Dracaena draco: The Mystery of Dragon's Blood

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A Desensitizing Sensory Experience

As the tongue goes numb and all efforts fail to remove the scarlet, sticky substance that binds to one's teeth like quick-setting epoxy, one starts to panic and wonder if the dragon's blood just ingested is truly as noxious as its name suggests. Though the epithet "dragon's blood" elicits images of medieval myths and fantastical notions of fire-breathing lizards soaring high in the sky, this "blood" is in fact the resin of a very real tree. Dragon trees grow for 10 to 15 years with a single stem before producing flowers, after which branches start growing from the buds. Branches slowly grow new branches, which ultimately give the trees their characteristic, umbrella-style crowns. Dragon trees have captured the imaginations of great minds across the ages, from Pliny the Elder (23/24–79 CE) to Alexander von Humboldt (1769–1859). Unlike Pliny, however, who was the lone scholar of his age enthralled by the epic allure of the dragon tree, Enlightenment-era European naturalists, like Humboldt and André Pierre Ledru (1761–1825) focused on one species, *Dracaena draco* (L.) L., and both flocked to its native Canary Islands to study it around the turn of the nineteenth century. Soon after their initial encounters with dragon's blood, they all may have realized that this strange sap occupied a liminal space between myth, legend, and scientific botany.

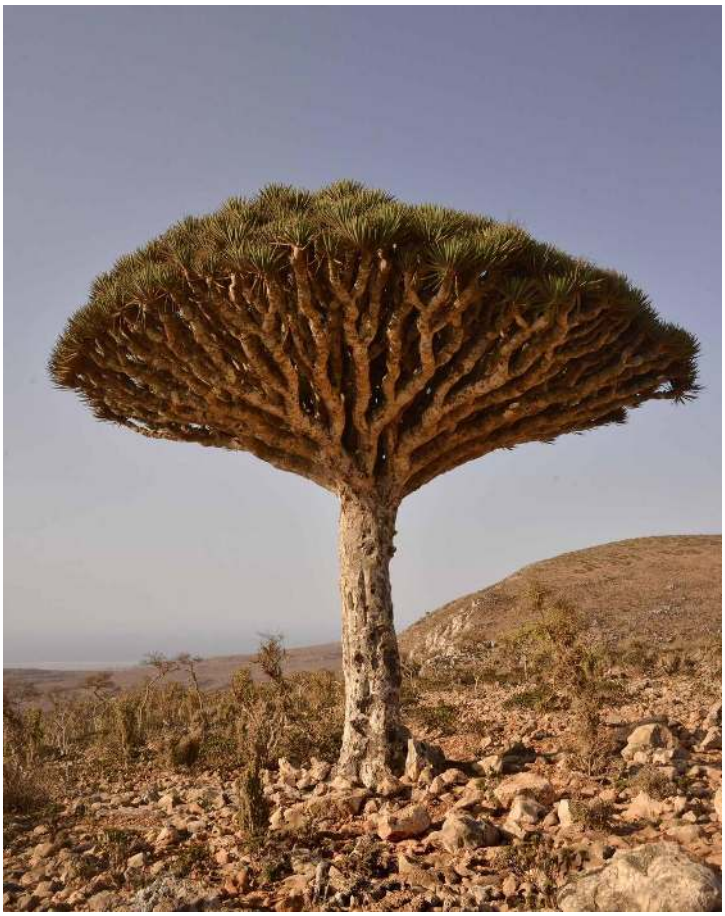
D. draco

Sanguine Myths and Elemental Reality

Vedic Tale of the Elephant and the Dragon. Giraldu...

