Book reviews

Water Beings: From Nature Worship to the Environmental Crisis by Veronica Strang (2023) 280 pp., The University of Chicago Press, Chicago, USA. ISBN 978-1-78914-688-2 (hbk), USD 45.00.

As temperatures on Earth continue to rise, the UN Secretary General, António Guterres, has warned that we are entering an 'era of global boiling', and in my view it is water, not carbon, that will ultimately be at the heart of the climate emergency. We see this devastatingly clearly in the many examples of water-related catastrophes, from crippling droughts in the Brazilian Amazon to the relentless floods that have recently overwhelmed Pakistan and washed away much of the city of Derna in Libya. For me, it was a personal and professional connection with water that drove me to read this book, not only to learn more about the work of anthropologist Veronica Strang, but also to understand how humankind could lose sight of something so vital and, dare I say it, spiritual as water.

In Water Beings, Strang guides the reader through early human history and our relationship with water as a sacred entity, personified in stories of snake-like aquatic beings and deities such as giant anacondas, rainbow serpents and cloud dragons. The ancient narratives featuring these fluid forms not only spoke to the physical nature of water in terms of flow and movement, the snaking of rivers and the rippling of waves, but also of the creation of the cosmos, of wisdom and the potential renewal of all things. The lifegiving qualities of water were once worshipped and deeply respected. This veneration also stemmed from the well-founded fear of the destructive powers of water, with flooding and drought framed as the consequences of upsetting aquatic deities such as river gods or inciting angry storm gods.

From those early beginnings, Strang charts a transition through time and space, from a sacred and feminine representation of water to one that became marginalized and demonized, particularly in the Western world, where monotheistic and patriarchal religions and scientific disenchantment sought to dominate nature and banish any pagan or animistic beliefs. The fluidity and formlessness of water was increasingly associated with unruliness and chaos; marshes and swamps were described as fetid sources of miasma and associated with dangerous 'nether' regions. In Victorian times this was conflated with anxieties about out-of-control female sexuality and monsters that lurk beneath. Shape-shifting beings such as serpentine water deities were considered threatening and beyond human control. With the rise of imperial power and patriarchal hierarchies, previously androgynous or hermaphrodite water deities became increasingly masculinized. Highlighting many fascinating feminine water deities from all over the globe, Strang introduces us to Sedna, the arctic mother sea goddess, Ratu Lara Kidul, the Javan mermaid goddess, and my personal favourite, Mami Wata, 'a classic embodiment of feminised, untamed and corrupting Nature: a misogynistic nightmare of disorder' (p. 214).

As humankind shifted from nomadic hunter-gatherer lifestyles to permanent settlement, agriculture and irrigation, societal structures became more authoritarian, with centralized government driving increasing social inequalities. Leaders became elevated to the status of gods, and in ancient Egypt came the first major dams. Increasingly the natural world, especially water, were viewed as needing to be controlled and tamed, as were women and the diverse cultures and belief systems that monothetic religions sought to dominate. The Industrial revolution and the use of water to drive steam engines, with rural workers pushed into cities, led us further down the path of our separation from nature. Capitalism served to reinforce the idea of nature as a matter of utility, an object of consumption or a means of production. Strang also powerfully illustrates the role of religion in this process, highlighting Lynn White's argument that Christianity de-sanctified nature and reinforced the distance between humankind and other species. White, himself a Christian, was not afraid to point out that Western Christianity is the most anthropocentric of all religions. The opposing duality of culture and nature, with crusading superhero knights slaying fearsome dragons, doubled down on the transition from veneration of water beings and water bodies to their control and destruction.

As Strang presents the evidence of our changing relationship with water, she asks how we can reposition ourselves alongside other forms of life, to connect with the living world around us in more equal and reciprocal ways, and to see non-human beings as both creators and ancestors. Such ways of being in and relating to the natural world are deeply embedded in Indigenous and place-based societies, through their traditional, permanent and inalienable relationship with their homelands and ecosystems.

