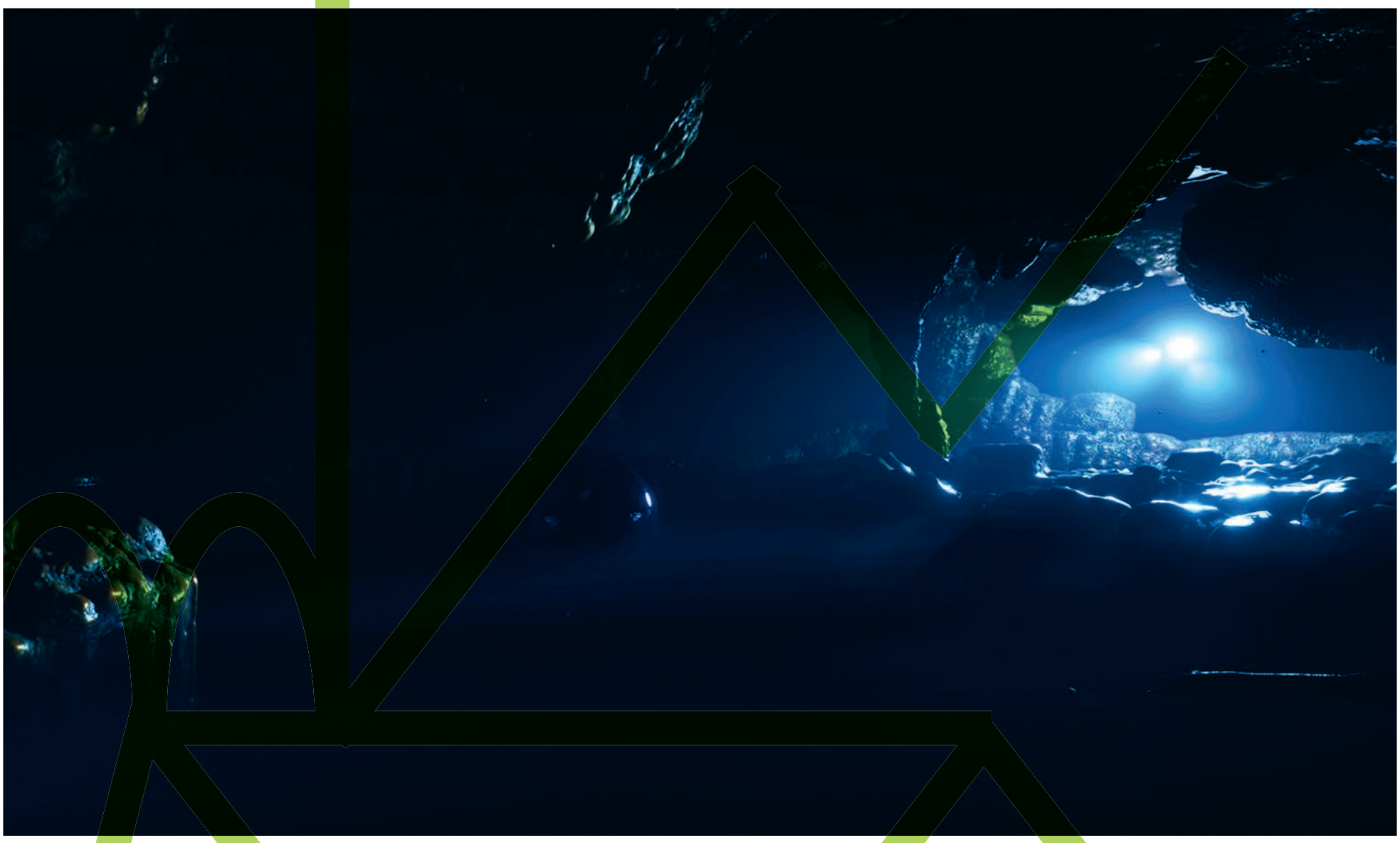
