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SueEllen Campbell, Alex Hunt, Richard Kerridge, Tom Lynch, and Ellen Wohl. *The Face of the Earth: Natural Landscapes, Science, and Culture* (Berkeley: University of California Press, 2011) 320 pp.

A number of ecocritics in the late 1990s and early 2000s called for an enrichment – even a corrective – of literary studies through both increased scientific literacy for scholars in the humanities and interdisciplinary work undertaken by scientists and humanists working in collaboration. In calling for a renewed effort to overcome the intellectual chasm between what C. P. Snow once called "the two cultures," Glen A. Love recommended that humanists "pull up our socks, and try to learn something about [science]" (40). Specifically, he argued that "Ecological thinking about literature requires us to take the nonhuman world as seriously as previous modes of criticism have taken the human realm of society and culture" (47). That, precisely, is the project of *The Face of the Earth*. The authors "take seriously" the complexity, variety, resiliency and fragility of the planet's processes and biological systems. Campbell and her colleagues draw on a scholarship model that employs the collaborative research-team approach more typical of the sciences. As lead author, together with three other colleagues working in English departments (Richard Kerridge, Tom Lynch, and Alex Hunt) and one from geology (Ellen Wohl), Campbell sets out "to stand face-to-face with the land so that we might read and understand its *character*" (x). The result is masterful: a hugely ambitious, necessary, articulate, and generous intellectual undertaking, executed with scholarly exactitude and lyrical beauty.

Human beings are remarkably good at recognizing other human faces and determining members of our kin group or social group—evidently a skill we share with monkeys, so it goes far back in our evolutionary heritage. We're so good at it that we see faces everywhere, as in instances of pareidolia, where we perceive human faces in clouds, tree bark, the moon. Recognizing the face of the earth is a different sort of undertaking: an attempt to see the astonishing complexity of the earth's geology, biology, and climatology with both precise observation and responsive emotion.

The book's structure emphasizes the interdisciplinarity of its conception and, importantly, models the kind of cross-disciplinary thought and action that the culture – i.e., we – will need throughout the coming decades. Four hefty chapters treat distinct landscape types: volcanic; glacial; wetland; and desert. A fifth chapter, "The Complexities of the Real," pulls them all together, resulting in a literal "overview" of the planet following an imaginary "journey from the center of the planet out toward space" up through the increasing elevation levels, and on into space (241). Each chapter contains discussions of specific constituent landscape features – Peat, Mires, Bogs, Fens, Marshes and Swamps, for example, all from Chapter Three – along with ecological processes essential to their formation and maintenance – "The Water Cycle" or "How the Climate Works." Interspersed with these sections of summary and synthesis are brief sketches, first-person essays by a variety of contributors with particular scholarly expertise and personal investment in particular locations. These latter participate in the long tradition of American and British natural history writing and function as up-close-and-personal accounts of time spent with the book's subject, each catching a different glimpse of the central face and its various moods.

For some readers, the best feature of this book might be the graceful clarity with which it presents both histories of science and summaries of the current state of research-based understanding of the earth's processes and their implications for global climate change. Chapter two's discussion of the Little Ice Age is particularly illustrative and fascinatingly detailed. While the workings of the hydrologic cycle may not be a mystery for many readers, chapter three, "Wet and Fluid," manages to present a useful recap of these processes sandwiched directly between the chapter on glaciation and the one on deserts; the underlying imperative that we must "face" and understand the workings of climate change as a function of water's movement across the planet, not simply as a question of whether (or by how much) our local latitude will warm, is thus reinforced. Summaries of previous theories of the earth (especially in chapter one, "Landscapes of Internal Fire") offer excellent glosses on how the history of science both illuminates previous literary interpretations of the more-than-human world and recalls the value of the scientific method. (Again I'm reminded of Love, quoting anthropologist Sarah Blaffer Hrdy: "Unlike superstition or religious faith, a good scientist's underlying assumptions are subject to continuous challenge. Sooner or later in science, wrong assumptions get revised" [41].)

