

Agriculture and Environmental History

John Varty

Brian Griffith, *Gardens of Their Dreams: Desertification and Culture in World History* (Halifax: Fernwood Publishing, 2001)

Robert Ali Brac De La Pierre and Frank Seurat, *Brave New Seeds: The Threat of GM Crops to Farmers* (Halifax: Fernwood Publishing, 2000)

John Madeley, *Hungry for Trade: How the Poor Pay for Free Trade* (Halifax: Fernwood Publishing, 2000)

HERE ARE THREE RECENT TITLES from London, England-based Zed Books, publisher of “books that make a difference.” *Brave New Seeds* and *Hungry For Trade* are part of Zed’s new “Global Issues in a Changing World” series, a collaborative effort with partner publishers (Fernwood in Canada) and some lesser-known non-governmental organizations. In Zed’s own words, the series is “intended for the enquiring reader and social activists in the North and the South, as well as students”; the series’ authors “pay particular attention to the needs and interests of ordinary people, whether living in rich industrial or the developing countries.”

As an environmental historian, always on the prowl for a one-size-fits-all title for undergraduate teaching, I must confess to having been most enthusiastic about *Gardens of Their Dreams* — with 345 pages of text, by far the most substantial of the three books under review here. As its extended title suggests, this book is about our planet’s famously intractable places, deserts, and the cultural “story” that unfolds as humans encounter such places over time. Griffith posits an essential distinction between “desert traditions” and those from so-called “green lands.” This interesting but ultimately superficial and unproven binary opposition prevails throughout an unwieldy and far too sweeping exploration of environmental degradation and cultural response.

Griffith’s core ecological premise is correct: there is a wide and widening swathe of arid land stretching in a northeasterly direction from Saharan Africa

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across the Arabian Peninsula and into the Chinese uplands. This is neither a static nor linear state of environmental affairs, however. For a period of about 5,000 years, beginning a mere 20,000 years BP (before present), for instance, the Sahara Desert was considerably more extensive than it appears in its current form.¹ *Homo sapiens* had achieved anatomical and cognitive “modernity” by this point, and was certainly present to witness this arid period, notwithstanding Griffith’s opening sentences suggesting otherwise. (10) On the other hand, a significant pluvial period from 16,000 years BP down to about 9,000 years BP turned the world’s most infamous desert landscape into a sub-humid and humid garden of sorts — three-metre-long crocodile remains have been found in present-day Mali, while tropical taxa such as hibiscus appear in pollen samples from Oyo, a hyper-arid site in today’s eastern Sahara.²

As desertification intensified and erstwhile verdant lands turned arid around 8,200 years BP, the result in human terms, according to Griffith, was absolutely striking. Among its many human effects, he argues, desertification inspired an increasingly harsh treatment of women, a propensity for bellicosity, and a complete transformation of philosophical, theological and cosmological visions among those most effected. In short, the cultural and intellectual traditions of “desert people” took on a resounding harshness, and came very quickly to reflect elements of the degraded landscape itself: “Where the earth seemed hostile to humanity, culture grew hostile to the earth.” (12)

Arid conditions also affected patterns of local and regional governance. In fact, given that “means of coercion were often more important than means of production” in arid lands, an imposition of military-style resource, supply, and distribution control prevailed over any penchant for fostering production. (12) When life became too stark, and resources too scarce, even under military control, desert peoples were thrust upon a life of peripatetic uncertainty. “Naturally,” Griffith opines, “they wondered what they had done to deserve their hardship.” (20) In any event, faced with such undesirable conditions, waves of violent, arid-land refugees — Aryans, Mongols, Huns, and Kurgans — fled their barren homes and clashed with those settled in the less “ruined lands.” As these invaders spread outward from their arid centres, so went their desert-born traditions. Among these, of course, religion was perhaps the most influential beyond the arid lands: “Religion from the desert became ‘Western Religion’ as we know it. Out of that heritage, ‘Western science and economics’ presumed that the planet is a dead resource, and that only the human community matters.” (12)

There is a lesson to be learned by studying this arch-encounter between humans and deserts, an encounter that “seems to highlight the worst and the best in human history.” (15) We can, Griffith suggests, expect repetition of desert peoples’

¹For more see Neil Roberts, *The Holocene: An Environmental History* (Malden, MA 1998, 1989) 115-7.

