

# A New History of Flowers

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The history of flowers is in some ways standardized, although I know almost nothing of the subject. But it should not be controversial, and I could probably look it up right now, and receive something like the following, from almost any popular source:<sup>1</sup> when plants first appeared on dry land, they spread with spores.

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1. I did indeed look up the history of flowers, on Wikipedia, immediately after I typed this sentence, and as it turns out, it's not as standard as I believed it was. It is claimed that Darwin described it as an "abominable mystery," because of their sudden appearance in the fossil record. It turns out that the exact shape of the flower's evolution is not precisely known.\* Next time I should give more credit to the botanists, who seem to know what they're doing.

\* The situation is much more dire than "not precisely known," and in fact could be said to be "not known at all."

But as insects crawled out of the ocean and populated the earth, their bodies were found to be excellent carriers of reproductive material, and so slowly flowers developed, through natural selection, to attract insects.

There are few historical accounts as pat as this. If our close readings of modern science has taught us anything, we have learned to be skeptical of any explanation based on utility. The natural historian would have us believe that a flower is a means to an end: better reproduction. What would she say about friendship, or love?

A new history of flowers would require to be written from the point of view of the flowers themselves. Why did the flowers become the shape they are? Why their colors?<sup>2</sup> Why does a flower dance the way it does when it slips off its stem and twirl to the ground? Does it scream as it does this, or does it laugh and die gracefully? Is it proud of its service to its plant, or is it full of resentment? Does it have friends? Can it play? We must be ready to ask these questions and to be laughed at. New histories require bravery.

I once heard flowers speak. I was at the Museum of Fine Arts in Boston in an



exhibition of small Flemish and Dutch works,<sup>3</sup> many of which were still lifes of

2. "Why such *beautiful* colors," we might be tempted here to say, violently bringing in human aesthetic sensibility. For all we know, the flower thinks itself ugly.

3. We learn that Boston society love their Flemish and Dutch works. We also learn that the

flowers, detailed and vibrant and always dark. I was admiring one of these flower works when I felt the urge to touch it, which I did, and my hand slipped into the painting's surface, and soon my whole arm was inside the painting, and then I managed to get my head and torso in, and then I was wholly inside the painting. It was dark inside, and I felt a strong presence. I could not hear music but I felt music, and the music was like afternoon sunlight streaming out of a lightly curtained window, with bits of dust dancing in it hostile and ecstatic like a dog running on hot pavement.

In my mind I saw a perfect pentagon, lucidly, and I do not see things in my mind very lucidly, but I saw lucidly a pentagon in my mind, and the pentagon shifted into various shapes with five-fold symmetry, and I knew that a flower was making itself known to me in a direct way. And I was sure that I could not communicate with the flower, but that it was with force impressing on to my mind something about itself, probably not about anything other than itself, truly revealing a bit of itself to me as it is in-and-of-itself. This stopped and then another image filled my mind, but this was simply the color red, although it was not red, it was many other colors, colors which are not red, but which aren't blue either, and some colors which are not colors.

This sort of one-way communication continued for some time, as the flowers in turn spoke to me in the most unmediated way. I am left with heartbreakingly beautiful images, as I described above, but on the whole I can only say with certainty that the flowers had a hunch that they were dying, cut off from their bodies and dying, slowly wilting. The aggregate result was a manic and social, one could even say *erotic*, frenzy<sup>4</sup> of communicating identity, since the flowers could sense, or *smell*, that they were dying, and so were frantically trying to tell each other who

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flowers themselves, some of them delicately grown luxury commodities, were often more expensive than the final painting. The painting shown is indeed Flemish, but not one I saw that day.

4. One could even say *orgy*.

they were one last time, to be known finally before darkness.

Before I knew it, I was being shouted at and shoved by gallery attendants, and a loud alarm was sounding, telling me I was too close to the painting, and the tip of my finger was on the painting, and I was brought into an administrative office, and I made a call to my sister's lawyer, and I was all but scolded, and I finally left with some reassurance that everything should be alright, that I didn't seriously damage the painting,<sup>5</sup> but that I should expect a call from the museum, for insurance purposes, a call which I did eventually receive.

I left the museum and walked around in a state of shock. How could I have ignored flowers for so long? I have seen flowers all my life, but I have not *listened* to them. I truly hadn't payed attention to them, or cared to see them for what they were. I made up my mind to every day wander Boston and once more hear the flowers.

