish in the world', baskets of game 'the best of the worlde', fruits, vegetables and the corn 'of the Countrey [maize]'! There was no need to stint in this Garden of Eden: 'The earth bringeth forth all things in abundance, as in the first creation, without toil or labour.' Those first impressions of Virginia's 'incredible abundance' – invoked a dozen times in the five pages of Richard Hakluyt's edition – led the later colonists to expect a Paradise.

The venturers' delight in this new world, however, was quickly followed by a disorienting awareness of the *strangeness* of the creatures in it. Barlowe's report conveys the explorers' disconcerting realization that many things in America were very similar to what they knew – but not quite:

*They haue those Okes that we haue, but farre greater and better... my selfe hauing seene those partes of Europe that most abound [in grapes], finde such difference, as were incredible to be written.*

Some of the differences were startling, the stuff of fairy tales:

*Their Countrye corne ... groweth three times in fiue moneths... in tenne daies [our Pease] were of foureteene ynches high. They haue also Beanes very faire, of diuers colours, and wonderfull plenty.*

Even if all the differences were as benign as these, the comparisons undermined the travelers' sense of security about the natural knowledge they carried with them. In the old world, they had at least a lay knowledge of what plants were 'good meat and hoselsey'. In this new world, they could not be so sure.

**'Whether to vse or not to vse'**

On the second Roanoke expedition, Thomas Harriot and John White spent the summer of 1585 'employed in discovering' Virginia and dealing with its 'naturall inhabitants'. Most of the large company returned to England with Sir Richard Grenville in mid-August–early September 1585. Harriot was one of 107 men who stayed a full year in Roanoke with Ralph Lane.

White's whereabouts for that year, however, remain uncertain. Kim Sloan has suggested that he went back to England with Grenville, worked up his precious 'pictures of sundry things collected', and began promoting the next voyage among potential settlers. David Beers Quinn, however, believed it 'almost certain' that White continued working with Harriot – only to witness the disastrous loss of their notes, paintings, and specimens in confusion of the company's flight.

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**Don't Eat, Don't Touch: Roanoke Colonists, Natural Knowledge, and Dangerous Plants of North America**

Karen Reeds

In England’s first attempts to plant an American colony, the Roanoke settlers’ knowledge of the natural world could make the difference between, at the very least, comfort and misery and quite possibly between life and death. In this essay, I suggest that the Roanoke colonists’ uncertainties about the reliability of their ‘natural knowledge’ may have contributed to the colony’s mysterious fate. More specifically, I look at the connections between human survival and knowledge of plants in the Roanoke expeditions from 1584 to 1590, the years when John White and Thomas Harriot were England’s closest observers of North America.

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from Roanoke in June 1586. To me, White’s undiminished enthusiasm for the colonial enterprise in 1587 suggests that he had only seen the summer’s abundance in 1585, not the hardships of spring 1586.

Harriot properly credited himself with ‘hauing seene and knowne more then the ordinarie’. In A briefe and true report, he named about 60 different plants native to the region or sown there by the colonists (along with nearly 40 animals and a dozen minerals). Two dozen plants, identified only by their indigenous names, were wholly unfamiliar to the English newcomers. Even if Harriot had learned these plant names beforehand, while studying the language with Manteo and Wanchese, the two Algonquians who had traveled to England in 1584, the words would have meant little until he saw the living plants. White’s drawings add two more Virginian plants to the list. One is an unlabeled five-petaled purple flower. The other is labeled as Wysauke (Asclepias syriaca L., common milkweed) (Fig. 1).

