

The Pathfinder's Lost Instruments: John C. Frémont's cavalier attitude toward his scientific apparatus



JESSIE FREMONT.

A more extravagant disregard for instructions on his second expedition would lead him deep into California—still a part of Mexico—and would win him not censure, but fame.

Natural History in Two Dimensions

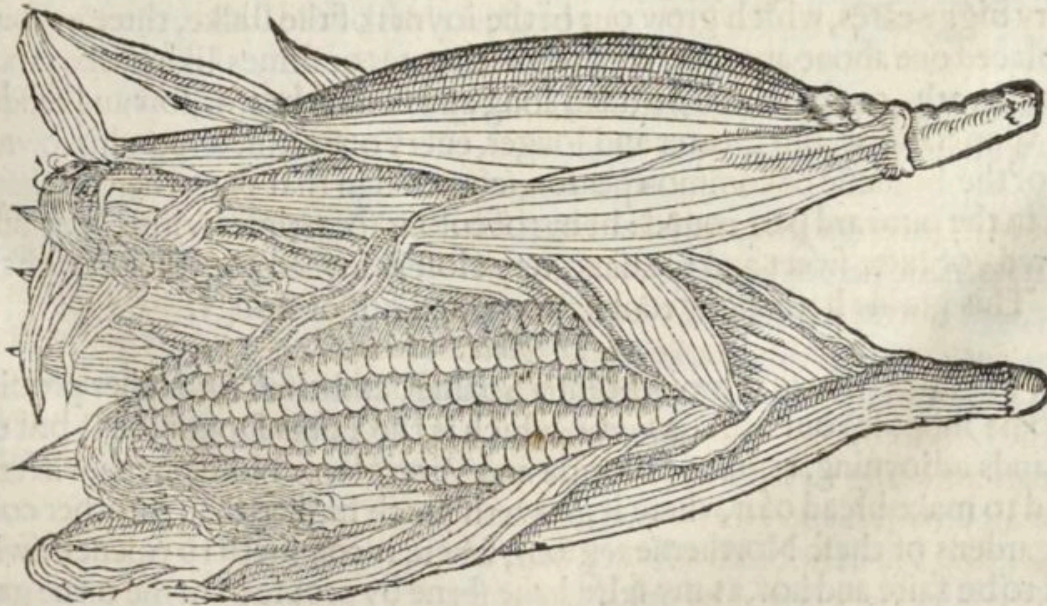


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What can making now tell us about the past? Or should the past remain untouched?

Unpacking Winthrop's Boxes

The forme of the eares of Turkey Wheat.
3 *Frumenti Indici spica.*
Turkie wheat in the huske, as also naked or bare.



G 3

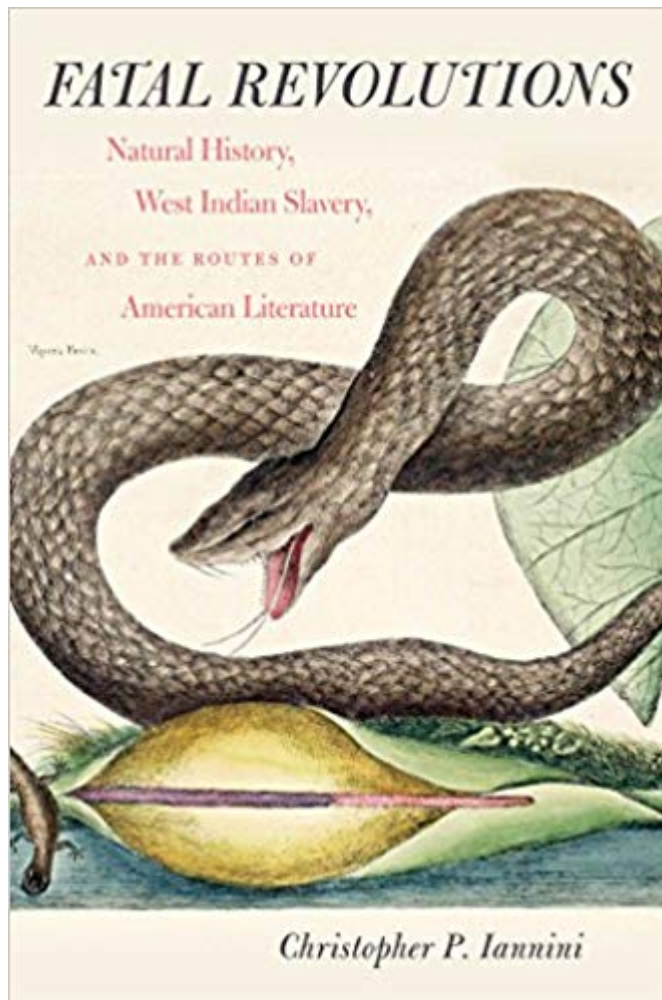
Like the agents and reagents of a chemical demonstration, Winthrop's specimens illustrated a fundamental transformation as they were unpacked from their crates: not a transformation in their material state, per se, but rather an alteration of the New World environment and the political economy of colonial New England according to Winthrop's careful designs.

