



# The Forgotten History of Fire and the Tribal Wisdom That Changed the World

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Our human ancestors were using stone tools well before *Homo sapiens* evolved three hundred thousand or more years ago. Tools have been discovered dating back three million years, no less than ten times older than our species. Considering that some birds and fish use -and even fashion- tools (watch crows making hooks), and that any implements made of wood or other organic material will not show in early fossil records, it would be astonishing if our hominid ancestors weren't using them well before the earliest stone ones we've so far found.

The most important tool of all was fire. Like much in archaeology nowadays, where microscopic analysis is changing earlier guesswork, the first known date for cooking is being pushed ever further into our deepest past. It is hotly debated issue, but some now put it at around a million years ago. Again, that is long before our species evolved - though of course some of those earlier, now extinct, hominid species are our direct ancestors.

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Many scientists believe that our very evolution could never have happened without cooking. It massively enhanced our calorie and nutrient intake, so enabling our teeth and guts to grow smaller and our brains, which need huge amounts of energy, to grow bigger. Brain size is a tradeoff between enabling women to walk upright (a wider pelvis needed to have even bigger-headed babies would make that impossible), and the inordinately large number of years we have to care for our helpless young, longer than any other species. That both engendered and depended on our enormous capacity for social cohesion, empathy and self-sacrifice. In brief, we made fire and cooked our food and that turned us into people, generally more virtuous than vicious -in spite of our striking inhumanities, and the religious dogmatists and “evolutionary psychologists” preaching otherwise.

In the ancient Greek myth, Prometheus creates men but can't endow them with any real strengths - all those have already been given to the animals - so he hands them fire, stolen from the gods, so they can thrive. It sounds about right.

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This all started happening hundreds of thousands of years ago. Fire, manipulated by our ancestors, changed the world, and cooking was just one part: Regular undergrowth burning had the other big impact. It's enormously beneficial: It prevents scorching wildfire conflagrations (look at California or Australia today), and also massively increases biodiversity, however counter-intuitive that may sound to urbanites. It enriches the soil, encourages fresh plant growth, enables wind-blown seeds to germinate in the nutrient-rich ash rather than wither in the undergrowth, and so favors some species over others. All this attracts herbivores, which are followed by predators.

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Several key principles have been noted for Aboriginal burning. Neighbors were always forewarned and agricultural lands were fired in rotation at specific times of year when the bush was in the right state and the weather favorable. This limited the fire's intensity, allowed animals to move out of the way, avoided particular growing seasons, and stimulated particular seeds to germinate under the resulting hot ash.

Needless to say, the British banned the practice in many parts of its empire, teaching that undergrowth firing was a destructive and primitive local custom. Some scientists remain schooled in such colonialist prejudice today. The ban on undergrowth burning is still in force in much of India and continues damaging the environment. The Soliga people in India, for example, say that the recent massive rise in forest fires in Karnataka would not have happened if they had been advising on forest management and allowed to continue their traditional burning.

People deliberately start fires in many environments and have done so for a very long time. For example, there is evidence that it's gone on in Southeast Asia for at least forty-five thousand years.

Today, the Xavante in Brazil take careful note of wind and rain before setting their ceremonial fires to assist hunting. The fires remain low and not overly hot because they are lit so regularly that undergrowth is not allowed to grow up year after year. Fire-resistant plants can easily regenerate, and animals have plenty of time to move away. Fire can obviously be destructive, but that includes

getting rid of species no one wants, such as deadly disease-bearing insects like the tsetse fly in Africa and the *Loranthus* tree-killing parasite in India. It also brings new plants and animals in its wake.

Regular burning is key in the various “slash-and-burn” methods of farming tropical forests. It is also called “swidden,” but journalists unfortunately favor the more dramatic name, which has become pejorative. Whatever one calls it, the practice is still widely denigrated and even criminalized by some conservationists, who could not be more wrong. Other scientists, sticking to the evidence, now see it as, “an integral part of many, if not most, tropical forest landscapes that are crucial to biodiversity conservation in all the remaining large tropical forests: Amazonia, Borneo, Central Africa.” The Hanunoo people in the Philippines grow over 280 types of food with swidden, and an even greater variety can be found elsewhere.

If undergrowth burning led to cooking, which seems logical, then it dates back over a million years. Considering that some birds not only make tools, but also actually manipulate bushfires by dropping burning twigs to help their hunting – something Australian Aboriginal people have long known – then it’s likely that our ancestors were changing the world with fire more than a million years ago. Science is unlikely ever to be precise about the timing, but that doesn’t alter the fact that the ancient world has long been shaped by women and men.