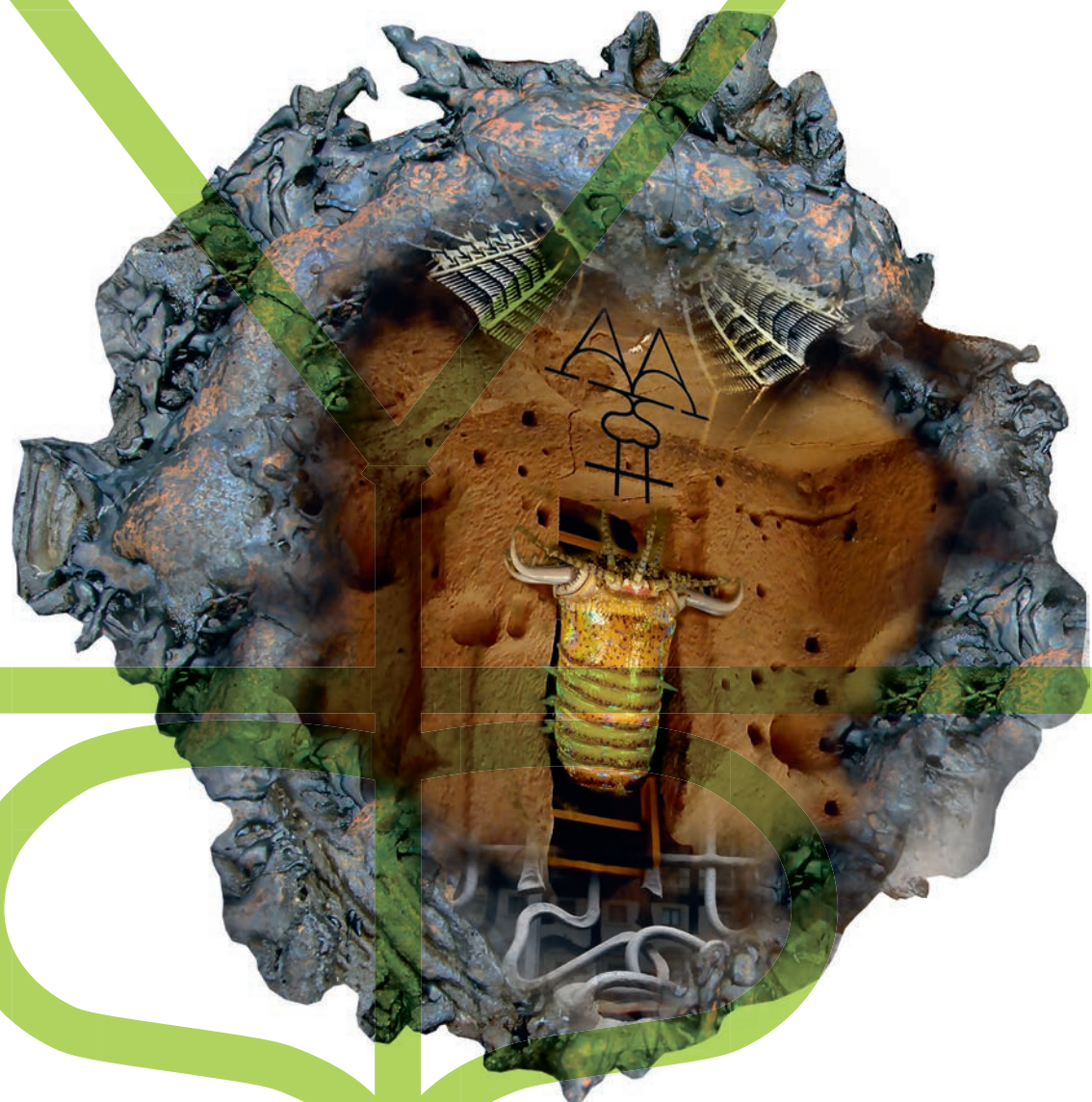
ABYSSAL SEEKER