[John James Audubon, the American "Hunter-Naturalist": A New Species of Scientist for the New Nation](#)



As much as Audubon drew attention to himself as an artist and man of science—and he did so ceaselessly and shamelessly—he also drew the attention of the American people to the richness and diversity of nature in America, helping them see it in national as well as environmental terms.

[Routes and Revolutions](#)



Crèvecoeur, William Bartram, Jefferson, and Audubon appropriate the “ideological assumptions, discursive conventions, and representational techniques” of earlier Caribbean natural histories to debate the implications of plantation slavery for a nation ostensibly committed to equality.

[Sagas in Stone](#)



We began with only a rudimentary idea of how to build the wall.

[Reading the Man of Signs, or, Farming in the Moon](#)

THE ANATOMY OF MAN'S BODY

As governed by the twelve constellations, according to ancient astrology.



To know where the sign is, first find the day of the month in the calendar page, and against the day in the seventh column, you have the sign or place of the moon; then find the sign here; and it will give you the part of the body it is supposed to govern.

Note.—It is thought proper to notice in this place, that in this enlightened age of the world, people in general place no confidence in these signs, nor the prognostics of the weather.

THE TWELVE SIGNS OF THE ZODIAC.

Spring signs.	1. ♈ Aries, or Ram,	Autumn signs.	7. ♎ Libra, or Balance,
	2. ♉ Taurus, or Bull,		8. ♏ Scorpio, or Scorpion,
	3. ♊ Gemini, or Twins,		9. ♐ Sagittarius, or Bowman,
	4. ♋ Cancer, or Crab fish.		10. ♑ Capricornus, or Goat,
	5. ♌ Leo, or Lion,		11. ♒ Aquarius, or Waterman,
	6. ♍ Virgo, or Virgin,		12. ♓ Pisces, or Fishes.

The first six are called Northern Signs, and the other six Southern Signs.

EXPLANATION OF ASTRONOMICAL CHARACTERS.

Sun, Planets, &c.—Sun, ☉, or ☌—Moon, ☾, or ☽—Mercury, ☿—Venus, ♀—Earth, ⊕—Mars, ♂—Jupiter, ♃—Saturn, ♄—Herschel, ♁—Ascending Node, ♅—Descending Node, ♆.

The character of the nodes are indiscriminately used in relation to any of the Planets; but the times when the primary planets are in their nodes are generally omitted in common almanacs.

One of the most common printed images of the first half of the nineteenth century was also the one of the most derided—often, treacherously, in its own caption. Right under his woodcut of "The Anatomy"—the image of a male body

linked to the signs of the zodiac that began most American almanacs—the almanac-maker David Young wrote sourly in 1848: “It is thought proper to notice in this place, that in this enlightened age of the world, people in general place no confidence in these signs, nor the prognostics of the weather.” In this, as he certainly knew himself, Young was wrong. “There are many men at the present age, so far behind the times,” complained another author, two years before Young’s Almanac “that if they have a tooth to pull, a vein to open, a pig or a calf to castrate, a patch of thistles to mow, a bunch of white birches or scrub oaks to cut down, or a dose of physic to swallow, the chapter of signs must be consulted, and their connection with the body, or the plant ascertained before anything can be done.” At least one of these men, as demonstrated in the margin of the second image on the left, was using my copy of Young’s almanac.

