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Chapter Two

Richard Carew and the Matters of the Littoral

Tamsin Badcoe

That nothing under heaven dooth ay in stedfast state remayne.

And next that nothing perisheth: but that eche substance takes

Another shape than that it had.

—Arthur Golding

And yet, writing makes no soil fertile.

—Richard C. Hoffmann and Verena Winiwarter

As Richard Carew proposes at the beginning of the “earthly description” that comprises his *Survey of Cornwall* (1602), he will begin by telling the reader of “such mynerals as her bowels yeeld forth” before passing on to other things, namely the matters “of growing, and feeling life, which upon her face doe relieve themselves.” Moving from depth to surface, from the subterranean earth to thriving plants and persons, and from mythical past to the concerns of his present, Carew surveys a county that is shaped by the combination of a desire to labor with the capacity to dream; the work he produces is of both mind and matter, supplying stuff fit for the entertainment and education of “the Cornish wonder-gatherer.” With an expressive style that is sensitive to the mutable colors, textures, and forms of a littoral landscape, Carew may modestly refer to his prose masterpiece in his
dedicatory letter to Sir Walter Ralegh as an “ill-husbanded Survey,” but the land limned by his pen reveals itself to be very well husbanded indeed.⁵ Owing to its dramatic surfaces and its blustering but healthful air and waters, Carew’s Cornwall exists as a fecund place “that with utmost bound/ Of Zephire art possest”; it provides a setting for Carew’s meditations on the relationship between humans and the environment, and owing to its distinctively maritime aspect, on the temperament of England’s most westward shores.⁶

Surrounded by the ebb and flow of the sea, Carew’s Cornwall emerges as a precarious but well-governed place, sounded by the richness of the author’s vocabulary and wit. Writing of a place where the land may seem to be at its most fragile, “ravined” by the “encroaching Sea,” Carew attempts to catch at something that he knows cannot stand forever.⁷ Indeed, as he writes in the companionable letter addressed to the reader that prefaces the work, acknowledging the inescapable belatedness of his writerly labors, the country has already “undergone so manie alterations, since I first began these scribblings,” but that “a wonder it were, that in the ceaselesse revolution of the Universe, any parcell should retaine a stedfast constitution.”⁸ Always aware of the constant threat of mutability, of the interaction between soil and saltwater that is an everyday environmental experience for the county’s inhabitants, Carew’s surveying eye is drawn to the achievements of labor, invention, and endeavor, and the creation of practices and customs that persist and endure. By building on the work of Wendy Wall, this essay explores how Carew praises both heroic named individuals and the unnumbered anonymous husbandmen that shape the destiny of the land, whereby the “grand inscriptions of a heroic and mythic national project” can be located in “the more mundane meanings of the land: as soil, dirt, earth.”⁹ By focusing on Carew’s interest in the matters associated with coastal terrain, I address how The Survey of
Cornwall participates in a mode of writing that flourished in the late sixteenth and early seventeenth centuries, in which, as Wall observes, “real dirt meets a glorified georgic head-on.” For Carew, this means tracing shared material concerns between local spaces, exemplified perhaps by the pleasure of managing a much-beloved saltwater pond at Antony, his ancestral home, and their national equivalents, where soil and saltwater interact on grander scales. From microcosm then, a pond that “doth th’Ocean captive make,” to macrocosm, in which a sea surrounds and shapes a nation, Carew’s focus moves freely between county and country, offering models of correspondence and modulating harmony that delight in the correlation between aesthetics, matter, and the imagination.

Carew rarely moralizes his landscape, but he finds within it a series of narratives that associate cultivated and inhabited land with the progress and development of civility and culture; for Carew, as for many others during the early modern period, “the cultivated landscape becomes the supreme expression—national, political, and religious—of the ‘country,’ and the most powerful figuration of the cultivation of the human spirit.” The impulse to ameliorate, aestheticize, and theorize the soil, which Michael Leslie and Timothy Raylor describe as “terracultural thinking,” manifests in Carew’s work in the way that he is attentive not only to founding myths but also to the quotidian, practical tasks involved in the work of husbandry. After envisioning a once uncivilized place ill governed by Titans, where the “earth groan’d at the harmes / Of these mount-harbour’d monsters,” he goes on to explain how Cornwall gradually came to be cultivated, connecting trade routes and the movements of merchants to the way that resources are managed in regional terms.

