

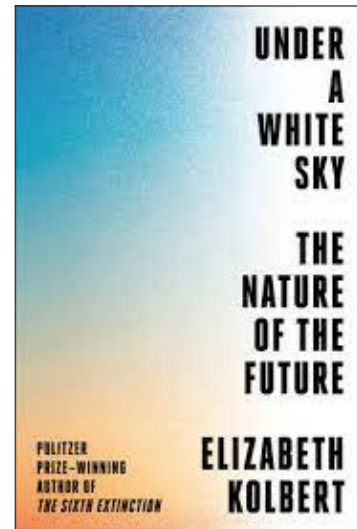
Under a White Sky by Elizabeth Kolbert,
Crown, New York, 2021. \$28.00.

Review by Ed Meek

Channel 10 Boston recently did a story on “managed retreat from the coast” based on the notion that a quarter million people living in eastern Massachusetts are at risk from rising water as a result of climate change. You might remember a “Massive Nor’easter” two years ago that flooded the streets of Boston. Maybe that’s why Elizabeth Kolbert lives in Williamstown. Kolbert is the author of *The Sixth Extinction*, a must read for our current era. In that book she informs us that there have been five previous mass extinctions on earth and that it appears as if we are at the beginning of the sixth extinction. The difference with this one is that we are in what scientists call the Anthropocene period in which we are in charge. Yes, we are number one on the planet. The problem is we have been too successful! We are threatening the extinction of many species, some of whom we depend on for our survival like say, bees. At the same time, due to developments in agriculture and healthcare, nearly 8 billion of us now cover the surface of the earth. Fossil fuels have enabled us to thrive. Meanwhile, we have altered our atmosphere, raising the average temperature by two degrees Fahrenheit which doesn’t seem like much until you consider all those wildfires in California and Australia, and the droughts and floods in the Mid-West and the flooding in New Orleans and Atlantic City and New York and Boston while glaciers retreat and ice melts at the poles and in the mountains.

Ants are what is called a superorganism. Each ant knows its role and they all work together in the colony. Humans, on the other hand, do not always work well together. We are tribal. That is just one of the many reasons dealing with climate change is difficult. Nonetheless, there is a growing awareness of the problems we have created and attempts to begin to deal with them. Elizabeth Kolbert explores some of those attempts in her new book *Under a White Sky: The Nature of the Future*. The white sky in the title refers to what happens when we use chemicals and particles to dim the sun in order to cool the earth. Nature and the natural world have already been permanently altered. There is no returning to nature. Instead, we now have to intervene in order to save ourselves and whatever remains of nature.

Kolbert starts out on the Chicago Sanitary and Ship Canal which was created in the early 1900s to prevent sewage from the Chicago River draining into Lake Michigan which provides drinking water for Chicago and is a fishing resource. The canal diverts the water to the Mississippi. The Chicago River is toxic and heavily traveled. But in this water, weeds and algae get in the way of the boats so in the 1970s, Asian Carp were introduced because they consume weeds and algae. The problem is that the carp have been so successful that not only have they taken over the river, they’ve in-



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vaded both Lake Michigan and the Mississippi. In response, the river has been electrified by the Army Corps of Engineers in order to kill the carp.

Kolbert then heads down to Plaquemines at the southern end of the Mississippi, one of the “fastest disappearing places on earth. In southeastern Louisiana there’s a “land-loss crisis.” The Army Corps of Engineers have created canals, a spillway, and levees in order to control the flooding. This area, Plaquemines, “was devastated by Katrina and then by Hurricane Rita. New Orleans of course was nearly destroyed by Hurricane Katrina which killed 1800 residents and turned the city into a lake. Although New Orleans was high ground when it was founded in 1718, it has been sinking like Venice since.

Kolbert goes from there to the Mojave Desert where a rare species of fine beautiful pupfish has so far been saved from extinction and then she’s on to Australia and the Great Barrier Reef where coral stretches for 135 miles and contains as much as 20% of the species on earth. “If there’s a more spectacular place on earth,” she says, “I’m unaware of it.” The outlook for the Great Barrier Reef as determined by the Park’s administrators has recently declined from “poor” to “very poor.” Nonetheless, scientists are working on a type of coral that is resistant to climate change. Meanwhile, Australia has made a deal with an Indian developer for a 16-billion-dollar coal mine project.

There are two major responses to our climate problem that Kolbert delves into: bioengineering and geoengineering. The former includes CRISPR and addresses “the nature of the future,” the latter refers to “the white sky” that comes from giant projects that remove carbon or dim the sun. What could go wrong? CRISPR as you’ve no doubt heard, gives scientists the ability to manipulate genes. This could be put to good use eliminating diseases. Perhaps we could use it to develop bodies that are better at processing heat. On the other hand, bullet-resistant soldiers could be created by the Chinese. Geoengineering involves either removing carbon from the atmosphere or blocking the sun by doing things like spraying aerosol from a plane or launching reflective particles into the sky.

Under a White Sky starts with the premise that we have already altered the world we live in—there is no going back. Now we are trying to correct some of the mistakes we’ve made and to come up with new ways to engineer our way out of this crisis of our own making. The consensus among her subjects is that we will have to completely change our lifestyle to achieve zero net energy and we will have to employ science to ensure the planet remains user friendly.

As Bob Dylan says, “The hour is growing late.” Fortunately, there’s plenty of time to read Elizabeth Kolbert’s great new book.