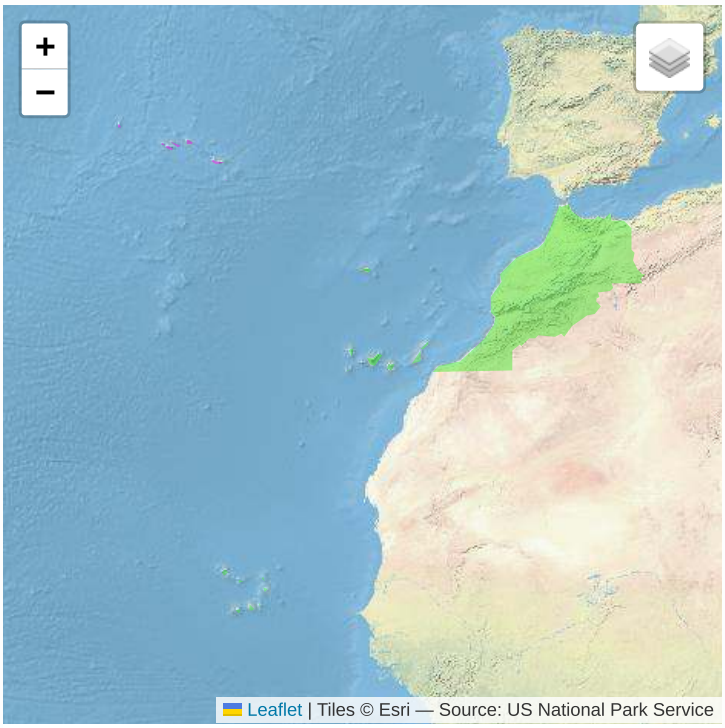
Members of today's *Dracaena* genus have long been valued for their signature red resin, the so-called dragon's blood, that oozes from cuts in the tree's bark. There are many species of tree that exude their own forms of dragon's blood, which include the other 120 members of the *Dracaena* genus, in addition to several others. While these other trees certainly exude a resin identified as dragon's blood, a level of botanical and geographical ambiguity that contributes to the mythical status of the substance, *D. draco* and *D. cinnabari* are the two species that are most commonly referred to as the source of the resin in historical sources. The first-known reports of dragon's blood were dispersed through Pliny's *Naturalis Historia*, where he recounted the Indian tale of a dragon (representing Brahma) biting a giant elephant (representing Shiva), and their blood mixing into the iconic resin. While this Vedic myth actually originates from Yemen's Socotra island, and is based on the resin of *Dracaena cinnabari*, the fascination with dragon's blood also took a foothold in Europe through the infamous tale of Hercules.[1]

As the eleventh labor of his famous twelve, Hercules was sent to steal the golden apples of the Hesperides, the three nymphs of evening and sunset, who were located on the western fringe of the known world. The apples were guarded by Ladon, a vicious dragon with 100 heads. Once slain by Hercules, Ladon's blood seeped into the ground and "from it sprung up the trees that we now know as 'dragon trees,'" and his body was sent to live among the stars.[2] As dragon's blood became one of the most coveted commodities in ancient Greece, so too did it serve as a lasting link between myth and reality, as Greeks from Athens to Thebes believed that "the source of 'Dragon's Blood' [… is] the red blood of the dragon Ladon after it was killed by Hercules."[3]



Dragon's Blood Tree, Socotra Island, Yemen, 2013.

European understandings of the dragon tree evolved as scientific botany developed from the late medieval through the early modern periods, and the myths and legends of antiquity surrounding the tree became artifacts of the past. Native to the Canary Islands, Cape Verde, and Madeira—and recently found growing natively on the west coast of Morocco—*D. draco* is somewhat ubiquitous along the northwestern coast of Africa. Evidently, the tree and its resin were an important feature of the economy and magico-medicine of the Canary Islands even before colonial contact. Thus, when French explorer Jean de Béthencourt became the first European to write of *D. draco* in 1402, he recounted an elaborate trade of fishing hooks, knives, and iron in exchange for figs and dragon's blood between his crew and 500 Guanches, the indigenous population of the Canary Islands.[4]



Distribution range of *Dracaena draco*.

The Guanches used dragon's blood for a variety of purposes, ranging from embalming their dead and making dyes and varnishes, to using it as a toothpaste.[5] Believing that, when dragons died they transformed into the divine trees, Guanches would regularly meet under the canopy of the giant dragon tree in the village of Orotava, to enact laws and perform judicial duties, as well as base meteorological predictions on the tree's bloom.[6] The tree remained a mythic indicator of a foreign land that was both exotically enticing yet materially valuable, as shown, for instance, in Martin Schongauer's engraving *The Flight to Egypt* (c. 1470). Dragon's blood was immensely valuable: Béthencourt noted that the resin was "well worth two hundred ducats, while what was given in exchange was hardly worth two francs."[7] In fact, dragon's blood soon became a European toothpaste, likely indicating a cultural transference of ethnobotanical knowledge between the Guanches and their European neighbors.