²Roberts, *The Holocene*, 115-7.

social patterns as desertification persists, and we must therefore learn to “lower our defenses” against nature, along with making our settled areas more “nature-friendly.” (343) These are exhortations with which I am very sympathetic. I think it is fair for Griffith to question the value of sequestering “wilderness” away from humans under the guise of its protection — a process I refer to as “canned land.” All the same, for Griffith to pose the problem as one of humans’ response to nature, however well meaning he may be in doing so, is to establish an immediate bias against studying anthropogenic forces in natural destruction. The particular role humans play in contemporary environmental destruction clearly affects how they will ‘respond’ to the same, and it is extremely doubtful that a one-directional interpretation can be made relevant for contemporary purposes. In other words, Griffith’s admittedly laudable exhortations are not ones whose anxious pursuit should permit a sacrifice of methodological rigour.

For instance, Griffith defends the study of history as the best answer to our environmental problems — so far, so good. Whereas many environmentalists deal in predictions about the future, he admonishes, “there is little need ... for speculation about the past.” (14) “The past,” for Griffith, seems to be a repository of knowable truths, easily apprehended, waiting to be plucked without incident from their temporal and material context and called into the service of contemporary needs. Academic historians (not all, but many) tend to cavil at this “Lessons from History” trope with some justification for, as is the case in *Gardens*, it too often relies on a trans-cultural and, paradoxically, ahistorical determinism.

Anxious to make his contemporary point, Griffith tends to force evidence from “the past” into his determined narrative with disappointing and often contradictory results. Disappointing: in order to assert a tight link between desertification and predictable patterns of human activity, Griffith has imposed a modern time horizon on a process that developed over at least 2,000 years, perhaps more. He opens by compressing several thousand years of ecological history into one paragraph: “Our ancestors watched as patches of desolation appeared in the landscape” and “At dawn, choruses of songbirds no longer greeted the sun. At night the chirping of crickets and frogs slowly faded to a hush.” (10) The reader is left with an impression of savannah drying up before the perceiving subject’s very eyes. As a rhetorical device this certainly “jazzes” up the book somewhat, but bodes ill for a sophisticated reading of a long-term and therefore complex process. One should read Michael Glantz’s work on Sahelian drought to appreciate the intricacies of politics and famine in a more recent context.³

Meanwhile, some puzzling contradictions emerge from Griffith’s attempt to forge a connection between deserts and cultural degradation. For example, he argues, I think accurately, that desert conditions often lead to the decline of women’s productive importance. Although he provides little direct evidence, Griffith

³(New York 1976)

opines, “women were increasingly treated as a sexual resource and little else.” (27) Interestingly, according to Griffith, Islam did not abide this suppression of women’s rights: “like early Christians, many early Muslims took pride in their egalitarian spirit.” (31) In fact, it was not the “visionaries of Islam, Christianity or Judaism who reduced women to a primarily sexual identity, but the overriding conditions of life in the desolate plains.” (35) I am not saying he is wrong in any primary sense, but this distinction left me very confused: if desert conditions uniformly lead to the suspension of women’s perceived productive value, and therefore their rights, then, *a fortiori*, we should expect Islam to have adopted negative views of women — it being a desert tradition as much (more, as he suggests elsewhere) as any other. How can Islam be considered apart from the “conditions of life in the desolate plains” here, and elsewhere stand as a quintessential “tradition of the desert”? That ill-treatment of women was not codified in Islamic texts from the beginning needs to be explained more satisfactorily, even if it does complicate the desert-determinism narrative.