2

Although I had gone a lifetime without hearing them, it was easy to pick up after doing it once. Stepping out the door on my first walk, the first flower I heard,



living on the small lawn bordering the porch, was the common dandelion. This

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5. The painting was taken down and into the depths of the museum, so that the microscopic layers of my finger oil could be cleaned off.

one was nearby other dandelions, but not bunched up with them, a comfortable distance which this individual appreciated (it told me so).

The way a dandelion talks is in bristles, and sharp laughter.<sup>6</sup> One's mind feels as if tickled and caressed. Dandelions are among the friendliest of the flowers around Boston, and have the driest wit.

Getting the hang of it, I tried my luck with other plants. The next flowers I was able to hear were a group of daffodils. They weren't doing so well, which wasn't a



surprise since they were planted on a patch of apartment soil next to the street. Owing to their more modern dwellings, they had a certain uppity pride which was missing in the dandelion, even as they coughed, so to speak, from months of inhaling smog.

Daffodils communicate frenetically. When you hear them,<sup>7</sup> you see shapes, gray or black, with many curves, exploding onto your mind, whizzing about, appearing instantly and disappearing as quickly. You hear sounds too,<sup>8</sup> like cans being

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6. This is what I would feel in my mind. It wasn't coming in through my ears, or my eyes, but it might have come in through the thin hairs on my arm, or through my otoliths, or some as yet undiscovered organ.

7. In your mind, that is.

8. In your mind.

banged on.<sup>9</sup>

After seeing this sad bunch, I continued down the street and found a group of flowers which were properly taken care of; one could tell that the plants wanted



for little, except for maybe more space and a touch more sunlight. What confronted me in my mind as I passed by was a hodge-podge of color not unlike a Kandinsky painting, although the lines and shapes were not merely color, but gossip and witticisms, the flowers all conversing at once, though each type of flower had its own language, or dialect, and if I payed attention closely I could even hear a few antagonistic words between rival flowers, perhaps flowers that were pushing each other for space or competing for the bee who was, in that very moment, flying by and considering its options. These flowers scarcely paid me any attention, so content, or occupied, were they in their village of shade and breezes. A few days later, on another one of my floral strolls, I would be shocked to find this scene's di-

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9. Who knows what entire genres of avant-garde music owe their existence to the daffodils, and to the visionary musicians who, in secret, listened to their babble and transcribed it for a human audience.

ametric opposite in a white lilac tree, which put in my mind the sound of silence, if such a thing is possible, as if I could hear less than when I started listening, but not a serene silence, as one might assume from the cloud-like formations of the



delicate flowers, but a mute and gasping silence, a desperate quiet like that of a fish on the deck of a fishing vessel, simultaneously arching its body and opening its mouth, staring wild-eyed at anyone that might help, or maybe blind and agape in the morning sun.

After this colorful frenzy, I continued my perambulation and came across the happy yarrow, who didn't take long to hear, since they only spoke in sound, and if they spoke in images at all, they were the strangest and most delirious images, sketches of limbs and laughing faces peering out from the shadows. Their sound is the sound of forever rejoicing, which at first seems like a nostalgic and distant lament, but which after a few minutes envelopes you in joy that can only be described as the song of ages, or, if it could be describe another way, as the yarrow's inheritance of its deep history, which is hundreds of millions of years of coming into being on this planet. At once I knew that I must write this new history of flowers.



Then I stumbled into a daisy, which made a few remarks about my mother which I don't care to repeat. But a little further off was an orange dahlia who displayed the utmost manners, and with who I had a lovely conversation.



I could go on endlessly about my rambles, but I should end with the mountain laurel, which I found bravely growing alongside a high traffic street. The laurel's communication is so urgent, so direct, yet I do not know what it was communicating. Because what this flower needed to express was like the longing of a mortal face-to-face with the infinite sunset of a giant's daydream. Listening to it, I was filled with quiet images, shapes in symmetries which eyes cannot grasp, morphing into each other through quiet transformations. Virgil wrote "fortunate is he who has found the gods of the countryside," and I believe I have found them in the mountain laurel.



3

We are beginning to see the crux of the issue: flowers are things onto themselves. All previous thinking about flowers assumed that their purpose was an aesthetic one, even to the point that the phylogenetic explanation of flowers, when it finally

developed, is that flowers are advertisements for pollinators. Both popular and scientific understanding of flowers reduces them to nothing more than an image with genitals.

But flowers are self-expressing subjects who have a contingent relationship to their outward appearance, the same contingent relationship that we humans, through millions of years of mammalian evolution, have to our appearance, with our stalky limbs, bare skin and awkward ears. All living things are deeply embedded in a vast system of heat and sugar exchange, and each species has undergone involuntary cosmetic and functional changes over the ages. It is a deeply human mistake to replace the flower, subjects of its own social life, with its outward appearance, or worse, with its utility to human affairs.