For other readers, the greatest value might be the ecocritical consideration of familiar texts in surprising and illuminating surprising ways. "Climate and Ice," discusses how the decades of cold temperatures during the geologic period called the Maunder Minimimum (1645-1710) and the "Year Without a Summer" following the 1815 Mount Tambora eruption in Indonesia reflect in such diverse cultural productions of the time as the Old Masters' paintings in Europe; the ice imagery in Mary Shelley's *Frankenstein*, and the Romantics' fascination with the concept of the sublime (108-109). Others may best appreciate the introduction to new artists and writers working in response to changed and changing understandings about the earth. French photographer Yann Arthus-Bertrand's 2000 book *Earth from Above,* is an example of artists who "[keep] human relationships with the rest of nature firmly in sight," whose "work acquires its ethical, political, activist weight" because of its uneasy examination of both beauty and destruction (288-89). Campbell et al. consider how "our perspective changes again" through our wide access to imagery *of* the earth that is taken from a point of removal *from* the earth, including Google Earth and American Landsat images that are available to the public from the USGS. In describing the beauty and complexity of visual images generated by such non-human perspectives, Campbell et al. add yet another layer of complexity to their examination of what it must mean to try to face the earth.

For still other readers, the book's delight in the English language's robust and resourceful vocabularies for referencing the physical world and its processes will resonate. From the nouns signifying distinct features of a glacial world, many developed during the 19th century examinations of the Alps, a legacy of the region's German and French speakers, to the place names across the planet that register the plethora of peoples who inhabit its sometimes extreme landscapes – Al-Maslūkhah means "stripped bare," we learn – the book reminds us that the land has helped shape the tongues we speak. It's a delight to consider the etymologies as well as the textures of the words themselves.

But this sort of division is exactly what the book is so well presented to challenge. The fusion of all these modes into a consideration of the earth's character resists any attempt to read selectively. Even so, for me, Campbell's personal cast is particularly powerful. The book's shape recreates an archetypal trajectory of emergence: from the initial mythology and supposition about the interior of the earth; to various places across its surface, where science and art, water and land, interpenetrate; and finally into the air and beyond. This upward movement reflects an ancient conceptual metaphor humans have long employed: upwardness suggests better perspective, fuller understanding, and greater maturity. One could personify through gender's lens and glimpse the movement away from the mother's lap to stand on one's own two feet and meet her face to face. (It is also, as Campbell writes movingly, to follow the direction of the advancing tree line in a warming world, where one of her own personally-cherished landscapes, the alpine meadow, will likely disappear from the Rocky Mountains, since "Treeline in this area is predicted to rise some 350 feet per degree Fahrenheit of warming … in which case the forest will advance its realm upward, pushing the tundra ahead of it right off the tops of all but the highest peaks" (285). Positioned in one such meadow, Campbell observes in the epilogue, "If someone I loved became ill with a disease likely to be fatal, I'd want to spend time with her, less to mourn than to *live* with her – to absorb her particular vitality, the forms passion and beauty have taken in her body" (295).

Readers previously familiar with these scholars' work will be able to detect their personal involvement here: the chapter, "Desert Places, Desert Lives" carries hints of Tom Lynch's voice as well as his argument that the term "green" is itself a term conveying some element of xerophobia (see Lynch); "Wet and Fluid" is enriched by its transatlantic authorship (Richard Kerridge's contributions along side his American colleagues' are especially clear here). And of course, each author includes one of her or his own "On the Spot" descriptions of particular places. Overall, however, the book's intelligent, accessible voice remains consistent throughout.

Quibbles? Most of the "On the Spot" sections are written consistently in the first person—what I see, what I hear—so Bruce Campbell's second-person turn toward the reader as a potential companion in his tallgrass prairie section is a welcome change. It made me wonder what other narrative variety could have been possible: What about a rare, "On the Spot" report from the final perspective, in or above the atmosphere? But this is nit-picking, not worth pursuing. *The Face of the Earth* is a book of great breadth and vision, a triumph of what Lawrence Buell calls "the environmental imagination."

Works Cited

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