There is a similar contradiction apparent in Griffith’s invocation of “western science.” In his introduction Griffith describes the tidy lineage of desert tradition from religion to “western science,” implying that both were desert-born and viewed nature in tendentiously negative ways. Then, in a chapter entitled “The Devil’s Garden,” he explains that Islamic centers of learning focused on the study of theology rather than on “learning about nature.” This, we are told, is a function of Islam being “more fully a religion of the desert,” a harsh environment that forged a sense of transcendence, taking emphasis and learning away from earthbound matters. Incidentally, Griffith forgives Muslims their disinterest in studying the natural world, for to these “heirs of desert tradition,” Mother Nature “had little or nothing to give.” (53) In any event, he juxtaposes lack of scientific tradition among Islamic peoples with the teaching of chemistry, physics, biology, climatology, geology, among others, in North American universities of the 19th century. The clear implication is that “learning about nature” is both emblematic and constitutive of kinder views towards the natural world, notwithstanding his earlier imputation of “western science.” Griffith seems to use his evidence in any way necessary to suit his argument.

These issues are partly evidentiary in nature — a problem that prevails, in one form or another, throughout. He draws on “the great historian Ibn Khaldun” (27) without citation in either footnote or bibliographic form to make a point about negative views toward nature. Ironically, Khaldun was a 14th-century Islamic scholar of extraordinary breadth who studied nature with a discriminating and sensitive eye to its role in human history — this despite the putative intellectual divorce from nature his religion is said to have fostered; Khaldun’s appearance at this point militates quite seriously against the point Griffith hopes to make.

Also, with both regularity and confidence Griffith cites the Christian Bible (which version, edition, etc., is never made clear) as a primary source without the

slightest acknowledgment of how problematic this might be perceived by readers — especially those of non-Christian heritage. Worse, he quotes the Bible in rather promiscuous ways as necessary. On page fourteen, for instance, he indents a three-line quote ostensibly from the book of Isaiah, most of which is actually from a secondary source, and contains only four of the Prophet's own words. As for the passage itself, only a very liberal reading could allow one to call Isaiah's metaphorical language into service of the particular point being made.

In other instances Griffith has missed many essential academic texts. His chapter on India (Chapter 8), for example, could have benefited a great deal from Ramachandra Guha's *This Fissured Land* (Berkeley 1993), a critical ecological history of India. In particular, Guha's very nuanced interpretation of Buddhism as a conservationist adaptation of Brahmanic fire sacrifices would have profited Griffith, and his readers, a great deal. In a broader sense, *Gardens* is written in a tradition of cultural materialism dating back at least to Julian Steward's "cultural ecology" framework of the 1950s, and anthropologists such as Marvin Harris. Despite his book's debt to the intellectual capital of these important people, Griffith seems unaware of this tradition, citing Harris only once, and indirectly at that, through another secondary source.

Finally, Griffith glosses over chronological complexity by simply omitting evidence. Speaking of waves of violent attacks across China, India, Iran, Mesopotamia, and Egypt soon after 2000 BCE (Before the Common Era) he notes that the "timing of these migrations seems to complement climactic evidence of intensified aridity" — a claim for which he provides a confusing citation, possibly an article from *Discover* magazine. *Seems* to complement? Since this is the fulcrum of Griffith's entire argument one might expect a less tentative claim on far firmer evidentiary ground. For one thing, I am personally acquainted with paleobiologists who work for years on a single lake-bed and remain very cautious about the geographical reach of their findings; to treat China, India, Iran, and northern Africa homogeneously in one sweep is highly suspect.

There are other things about this book that academic historians are unlikely to tolerate, not least being Griffith's temporal "flip-flopping." He has no compunction about oscillating between points 2,000 years apart, positing causal connections all along. On pages 28-29 he leaps from Neolithic Sahara to a quote from a 20th century Jordanian teacher in the space of two paragraphs. His relative ease with such leaps exposes what amounts to an unqualified essentialism. Desert environments, he argues, offer "natural tendencies toward changelessness," a characteristic which Islam very quickly adopted to become an "eternalized" tradition. (99) Thus, 20th century Muslims viewed their world essentially as their forebears had done, interpreting the Quran "according to a desert-born common sense"; (34) no need, it would seem, for consideration of historical novelty. In short, the temporal leaps are far too great and the connections far too tenuous — ahistorical and

essentialized — for this book to be considered a meaningful contribution to historical scholarship in the area of ecological and cultural transformation.