JOE MOLLER





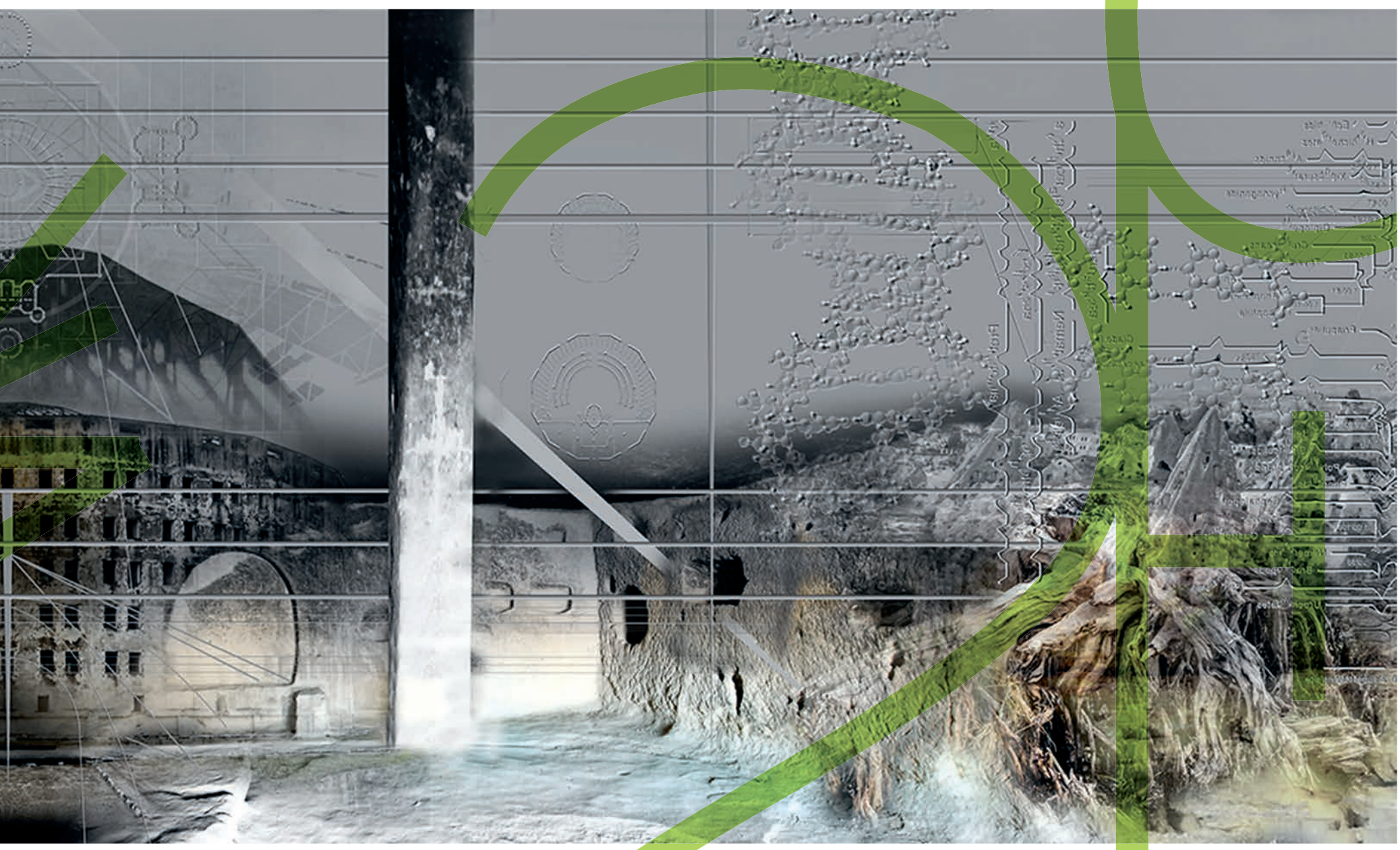
Biology becomes biocapital
The planet becomes a mine
And life mutates in the depths