An interest in writing the surveyed county into a national economy, networked by occupations and industries, is tempered by an attention to the environmental integrity of local places,
which reinscribes received epic narratives within an appreciation of grounded cultural practices. When beginning his survey by rewriting the topographical account popularized by Geoffrey of Monmouth and William Camden, for example, in which Corineus, companion to Brutus, “the first Conquerour of this Iland,” defeats “a mightie Giant, called Gogmagog,” he describes how Corineus “threw him over Cliffe, brake his necke, and received the gift of that Countrie, in reward for his prowesse,” giving it his name in return. As Elizabeth Jane Bellamy observes, this moment of “coastal violence” acts as “the necessary first stage of Britain’s evolution into a new, westerly fertile crescent”: a myth that suggests the importance of Cornish terrain as a developmental epicenter for the rest of the isle. For Carew, who reflects on the controversies concerning location generated by the myth, where some writers favor Cornwall and others Dover in a conflict as strenuous as the “wrastling pull betweene Corineus and Gogmagog,” even his own reasoning is couched in terraqueous terms: for, “if there be any so plunged in the common floud, as they will still gripe fast, what they have once caught hold on, let them sport themselves with these conjectures, upon which mine averment in behalfe of Plymmouth is grounded. The place where Brute is said to have first landed, was Totnes in Cornwall, and therfore this wrastling likely to have chaunced there, sooner then elsewhere.” As this essay explores, Carew’s descriptive tendencies move easily between the fluid and the “earthy,” and he takes delight in ensuring that his proofs are “grounded,” or substantiated; an interest in the surface of the earth, in “meadow ground,” “quicke ground,” and “gaully grounds” is, as we shall see, accompanied by an antiquarian interest in the relationship between “the memory of our Chronicles” and “our owne view.” The effect of grafting husbandry to myth is to create a survey of a promontory that is shaped by both mythic
narratives and vital and everyday labor, and where signs in the soil are complemented by dreams promising prospective prosperity.

In order to think about the kind of work Carew does with soil, and the curious attention he pays to local habit and improvement, this essay also pays attention to the literary genres and transformations with which the *Survey* engages. For Richard Helgerson, Carew’s chorographical writing directly complements his political career, whereby allied kinds of “topographical representation” (he represented the Cornish constituency of Saltash and later that of Mitchell in Parliament) can be read as a “parliamentary counterpart” to writing the land. In *God Speed the Plough*, Andrew McRae draws attention to a poem Carew includes within his survey that “celebrates his family’s etymological link to the tilling of the soil” by punning on the Carew surname and the word “Carru” (“a plowe”). As McRae observes, the verse’s interest in “the spirit of industry and improvement . . . underpins and invigorates the *Survey*’s predominantly pastoral emphasis on retirement”; however, as this essay will argue, Carew’s sustained interrogation of process and unavoidable change ensures that both his strategies of praise and his idealizations of the relationship between labor and place never truly approach the realm of literary pastoral and the static ecologies in which this mode invests. When offering an initial brief survey of the varied quality of the Cornish soil, for example, the author’s mind travails freely over the geographical contours of the fluctuating terrain, directing the reader’s gaze toward a landscape shaped by the implicit presence of human intervention:

The Cornish soyle, for the most part, is lifted up into many hils, some great, some little of quantitie, some steepe, some easie for ascent, and parted in sunder by short and narrow vallies. A shallow earth dooth cover their outside,
the substance of the rest, consisteth ordinarily in Rockes and Shelve, which maketh them hard for manurance, & subject to a drie Summers parching. The middle part of the Shire (saving the inclosures about some few Townes and Villages) lieth waste and open, sheweth a blackish colour, beareth Heath and spirie Grasse, and serveth in a maner, onely to Summer Cattel. That which bordereth upon either side of the Sea, through the Inhabitants good husbandrie, of inclosing, sanding, and other dressing, carrieth a better hue, and more profitable qualitie.24

Through a description that is attentive to both the effects of manuring and enclosure, and to the lived and worked contingencies occasioned by the changing seasons, this moment provides fertile ground for the kind of reading Steve Mentz calls for in an essay arguing for the need to move “beyond happy fictions of sustainability.” As Mentz suggests, “literary culture has always been fascinated with the interplay of stability and disruption, and literary attitudes toward change can aid us in reimagining ecological dreams.”25 By writing proudly of the effects of “good husbandrie,” Carew reveals the constant inconstancy of terrain where salt, sand, and soil are mixed and compounded in ingenious ways in order to ensure the continuing depth of the harbors and the fatness of inland fields. In so doing, his writing can be seen to participate in the activities of composition that are so elegantly outlined by Frances E. Dolan in the opening chapter of this collection.

In Carew’s hands, the secretive constitution of the soil requires narration. His antiquarian disposition and interest in preservation may partially inform the way in which he writes about place, but his narratives also preemptively include what Simon E. Estok identifies within certain kinds of knowledge-making activities as a “latent affective ethics of
activist engagement.” In particular, Carew’s interest in plotting the tensions that underwrite what we might now call a littoral ecotone, in which “marine and terrestrial ecosystems meet,” draws attention to the land ethic of two interconnected labors, namely, soil amendment and the ways in which the earth must be moved in order to facilitate the mining of tin. For Carew, these were sometimes antagonistic and sometimes complementary processes. At the point where sea and land meet, and where water and soil are constantly exchanged, Carew demonstrates a concern with substance and alteration, particularly when attempting to articulate ecological vulnerability. As a result of his shaping imagination, the shared features of agriculture and metallurgy are occasionally suggestive of alchemy, where, to borrow Mircea Eliade’s formulation, both processes can be seen to “pursue the transformation of matter, its perfection and its transmutation.” Far from displaying anxiety at what Walter M. Kendrick identifies as a troubling “compound of mind and mud” in the works of contemporaries such as Edmund Spenser, whom Lindsay Ann Reid discusses further in this volume, this essay argues that Carew’s survey displays a generous curiosity, which exceeds the purely economic, in the peculiarity and texture of littoral matters.

