

# global warming and WILDFIRE

**An activist guide to understanding our human  
relationship with wildland fire and  
global climate change**



**Firefighters United for Safety, Ethics and Ecology**  
*TORCHBEARERS FOR ECOLOGICAL FIRE MANAGEMENT*

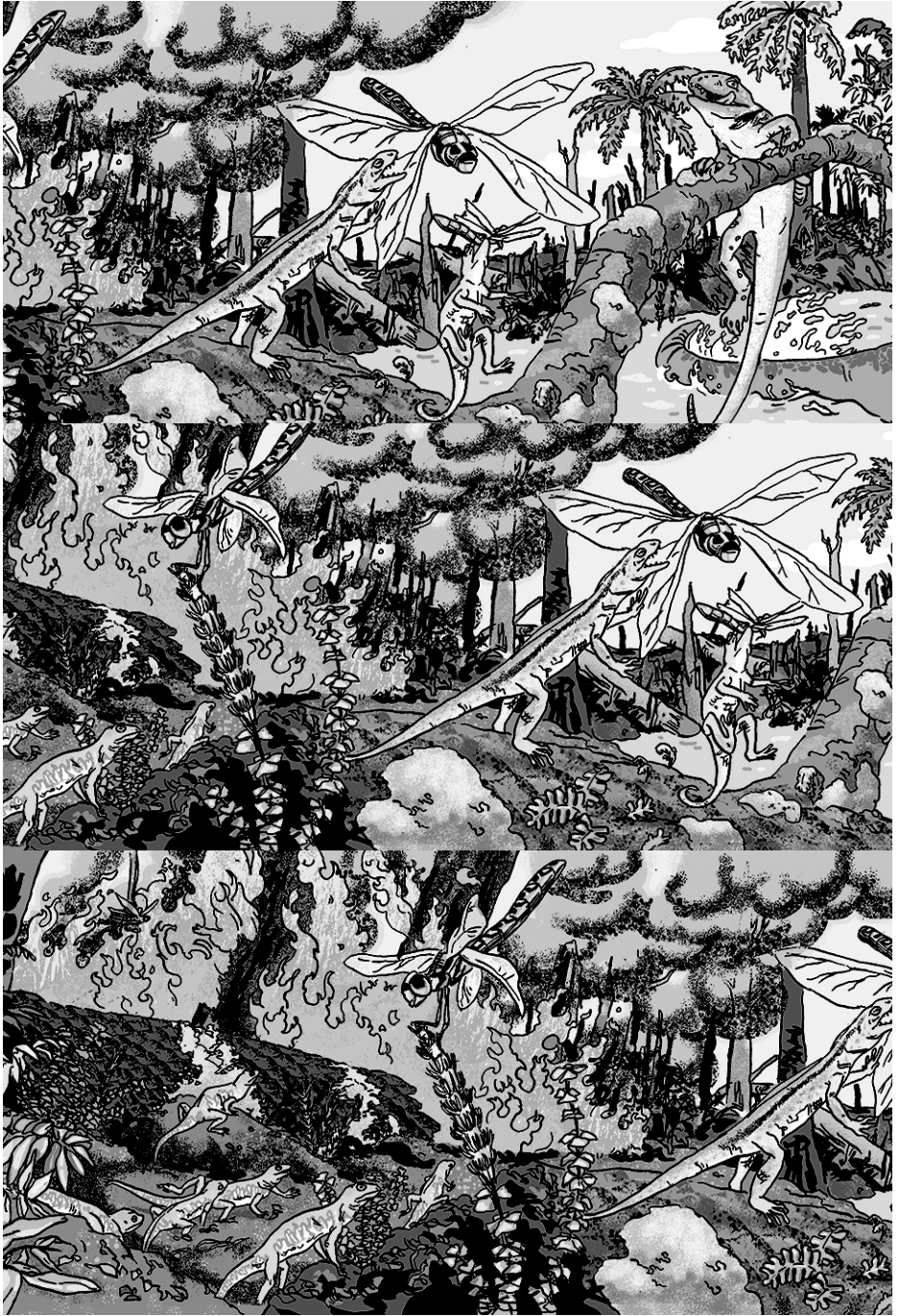
# Fire and Earth History

## **Fire Evolves from Life**

The dominant image of wildfire in the western world is that it is an agent of death and destruction, but looking at the whole of its existence, fire is one of the planet's most essential life forces. Although Earth is over 4 billion years old, it was devoid of flames until 400 million years ago when algae growing in the primordial seas first produced oxygen for the atmosphere, and then land plants emerged and provided burnable biomass for that first momentous lightning bolt that sparked terrestrial flames. Fire thus evolved out of life, and over the ages has played a vital role in the evolution of plant, animal, and human life. Modern scientists are rediscovering what the ancients intuitively understood: fire is one of the four foundational elements of life in the cosmos.

## **Life Evolves with Fire**

Nature's innate intelligence is exhibited in the fire cycle and its ability to turn seemingly dead matter into living beings. Fire is the planet's natural recycler, converting downed woody debris and other biomass into fertile soil nutrients for new plant growth. Many plants and animals evolved with special adaptations to survive most fires, and some even require flames or fire-created habitats for their regeneration or reproduction. Far from being lifeless "moonscapes" as they are commonly portrayed by the newsmedia, burned natural areas are birth zones that are hotspots of biological activity and diversity. Indeed, pyrodiversity begets biodiversity for many grass, shrub, and forest ecosystems. Life on land as we know it would not exist without the ecological stimulus and dynamic evolutionary influence of fire.



Artwork by Estrella Vega

# Fire and Human History

## **Humans Began as Fire Foragers**

While countless species owe their evolutionary existence to fire, only one species developed the capacity to steer, stop, and start flames: homo sapiens. The earliest hominids were fire foragers, gathering and hunting food in the ashes or regrowth of wildfires. The use of fire to cook food greatly expanded their diets, making digestible what was formerly too toxic or tough to eat. This led to physiological changes in our ancestors, shrinking their giant jaw muscles but expanding their brain sizes and lengthening their lifespans. The use of fire to sculpt habitats that were otherwise too densely-vegetated, too wet, or too cold for humans also facilitated their great migration out of Mother Africa across the rest of the planet.