A briefe and true report recorded only a subset of Harriot’s observations and insights. He protested that he was working largely from memory; and it is clear that investors, not naturalists, were his intended audience. Of the multitude of unknown plants he had seen, utility dictated which ones deserved mention. Harriot chose the ones that would either help the colony survive or become ‘Marchantible commodities’. To judge whether a particular plant might be good ‘to vse or not to vse’, he relied on five sources of natural knowledge:

1. English medical and herbal expertise. As two anonymous memoranda and Hakluyt’s Discourse of Western Planting had recommended, the expedition included a surgeon, a physician and apothecaries. Their job was to tend to the health of the soldiers, but equally to ‘discover the simples [i.e., simple medicines] of earbs plantes trees roothes, and stons’ and then to ‘send into the Realme by seede and root herbs and plants of rare excellencie’. They apparently returned to England with Sir Richard Grenville at the end of the summer of 1585, carrying specimens to grow and test at home. After highlighting the medicinal value of Roanoke’s ‘Sweete Gummes of diuers kindes and many other Apothecary drugges’, Harriot deferred to a report expected from the apothecaries.

2. Botanical literature. Harriot’s report implies that the expedition carried along a key reference book on New World natural history: John Frampton’s English translation of La historia medicinal de las cosas que se traen de nuestras Indias Occidentales que sirven en Medicina (Seville 1574), by the Seville physician, Nicolás Monardes. Harriot may not have had a copy at hand as he wrote: his reference to the herbal – ‘The ioyfull newes from the West Indies’ – conflated its title, ioyfvll nevves ovt of the newe founde worlde (London 1577, 1580), with its running heads and misspelled Monardes’s name (as ‘Monardus’).

Harriot referred his readers to Frampton’s Monardes for an account of the invaluable sassafras [Winauk; Sassafras albidum (Nutt.) Nees] (Fig. 2). Readers could also find there a long enthusiastic account of Harriot’s favorite American plant: ‘vppówac ... The Spaniardes generally call it Tobacco [Nicotiana rustica L.] (Fig. 3).’

3. Resemblances to English plants. Harriot and his companions bestowed English names on a number of American plants, based on their similarity in shape, color, size, habit of growth or use to familiar English plants:

- ... called by vs Beans, because in greatness & partly in shape they are like to the beans in England ...
- ... called by vs Peaze, in respect of the beanes for distinction sake, because they are much less; although in forme they little differ ...
- ... called by vs, Pomptions, Mellions, and Gourdes, because they are of the like formes as those kindes in England.

The persimmon (Figs 4–5) had some resemblance to English Medlars:

- ... so called by vs chieflie for these respectes: first in that they are not good until they be rotten; then in that they open at the head as

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Figure 1 Wysauke (milkweed, Asclepias syriaca L.), John White (BM 1906,0509.1.37)

Figure 2 Sassafras (Winauk; Sassafras albidum [Nutt.] Nees), in Nicolás Monardes, ioyfull nevves ovt of the newe founde worlde... Englished by Jhon Frampton, 1577, woodcut (ed. S. Gaselee, London 1925,100)

Figure 3 Tobacco (uppówac, Nicotiana rustica L.), in Nicolás Monardes, ioyfull nevves ovt of the newe founde worlde... Englished by Jhon Frampton, London 1577, woodcut (ed. S. Gaselee, London 1925,76)
our medlars, and are about the same bignesse; otherwise, in taste and colour they are farre different: for they are as red as cherries and very sweet: but whereas the cherie is sharpe sweet, they are lusious sweet. 32

The ‘Leekes’ differed so ‘little from ours in England’ that the colonists were ‘wonderfull many, but the natural inhabitants neuer.’ 33 The dye plant, ‘Shoemake’ (i.e., sumac), was ‘well knowen, and vsed in England for blacke.’ 34

4. Similarities to plants from other lands. Harriot relied on the testimony of others that some Virginian plants resembled plants from Europe, the Near East or the Indies:

There is an hearbe which in Dutch [or German] is called Melden. Some of those that I describe it vnto, take it to be a kinde of Orage [orach, Atriplex spp].

Silk of grasse or grasse Silke [Yucca spp.] ... The like groweth in Persia, which is in the selfe same climate as Virginia ...