Brave New Seeds and *Hungry for Trade* have much in common. Each is a slim volume easily covered within an afternoon; in the broad sense, each deals with international trade and an apparently growing hemispheric divide between the so-called “North” and “South” (a divide formerly defined as between “first” and “third” worlds, respectively). *Brave New Seeds* is expressly concerned with the effects of genetically modified (GM) crops on southern hemisphere farmers and biodiversity.

For at least 130 years, since the advent of the world’s first true “international food regime,” farmers in many parts of the world have been increasingly integrated into industrial processes well beyond their farms’ boundaries. This has altered the world’s agricultural systems in both degree and kind. In terms of degree, agricultural products such as wheat began flowing like rivers from regions to which they were once entirely unknown. Meanwhile, the complex patterns of international trade have led to a remarkable simplification of agro-ecosystems. First, in the interests of long-distance trade within self-regulating market systems, agricultural commodities came to approximate, as nearly as possible, what classical economists have called “easily reproducible goods.” In a related vein, industrial processing of agricultural products has demanded an almost muscle-bound quest for standardization, resulting in a *de facto* control over small agricultural production.

Significantly, in many cases it has been germplasm from the bio-diverse South that has made agricultural commodities of the North uniformly suitable for industrialization. An example close to Canadian historians’ hearts is that of the inimitable Marquis wheat, a cross between Red Fife and Hard Red Calcutta, the latter a wheat variety of Himalayan provenance. As plant breeders in Canada and elsewhere in the Northern Hemisphere worked diligently to reduce variation in the North’s agro-ecosystems, they have relied absolutely on the vast range of plant genetic resources still available (fortunately) in the South. Moreover, the process is never complete, for the traits that made agricultural plants universally positive for industrialized production and commodity exchange also rendered them universally susceptible to disease. So plant breeders have turned, over and over, to southern germplasm for resistant traits unknown in northern plant species.

Genetic modification, as opposed to landrace manipulation or the now mundane science of hybridization, heralds a new phase in this ongoing process. Whereas corporate control over hybrid seed inputs has been both difficult to achieve and indirect — if powerful — in nature, thus giving farmers a modicum of independence, GM technology makes proprietary ownership of seeds a practical reality. The pressures, ecological and social, portended by this new era, are central concerns for the authors of *Brave New Seeds*.

Reading like a manifesto, this book summarizes and elaborates resolutions from a December 1998 seminar, held at Rishikesh, India, on biodiversity and “the

implications of genetically modified organisms.”(3) “Side by side in a circle, seated on mats,” the authors point out quixotically, “participants from all horizons met ... for a multicultural debate.” With the exception of the ubiquitous Vandana Shiva, participants’ names were not recognizable to me, nor was it clear why they were selected for inclusion in this seminar. Despite pretensions of inclusiveness, and of opening a “file for debate,” *Brave New Seeds* is a lop-sided and, more troublingly, unsupported polemic.

Each of the book’s eight chapters is devoted, in order, to five “principles” and three “means of action” identified and agreed upon by seminar attendees. The “principles” listed were: seeds belong to farmers and not to corporations; farmers’ autonomy is jeopardized by sterile seeds; the health rights of users (of genetically modified products) ought to be considered and protected; complete transparency must prevail in matters concerning genetic modification; and broader questions need to be raised about ethics and science.

As Jack Kloppenberg suggests in his important book, *First the Seed* (Cambridge 1988), seeds have long symbolized farmers’ ambiguous place within capitalist relations of production. Farmers are unique among commodity producers, small or large, in that their outputs are also raw inputs for successive production. Chapter Two of *Brave New Seeds* tells why farmers’ place in productive relations is set to become a great deal less ambiguous. Through so-called “terminator technology,” biotech corporations such as Monsanto, Dupont, and Novartis have transferred the apomixis gene, inducing the trait of asexual reproduction, into agricultural plants. The result is seeds that yield plants whose seeds are, in turn, sterile. Farmers will be forced through such intentional seed sterilization to purchase seeds annually — an obligation to which many are now bound contractually.