The Flight into Egypt, first known etching of the...

From Herbals to Enlightenment Science

After decades of violent attacks against the Guanches, Spanish conquistadors vanquished the last of the Canary Islands in 1496. The Guanche language soon disappeared, with the exception of their distinct whistling language, known as Silbo Gomero. Due to the traditional Western preference for written records rather than oral histories, much of what we now know of pre-Columbian culture on the Canaries comes from European colonial interlocutors.

Sylbo, The Last Speakers of the Lost Whistling Language |...

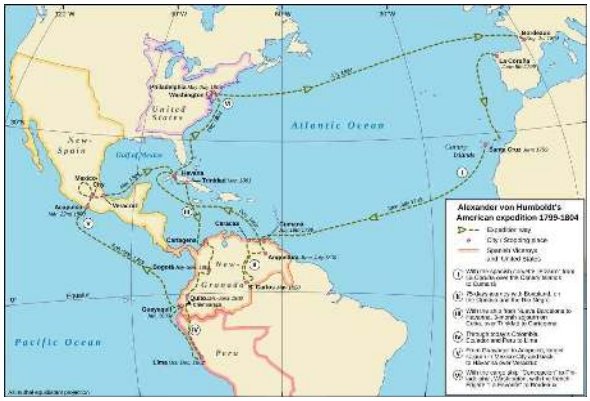
Throughout its dissemination into European spaces from the Age of Discovery, dragon's blood was understood chiefly as a medicament. Soon after its introduction, the sticky scarlet resin became nothing short of a panacea with widespread potential to prevent a host of illnesses.[8] As a result, the so-called "*draco arbor*" features in famous early modern herbals, such as John Gerard's *Herball or generall Historie of Plantes* (1633) and John Parkinson's *Theatrum botanicum* (1640). Both authors pointed to the Atlantic islands (comprising the Canary Islands, as well as the Portuguese Azores and Madeira), as the tree's most common habitat. As for *D. draco*'s medical uses, Gerard and Parkinson also agreed: its resin was believed to have effective astringent properties to treat gonorrhea, dysentery, spitting blood, and loose teeth. Gerard noted that "smiths also use it to varnish over their works," while Parkinson doubted "painters can bring it to be a fit color to be used in their works."[9]

An image of the Dra...

Draco arbor in...

After European colonization, and along with the integration of the Canaries into the burgeoning European sphere of influence, *D. draco* emerged on the stage of European gardens. Botanical interest in *D. draco* thrived, especially in the latter half of the eighteenth century. German scientist and writer Alexander von Humboldt famously fell prey to the tree's enchanting appeal. In his last work *Cosmos: A Sketch of a Physical Description of the Universe* (1842), he recalled the time when, as a child, he "first saw a colossal dragon tree in an old tower of the Botanical Garden in Berlin."[10] The experience was so overwhelming that Humboldt thought of it as "the source from whence sprang my early and fixed desire to visit the lands of the tropics."[11] The fact that the dragon tree bookended Humboldt's illustrious career, as both a formative experience of his youth and a notable point in his last great work, highlights how the dragon tree itself was at the core of his understanding of nature as one interconnected whole.

Julius Schrader, Bar...



Map Alexander von Humboldt expeditio...