Metaquesaunauk [Opuntia sp., prickly pear, tuna], a kinde of pleasant fruite ... Some that haue bin in the [West] Indies, where they have seen that kind of red die of great price which is called Cochiniile to grow, doe describe his plant right like vnto this of Metaquesunnauk ...

Coscushaw [probably Peltandra virginica (Schott) L., or Orontium aquaticum L.], some of our company tooke to bee that kind of roote which the Spaniards in the West Indies call Cassauy, whereupon also many called it by that name.

Tsinaw a kind of roote much like vnto yt which in England is called the China root brought from the East Indies. 35

5. The experience of the North Carolina Algonquians. Above all, as Harriot readily acknowledged, the colonists were indebted to the Indians’ guidance:

by the experience and use of the inhabitants, we find ... a kind ... so called by the naturall inhabitants ... 36

From the Indians, the colonists learned to relish maize in many forms, as well as half a dozen starchy roots known only by indigenous names (and some still not identified with certainty) and five sorts of ‘berrie or acorne’ growing on ‘seueral kinds of trees’. 37

Above all, this was true for tobacco (see Fig. 3). The Algonquians’ ‘precious estimation’ of the plant in medicine and

religion confirmed Monardes’s praise. 38 The colonists – and Harriot above all – ‘found manie rare and wonderfull experiments of the vertues therof; of which the relation woulde require a volume by it self’, 39 Through De Bry’s editions of A breife and true report, Harriot’s fervent advertisement for tobacco reached thousands of European readers and helped create the market for the Jamestown colony’s most important commodity. 40

Unspoken fears

Just off the pages of John White’s drawings of Roanoke foods and cooking pots (Fig. 6) stand three invisible figures – the artist himself, Harriot the observer and Manteo the interpreter. 41 Harriot paid close attention to the ingredients that went into those stews. Aside from simple curiosity, he was motivated by hunger and self-reliance: sooner or later, the settlers would have to grow and cook the native foods for themselves.

There was, however, a darker motive for keeping an eye on the cooks: fear of deliberate poisoning. That possibility would have passed through the mind of any prudent Elizabethan: accusations of poisoning were common in England and a plot element in many a drama. 42 Frampton’s translation of Monardes dedicated many folios to two exotic antidotes to poison. 43 In Virginia, it would have been child’s play for the Algonquin cooks to kill the newcomers.

Harriot specifically names two poisonous plants. The roots of Coscushaw and the mysterious Sacqueniummen were ‘very good in taste, and holsome’, but only if ‘heede... be taken’, they were edible only after a long, careful course of preparation to remove their poisons. 44

Poisoned arrows were another fear. Spanish and English accounts of the West Indies had described the Indians’ use of poisoned arrows and stakes. 45 John White’s label to his drawing of milkweed (see Fig. 1) signaled both the Virginian Indians’
use of poisoned arrows and their antidote: ‘The heare wch the Sauages call Wysauke wherewith theye cure their wounds wch they receaue by the poisoned arroes of theire enemies.’

John Gerard’s account of milkweed in his widely read *Herball* (1597) could not offer a ‘phisicall [i.e., medical] vertue’ for the plant (Fig. 7). However, the woodcut’s Latin label – *Vincetoxicum Indianum*, i.e., ‘Indian antidote to poison’ – implies that Gerard had in fact seen John White’s inscription. Moreover, that use was supported by Dioscorides, the ancient authority on *materia medica*, who had recommended the European swallow-worts as ‘a remedie ... against deadly poison ... one of the especiallest herbes’.

In *A briefe and true report*, Harriot performed a remarkable rhetorical feat. He put the best face on an expedition whose success was being ‘slaunered’ by returned malcontents. He reassured Raleigh and his backers that America was worth investing in: full of valuable commodities and a safe, fertile, healthy place to live. He allayed a host of well-founded fears without acknowledging just how reasonable they were.

An encounter with sassafras provides a good example. It was not a dangerous plant; to the contrary, from the start it was on the venturers’ shortlist of profitable commodities and quickly became Virginia’s first cash export.

