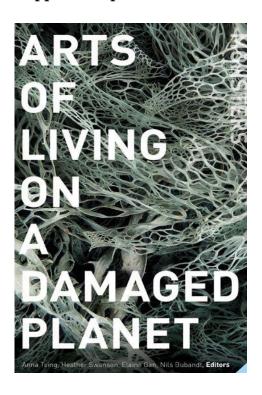
Reviews

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Telling Multispecies Stories From the Anthropocene

Anna Tsing, Heather Swanson, Elaine Gan, Nils Bubandt, Eds. Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene. Minneapolis: University of Minnesota Press, 2017. 368 pp. \$27.95 pbk, \$112 hc.



Attempting to mitigate the deepening crises of mass extinction, climate change, global inequality, and environmental destruction that characterize our current period of loss and risk, multispecies practitioners have called for alternative modes of togetherness predicated on the coexistence of humans and more-than-human beings. Thom van Dooren, Eben Kirksey, and Ursula Münster propose "arts of attentiveness" as a way of participating within and responding to multispecies collectivities. Donna Haraway asks us to "stay with the trouble" by attending to the difficulties that characterize the Anthropocene. These propositions for living with others ask humans to alter our practices and critically reexamine our relationships with the beings that co-constitute this world. They also make clear the need for more constructive and empathetic ways of

being if we hope to weather the Anthropocene and support the entanglements that make wellness possible.

The edited collection Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene responds to these recent calls for alternative modes of belonging. Building upon Anna Tsing's earlier work that asks us to cultivate "arts of living" among the endangered, this text proposes two frameworks for surviving the damaged world of modernity: ghosts and monsters. As Tsing and her collaborators contend, the Anthropocene has simultaneously brought into being and exposed a messy collection of monsters and ghosts that must be observed, studied, and appreciated. Monstrous and spectral figures such as trash, radiation, tunicates, atomic bombs, trees, lichens, microbes, wolves, sea lice, ants, horseshoe crabs, and introduced plants all compose contemporary landscapes. Whether examined in physical contexts, literary productions, or historical documents, ghosts and monsters render multispecies entanglements visible. By uncovering the collective basis of earthly habitation, these beings and things displace the human from an imagined central position and point toward future modes of togetherness. In short, examining ghosts and monsters helps us establish new arts of living during the Anthropocene.

Monsters, for the editors of and contributors to this volume, are the product of modernity. At once "the wonders of symbiosis and the threats of ecological disruption," monsters "help us pay attention to ancient chimeric entanglements ... [and] point us toward the monstrosities of modern Man" (M2). Ghosts are "the traces of more-than-human histories" (G1) that, like monsters, can be found in all spaces where humans and others interact. "[G]hosts," the editors write, "remind us. Ghosts point to our forgetting, showing us how living landscapes are imbued with earlier tracks and traces" (G6). By pointing to past moments that often exist outside of human time scales, these figures disrupt modernity's linear configuration of time, showing us "multiple unruly temporalities" (G8). These two theoretical frameworks structure the diverse collection of essays that follow.

As a collaborative publication, Arts of Living emerged from the conference "Anthropocene: Arts of Living on a Damaged Planet" held at the University of California, Santa Cruz in May 2014. Supporting an interdisciplinary approach to contemporary environmental difficulties, the collection features nearly two dozen contributors from a diverse range of disciplines, including anthropology, cultural studies, literary criticism, digital arts, science and technology studies, professional writing, biology, environmental history, and quantum physics. One half of the book

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discusses ghosts and the other monsters. Each part contains nine chapters along with introductory remarks and a coda. The split format of the book allows readers to begin with either ghosts or monsters and freely move between sections according to interest. Each half is further divided into subsections that cluster essays into shared themes, arguments, and interests. The "Monsters" half is subdivided into "Inhabiting Multispecies Bodies," "Beyond Individuals," and "At the Edge of Extinction," and the "Ghosts" half contains "In the Midst of Change," "Footprints of the Dead," and "What Remains."

With such a diverse cast of contributors and interests, the writing style of the essays varies from high academic to easily accessible. This stylistic and tonal range supports a wide readership. Images, original artwork, diagrams, and citations abound within the text, enriching the reading experience and providing additional interactions. As one reads through Arts of Living, it becomes clear that this is a collection of essays interested in the power of narrative. Not only does the volume seek to better understand the narratives we tell about being in the world, but it also aims to tell new stories — narratives that try to capture the complexity and liveliness of multispecies becoming — about leading entangled lives within the difficult present. The contributors are not simply celebrated scholars; they are also multispecies storytellers. The following chapter synopses offer a more-detailed sense of the material discussed within the collection and the authors' interdisciplinary contributions.

Ghosts. In her chapter titled "No Small Matter: Mushroom Clouds, Ecologies of Nothingness, and Strange Topologies of Spacetimemattering," Karen Barad argues that atomic events demonstrate how matter, space, and time are inseparable and bound up with one another. Moreover, this spacetimemattering is fundamentally spectral. As Barad points out, "Hauntings are not immaterial. They are an ineliminable feature of existing material conditions" (G107). Therefore, "Matter is spectral, haunted by all im/possible wanderings, an infinite multiplicity of histories present/absent in the indeterminacy of time-being" (G113). While Barad provides an intriguing discussion of the atomic bomb, she also offers a valuable materialist definition of ghosts. Hauntings, she writes, are "the dynamism of ontological indeterminacy of time-being/being-time in its materiality" (G113). This ontological indeterminacy is present throughout Arts of Living.