## **Fire is Socioecological**

The domestic and landscape uses of fire was a socializing and civilizing force that nurtured homo sapiens into human beings. In order to provide food and shelter for people, people needed to shelter and feed flames, a “vital reciprocity” (Theodore Roszak) that helped forge social bonds. Gathering around fire circles formed a daily/nightly hub of social interaction that formed primal cultures and communities. The use of fire by gathering-and-hunting bands developed the knowledge needed by horticultural and pastoral communities that later evolved into agricultural societies where fire was an essential tool for farming and herding. Nearly every indigenous culture on Earth used fire intentionally and prolifically to enhance the bounty of their harvesting and hunting activities, and did so in ways that nurtured habitats for innumerable other species.

Across the continents of North America, Africa, and Australia, indigenous peoples' burning practices were a co-creative activity that stimulated Nature's fertility and fecundity, allowing a wide diversity of species to flourish. The unique human ability to use fire may, in fact, be our species most important ecological function or planetary purpose as a "fire steward" enhancing the richness and abundance of natural life.

## **The Modern War on Wildfire**

People living in modern urban-industrial societies suffer from a deep cultural amnesia about our species unique relationship with fire and its role in developing human cultures and civilizations. Fire of some source is required for the manufacturing of most everyday materials in modern society — concrete, steel, plastic, wood — but while the products of fire are everywhere, flames are largely invisible. We have confined combustion into iron boxes, transported its energy along metal wires, and largely eradicated flames from the urban environment. Now, for over a hundred years western urban-industrial societies have also been attempting to eradicate fire from the natural environment, aggressively waging "war" against fires in forested wildlands with modern technology.

The proliferation of wildfire suppression—at first, a misguided but well-meaning attempt to conserve forest resources, but now a government institution and lucrative industry with vested political and economic interests in perpetuating a war on wildfire — stands in stark contrast with our legacy of co-existence and collaboration with fire on the land. We must overcome the socially-conditioned fear and framing of wildfire as an "enemy" to "fight," and instead remember and restore our social and ecological connections with fire in our communities and on the land.