Harriot was circumspect about the main reason for the demand: sassafras is ‘of most rarevirtues in phisick for the cure of many diseases. It is found by experience to bee farre better and of more vsethan the wood which is called Guaicum’. However, as every reader of Monardes knew, God gave every region the cures for its peculiar ills, and sassafras – like guaicum – was a sure cure for the New World’s new disease, syphilis.

Sassafras did indeed help save lives on the 1585–86 expedition (perhaps including Harriot’s), but not for reasons that investors would want to hear. On a trip up the Chowan River in April 1586, Ralph Lane’s party ran out of food. They were forced to kill their two mastiffs to make a stew of dogmeat, eked out and thickened with sassafras leaves: ‘Wee ... had nothing in the worlde to eate but potage of sassafras leaues, the like whereof for a meate was never vset before as I thinke.

Why did the explorers add sassafras to their ‘dogs porragede’? Of all the unfamiliar greenstuff emerging around them in springtime, it was the one plant that they knew was safe to eat. It was the one plant whose ‘much sweetnes in taste’ and ability to give ‘appetite to eate’ might make the stew palatable. And it was the one edible plant they could infallibly recognize, thanks to its distinctive smell and three-lobed leaves, ‘after the maner of a Figge Tree, with three poinctes’ (Fig. 8).

**A poison apple in Paradise**

In *A briefe and true report* Harriot played down the drama of his year in ‘the new found land of Virginia’. He did not relate the number of times his colleagues had to negotiate with the natural inhabitants for food, effectively robbing them of their own scanty stores of corn, to make it through the winter. He did not convey just how close the company came to starvation and native retaliation. The colonists’ relief at Sir Francis Drake’s unexpected arrival in June 1586 is only implied by Harriot’s understated urging that the next colony be sent off with a ‘reasonable’ provision of food, arms, clothing, cattle and seeds of ‘our kinde of fruites, rootes, and heares’ for the first year of planting.

In the long term, Harriot’s rhetoric of rational optimism captured enough well-wishers to keep the Virginia project going even after the Roanoke colony had to be assumed to be lost. In the short term, John White’s drawings served as the visual equivalent of Harriot’s prose: persuasive in their precision, close observation, and restraint. However, White’s Roanoke scenes were misleading in their orderliness. They omitted the tense encounters between two cultures, the backdrop of wilderness, and the dangers that both of these represented to the next band of newcomers.

Equally misleading was the impression of expertise that White and Harriot projected. For all their immersion in New World natural history, they did not play a vigorous part in disseminating, analyzing or building upon their unique experience – even though London’s lively community of naturalists would have hung on every detail (what did those five kinds of acorns look like?). Apart from writing out his ‘Chronicle’ and *A briefe and true report* (completed February 1588, published in May), Harriot evinced virtually no interest in natural history after his return to England. His *Report* gives little indication that he had learned to examine, collect and describe unfamiliar plants with the tireless precision he applied to his observations and calculations in astronomy, navigation and physics.

John White’s drawings, his enthusiasm for ‘fruitfullest
Virginia’, and his safe return from two previous Roanoke expeditions must have reassured his recruits for the second colony.79 They were embarking under a leader who knew more than anyone else in Europe about the place they were going and who clearly felt confident about its success. Why else would he have ventured again? Why else would he have brought his own daughter and son-in-law along?77

It is doubtful that the men and families who set out under Governor John White for Virginia in April 1587 knew how much the first colony’s survival had depended on the natural knowledge and the generosity of Roanoke’s native inhabitants. Even before White and his company arrived in Virginia, however, they had discovered how scanty his knowledge of New World plants actually was and how easily their own natural knowledge could betray them. Here is the story in White’s own words:

Iune. The 22. [1587] we came ... an Isle, called Santa Cruz [St. Croix], where all the planters were set on land, staying there till the 25. of the same moneth. At our first landing on this Island, some of our women, and men, by eating a small fruite, like greene apples, were fearefully troubled with a sudden burning in their mouths, and swelling of their tonges so bigge, that some of them could not speake. Also a child by sucking one of those womens breastes, had at that instant his mouth set on such a burning, that it was strange to see how the infant was tormented for the time: but after 24. howres, it ware away of it selfe... . In this Island we found no watring place, but a standing pond, the water whereof was so euill, that many of our companie fell sick with drinking thereof; and as many as did but wash their faces with that water, in the morning before the Sunne had drawn away the corruption, their faces did so burne, and swell, that their eies were shut vp, and could not see in fieue or sixe daies or longer.78

The cause of all these miseries was the ferociously toxic manchineel (Hippomane spp.) (Fig. 9).

Touching or tasting any part of the manchineel tree, or anything it had contaminated, was dangerous – as Spanish accounts of the West Indies, beginning with Columbus, had made clear decades earlier (and modern botanists have known about manchineel’s dangers before setting out in 1587). Gonzalo Fernández de Oviedo had provided the classic account of the deceitful manchineel in De la Natural Hystoria de las Indias (Toledo 1524), a work cited by Roanoke’s promoter, Richard Hakluyt, in 1582.79

The fruit is like the perfectly round pears of Sicily or Naples, in shape like the small early pears. In some places they are spotted red and have a very pleasant odor. These trees usually grow on the coast near the sea, and every man who sees them wants to eat many of the ... manchineel apples. From these manchineel apples, the Carib Indians make the deadly poison with which they tip their arrows and darts ... if a man lies down to sleep in the shade of ... these manchineel trees, he awakes with his head and eyes swollen, his eyebrows level with his cheeks.79

After another month of sailing, the planters landed on Roanoke, on 25 July 1587. Less than a month later, on 18 August, John White’s daughter, Elyoner Dare, gave birth to her own daughter, Virginia Dare, the ‘first Christian borne in Virginia’.80 Another family’s child was born a few days later.81

The colonists’ expectations of Edenic abundance were challenged immediately by deadly misunderstandings with the Indians and by the shortage of corn.82 On 27 August, after 10 days of entreaties by ‘the whole companie ... as well women, as men’, Governor John White sailed back to England for more supplies.83 He never saw any of them again.

Consequences

Ralph Lane’s account of English lives saved by sassafras and John White’s record of English lives threatened by manchineel poisoning represent two different aspects of the Roanoke colonists’ natural knowledge.

With sassafras, the Roanoke explorers could draw on Dr. Monardes’s long testimonial and on the reports from the French expedition who had used it in Florida two decades earlier and the Barlowe expedition in 1584. They had nearly a year’s worth of personal experience gathering sassafras for market, and they had witnessed the Algonquians’ regard for Winauk. The colonists’ success in putting this knowledge to use in a tight spot underscored the value of all these forms of natural knowledge to the colony’s future.

With manchineel, the colonists’ state of knowledge was much more problematic. John White could, in theory, have known about manchineel’s dangers before setting out in 1587. He could have picked up stories about manchineel from contemporaries with experience in the Caribbean.84 He could have read about the toxic fruit in Columbus, Peter Martyr and Oviedo – books that circulated in London’s overlapping communities of naturalists and geographers.81

The availability of a piece of information, however, no matter how authoritative its source, is no guarantee that it will be registered or believed. Even today, the extravagant effects of manchineel are dangerously easy to dismiss as travelers’ tales. And, even if forewarned, it might have been hard to stop the passengers – in their joy at their first American landfall, in their longing for fresh food after a month at sea – from trusting in their own lifetime of experience with England’s sweet-smelling apples.