Amidst increasing calls to recognize the legal rights of rivers and non-human entities, to punish ecocide as a crime and to adopt the rights of nature more widely, Strang demonstrates how this understanding can be built into legal frameworks to protect not only water, but nature as a whole. She reimagines communities as comprising all living things that a river catchment contains, which strikes a particular chord with me as I work with my own community towards the restoration of a river catchment in Sussex, England.

Water Beings is a well-researched and richly illustrated book that I found both inspiring and thought-provoking. It leaves me suitably enchanted, imagining these serpent water beings winding their way through our history. However, their representation of chaos as a source of creativity makes me wonder: will the 'era of global boiling' be chaos enough for us to return to a humbler relationship with all forms of life that share our beautiful blue planet?

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Nature's Temples: A Natural History of Old-Growth Forests by Joan Maloof (2023) 232 pp., Princeton University Press, Princeton, USA. ISBN 978-0-691-23050-4 (pbk), GBP 14.99.

Elderflora: A Modern History of Ancient Trees by Jared Farmer (2022) 448 pp., Basic Books, New York City, USA. ISBN 978-0-465-09784-5 (hbk) USD 35.00.

Finding the biggest or oldest individual of a tree species, so called champion trees, is a pastime somewhat akin to a very slow version of train spotting. It could be easy to dismiss this activity, as I have tended to do without appreciating the scientific rigours involved, but reading these two books has completely changed my outlook. In fact, Elderflora by Jared Farmer, a Professor of History, emphasises a whole new dimension to tree conservation. Documenting the conservation status and reducing the extinction risk to individual tree species is one generally acknowledged conservation priority. Protecting assemblages of trees, especially those of species-rich forests, is another. Taking into account the age of trees and forests is yet another important factor emphasised by these two books. Farmer suggests that to become wise stewards of the planet, we must take greater account of the temporal component, recognizing the age of trees and emphasizing the value of old-growth forests. We should conserve trees, not only for

their ecological value, but because they represent and record the very passage of time.

Individual ancient trees can be of great cultural and symbolic significance, revered for their connection with particular historical events, links with religious sites and their continuity through time in a local context. Collections of ancient trees in woodlands and forests may be valued for their strong sense of place. But the cultural and spiritual importance of forests has been widely overlooked during recent centuries of global forest exploitation. In the colonial era of settlement, the quest for land, building materials and profit has led to the clearance of vast areas of ancient trees without regard for the ecological consequences or the needs and beliefs of local people.

Old-growth forests are clearly of immense ecological importance for the habitats they provide and the biodiversity they support. In her relatively slender tome, Joan Maloof, a biologist and Director of the Old Growth Forest Network, sets out the importance of old trees for biodiversity. She points out that many species unique to old-growth sites disappear after timber management and that rare and threatened species are more likely to be found in old-growth forests. The chapters in her book Nature's Temples outline the support provided by these forests for different species groups and also document the value of old-growth forests for water and carbon, and for their sheer beauty. There are some odd gaps in her coverage, however. For example, the chapter on amphibians refers only to salamanders and frogs, without reference to other amphibian groups. The geographical scope is also somewhat limited: Maloof's book focuses mainly on the USA, with few references to ancient trees and forests in other parts of the world. The author points out that in the western USA, only 5% of forests remain unlogged and in the eastern part of the country, less than 1% of the land is covered by original, unlogged forest. She makes a strong case for leaving old-growth forests alone 'for the species we share the planet with and for our human spirits' (p. 147).

Farmer's fascinating—and much chunkier—book, on the other hand, provides a broad global and historical perspective. He highlights the interlinkages between people and trees throughout time and explains how the scientific value of dating trees can help understand the history of the Earth. 'As a worldwide phenomenon, the modern cult of arboreal monuments could conceivably serve as a cross-cultural foundation for geotemporal thinking' (p. 133).

And what of the oldest trees? Farmer notes there are c. 25 plants species that can, without human assistance, produce individuals that live for over a thousand years, and

that these are mainly conifers of primeval lineage. He also draws our attention to the fact that the oldest individuals are not always the biggest. As noted in both books, a Great Basin bristlecone pine *Pinus longaeva* is acknowledged as the oldest recorded living tree. The story of ageing bristlecone pines as described by Farmer is as gripping as any novel. It was no small achievement for Edmund Schulman—who fought poverty and ill health to develop an academic career—to discover, in the late 1950s, living trees aged over 4,000 years old.