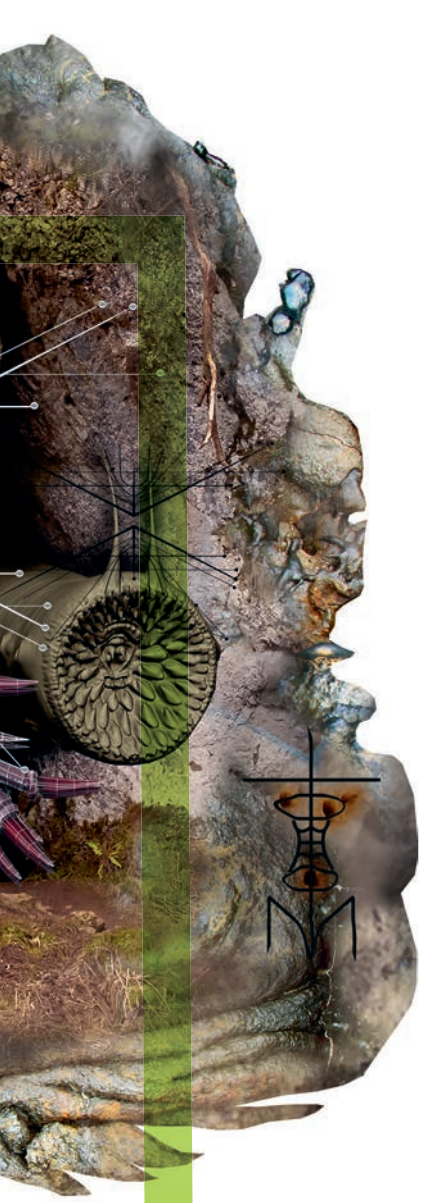
It took just thirteen years to sequence all 3.1 billion base pairs of the human genome, an achievement counted among the most significant breakthroughs in modern science. Before the social implications of this mega-project can be fully worked through, an initiative called the Earth BioGenome Project has begun to map the genetic information of every species of animal, plant, fungi and single cell organism on the planet. Led by the Peruvian entrepreneur Juan Carlos Castilla-Rubio, the Earth Bank of Codes is a sister project that assists in this task, creating an open source database for all 'eukaryotic' life — that is, anything with a nucleus — and providing the basis for a new class of biological asset. In partnership with the World Economic Forum, Castilla-Rubio aims to create a digital infrastructure that codifies the building blocks of life as intellectual property, with benefits supposedly accruing to indigenous communities now redefined as custodians of biological resources. Once encoded, patenting the genetic sequence of ancient Mexican corn varieties, or finding out what makes the venom of the Brazilian pit viper so valuable to pharmaceutical companies could be made a whole lot easier, and cheaper.[1]

Projects like the Earth Bank of Codes thrive on visibility as a key mechanism to attract speculative capital. The bigger the splash, the faster the investment frenzy. But how does the Earth Bank of Codes appear from a place in which visibility follows a different rulebook, where marine life nudges its way through a darkness so complete it gives rise to a visual universe we can barely understand? From the cocooned sphere of an underwater submersible descending through the midnight zone, it is hard not to see the ambition to sequence the genetic code of all life as doomed from the outset. Here rarely seen species such as the gulper eel, whose body quickly disintegrates when removed from the high-pressure environment of the deep sea, appear alongside creatures that haven't yet entered biologists' taxonomic schema. Castilla-Rubio has already explored the possibility of using drones to gather genetic information from such remote locations, something that has been put into practice by researchers in California through the use of autonomous underwater vehicles equipped with DNA sampling instruments.[2] Gathered in this way, it may not be long before databases are teeming with the genetic information of life-forms whose existence has yet to be verified by human eyes, their 'data doubles' surfacing in patent applications, while their fleshy counterpart remains outside the realms of direct human experience.