**Of Tin and Strong Imaginations**

When surveying the minerals and metallic ores found naturally occurring in Cornwall, Carew praises tin above all: a commodity that “is in working so pliant, for sight so faire, and in use so necessarie, as thereby the Inhabitants gaine wealth, the Marchants trafficke, and the whole Realme a reputation.” His celebration of tin acts as a recuperative strategy, for as Carolyn Merchant observes, mining was often criticized as a stimulus for greed and
cruelty during the early modern period. Noting the way that the forcible extraction of metals was often discussed as the violation of a feminized earth, she emphasizes the persistence of critical attitudes inherited from ancient Roman authors such as Pliny and Ovid. Carew's fellow Cornishman and poet Charles Fitzgeoffrey, for example, addresses his homeland as “nympha metalliferis praegnans Cornubia venis,” or as a “nymph pregnant with ore-bearing veins,” which attributes a loaded and sexualized female anatomy to the county. The implied desirous gaze is not solely focused on the nymph’s fertile womb but on the charged seams that run throughout her body. For Carew, the gendering of the tin itself is associated with its boundless utility: in "travailing abroad, in tarrying at home, in eating and drinking, in doing ought of pleasure or necessitie, Tynne, either in his owne shape, or transformed into other fashions, is alwayes requisite, alwayes readie for our service." By commending the substance’s involvement in the spaces of both venture and the domestic, with nourishment, and both the pleasurable and the practical, Carew associates the worked qualities of tin with the active and the masculine.

As Carew argues, there is little cause for avaricious behavior because it is “with such plentie therof hath God stuffed the bowels of this little Angle, that (as Astiages dreamed of his daughter) it overfloweth England, watereth Christendome, and is derived to a great part of the world besides.” Notably, the simile chosen by Carew is somewhat disconcerting due to how it elides displaced physiognomies, commerce, and prophecy; in the dream, which concerns unchecked power, Astyages, king of the Medes, “thought . . . that his daughter made so much water at one time as filled al the streets of the city Ecbatana, & that it did overflow all Asia.” In the quotations included here, the hollows of the earth are granted anatomical form: the loaded veins, stuffed bowels, and bladderlike womb are all bodily
spaces through which matter moves, either for circulation or ejection. For Astyages, the flood of waste water from within his daughter’s hidden interior spaces was a portent of ill-tidings; however, in Carew’s survey it becomes a sign of plenty, strangely associated through proximity with the manner in which the Cornish “tynners” read the aftereffects of the Biblical deluge in the contours of their livelihood. The miners, Carew reports, discover all sorts of flotsam and jetsam in the earth as they dig: “The Cornish Tynners hold a strong imagination, that in the withdrawing of Noah’s flood to the Sea, the same tooke his course from East to West, violently breaking up, and forcibly carrying with it, the earth, trees, and Rocks, which lay any thing loosely, neere the upper face of the ground. To confirme the likelihood of which supposed truth, they doe many times digge up whole and huge Timber trees, which they conceive at that deluge to have beene overturned and whelmed.”37 It becomes clear that Carew is fascinated by the ability of the “tynners” to interpret preserved objects in the soil, as if they can read the history of the land in its composition; the depth of the earth becomes a repository for things once living on its surface. As Philip Schwyzer notes, remarking on Carew’s description of fishermen dredging up objects that were once parts of domestic structures from the silty sea bottom off the coasts of Land’s End, and perhaps discovering evidence of the submerged island of Lyonesse, in “plumbing the depths, they were touching the past.”38 In both cases, the record retained by the soil commemorates a time in which the relationship between land and sea was radically different, suggesting that the county retains multiple memories of previous ecological catastrophes even as it presents commodities for future consumption. As in much of Carew’s writing, the lingering impression is of flux and flow, and of a sustained interest in the interaction of water and earth on both microcosmic and macrocosmic scales.
The author’s image of ancient trees found under the soil is mirrored in the forms taken by the mines themselves. Complementing his interest in the mysteries of the soil with another kind of authority, Carew records that from “the bowels of this little Angle,” the tin deposits, which are “couchèd at first in certainte strakes amongst the Rockes, like a tree, or the veines in a mans bodie” move up “from the depth whereof the maine Load spreadeth out his branches, untill they approach the open ayre”; similes that, in their evocation of a circulatory system or arboreal form, find their origins in the writing of ancient Greek philosophy. As Carew explains, the self-presentation of the tin at the surface, in the form of “Tynnestones” or “shoad,” the soil in which earth and tin is mixed together, is used to divine where to sink mineshafts, from whose bottom, “you shal at no one dayes discrée the Starres.” Yet, for all the work that can be done by reading “the quicke ground (as they call it) that mooved with the floud, and . . . the firme, wherein no such Shoad doth lie,” Carew hastens to point out that the soil is often keen to keep its secrets, frequently reducing the prospector’s labors to conjecture and the venturer’s hopes to ruin: “But you may not conceive, that everie likelyhood doth ever prove a certaintie: for divers have bee worked, through bestowing charges in seeking, and not finding, and many undone in finding and not speeding, whiles a faire show, tempting them to much cost, hath, in the end, fayled in substance, and made the adventurers Banckrupt of their hope and purse.” The cautionary tales enact a shift in Carew’s focus, suggesting that his drive to survey the land is tempered by different ways of knowing and understanding its properties. As he reports, some men have succeeded in seeing their dreams of prosperity manifest in substantial terms, recalling the story of a gentlewoman in the time of Edward VI who “dreamed, that a man of seemely personage told her, how in such a Tenement of her Land, shee should find
so great store of Tynne, as would serve to inrich both her selfe and her posteritie”; putting this to her husband, he “found a worke, which in foure yeeres, was worth him welneere so many thousand pounds.” Another man, “by a like dreame of his daughter (see the lucke of women) made the like assay, met with the effect, farmed the worke of the unwitting Lord of the soyle, and grew thereby to good state of wealth.” Ever attentive to material success, Carew comments that though he will not attempt to “bind any mans credite, . . . that of the Authors have herein swayed mine,” thus acknowledging the place of orally transmitted local knowledge and superstition alongside more empirical means of prospecting.46