Terminator technology quite nicely illustrates the ambivalence of this high-stakes game. On one hand, both the independence and financial position of farmers the world over is weakened vis-à-vis trans-national corporations. Also, it makes an emphatic comment on the ecological paradoxes our species has created: scientific ingenuity has not only reduced biodiversity through the destruction of plants *we do not want* (weeds), it is now focused on sterilizing those plants *we do want*. Corporations would, and do, counter that such technology is necessary armament in the ongoing war against world hunger.

Brave New Seeds raises some salient points. For example, it promotes the “precautionary principle” in both scientific exploration and legislative enactment. Also, it points out quite correctly that agreements such as the UN’s 1993 Convention on Biodiversity (CBD) have insufficient “teeth” to counteract the effects of other agreements such as the World Trade Organization’s Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). Indeed, far from being a nihilist tract, the authors’ second and third “means of action” argue that farmers and farming communities must be given due consideration under TRIPS provisions as “innovators and preservers of seeds.” (89)

These are worthy points, and one need not look far for their commendation. Corporate interest in a unidirectional-only approach to sharing plant genetic resources (celebrated as “mankind’s common heritage”) is palpable, and dates to the early 1980s when developing nations refused to share elite and proprietary varieties under UN Resolution 8/83 (Jack Kloppenberg, *Seeds and Sovereignty*, 1988). This refusal prompted talk of a “genetic OPEC” among developing nations and it hints strongly at the disingenuous nature of corporations’ Malthusian concerns. It also gestures at the need for binding protection of both farmers and our planet’s biodiversity.

Unfortunately, thousands of years’ defense of the world’s “fabulous vegetal heritage” is difficult to express in legal parlance, as would be required under TRIPS provisions. Ironically, being guardians of diversity entitles farmers to proprietary rights over nothing in particular, at least from a legal standpoint. Such is the logical paradox of *Brave New Seeds* and its expressed “means of action.”

Moreover, in making their arguments for biodiversity and farmers’ rights, the authors have added little in the way of new argumentation or evidence. This book merely trots out the familiar list of potential threats — the development of ever more resistant pests, potential toxicity, increasing allergic response, and so on — familiar to any avid newspaper reader. Most distressingly, its claims are supported only in self-referential ways. Throughout the book, statistical evidence comes overwhelmingly from other highly polemical organizations such as RAFI, the Gaia Foundation, or Greenpeace. (See 13, for instance, where RAFI is cited on an important statistical point). By all appearances, this book’s greatest ‘accomplishment’ is its reconfirmation of consensus among an already like-minded group of people.

Hungry for Trade tackles similar themes. Summarily, this book is about trade liberalization under World Trade Organization (WTO) auspices and its effects, in particular, on “food security” in developing nations. Whereas Karl Polanyi remarked that subjugating part of nature (land) to a self-regulating market system was perhaps the most bizarre of our ancestors’ undertakings, John Madeley might argue that to do so with food is more bizarre still.

Madeley’s opening chapter deals with the infamous WTO meetings held at Seattle in 1999. There, led by the US and the Cairns group of cereal exporting nations, a strong case for trade liberalization as a panacea for the “agricultural sector” was made. The case met with outrage from EU, Asian, and African delegates who balked at the notion of treating food as any other industrial commodity — waste paper baskets and tin cans for instance. Madeley concurs with such indignation: “Agriculture has an overriding claim to be dealt with differently from industrial production and services.”(26)

However positive trade liberalization may be for the “agricultural sector,” broadly conceived, Madeley suggests it is quite injurious to food security among subsistence farmers in developing countries. This is not a new story. In his recent book, *Late Victorian Holocausts* (2001), American historian Mike Davis paints a

very unflattering picture of how the process of market integration harmed rural peasants in India and Africa. Far too commonly in the transition from subsistence production to international market integration, vast stores of food either sat idle or rolled by the truck load, en route to lucrative markets, past peasants literally starving to death.