Human-made clearings, whether opened up with fire, axe, or both, modified the local fauna by changing animals’ food and distribution. There’s evidence from the Biligiri Rangaswamy Temple reserve in India that tiger numbers increase in areas where tribal people still live –if, that is, they’re not threatened with eviction and so retain an incentive to maintain their environment. When the people move their fields to leave some dormant, they also abandon the ponds they made for drinking water. The clearings, remnant crops and water attract boar, deer, and other creatures. The big cats then thrive on the easy hunting found in the open spaces. When tribes are evicted “for tiger conservation” the authorities know they have to keep similar clearings open. As a Baiga man told Survival International, “If you remove us, the tiger will disappear as well.”

An increase in tiger numbers clearly impacts the cats’ prey. Deer are less plentiful, but they are healthier than they would be were they never hunted: Sick animals soon become tigers’ lunch. The smaller deer population in turn brings more tree growth which encourages different insect and bird life, and so on and on. It is all a shifting, interconnected balance that has included human beings as a key environmental shaper for many thousands of years.

When scientists asked them about beluga whale loss in the Arctic, the Inuit explained that warmer temperatures had brought an increase in the beaver population. The beavers took more of the fish, which the whales depended on, and so whale numbers had diminished. It simply hadn’t occurred to the whale experts to include beavers in their research, but the Inuit had observed and interpreted these connections as and when they were developing.

Western science has only begun to describe the depth and complexity of such associations over recent centuries, but other “non-scientific” ways of looking at our surroundings have been articulating it for a very long time.

Among the best known is the Australian Aboriginal Dreamtime in which every geographical feature, every river, rock, plant, animal, even celestial bodies, and of course all the different tribes of humans, are descended from ancestors who emerged from the earth, and travelled around it in a series of adventures which are remembered and reenacted – and actively “re-created” through such reenactment– today. They capture an essential view of the world and our place in it which science seems to have largely bypassed in making its own invaluable discoveries.

Everything really is connected but, needless to say, the Dreamtime version was derided as primitive superstition by the European invaders who brought very different priorities from the British Isles. As well as massacring the native people, they infamously imported rabbits to shoot for sport. The creature immediately spread faster than any other mammal monitored anywhere and is now thought to have caused more species and habitat loss than anything else throughout the continent.

In brief, humans have been an integral part of the jigsaw of the planet's ecosystem for thousands, even millions, of years. It is true we did eliminate some species, including the huge and dangerous auroch, bred by our ancestors into docile domestic cattle. However, prior to industrialization, it seems to be the case that we enhanced biodiversity rather than reduced it, at least in many places. Moreover, humans are much more than just a small player in the constantly shifting picture of life on Earth. Together with atmospheric change, we have been one of the controlling hands of nature for a very long time, including - and this is a vital point - when our population was far smaller than it is today. Whether it fits in with one's beliefs or not, humans have always been changing the environment, for better or for worse.

The worse part is obvious, and is not confined to rabbits destroying Australian biodiversity. Massive urbanization and industrialization have made life easier for some over recent centuries, but have also created rampant environmental degradation, with escalating -in some cases permanent - damage to the health of significant flora and fauna, including humans. There is no shortage of warnings, studies, and prophets sounding that alarm. We can only pray it starts being properly heeded.

But what of the other side, how have people since antiquity made the world "better?" I've described the increased biodiversity, and that tigers seem to prefer it when they are around tribal people; it turns out that forest elephants do too. Baka "Pygmies" in the Congo Basin, for example, are characterized as "hunter-gatherers" but they also spread food plants around the forest, which attract animals. That is not just good for elephants: abandoned camps, fertilized with ash and waste, make good habitat for primates. In the [Salonga National Park](#) researchers think there may be up to five times more bonobo where the Iyaelima tribe live than where they don't. The people were unusually allowed to remain inside the park because they too were classified as "wildlife"!

Reverence for elephants is widespread in Africa. The Baka, for example, think they have an intimate spiritual connection with the animals - which includes sustainably hunting them for food and ritual. This can seem anathema to those urban Europeans and North Americans for whom wild animals (big ones at least), are anthropomorphized and considered nicer than us, untrammelled by our supposedly unique sin and guilt.

If anyone doubts the level of misanthropy to which such "Disneyfication" of nature can sink, they might read the comments accompanying internet stories about poaching. Extremist animal rights advocates repeatedly put animal life far above that of their fellow humans, particularly when the victims are African or Asian.

Unfortunately, this often goes unchallenged by those moderates who also value people. Extrajudicial killing, so-called "shoot on sight" is routinely applauded, even if some of the wounded and dead "poachers" include children, and were never criminals but simply poor people looking for food or even firewood or medicinal plants on what was once their land. Those accepting this as mere "collateral damage" in a righteous war against poaching are rejecting human rights, often gleefully.

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