It seems that Carew shares “a strong imagination” with the “Cornish Tynners”; his survey temporarily travails with them under the earth and the result is an extraordinary description of the miner’s labor that charts a candlelit encounter with the subterranean peril of “loose earth,” “exceeding hard Rockes, and . . . great streames of water.” Protected from falling earth by timberwork, the miners run the risk of having to endure a structural collapse and the threat of being pressed to death. They perform a subterranean existence, which prompts Carew to liken them to inhuman burrowing creatures, breathing air that conveys little nourishment: “While they thus play the Moldwarps, unsavorie Damps doe here and there distemper their heads, though not with so much daunger in the consequence, as annoyance for the present.” The miners undergo a temporary metamorphosis in his imagination into organisms whose natural habitat is the soil, and his appreciation of their aptitude prompts a series of remarks on the associated transformation of mind and physical motion: “If you did see how aptly they cast the ground, for conveying the water, by compassings and turnings, to shunne such hils & vallies as let them, by their too much height or lownesse, you would wonder how so great skill could
couch in so base a Cabbin, as their (otherwise) thicke clouded braines.” In a manner akin to the sailor who is only at home on the sea, the miner seems to Carew to be most attuned to the earthy element through which he moves, embodying, to borrow Walter M. Kendrick’s words once again, a particularly specialized “compound of mind and mud.”

For all Carew’s praise of the miners, there are elements of their occupation that retain the memory of Ovid’s encroaching Iron Age and the uncomfortable proximity of the consequences of agriculture and metallurgy:

Not onely corne and other fruites, for sustnance and for store,
Were now exacted of the Earth: but eft thy gan to digge,
And in the bowels of the ground unsaciably to rigge.
For Riches coucht and hidden deepe, in places nere to Hell,
The spurres and stirrers unto vice, and foes to doing well.

As the survey progresses, Carew begins to make a connection between the labors of the miners, the husbandmen, and an increasingly personified ecological balance; if “any ryver thwart” the activity of the “tynners” then “hee is trained by a new channell from his former course,” thus altering the relationship between land and water. This may “yeeldeth a speedie and gaineful recompence to the adventurers of the search,” but, as Carew continues, “I hold it little beneficiall to the owners of the soyle.” With the suggestion of a sentient environment that is responsive to, and critical of, human influence, he concludes how “those low grounds, beforetime fruitfull, having herethrough their wrong side turned outwards, accuse the Tynners injurie by their succeeding barrennesse.” The idea that the earth can be turned “wrong side . . . outwards” suggests that mining inverts an established natural order and damages the nurturing earth, and from here on Carew becomes
increasingly interested in questions concerning the capacity of the earth for self-regulation and renewal.

By reporting on adventures of speculation, profit, and the necessary collaboration between prospectors, Carew reflects upon the needs and desires of an industry that is not only constantly forward-looking but also alert to the riches that can be found by retracing old ground: the “old Stream and Loadworks” that “former adventurers have beene given over.” Citing the theories of Francis Leandro and Sebastian Münster concerning the possibility of whether within “twentie or thirtie yeeres” an emptied mineral vein will “become alike ful againe of the same mettall, as at first,” Carew ruminates on the substantial requirements of a replenishing metamorphosis, where perhaps “the ayre and water replenishing the voide roome, through the power of the uniuersall agent, and some peculiar celestiall influence, are turned into the selfe substance; and so by consequence, neither the Owre groweth, nor the earth consumeth away.” Such thoughts are handled as further speculation: musings on an environment whose bowels prompt a kind of toil that can be “so extreame” that it often cannot be endured “above foure houres in a day.” The discrepancy between Carew’s rarefied intellectual conjectures and fanciful imaginings, and his awareness of the realities of the miners’ physical labor, further demonstrates how, although he may envisage a form of oikos that is interested in the possibility of permanence and endurance, his mind is rarely invested in the ideals of “pastoral stasis.” His record of the implications of the miners’ subterranean actions for nearby husbandmen also presents an image that constrasts starkly with that of the restorative digging described in this volume by Keith M. Botelho in his discussion of the writings of Gerrard Winstanley. For Carew, a latent accusation of injury and ingratitude lingers in “the voide roome” of the
emptied mine and in the barrenness of the turned soil: a cautionary vision of what happens if one does not repay that which is “exacted of the Earth.”