Berthelot drago franchy

In 1799, as he stopped in Tenerife before his voyage to the Americas that would make him world-famous, Humboldt found himself in Orotava. While there, he visited the garden of a Monsieur Franchy and was immediately awe-struck by the sheer size and magnitude of its dragon tree—the very same tree that the Guanches had worshipped for centuries. He reported that it measured 60 feet tall and 45 feet in circumference near the roots. “We were told that the trunk of this tree,” Humboldt wrote in his *Personal Narrative*, “which is mentioned in several ancient documents as marking the boundaries of a field, was as gigantic in the fifteenth century as it is at the present time.” According to his calculations, the specimen was undoubtedly “one of the oldest inhabitants in our world,” which called for special protection.[12] Humboldt’s experience with the large *D. draco* at Orotava was far more than the mere realization of a boyish dream, but was instead a pioneering act that inspired other European travelers to follow in his footsteps and help strengthen a global network of scientific and economic exchanges focused on plants.

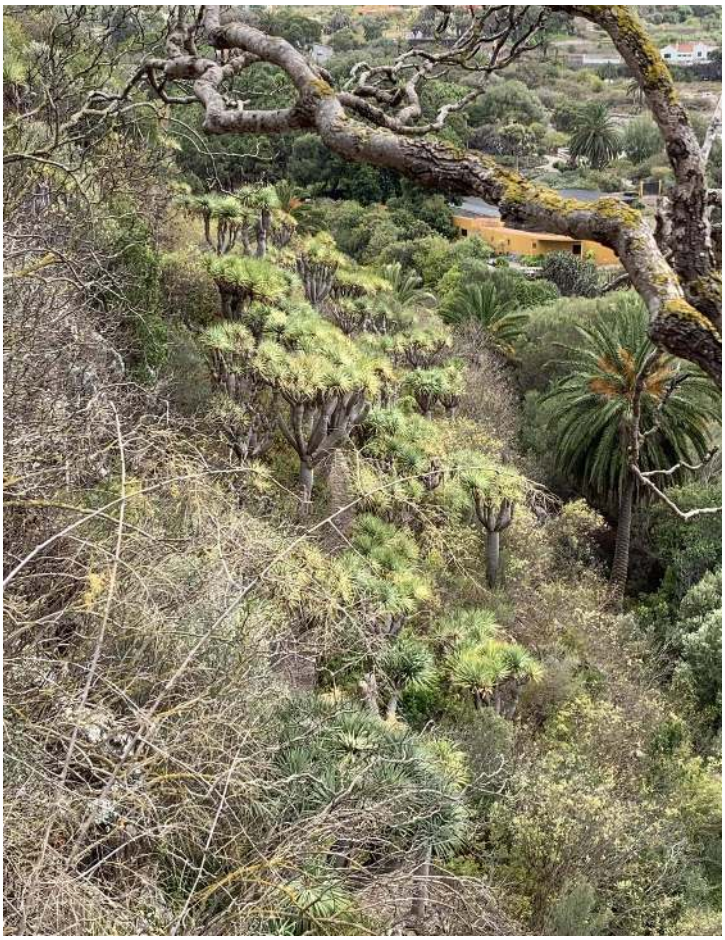
Marchais, ‘Le dragonier de l'Orotava,' in: Alexande...

Smothering the Dragon’s Flame: D. draco and the Anthropocene

Humboldt was not the only naturalist of his time attracted to the remarkable centenary dragon tree, as some three years before, in 1796, French naturalist André Pierre Ledru also found himself in Franchy’s garden, admiring the very same tree. The scarlet-colored resin was a critical aspect of the Guanche pharmacopoeia and a valuable piece of *naturalia* that spurred the Canarian economy. By the turn of the nineteenth century, however, due to unsustainable cultivation techniques, the population of trees from which it was sourced was already in decline. This environmental degradation has only increased in the last two centuries, with the intensification of human-driven ecological change, known as the Anthropocene.

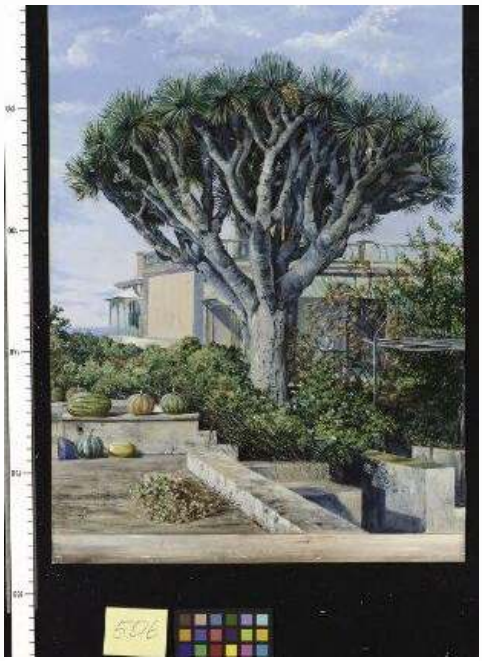
Harvard University, Dumbarton Oaks Research...