# Fire and Spirituality

## Fire Worship

Given the many beneficial uses, effects, and products of fire that were vital to human social life, it was entirely natural for fire to become a fundamental if not foundational element of early religious ceremonies celebrating life-forces. Indeed, fire worship may have been the original religion, for life-sustaining fires provided early peoples with both the physical space and a psychic source for developing rituals, ceremonies, and religions celebrating spirituality.

## Fire and Sacred Ceremonies

Beyond the primal worship of fire, the use of fire for various sacred rituals and ceremonies is almost a universal religious practice. These diverse ceremonial uses of fire include sacred **altar fires** where the Divine was worshiped, **perpetual fires** that marked remembrance and faith in the eternal, **new fires** that blessed the renewal and regeneration of life, and **sacrificial fires** that symbolized devotion. Nearly every religion on Earth — ancient or contemporary, great or small — includes one or more variations of these symbolic uses of fire for ritual and worship.

## Fire is Transcendental

Although in every instant the flames of any given fire are a unique expression of spontaneous combustion, at the same time, the flames offer a universal, transcendent form that makes fire an enduring source of religious inspiration and meaning throughout the ages. The transformative power of fire to convert matter into energy has mystical qualities that help people merge with the metaphysical, and tune in to the spiritual. Fire is more than a land management “tool,” more than a manufacturing “power source,” it is a dynamic life force of Nature that should be respected, if not revered, for all the blessings it provides people and the planet. It could very well become the focalizing force for a resurrection of natural religion and renewal of Earth-based spirituality that will be needed to guide humanity through the great social and ecological changes ahead.



*Ancient Zoroastrian fire temple of Baku*

# Fire and Climate Change

## Fire as the Specter of Global Warming

The renowned fire historian, Stephen Pyne, notes that "Combustion is no longer flowing from living sources to living sinks, as when forests are burned; instead, the source of combustion comes from the geologic past, and the sinks for its effluents are affecting the future of the Earth." Perhaps never before in Earth's history has there been so much combustion, but never before in human history has there been so little open flame. The result is that the chemistry of the planet's oceans and atmosphere is radically changing in ways that put at risk our civilization and species' existence along with most of the rest of life on Earth. Mother Earth is burning from a fever humans have generated, and that humans can cure.

Global warming is affecting wildfires, too, by creating weather and vegetative conditions that are conducive to large-scale, long-duration wildfires. Hotter, drier weather, high winds, and prolonged droughts make fires ignite easier, spread faster, and burn more intensely; consequently, wildfire activity is dramatically increasing in many forests, shrublands, and grasslands across the world. In places where people have built homes in naturally fire-prone places, fire behavior in our altered climate is overwhelming firefighters' always-tenuous ability to contain and control wildfire spread, causing a rising toll of death and destruction of people and property. People who felt that melting glaciers, shrinking ice-caps, rising sea levels, or extreme storms were too remote or too random to generate much concern about climate change, now fear wildfires burning in their backyards and attribute this new danger to climate change. Indeed, wildfire has become the dominant specter of global warming to most people.



## **Fossil Fuel Burning is the Real Danger**

The past century's efforts to demonize wildfires as purely deadly, destructive forces, and instill fear and hatred of fires in forests is now greatly amplified by the added terrors of global warming. In countries like the U.S., timber corporations and forestry agencies are opportunistically stoking people's socially-conditioned fear of forest fires to peddle grandiose projects to expand logging and firefighting as purported "solutions" to global warming's wildfires. But landscape-scale proposals to log trees as "fuels reduction," or burn trees as a "renewable biofuels energy source," or ramp up more mechanized firefighting to attack all fires, are nothing more than geo-engineering schemes serving the profit and power ambitions of a few at the great expense of people and the planet. These schemes will fail to prevent or put out wildfires, and will radically alter fire-adapted ecosystems causing further decline of fire-dependent species and habitats. By further looting wild forests — the planet's natural bank vault for sequestering and storing carbon — these schemes will only accelerate global warming.