In the brief evocation of an Ovidian Iron Age, Carew’s focused perspective—that of the surveyor whose eye rarely rests—temporarily shares in the critical viewpoints identified by Randall Martin in his reading of the habits of saltpetermen. As Martin writes in his essay in this volume, their ways of working the soil not only had immediate local consequences, but also a national and even global reach, owing to the involvement of their trade in the armament industries. In Carew’s case, there is perhaps an unspoken understanding that the mined tin, once “transformed into other fashions” could be used in the manufacture of bronze guns, which were notably prized for their use at sea in the late sixteenth century owing to their lightness and noncorrosive properties. Indeed, as Sir John Fortescue was heard to observe in a speech made in the House of Commons in 1593, the colonial endeavors of Elizabeth I were partially reliant on her modernization of naval technologies: “Yea, she hath with her ships compassed the whole world, whereby this Land is made famous throughout all places. She did find in her Navy all Iron Pieces, but she hath furnished it with Artillery of Brass, so that one of her Ships is not a Subject’s but a petty King’s wealth.” As such, although Carew’s meditations on the interactions between man and soil root themselves in a consideration of the local, his contemplation of the possibility that the earth may one day be compassed and consumed away resonates beyond Cornish shores. It is this emergent awareness of the relationship between local, national, and global activities that becomes the undersong of the following section of the Survey, which moves, as promised, to matters concerning “growing, and feeling life.” As the rest of this chapter will discuss, his imaginative and material investments in national and colonial endeavors
are entangled with an appreciation of the environmental integrity of the immediate region from which he writes.\(^5^9\)

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**The Curse of Midas**

As a horn of land “cast out into the Sea,” Cornwall, Carew observes, fosters a distinctive selection of naturally occurring plant life, which thrives in its saline environment.\(^6^0\) The coastal soils bring forth “greater store of Seaholm and Sampire, then is found in any other County of this Realme,” and the damp or “gaully grounds . . . yeeld plenty of Rosasolis,” or sundew; in addition, on the precarious periphery of land and sea, rocky cliffs provide sufficient lodging for the growth of “wilde Hissop, Sage, Pelamountayne, Majorum, Rosemary, and such like well-savouring herbes.”\(^6^1\) On its own terms, the land is naturally fruitful; however, Carew comments, ruefully acknowledging the economic expense of working the land, “whosoever looketh into the endevour which the Cornish husbandman is driven to use about his Tillage, shall find the travell painefull, the time tedious, and the expences verie chargeable.”\(^6^2\) William Camden also explains in his description of the Cornish environment that the soil is unwelcoming in its natural state and must be dressed in order to become truly fecund: “This our Cornwall, as if nature made amends and recompense for the incroching in of the sea, is for the most part raised on high with mountains, being in the valleys between of an indifferent glebe, which with the Sea weede, or reit commonly called Orewood, and a certaine kind of fruitfull Sea-sand, they make so ranke and battle, that it is incredible.”\(^6^3\) The proliferation of archaic words concerning soil and soil amendment in Philémon Holland’s English translation of Camden’s work is striking, where “glebe” pertains to the “soil of the earth,” “reit,” to a particular kind of
waterweed, and where the description “ranke and battle” conveys the sense that the addition of manures makes the soil “extremely rich, heavy, or fertile” or “rich, fertile” and “productive.”

The nutritious riches found in both the seaweed and in “the Ose or salt water mudde,” and their aptitude for subsequent use in soil amendment, evokes an ecological balance between land and sea; by intervening in such a balance, as Mircea Eliade writes, “man, with his various techniques, gradually takes the place of Time.” The husbandman transforms nature, colonizing its processes, whereby only “permanent effort can stabilize the preferred features” of the system. Such a drive is also identified, for example, by Bonnie Lander Johnson in her essay on Shakespeare’s Richard II in this volume, wherein the failure to comprehend and manage the contingencies of the oikos is seen to have tragic consequences. For Gervase Markham, for example, the use of “orewood” to dress the soil is intrinsically linked to the support of larger patterns of husbandry in coastal areas, including the growing of hemp and flax: commodities, he notes, that were of vital importance to fishing communities for the making of nets and other devices. As he advises his readers,

go downe to the low rockes on which the sea beats, and from thence with dragges and other Engines, gather those broad leaved blacke weeds, which are called Orewood, and grow in great tufts and abundance about the shoare, and these weeds you shall bring to your Hemp-land, and cover it all over with the same, and then you shall plow it againe, burying the weeds within the earth: And herein is to be observed, that in any wise you must lay these weeds as wet upon the land, as when you bring them out of the Sea, provided still
that you adde no other wet unto them but the salt water, for so they are of all soiles or meanures whatsoever, the only best and most fruitfull est, and most especially for these seeds, and breed an increase beyond expectation.67