Richard Hakluyt was later to signpost the incident on St. Croix with the marginal note: ‘Circumspection to be used in strange places.’82 The admonition came too late for this small band of men, women, and children. All that they thought they knew about the way plants looked and grew, all that John White had told them about Virginia, ‘this paradise of the worlde’, was now subject to doubt and misgiving (Fig. 10).83 After that taste of the poison apple, would even John White’s daughter have believed in him quite so trustingly again?84 And what in the New World would she have dared to eat?
Notes
1. I am consciously conflating two quite different uses of ‘natural knowledge’ from the late 17th century and the late 20th century. The Royal Society of London for the Improvement of Natural Knowledge (founded 1660) took it to mean objective knowledge of the physical and natural world. In recent decades the term has been widely deployed by historians, sociologists and philosophers of science as a pragmatic shorthand description of what people believe to be true about the physical and natural world, how they learn about and explain its phenomena, and how they act upon their understanding, regardless of its scientific validity. See J. Golinski, Making Natural Knowledge: Constructivism and the History of Science, Cambridge, 1998; 2nd ed., Chicago, 2005.


4. The travelers’ awareness that Roanoke’s inhabitants found the English equally strange magnified these feelings of disorientation; ibid., 112.


7. Ibid., 95.

8. Ibid., 96–7.

9. Ibid., 97, 105, 115.

10. Ibid., 108. On the Garden of Eden trope, see Karen O. Kupperman’s paper in this collection.


12. The travelers’ awareness that Roanoke’s inhabitants found the English equally strange magnified these feelings of disorientation; ibid., 112.

13. Ibid., 106; 95.


17. Ibid., 318.


20. Compare Lane’s florid praise of ‘the most pleasing territory of the world’, in mid-August 1585, to his sober ‘Discourse on the first colony’ the following year; Quinn, supra n. 2, doc. 28, 208 (see also docs. 25–7 and 29); Quinn and Quinn, supra n. 18, 255–94. On Lane’s rhetoric, see P.A.S. Harvey, ‘Barlowe, Lane and Harriot’s Accounts of the New World’, The Thomas Harriot Seminar, Occasional Papers, no. 20 (n.d.).


24. Sloan, supra n. 3, 172–3; Wisakon, cat. 38; Wisakon, fig. 111; Wisanck, fig. 112, 172–3.


26. On Harriot’s utilitarian thrust, see Stephen Cubacs’s paper in this collection.


28. Harriot, supra n. 2, 344. I leave it to others to decide if Hamlet (c. 1601) echoes Harriot’s phrase.

29. Anonymous notes for the guidance of Raleigh and Cavendish [1584–5]. Quinn, supra n. 2, doc. 6, 175; see also Quinn, supra n. 2, 50–4. Hakluyt, Discourse, supra n. 4, 126–7; Harriot, supra n. 2, 334.

30. ‘Ralph Lane to Sir Francis Walsingham, 8 September 1585’, Quinn, supra n. 2, doc. 29, 213. Samples of silkgrass, cedar, and ‘Indian Swallow woort’ reached England, but we do not know who brought them or when: Gerard, Herball (1597), supra n. 2, 752; Harriot, supra n. 2, 326, 329–30, 334. White gave the naturalist, Thomas Penny, a firefly and a drawing of it; Sloan, supra n. 3, 212–3.

31. Harriot, supra n. 2, 334.

32. Harriot, ibid., 329; the misspelling, ‘Monardus’, appears in both the 1587 pamphlet and Theodor de Bry’s English edition (Frankfurt 1590); Quinn silently corrects it. Monardes, Joyfull Newses out of the Newe Founde Worlde Written in Spanish by Nicholas Monardes... and Englished by John Prampton... 1577, intro. S. Gaslee, 2 vols, The Tudor Translations, Second Series, IX-X, London, 1925. It is not known which edition of Frampton Harriot saw. It is very unlikely Harriot used the Latin translation and commentary by Europe’s most astute botanist, Carolus Clusius (Charles L’Écluse,
who later translated A briefe and true report into Latin for de Bry, correcting Monardes's name in the process); De simplicibus medicamentis ex occidentali Indi delatis ... Auctore D. Nicolao Monardis, Antwerp, 1574, 44–9; Clusius replaced Monardes’s image of the true sassafras with a woodcut of a Peruvian tree, Molle.