Bristlecone pines have not been major targets for their timber. The species is categorized as Least Concern on the IUCN Red List and is now protected within the Great Basin National Park thanks to the endeavours of Schulman and his successors. Other ancient trees such as the majestic Alerce Fitzroya cupressoides of Chile and Argentina or the Kauri Agathis australis of New Zealand have been depleted by logging and are under continuing threat of extinction. These two books highlight why we should record and care about all the world's ancient tree growth. As Farmer notes, 'the demise of olden trees represents an ecological loss, a cultural impoverishment and a social problem' (p. 305). The solutions are for us to remain engaged, network, do more where necessary and also learn to leave ancient forests alone without interference. Only if we do all this will the treasured and unique ancient trees and forests of this world be able to continue to play their crucial role in the intricate web of life.

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Dawn at Mineral King Valley: The Sierra Club, The Disney Company, and the Rise of Environmental Law by Daniel P. Selmi (2022) 347 pp., The University of Chicago Press, Chicago, USA. ISBN 978-0-226-81619-7 (hbk), USD 30.00.

This book is called Dawn at Mineral King *Valley*, but it is not really a book about a valley. Instead, it is a book about the many men who used this particular valley-located in the southern part of Sequoia National Park, in California, USA-as a backdrop to further their own agendas. This throng of men contributed to the development, argumentation and aftermath of one of the most prominent cases in environmental law: the U.S. Supreme Court case Sierra Club v. Morton. This case, decided in 1972—at the dawn of modern environmental law-has become a classic in large part because it features a storybook conflict of development vs conservation. This conflict played out between those seeking to develop the remote subalpine Mineral King Valley—including the Walt Disney Company and the U.S. Forest Service, who approved Disney's plan—and preservationists in the Sierra Club, one of the first large-scale environmental preservation organizations (which had been founded by naturalist John Muir in the late 1800s). Although the Sierra Club technically lost the case, the decision in Sierra Club v. Morton is often credited with establishing a basis for standing in environmental cases—an issue of particular modern urgency as courts play an increasing role addressing climate and environmen-tal injustices.

To say this book talks about 'many men' is no exaggeration: over the 270 pages of the book's narrative, the author introduces (by my count) 170 men. This dizzyingly large cast is only recognizable because of the author's gift for quick and memorable characterization, as when summarizing a geologist as '[m]ethodical to the point of drawing a diagram indicating where to stow all his outdoor equipment in his Volkswagen van' (p. 23), quoting from an administrator's self-congratulatory diary (p. 84), or describing a politician as 'a witty man with a penchant for wearing multicolored tam-o'-shanters' (p. 252). Indeed, the author's ability to vividly humanize his subjects-including lawyers, bureaucrats, judges, organizations and corporations-adds important explanatory depth. Why, for instance, did the Sierra Club, which had initially supported development of a ski resort in Mineral King Valley, turn against the project? The book describes a fiery meeting of the board of directors, in which one member 'raised hell' (p. 27), convincing most of the other directors, including photographer Ansel Adams, to prioritize the 'environmentally correct' (p. 27) position of preserving a wilderness-like area over the pragmatism of maintaining a consistent position. On the other side of the conflict, why was Disney so committed to building a ski resort in this particular remote valley, even after significant public and legal opposition had developed? Here the book emphasizes the ways in which, after the death of Walt Disney partway through the project, the development of Mineral King Valley became an emotional tribute to Walt by his brother Roy Disney and other Disney executives (pp. 71, 241). This depth pays off in the climactic ninth and tenth chapters of the book, when the author reaches the oral argument before the Supreme Court, and the reader has reached the stage of rooting for everyone.

The author does an impressive job of humanizing the perspectives of men on each side of this faceted case. Yet *Sierra Club v. Morton* is concerned with questions of