Like Camden, Markham emphasizes the extent to which the effect of the labor is “incredible”: it results in “an increase beyond expectation.”68 If captured when brought in by the tide and before being carried away by the wind, the “Orewood,” found “growing upon the rockes under high water marke, or broken from the bottome of the sea by rough weather,” can also be used to enrich soils for the growing of barley.69 Always attentive to texture and form, Carew describes how this “Floteore is now and then found naturally formed like rufs, combs, and such like: as if the sea would equall us in apparel, as it resembleth the land for all sorts of living creatures,” echoing ideas found in the work of ancient authors interested in the analogical relationships between marine and terrestrial life.70 The analogy that Carew draws is an intricate one, whereby the dress and ornament of the sea can be likened to the fashions of the court: a suggestion, perhaps, that the sea’s production of enriching matter for the land acts as the extension of a generous courtesy and a strange reflection of human need.

From rough sod to ooze, and from ash to fecund saltwater weeds, the matters of Cornwall’s coastal spaces are used in ingenious ways to make the inland soils more fit for tillage, ensuring that the renewed earth yields “it selfe as ready to receyue and foster” even, Carew ambitiously declares, grapes fit for winemaking.71 Yet, most importantly, in describing the persistent action that can be taken to redress temperamental imbalances in the soil, Carew also reveals his anxiety concerning the wrongful displacement of earth, and its wasteful or ungoverned contact with other elements. When drawing his reader’s
attention to the interconnected labors of the husbandman and the tin miner, for example, Carew notes the damage that can be caused by human activity, most notably concerning the shape and depth of harbors and havens:

Divers of these are dayly much endammaged by the earth which the Tynners cast up in their working, and the rayne floods wash downe into the rivers, from whence it is discharged in the havens, and shouldreth the sea out of his ancient possession, or at least, encrocheth upon his depth. To remedy this, an Act of Parliament was made 23. H. 8. that none should labour in Tynneworks, neere the Devon and Cornish havens: but whether it aymed not at the right cause, or hath not taken his due execution, little amendement appeareth thereby for the present, and lesse hope may be conceyved for the future.72

Here, the presence of the displaced earth that results from the activities of tin mining is seen as an affront to a personified, sentient, and ancient sea; in human terms, Carew's words are also an invitation to reflect on the failure of existing legislation, established in 1531, to conserve the natural contours of the environment and, as a direct consequence, the free and easy passage of large ships in and out of harbors. In an act passed in the twenty-third year of Henry VIII's reign, concerning “the amending and Maintenance of the Havens and Ports of Plymouth, Dartmouth, Teignmouth, Falmouth and Fowey,” it is argued that owing to the activities of persons “more regarding their own private Lucre, than the common Wealth and Surety of this Realm,” the creation of streamworks has resulted in a “marvellous great Quantity of Sand Gravel Stone Robel Earth Slime and Filth” being washed into “the said Ports and Havens, and have so filled and choaked the same” that large ships can no longer enter at low water.73 With little apparently done to enforce the act, the
implied audience of Carew’s survey is called, perhaps, to attention; when addressing Sir Walter Ralegh in his dedicatory letter, who had been made Lord Lieutenant of Cornwall and then Lord Warden of the Stannaries in 1585, Carew describes him as a man whose “eares, and mouth, have ever beene open, to heare, and deliver our grievances” and whose “feete, and hands, readie to goe, and worke their redresse.” Here, Ralegh is figured as a laboring man himself, whose body is no stranger to the contingencies of living by the sea, and Carew’s criticism is short lived.

The discharge of runoff soil into the sea may suggest mismanagement and the triumph of greed over national necessity; however, as Carew goes on to observe, the movement of matter at the coastline is cyclical, not linear. Once cast into the waters by the activity of man, the excess “earth, slime and filth” is transformed by the salt of the sea into something valuable, which, through a combination of the sea’s transformative capabilities and the labors of men, can once again be brought back to terra firma. It is as if the earth, like the sea, is capable of ebb and flow: what is cast off is returned, subject to a regulated kind of tidal motion:

Yet this earth being through such meanes converted into sand, enricheth the husbandman equally with that of Pactolus: for after the sea hath seasoned it with his salt and fructifying moysture, his waves worke up to the shore a great part thereof (together with more of his owne store, grated from the clifffes) and the Tillers, some by Barges and Boats, others by horses and waines, doe fetch it, & therewith dresse their grounds. This sand is of divers kindes, colours, and goodnesse: the kinds, some bigger, some lesser; some hard, some easie. The
colours are answerable to the next Cliftes. The goodnesse increaseth as it is
taken farther out of the Sea.\textsuperscript{75}