35 Monardes, supra n. 33, i, 75–98. Harriot, supra n. 2, 344–6.


37 Ibid., 352. Harriot’s description of the taste of a ripe persimmon ( Diospyros virginiana L.) is right on the mark.

38 Ibid., 350 and n.4. Roanoke’s native wild onion, Allium canadense L., does not have the broad leaves suggested by ‘Leeke’ (Allium porrum L.); Allium tricoccum Ait., the wild leek or ramps of North Carolina’s western mountains, is not found in Dare County (my thanks to Misty Franklin, Botanist, North Carolina Natural Heritage Program; personal communication, 7 September 2007).


42 Harriot, supra n. 2, 330, 337.

43 Ibid., 354–5.

44 Ibid., 344–6. Monardes, supra n. 33, i, 75–98; woodcut, 76.

45 Harriot, supra n. 2, 345.

46 John Rolfe’s introduction of the Caribbean’s more palatable Nicotiana tabacum insured Jamestown’s economic survival; cf. Harriot, supra n. 2, 1340. Monardes, supra n. 33, i, 109.

47 Sassafras bears three shapes of leaves, often on a single branch. Monardes described the variability and the three-lobed form (supra n. 33, i, 100, 102), but these features are not clear in Monardes’s and Gerard’s woodcuts. Cf. Mark Catesby’s watercolor (1730s?); Sloan, supra n. 3, 206, fig. 137.

48 Harriot, supra n. 2, 317.

49 Cf. the equally garbled account that the party had been ‘hitherby in some scarsetie’; ‘The third voyage made by a Ship, sent in the yeere 1586, to the reliefe of the Colonie plantified in Virginia’ (published in 1589 by Hakluyt, and probably written by him), Quinn, supra n. 2, doc. 64, 478.

50 Harriot, supra n. 2, 385–6.


52 Harriot, supra n. 2, 387.


54 Edmund Spenser, The Faerie Queen, Book Two, quoted by Quinn, supra n. 2, 465.

55 ‘Eluyon Dare’, ‘Ananias Dare’, and ‘Virgina Dare’ appear among ‘The names of the colonists [1587]’, Quinn, supra n. 2, doc. 78, 539, 541.

56 ‘John White’s Narrative of his Voyage’, Quinn, supra n. 2, doc. 77, 517–8.

57 For early references, see José Pardo Tomás and María Luz López Terrada, Las primeras noticias sobre plantas Americanas en las relaciones de viajes y cronicas de Indias (1493–1553), Cuadernos Valencianos de Historia de la Medicina y de la Ciencia, XL, Serie A, Valencia, 1993, 303. R. Howard, ‘Three experiences with the manchineel (Hippomane spp., Euphorbiaceae)’, Biotropica, 13, 3, 1981, 224–7; Cf. Drake’s West Indian Voyage, supra n. 50, 1621n; given Drake’s mention of the poisonous fruit, manchineel seems as likely as the editor’s suggestion of boxthorn (Lycium spp.).

58 Oviedo, supra n. 50, cap. 77, 91. Hakluyt, Discourse, supra n. 4, 108, 112, and Divers voyages touching the discoverye of America, and the ilands adijcent unto the same, London, 1582, [title page verso].

59 ‘John White’s Narrative’, supra n. 72, 531–2.

60 ‘The names of the colonists’, Quinn, supra n. 71, 542.

61 See K.O. Kupperman’s paper in this collection.

62 ‘John White’s Narrative’, supra n. 72, 524–35.


64 See supra n. 73. Harkness, supra n. 40, 25–6, 48.

65 Hakluyt’s 1600 edition of ‘John White’s narrative’; Quinn, supra n. 67, 5085n.

66 ‘The third voyage’, supra n. 65, 479.

67 ‘John White’s Narrative’, supra n. 67, 531–2.