If by the 1840s the Anatomy and the columns of calendrical symbols to which it was keyed had been an embarrassment to American almanac makers for more than a hundred years, they nevertheless still stood as required elements of the agricultural Almanac, the most stable features of a famously volatile and various form. One reason for their persistence was their importance to the practices of “moon farming,” which used astrological information to mark time and schedule agricultural tasks. The astrological tables were, as such, as important as the other (more recognizably utilitarian) forms of information that almanacs provided—critical elements of these objects that rural Americans hung from hooks on the wall, whose ripped pages they repaired with careful stitches, and, as above, whose margins they marked with signs of their own.



Image 1. “The Anatomy of Man’s Body,” from David Young, *The Farmers’ Almanac, and Ephemeris of the Motions of the Sun and Moon, the True Places and Aspects of the Planets, Rising and Setting of the Sun, and the Rising and Southing of the Moon, for the year of our Lord, 1848* (Ithaca: Mack, Andrus, & Co., 1847). Courtesy of the author.

To contemporary historians, the first pages of an almanac can be frustrating to work with. It’s tempting to skip to the later sections—rich, if confusing, collections of texts that mingle seasonal poetry, jokes about Irishmen, and stories of canny farmers, with helpful information about circuit court session dates and the “Use of Sulphuric Acid as a Manure.” The first pages, by contrast, consist of the Anatomy, some astronomical calculations, and a twelve-page calendar packed top to bottom with unfamiliar symbols. When students in my classes seem to be identifying too much with seemingly “modern” nineteenth-century farmers, a short almanac “problem set” quickly restores their sense that they’re dealing with a culture alien to them.

Some of this seeming impenetrability comes from our lack of familiarity with the night sky. The anatomy refers, on one level, to perfectly visible astronomical phenomena that were rather more reliable than nineteenth-century clockwork. For farmers, the signs of the zodiac retained their concrete

physical meaning: the east-to-west procession of twelve constellations through which the sun and the moon and the planets seem to move, imprisoned in the flattened disk of the solar system. Where our modern newspaper horoscope tells us about our birthdate in terms of the sun's place in this sequence, breaking the year into twelve months, nineteenth-century farmers were primarily interested in the faster circuits of the moon, which moves across the whole zodiac every twenty-eight days, spending about two days in most signs. Almost all almanac calendars devoted a column to this cycle, allowing readers to determine the sign of the moon when the moon and stars were hidden by daylight or by the rotation of the earth. The anatomy connected this macroscopic physical phenomenon to the smaller cosmos of the human body, linking each body part to a corresponding sign—the two arms to Gemini, the twins; the breast to Cancer, the Crab; the “secrets” to Scorpio, the scorpion.

But what did the signs and the phases of the moon mean to moon farmers in the 1840s? In the almanac we have the tools of moon farming, but explicit guidance for the everyday use of these tools had been stripped out of almanacs in the eighteenth century, as the reputation of astrology declined. Our clearest accounts of the changing oral tradition of nineteenth-century moon farming in fact come from its most voluble enemies, the self-consciously scientific “improving agriculturists” who controlled the agricultural journals, and who made attacks on moon farming a standard genre of agricultural journalism.

Several consistent sets of rules can be pieced together through these hostile sources. The first set followed the waning and waxing of the moon—usually described in the columns of the almanac by a moon face marking each quarter. Some described analogies between the increase and decrease of moonlight and increase and decrease of substance on earth; thus, for example, pork cured in the light of the waning moon would itself dwindle to nothing. Others connected darkness to subterranean activity, and light to activity above ground. Potatoes, beets, and turnips should be planted in the old or declining moon; oats, corn, and wheat planted in the old moon would produce “roots, and no stalk, or seed.”