This pattern is being replayed, according to Madeley, with different agricultural products comprising the cast of characters. Agricultural land is increasingly used in the production of goods having high exchange value in international markets, and less for the production of subsistence crops. Taking one example, flower production for the European cut-flower market now occupies vast tracts of agricultural land in India. Trade advocates, usually echoing comparative advantage theory, commonly argue that this process creates greater wealth overall, and profits everyone. Not so, counters Madeley. In fact, he argues, putting land into the production of exportable crops — often non-food crops — has required intensive capitalization in the agricultural sector, a corresponding turn to wage labour among farmers, and massive import dependence. (73-80) Ultimately, farmers working as wage labourers earn a fraction in currency of what they once produced in food value for themselves.

The Indian example is one of three “case studies” Madeley presents in Chapter Five to make his case against trade liberalization. At seventeen lean pages, however, with all of ten footnotes for the entire chapter, these can hardly be accused of being intensive case studies in any meaningful sense. Moreover, like the other two books reviewed here, *Hungry for Trade* is afflicted with serious evidentiary problems. For example, through an indented quotation on page 80, Madeley suggests that Indian farmers can purchase only a quarter of the food they once produced themselves. This is critical “evidence,” which interested me very much, and yet there is no citation, no introductory comments, no sense whatsoever of the claim’s origin. Madeley is guilty of similar omissions elsewhere: he notes, without citation, that only twenty per cent of agricultural research in Latin American countries goes to food crops (55); he chastises the EU’s Common Agricultural Policy (CAP), offering the unsupported claim that three quarters of CAP subsidies go to one quarter of European farmers. (70)

Evidence aside, most disconcerting is Madeley’s uncertain position on the international trade-subsistence production spectrum. Explicitly, he challenges trade liberalization: “Small farmers ... have had their food security impaled on the railings of trade liberalization.” (75) On this point he is quite strong, and raises the important objection that pure market models are not appropriate for all human activities, namely procuring the raw necessities of life. However, while he casts a critical eye on market reification, he is not *so* critical as to recognize, and thereby avoid using, the hegemonic language of market naturalism. He concludes his impassioned plea for food exceptionalism by noting “food is special; it is not like any

other commodity.” (25) Why make this concession to economic nomenclature? Wouldn't it be better to argue that food is not a commodity at all?

On the other hand, he heaps scorn throughout the book on the EU's CAP as “the world's most protectionist device.” (69) The policy, he asserts, results in cheap-food dumping in southern nations (a potentially beneficial activity that remains unexplored in any detail) and, puzzlingly, in unfair competition for farmers in developing countries. At the least, this critique could be read as an unintentional defense of freer trade, and certainly as evidence of a position lacking strong coherence.

Each of these books addresses truly important issues; much exception can, and should, be taken with desertification, genetic modification, and a growing regional disparity in wealth and food security. To this end *Brave New Seeds* and *Hungry for Trade* serve one significant, if mostly implicit, function: each uses the names and acronyms of myriad international organizations, and would therefore acquaint totally uninitiated readers with the key players in international trade and GM issues — an acquaintance that is surprisingly difficult to achieve from scattered sources. In fact, a list of addresses (including websites) for relevant organizations is included in *Brave New Seeds*. Interested readers should make use of these leads, familiarize themselves with important organizations, and acquire their often easily accessible reports and publications — especially those from UN agencies.

That said, owing to their lack of theoretical rigour, their often puzzling contradictions, and very poor evidence, none of these books should be read as apologia for the cause of social and environmental consciousness. Until one has read Michael Glantz's work on Sahelian famine, Mike Davis' *Late Victorian Holocausts* (London 2001), Jack Kloppenberg's *First the Seed* (Cambridge 1998) and *Seeds and Sovereignty* (London 1988), and any of Harriet Friedmann's essential work on international food regimes, these three books should remain shelved.