As Ledru remarked in his 1810 *Voyages aux îles de Ténériffe, la Trinité, Saint-Thomas, Sainte-Croix et Porto-Ricco*, which drew on observations he made during his trip to the Isles of Fortune some 14 years earlier: “In days gone by, the resin that one extracts from the dragon tree was an important object of commerce for Teneriffe; but since the locals have neglected to replace the old trees that were worn out by too-frequent tapping (of the resin) with young plantations, this source will soon be exhausted. There exist perhaps less than fifty dragon trees left on the island.”[13] This gradual, yet persistent, degradation of the *D. draco* population was not solely due to Guanche overcultivation, as Spanish colonizers inflicted profound ecological changes upon the islands when they razed and destroyed large swaths of forests during their conquest and settlement of the Canaries three centuries earlier.[14] Modern ecologists attribute the dragon tree’s decline to the disappearance of seed dispersers in the Canary Islands over the past centuries, potentially refuting Ledru’s assertion that *D. draco*’s deterioration was due to irresponsible Guanche farming practices.[15]



A small outcrop of Dracaena draco trees at the...

But even in the face of this acute anthropogenic pressure, the great dragon tree at Orotava persisted. Struck by the tree’s size, age, and enduring spirit, Ledru remarked on how even the most environmentally malicious conquistadors respected this dragon tree. Perhaps, then, to Humboldt’s delight, Ledru estimated that this special tree would easily live another 150 to 200 years.[16]



Dragon Tree at Orotava

Unfortunately, the Orotava centenary dragon tree did not outlive Humboldt and Ledru's visits by very long. In 1819, a storm broke one of its branches, and in 1867, a hurricane-like tempest broke them all off.[17] Despite this inauspicious demise, the tree's image remains associated with the Canary Islands today, and it is still frequently featured prominently in images of Orotava. Furthermore, both naturalists' accounts of their encounters with the dragon tree in its native environment stand as proof of its power to equally excite scientific and aesthetic imagination, promote environmental concerns, and reinforce colonial dynamics.

Orotava Ayuntamiento 04

Just as Humboldt and Ledru observed the centenary *D. draco* at Orotava and pondered the tree's age, durability, and its potential influence on theories of a global climate, today's scientists are weighing the tree's possible medicinal benefits, including potential cancer treatments, and its commercial value in the cosmetics industry as an ingredient in anti-aging creams in relation to the species' ongoing battle with extinction and its ecological vulnerability.[18] Since many different species make good sources of what is commonly known as dragon's blood, more comprehensive research needs to be carried out to fully assess the mythical resin's true medicinal efficacy.[19]

Eighteenth-century German…

Dragon's blood derived from Dracaena cinnabari o...

Due to its near-extinction in the wild, *D. draco* is officially designated as a vulnerable population on the International Union for Conservation of Nature's *Red List of Threatened Species*.[20] This is the result of the decrease over time in the number of suitable animal seed dispersers, because of hunting and other forms of habitat destruction.[21] Furthermore, as Ledru noted over two centuries ago, this population decline and endangerment is also due to overcultivation of the tree's valuable resin. The number of wild specimens has never been lower than it is today, and even though there are projects to repopulate the islands through experiments in propagation and acclimatization, one wonders if ever again a *Dracaena draco* will grow to the size and magnificence of the one that so captivated the minds of travelers like Humboldt and Ledru.[22] Perhaps, after its millennia-long smolder, the dragon's flame will be snuffed out by the twenty-first century Anthropocene. Or, perhaps, ecological preservation projects may reverse the trajectory of this ailing species.

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