## **Urban Fires Are Not the Same as Wildland Fires in Natural Areas**

Climate activists are wise to use urban wildfire disasters to raise awareness and mobilize action to address global warming, but it is essential that activists separate the effects of wildfires on homes and communities from their effects in forested wildlands. While fires burning homes and urban areas are undeniably destructive and must be avoided, scientific research is revealing that in North America large fires in remote wildlands have been restoring species diversity and ecosystem integrity which have suffered from decades of fire suppression and fire exclusion. This distinction between urban versus wildland fires is critical if climate activists are to avoid falling into the trap of permitting irresponsible logging and firefighting in forested wildlands as alleged "solutions" for combating climate change. People must not succumb to anti-fire "*pyroganda*" that portrays all wildfires as cataclysmic disasters that instills fear and panic.

# Rekindling Wild Minds

## End the War on Wildfire!

The suppression of fire on the landscape begins with the repression of fire in our mindscape. A century of state-sponsored propaganda to vilify all forest fires has prevailed over our species-nature as a creature of fire, and convinced most people that it is entirely normal, natural, even instinctual for people to fear and fight all forest fires. We have now instilled in modern culture an antagonistic relationship with fire, and institutionalized a de facto state of war on wildfire that is, in essence, *a war on Nature*. This endless and escalating war has dire social, economic, environmental, and spiritual costs that are simply not sustainable. It is time to declare peace with the planet including her life-renewing process of fire.

Fire is an agent of change, and just like meditating on rivers can offer us lessons about the eternal flow, wildfires can offer us lessons about the great transformation: death into life, matter into energy and spirit, past into present and future. The planet is undergoing dramatic changes from global warming, and wildfires are simultaneously a symptom and source of great changes unfolding on the land. Counter-intuitively, the more often that fires burn forests, the more stable and resilient to change they become. Frequent, low-intensity fires protect the big banks of carbon stored in large trees and soil from severely burning, while recycling into soil nutrients the short-term carbon stocks of understory plants and downed woody debris. Over the long-term, more carbon is sequestered and stored in forests with the use of fire than without it--and excluding all wildfires is neither possible nor ecologically sustainable. In short, forests play a vital role in sequestering atmospheric carbon, and fire plays a vital role in sustaining forests.

# Fire and Consciousness Change

## Awaken to Wildland Fires with Wild Minds

As part and parcel of the Great Green Transition which will replace fossil-fueled urban-industrial civilization with a new culture embedded in Nature's cycles and flows of energy, we must cultivate our "wild minds" (Gary Snyder) to awaken from our cultural amnesia and reclaim our legacy for the Earth as Fire Stewards. Working *with* Nature's fire instead of fighting against it, and restoring the ancient wisdom of ecological fire management, will help nurture eco-consciousness on a changing planet. We should *meditate* on the mesmerizing flames of transformation, *educate* ourselves and others about fire ecology and the cycle of life that fire stimulates, and *agitate* for the end of burning fossil fuels, logging wild forests, and warring on wildfires in wild lands. By taking up the torch to help guide the Earth's *Greenfire* we will rekindle memories of forgotten fires and reunite human society with our vital purpose and place in Nature.



## **ABOUT FIREFIGHTERS UNITED FOR SAFETY, ETHICS, and ECOLOGY (FUSEE):**

FUSEE (pronounced FEW-zee) is a U.S. based not-for-profit organization founded in 2004 that conducts public education and policy advocacy to promote safe, ethical, ecological fire management. FUSEE members include current and former wildland firefighters, fire managers and scientists, fire educators and students, forest conservationists, rural homeowners and other interested citizens who share our vision.

Inspired by the great Aldo Leopold's "Land Ethic," FUSEE promotes a new Fire Ethic in fire management policies and practices:

"A thing is right when it contributes to the safety of firefighters and the public, ethical public service and use of taxpayer dollars, environmental protection of fire-affected landscapes, and ecological restoration of fire-dependent ecosystems. It is wrong when it tends otherwise."

FUSEE informs and empowers firefighters and their citizen supporters to become torchbearers for Ecological Fire Management.

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*Support FUSEE and Carry the Torch for Ecological Fire Management!*



EDUCATE

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