The second set of rules followed the anatomy itself, and relied on analogies between the plants and animals of the farm, and the human body. The moon's presence in each sign, it was argued, brought an effusion of blood to the corresponding organ in the anatomy. Physicians had to avoid operating on these flooded organs to avoid hemorrhage; manipulating nonhuman bodies, farmers had to take similar issues into account. For example, when the moon passed into Leo, a sign keyed to the heart, farmers knew that cutting trees and vines would be satisfactorily deadly, but on the other hand, “wo be to the unlucky calf or colt, that happened to undergo castration when the sign indicated the forbidden region [Scorpio]” Other sign rules were less clearly medical. When the moon was in Virgo, “sometimes called the Posey Girl,” a committee investigating “Lunar influence in Agriculture” in the *Southern Planter*, reported disapprovingly and disbelievingly, “everything then sown or planted, will expend all its energy in blossoms on account of that girl's propensity for flowers.”

Relatively simple, these rules are the ones I use in my classes, the easiest to grasp for both undergraduates and anti-moon-farming reformers. However, it's clear from a few references that other rules surrounded other kinds of calendrical information. For example, the ascending and descending nodes of the moon (also known as the dragon's head, and the dragon's tail)—that is, its movement north and south of the path of the sun, and the direction of the moon's horns, as well as the exact clock time of the full and new moon—were certainly used to make the weather predictions that some almanacs included and others left to their readers. Agricultural improvers rarely touch on these matters. Perhaps these rules were less commonly used, or artifacts of older practice; perhaps they were merely too complex for improvers interested only in superficial dismissal. It is possible, indeed, that much of the uniformity of accounts of moon farming came not from a still unified moon-farming culture but instead from the echo-chamber of anti-moon-farming rhetoric, bounced from exchange column to exchange column in the nation's agricultural journals.

It is easy to look at the Anatomy and see unchanging tradition, perhaps even active resistance to modernity and the market. The Man of Signs, after all, reaches back to at least 1300, and some of the rules of moon farming can be traced back to classical authors, Pliny in particular. Improving farmers assiduously created this impression. Moon farmers, described as slaves of a tyrannical "Ancient Astrology," fit well into a broader improving narrative of a battle against superstition. Complaints about moon farmers merged seamlessly into an even more common trope—that of the bull-headed, "plow-jogging" neighbor, mindlessly adhering to old ways in the face of the new kinds of empirical evidence.



Image 2. Calendar page, April, from David Young, *The Farmers' Almanac, and Ephemeris of the Motions of the Sun and Moon, the True Places and Aspects of the Planets, Rising and Setting of the Sun, and the Rising and Southing of the Moon, for the year of our Lord, 1848* (Ithaca: Mack, Andrus, & Co., 1847).

Bucking narrative convenience, however, almanacs and moon farmers regularly incorporated new scientific knowledge. Young's Almanac of 1848 took into account not only the heliocentric universe, introduced to American almanacs in the mid-eighteenth century, but also the motions of a new planet called "Herschel" that had only been known since its discovery by William Herschel in 1781 (later to be renamed Uranus). Perhaps more importantly, even as improvers cast moon farmers as the enemies of improvement, moon farmers were improvising rules to govern improvers' most prized scientific practices: growing fertilizing crops like clover and employing soil amendments like plaster of Paris. One improving lecturer complained that his moon-farming neighbors refused to allow cattle "to run on clover plastered during the full moon" since, "they will certainly burst, in consequence of the extending principle imparted to the elements of vegetation at this critical phase." It is perhaps

worth noticing that improvers and moon farmers, like modern veterinarians, recognized the tendency of cattle suddenly to inflate, a sometimes fatal malady cured then and now by a sharp three pointed knife stabbed into the fourth stomach, releasing trapped gas, which could be lit by a candle as it escaped. (Cattle really are more interesting than they look.)

According to improvers' accounts, moreover, moon-farming neighbors defended their terrain with a market-oriented language of yields and profits. As new techniques emerged in the commercializing agriculture of the nineteenth century, moon farming extended to include them. Indeed, this blending of old and new methods was supported by improvers themselves, who, lured both by almanacs' profitability and by their broad audience, themselves printed almanacs, complete with anatomy, signs, disclaimer, and instructions in improving practices, and advertisements for the *Cultivator* or the *American Agriculturists*.