The association Carew makes between the transformation of waste matter into enriching sands for the husbandman, and the motion of the Pactolus, the river in Asia in which King Midas was said to have “washt his golden Wish away,” adds a mythical dimension to his description of the merging of labor and natural activity.\textsuperscript{76} Like an alchemical process, man can be seen to “collaborate in the work of Nature, to help her produce at an ever-increasing tempo, to change the modalities of matter.”\textsuperscript{77} Here, the actions of the waters are cathartic, washing away the charges of greed and the desire for “private Lucre” associated with the runoff earth, replacing them instead with communal reward: a way of amending barren soils with riches, as if the irrigating waters, like those of the Pactolus, had “adorne[d] this land with tokens and brookes of golde.”\textsuperscript{78} The lingering impression is of exchange and metamorphosis, of the translation of matter between locations, and the transformation of one substance into another. In the renewal of the soil, the curse associated with the avarice of Midas is lifted.

**Conclusion**

If, as Gerald Maclean, Donna Landry, and Joseph P. Ward argue, it was not until the reign of Elizabeth I that “English poets first seriously begin to imagine the English nation, and the British Isles,” and that while “reiterating Virgil’s line about the Britons inhabiting a world apart, they also began to look inside the national coastline to examine the astonishing variety of local customs and histories that made up the national map,” then Carew’s writing, as poet, prose stylist, and antiquarian, is exemplary.\textsuperscript{79} In addition, if the British
Isles were indeed once a world apart in classical models of geography, then Cornwall still retained the memory of westward isolation: “shouldred out . . . into the farthest part of the Realme, and so besieged . . . with the Ocean,” it appears as “a demie Iland in an Iland.”

As Carew writes, it was from these shores that the rest of the island has been defended from invasion and ships have been launched that can circumnavigate the globe. Carew may have begun his survey by narrating the landfall made by Brutus and the exiled Trojans, establishing a connection between history, land, and culture, but the rhetorical prowess of his survey is most apparent when coasting the Cornish side of Plymouth harbor in his present moment.

As the sustained panegyric that accompanies this section of the survey suggests, it was from this place that men sought out new shores and established a gaze that could prospect across oceans:

Here, mostly, have the troupes of adventurers, made their Rendez vous, for attempting newe discoveries or inhabitances: as, Tho. Stukeleigh, for Florida, Sir Humfrey Gilbert for Newfound-land, Sir Rich. Greynvile for Virginea, Sir Martyn Frobisher, and Master Davies, for the North-west passage, Sir Walter Raleigh for Guiana, &c. . . .

Here, Sir Fra. Drake first extended the point of that liquid line, wherewith (as an emulator of the Sunnes glorie) he encompassed the world. Here, Master Candish began to second him, with a like heroicall spirit, and fortunate successe.

Here, Don Antonio, King of Portugall, the Earles of Cumberland, Essex, and Notingham, the Lord Warden of the Stanneries, Sir John Norrice, Sir John Hawkins (and who elsewhere, and not here?) have ever accustomed to cut
sayle, in carrying defiance, against the imaginarie new Monarch; and heere to
cast anker, upon their returne with spoyle and honour. By producing a series of monuments that focus on making landfall and casting anchor,
discovering distant soils for plantation and other sea bottoms to hold fast in, Carew
suddenly expands his consideration of littoral matters so that his local concerns are writ
large across the globe: an extension of “the point of that liquid line” far beyond the shores
of his own county.

Indeed, as F. E. Halliday notes in his edition of Carew’s writings, “The Survey of
Cornwall is a product of the Renaissance and the Reformation: of the new spirit of creative
inquiry and of crescent nationalism, and Carew was doing in his odd angle of England what
Drake and his peers were doing in the world at large—charting territory unknown, or
scarcely known, to his fellow Englishmen.” The tension in Halliday’s words is an
interesting one: the image of Carew as an explorer of terra incognita sits provocatively
alongside his position as an inhabitant of the county he surveys, where he was born in July
1555 at Antony House at Torpoint, at the mouth of the river Tamar. In his vision of
Plymouth harbor as the meeting place of those “attempting newe discoveries or
inhabitances,” Carew joins together the idea of doing something for the first time with a
customary way of living: a characteristic pressure that shapes both the generic hybridity of
his Survey and its multivalent approach to the ethics of land use. In the litany of navigators
called to mind, previous discussions of labor and rest are reframed within the epic mode
and, via the image of a return journey replete with “spoyle and honour,” also within the
idealizing fictions of romance. Beginning his survey with the hope that “each wel-minded
Reader will wish a merrie passage” to his “rather fancie-sporting, then gaine-seeking
voyage,” the subsequent movements of Carew’s eye, mind, and hand draw lines of influence that chart the relationship between microcosm and macrocosm, soil and shore, county and country, home and globe. He takes his reader not only across the surface of the soil but under its surface: a progress that moves from the tops of cliffs to subterranean depths and horizontally along a “rugged and wearesome path” traced to Land’s End. To project beyond the shore, Carew seems to suggest, one first needs fecund, nurturing earth on which to stand. It doesn’t need to be terra firma, as his descriptions of the sands, tin-laden soils, and saltwater oozes prove, but something generative, self-regulating, and capable of transformation.