Whether or not the Earth Bank of Codes and the Earth BioGenome projects are successful does not diminish the influence of the logic underpinning their efforts. A prominent feature of this logic involves what Noel Castree calls 'individuation', the act of 'putting legal and material boundaries around phenomena so that they can be bought, sold and used by equally 'bounded' individuals, groups or institutions'.[3] Here the fluidity of the ocean and the complex webs of the life it sustains are reduced to discrete units of information on a database that can be bought, sold, and broken down into ever smaller parts. Intricate relations of interdependency all the way down to the molecular level are recoded as commodities in the making, as market logic enters the smallest pores and pockets of life.

In Joey Holder's exhibition *Abyssal Seeker* there is a sense in which marine life seeks protection from this logic in the oily blackness of the deep sea. The exhibition, comprised of two starkly contrasting rooms, narrates a journey away from an environment of oppressive transparency where all life is parsed as information, to another in which comfort can be found in darkness. In this second space, rarely seen species such as lamprey, frilled shark, and blue chimera skirt the fringes of an underwater brine lake, feasting on the profusion of life that surrounds this curious feature of the ocean floor. Brine lakes are a cocktail of hypersalinated water and chemical compounds such as hydrogen sulfide, which collect at the bottom of the sea due to the increased density of the water. Here the lakes





appear as both an oasis and a dead zone. Life able to profit from their chemical riches thrives at their edges, but these same properties make the waters toxic to anything that strays too far into the cloudy waters. Like the Chinese alpine flower that has been seen to change the colours of its leaves from bright green to inconspicuous greys and browns over many generations in order to avoid the gaze of commercial harvesters, Holder's marine lifeforms ensure invisibility from the extractive gaze of humans through change.[4] Above water their life is reduced to a bundle of biological resources whose value can be quantified and patented. As a way to avoid becoming more fodder for biocapital, the lifeforms in *Abyssal Seeker* migrate to the blind spots of our scopic regime, and find themselves at the edges of habitable space.

In order to make this journey into the deep Holder's creatures are forced to alter in shape, size and genetic composition, entering into accelerated co-evolutionary couplings with other species. This kind of incessant mutability is a recurrent theme in Holder's work, which she sees as the hallmark of free-range life. It is also part of what makes it so valuable to biocapital in the first place, with life continually generating new ways to synthesise chemicals that scientists can only dream of making in a lab. Genetic drift from one generation to the next, and a continual flow of DNA between populations create a perpetual churn of biological matter, and serve as one of the great sources of novelty in more-than-human ecologies. In its vital creativity, free-range life unwittingly carries out research and development activities for those seeking to profit from the patenting of new biological commodities.

And yet perhaps the creative proliferation of life is also something inherently resistant to current forms of capture. In the same way that a seed bank can only ever create a record of crop diversity at a certain moment in time, soon outpaced by the onward march of feral varieties in the wild, the ambition to sequence all eukaryotic life is a project that doesn't take account of temporality. It operates in what Rodney Harrison calls the 'frozen, arrested time'[5] of the archive, which is populated with proxies for real living things that make their own history. *Abyssal Seeker* implies that life can escape the nets and snares of biocapital if only it uses time to its advantage, by accelerating processes of genetic mutation already underway. Seek refuge in mutation, the creatures of the brine lake seem to say. Sensing the world through its DNA sampling device, the underwater drone can only interpret their message as noise.

1 Martha Pskowski, 'Indigenous Maize: Who Owns the Rights to Mexico's "Wonder" Plant' *Yale Environment 360*, July 16, 2019. https://e360.yale.edu/features/indigenous-maize-who-owns-the-rights-to-mexicos-wonder-plant; Tarek Mohamed Abd El-Aziz, Antonio Garcia Soares, and James D. Stockand. "Snake Venoms in Drug Discovery: Valuable Therapeutic Tools for Life Saving." Toxins. 11: 564 (2019)

2 Kevan M Yamahara, Christina M Preston, James Birch, Kristine Walz, Roman Marin, Scott Jensen, Douglas Pargett, et al. "In Situ Autonomous Acquisition and Preservation of Marine Environmental DNA Using an Autonomous Underwater Vehicle." *Frontiers in Marine Science* 6: 373 (2019)

3 Noel Castree, "Commodifying What Nature?" *Progress in Human Geography*, 27:3 (2003), 273–297, p. 280.

4 Yang Niu, Martin Stevens, and Hang Sun, "Commercial Harvesting Has Driven the Evolution of Camouflage in an Alpine Plant." *Current Biology* 31:2 (2021), 446–449.e4.