Like Barad, Nils Bubandt is interested in material and temporal entanglements. In "Haunted Geologies: Spirits, Stones, and the Necropolitics of the Anthropocene" Bubandt describes his research on the world's largest mud volcano. Located along the

north coast of Java, Indonesia, the volcano has damaged a large area, spewing mud that is rich in heavy metals and sulfur. Local inhabitants argue that the massive mudflows have been triggered by either a recent earthquake or by oil drilling in the area. Because of this debate, the mud volcano is "a tragic and dystopic, but also illuminating, illustration of the Anthropocene" (G122). The volcano illustrates "the impossibility of distinguishing human from nonhuman forces" (G122), and this "undecidability," Bubandt argues, "is simultaneously the signature characteristic, the curse, and the promise of our current moment" (G123). This period of global undecidability is a "spectral moment" (G128) which Bubandt calls the "necropolitics of the Anthropocene" (G125).

Exploring chestnut and pine forests in Monti Pisani, Italy, Andrew S. Matthews reads the traces of past relationships between humans and more-than-human beings in "Ghostly Forms and Forest Histories." He employs the practices of "walking, looking, and wondering" (G145) to study the ghostly traces of previous activities inscribed in trees. Matthews observes evidence of peasant cutting, terraces, drainage systems, forest fires, former orchards, disease, and grafting. "The forms of trees, as of other beings," he explains, "emerge from relations with others" (G151). By observing these ghostly marks, Matthews is able to piece together a political history of the region. State formation, capitalism, and colonization have all shaped the chestnut and pine trees of this place. By calling our attention to forgotten histories, these ghostly traces, Matthews contends, "provide ways of imagining and perhaps bringing into being positive environmental futures" (G145).

Monsters. In "Symbiogenesis, Sympoiesis, and Art Science Activisms for Staying with the Trouble," Donna Haraway outlines a vocabulary and proposes modes of togetherness suitable for life during the Anthropocene. Inspired by Lynn Margulis, Haraway asks us to study and describe how beings are always in the process of "making with" one another (M25). She calls this multispecies turn in academia the "new new synthesis," defining this shift as the interest in "human and nonhuman ecologies, development, history, affects, performances, technologies, and more" (M28). Some of the work inspired by this "new new synthesis" includes "art science activisms," or activist research that combines art and science, to propose "sympoietic practices for living on a damaged planet" (M31). Haraway discusses two of these "animating project[s] in deadly times": Crochet Coral Reef and the Madagascar Ako Project (M35).

Also interested in sympoietic practices, Marianne Elisabeth Lien studies a salmon farm in West Norway to better understand the complex, and often murky, multispecies

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entanglements associated with domestication projects. As she explains in "Unruly Appetites: Salmon Domestication 'All the Way Down'," the Atlantic salmon contained in this underwater enclosure are preyed upon by sea lice which feed on mucus and tissue, and, if left unchecked, can kill smolts. In an attempt to reduce these parasites, salmon aquaculturists have introduced wrasse, a smaller fish that eats sea lice. While wrasse help control sea lice, they also have "unruly appetites" (M116) and will occasionally nibble on salmon. The salmon, in turn, will also prey upon the wrasse. Lien reads this messy process where "the role of 'eater' and 'eaten' is notoriously unsettled" (M108) as "domestication-in-the-making" (M109). Together, Atlantic salmon, sea lice, and wrasse are creating a shifting and unstable set of relationships off the coast of Norway.

Like Lien, who offers a tangled reading of domestication, Peter Funch asks us to revisit the project of conservation from a multispecies perspective. "Synchronies at Risk: The Intertwined Lives of Horseshoe Crabs and Red Knot Birds" describes the intertwined, and vulnerable, lives of horseshoe crabs and red knot birds in the Delaware Bay. Horseshoe crabs engage in mass spawnings and red knot birds consume their eggs shortly after they are deposited. However, with the decline of horseshoe crab populations due to overharvesting and habitat loss, the population of red knot birds has also suffered. As Funch makes clear, "When all of these factors compound to cause horseshoe crab declines, they do more than imperil a single species; they also make vulnerable all who depend upon it" (M150). This understanding leads him to ask: If most conservation programs aim to assist a single species, how can we restore complex communities of organisms? Funch argues that paying attention to multispecies entanglements is necessary work during this troubled period.

Arts of Living is a required text for those interested in and involved with the Environmental Humanities. The two concepts it proposes — ghosts and monsters — are useful frames for studying and changing the sociomaterial landscapes of the Anthropocene. Spectral and unsettling figures can be found everywhere and they remind us not only of the changes we have caused, but also our constantly entangled presence on this planet. If we hope to participate in a livable future, we must craft new arts of living that recognize the contributions of others. As this collection of essays makes clear, we can gain perhaps our greatest inspiration by turning to the more-than-human denizens of this world.