5 Ibid., “To the Honourable, Sir Walter Raleigh Knight, Lord Warden of the Stannaries, Lieutenant Generall of Cornwall, &c.,” sig. ¶3r.

6 Ibid., “First Booke,” sig. Q2r. Here, Carew quotes a section of a poem that he says was shared with him by William Camden. Camden also includes the same extract, from John of Hauville’s twelfth century poem Architrenius, which is presented with an alternative English translation in the English edition of Camden’s Britannia. See William Camden, Britain; or, A Chorographicall Description . . ., translated by Philémon Holland (London: George Bishop and John Norton, 1610), sig. Q1v.

7 Carew, “First Booke,” sig. B3r.

8 Ibid., “To the Reader,” sig. ¶4r.


10 Ibid., 783.


Ibid., sigs. C2r, C4v, F3r, Gg2v.


23 McRae, *God Speed the Plough*, 252.


My edition is definitely 2013, within the spectrum of a prismatic ecology the brown hue of littoral spaces “blends liquid and solid, washing the inhuman fluidity of blue oceans into the purported stability of green land” (194).


34 For a sustained discussion of the “idea of nature as female” and the “association between artifex and masculinity,” see Mary D. Garrard, *Brunelleschi’s Egg: Nature, Art, and Gender in Renaissance Italy* (Berkeley: University of California Press, 2010), vii, 25.


42 Ibid., sigs. C4v–D1r.

43 Eliade, *Forge and the Crucible*, 53, for example, observes that the mining cultures of many European countries believed that it was the role of “gods and divine creatures” to reveal the locations of mines.

46 Carew, “First Booke,” sig. D1r.

49 Ibid., sigs. D3r, D3v.


55 Ibid., sigs. D1v, D2v.
Mentz, “After Sustainability,” 588. Mentz comments that the “intellectual frameworks for postsustainability appear in the two modeling sciences whose names are built on the Greek rook oikos: economics and ecology” (587).


John Fortescue and Thomas Fortescue Clermont, The Works of Sir John Fortescue, Knight, Chief Justice of England and Lord Chancellor to King Henry the Sixth, Now First Collected and Arranged by Thomas (Fortescue) Lord Clermont (London, 1869), 246. This is also quoted by Childs, Tudor Sea Power, 61. Historically, the word “brass” was the general name for all alloys of copper with tin or zinc. See “brass,” n., OED Online, Oxford University Press, March 2015, accessed May 12, 2015.


Ibid., sig. F3r.

Ibid., sig. F3v.

Camden, Britain, 184. Although Carew also goes on to write about the application of “Orewood” to the soil, he first notes the way that “Beat-boroughs,” or cut pieces of turf that are reduced to ashes, are ploughed into the soil as preparation for the growing of oats and wheat, giving “heate to the roote of the Corne” (sig. F3v). The process of burning beat, which is described by Gervase Markham in Markhams Farwell//”FAREWELL” IN BIB—WHICH IS CORRECT? It is spelt ‘Farwell’ in the 1620 edition// to Husbandry (London,
“the Burning of Baite,” is also described in the first of Virgil’s *Georgics, The Bucoliks of Publius Virgilius Maro . . .*, translated by Abraham Fleming (London: Thomas Orwin, 1589), sig. A4v, when the poet describes ways to renew the travailing earth.


68 Carew notes that the seaweed is sometimes burnt, but that the “noysome sauour” generated by this process “hath cursed it out of the country” (“First Booke,” sig. H3v). The Cornish practice of using “Orewood, Sea-sand, and Sea-slabbe for soylings” is also commented upon by William Folkingham in his surveying manual, *Feudigraphia: The Synopsis or Epitome of Surveying Methodized* (London: William Stansby, 1610), sig. C3v, when he records how seaweed is rotted down for “soyling” in Ireland and reduced to ashes by inhabitants of the Isle of Jersey, suggesting local variations in coastal customs.

69 Carew, “First Booke,” sig. H3r.

Carew, “First Booke,” sig. G1r.

Ibid., sigs. H2v–H3r.


Carew, “To Sir Walter Raleigh,” sig. ¶3r. As lord warden of the Stannaries, Raleigh was responsible for overseeing the Stannary Courts, which looked after the interests of the tin miners; as Carew explains, the title comes from “the latine word Stannum, in English Tynne.” See Carew, “First Booke,” sig. F2r.

Ibid., sig. H3r.


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80 Carew, “First Booke,” sig. B3r.

81 As Walsham comments, the “most immediately striking feature of the Survey is the present-centred tone of its analysis” (“Introduction,” 33).

82 Carew, “Second Booke,” sigs. Gg2v–Gg3r.


85 Carew, “To the Reader,” sig. ¶4r.