Though I've been collecting rules and hints for several years, I don't yet understand the cosmos that nineteenth-century almanacs describe. Indeed, I am sure that that cosmos, if it was even unified enough to call a cosmos, is no longer knowable, given the many prisms through which it has been refracted and distorted. However, assembling an imperfect picture of moon-farming practice, using rules learned from moon farming's enemies, reaffirms that the dichotomy between "modern" and "traditional," which has remained stubbornly evident in historians' writing about rural Americans, wavers on closer inspection, even when looking at the Man of Signs.

Further Reading:

The (still-useful) classic account of American almanacs is Marion Barber Stowell, *Early American Almanacs: The Colonial Weekday Bible* (New York, 1977). For a rich account of the incorporation of new science into the eighteenth-century almanac, see Sarah Gronim, *Everyday Nature: Knowledge of the Natural World in Colonial New York* (Camden, N.J., 2007). Maureen Perkins explores the parallel transformation of the almanac form in Great Britain in Maureen Perkins, *Visions of the Future: Almanacs, Time, and Cultural Change, 1777-1870*, (Oxford, 1996). Thomas Horrocks gives a broader picture of the use of almanacs in medicine in early America in Thomas A. Horrocks, *Popular Print and Popular Medicine: Almanacs and Health Advice in Early America* (Amherst, Mass., 2008).

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Gems in the Pasture



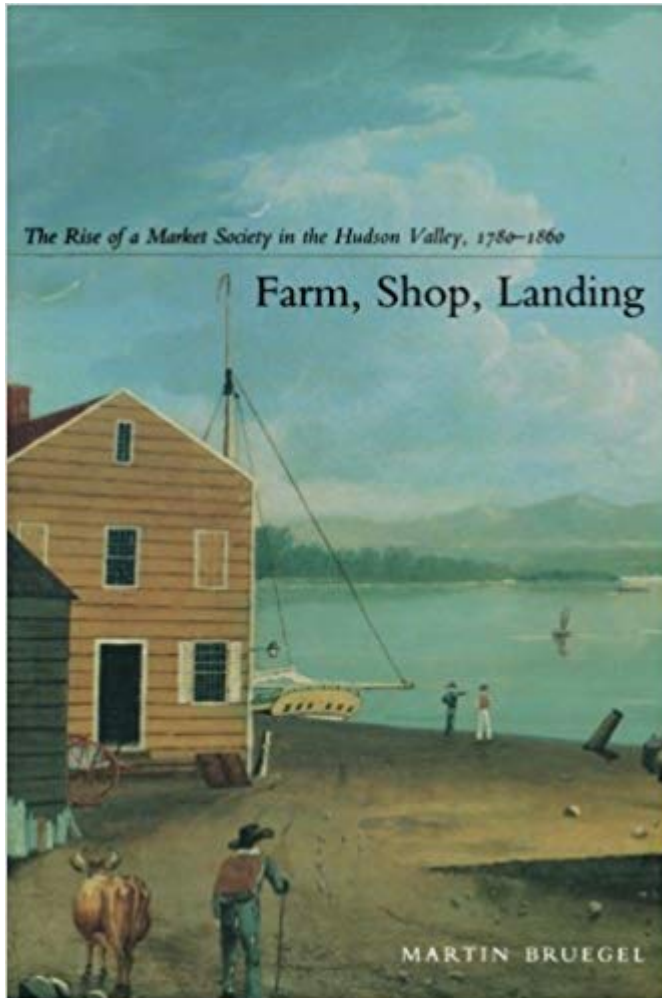
“[I]n late March, just days before Plimoth Plantation’s village of 1627 was to come to life for the 2001 season, the museum’s 130 head of livestock were rounded up and removed to a modern breeding barn at the back of the property.”

The Search for the Cure



Is there anything more ludicrous than the present day barbeque contests in which contestants are prohibited from supplying meat that might be more sapid than those of their fellows?

Farmers, Tenants, and Capitalists



“Face-to-face interpersonal relations took on far more importance in this society than abstract, impersonal economic relations, symbolized by commercial paper (whose origin might be unknown) or distant banks.”