5 Rodney Harrison, "Freezing Seeds and Making Futures: Endangerment, Hope, Security, and Time in Agrobiodiversity Conservation Practices." *Culture, Agriculture, Food and Environment* 39:2 (2007), 80–89, p. 86

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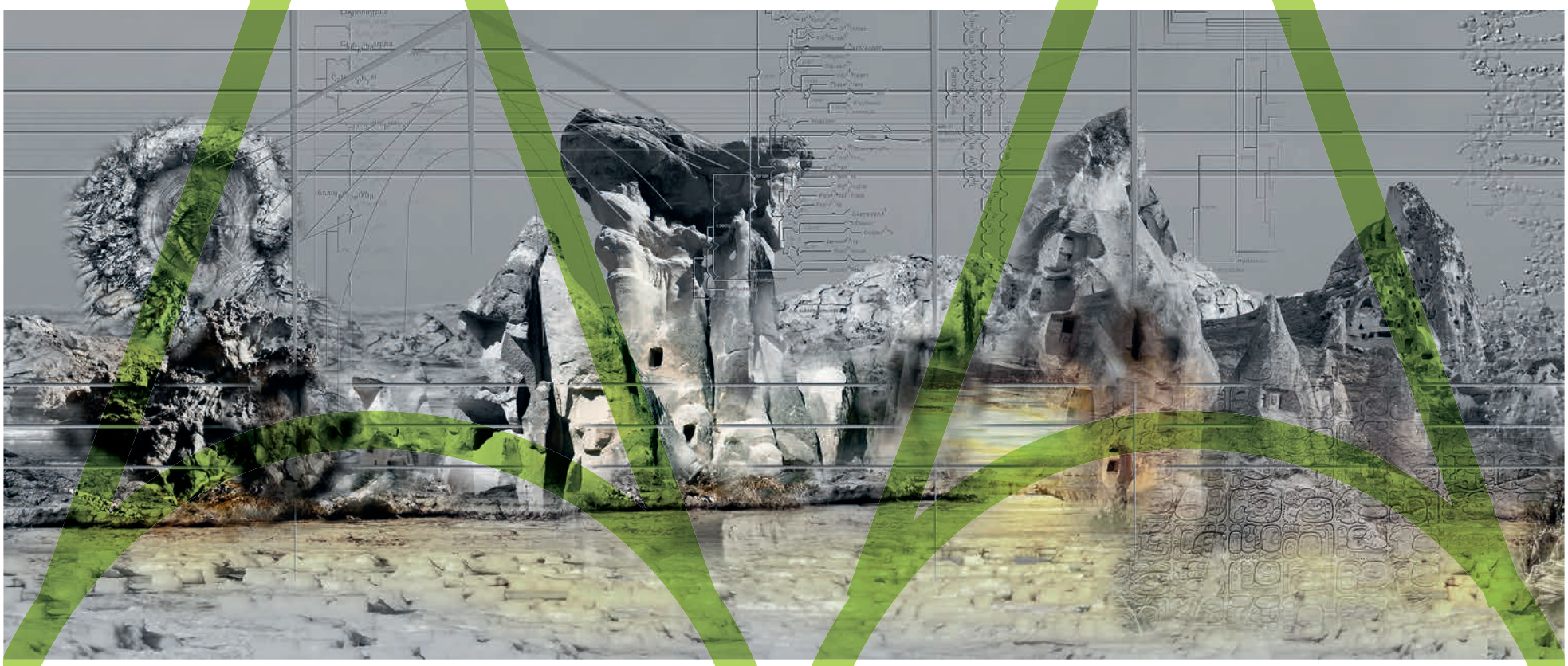

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