To be sure, the treasures each living thing inherits from its nature doom it to exploitation by others. But the particular forms of man's exploitation of flowers, aided by this aesthetic ideology, are alike in their scope to the dark expanses of the universe where no wind blows, and alike in their brutality to, if you prefer a more vivid metaphor, a dying cow kept alive, cut a million times and milked three times a day, at 8 in the morning, and then at noon, and then finally at 3 in the afternoon, and perhaps again at 6, the cow kept on the razors edge of death, as if experts had, writing in the top agricultural journals, deemed this treatment to produce the most subtly flavored milk. We can think of the weddings and banquets held across the world, daily using innumerable roses,<sup>10</sup> flowers cut off from their bodies, dead flowers who do not yet know they are dead, chattering frantically with each other in a final delirious ecstasy. Or we can think of the nurseries where plants bred with the most unnatural colors and patterns sit in rows waiting for someone to pick up their perfected bodies and take them home to a mani-

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10. Roses, almost all wild varieties of which have 5 petals, have been bred into the garden variety by gradually transforming the stamens into petals, creating a dense corolla. This means that humans, over the course of hundreds of years, have exerted a precise biological control over the garden rose in order to make it more pleasing to themselves, modifying the rose's genetic inheritance for the sake of aesthetics.



cured front lawn. Walking through a local nursery one day, I did not hear any of the flower's constant chattering, a conspicuous absence which gave me a sense of vertigo, as if I was peering over a precipitous cliff into an unfathomable emptiness, the intensity of which, as I strolled along the aisles, was only heightened by the innumerable dots and stripes and spirals on the individual flowers, branded, it seemed, onto their bodies as a mark of their descending position in the world.



Still, the great variety of flowers owes itself to the innumerable relationships which plants have developed with animals across the ages. This has produced countless flowers that don't match our aesthetic ideals, such as the little brown jug,<sup>11</sup> with its earthy jug shaped flowers, hardly the thing you would find in a nurs-

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11. *Hexastylis arifolia*.

ery, or the artichoke,<sup>12</sup> whose familiar flower-like shape is actually composed of bracts, which look like leafy petals, hiding their interior inflorescence<sup>13</sup> until the



moment of bloom. There are also beautiful leaves imitating, in many ways, the beauty of the flower. But leaves have limited reproductive use for the plant (what is the “function” of a pretty leaf?). And as we try to grasp and take apart the old



history of flowers, let us think of the stonecrop, who are often seen in “hen-and-chicken” formations, with mother plants surrounded by their younger, flowering children. The mother plants resemble ancient and ossified flowers from a past geological age, while their children, full of youthful color, spiral upwards in brilliant inflorescences, exploding their faces to the sky, not caring they will someday mature and settle into plump and waxy bodies, a cycle of life and death followed

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12. Although the artichoke, being useful to humans,\* has been bred for centuries in order to produce a tasty appetizer, whose tender young flesh requires to keep the plant from maturing and its flowers from blooming outward.

\* In the *Zhuangzi* we read: “Are you comparing me with those useful trees? The cherry apple, the pear, the orange, the citron, the rest of those fructiferous trees and shrubs—as soon as their fruit is ripe, they are torn apart and subjected to abuse. Their big limbs are broken off, their little limbs are yanked around. Their utility makes life miserable for them, and so they don’t get to finish out the years Heaven gave them.”

13. An inflorescence is a cluster of flowers. Many flowers, termed *pseudanthiums*, are upon closer look inflorescences, like the sunflower. As my conversation with the daisy showed, this can be an arbitrary botanical distinction.

for millions of years, in front of which our natural theories and history of botany seem insignificant.



4

Let us try to understand the old history of flowers. Mosses and liverworts were the first plants to colonize land.<sup>14</sup> Their cell walls weren't thick enough for them to stand. They needed to be in wet places, lest they dry out. They relied on rain and moist ground to carry their sperm to their eggs. This was a dual life cycle, where

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<sup>14</sup>. In general, non-vascular plants. Although some believe that the first terrestrial plants were single-celled algae.

sex cells would develop into a spore releasing plants which contained the seeds for the next generation of moss. The proto-insects followed them out of the water, a crucial detail.



*Liverwort egg and sperm*

Thicker walls formed, allowing for height, and the scales of the moss slowly transformed into true leaves. An example is the fern, which reproduce by dropping spores onto the ground, creating tiny plants that make sex cells which find each other by swimming through moist ground. At this point, some insects developed wings to take advantage of the foliage growing at height.



Then the sexual strategy developed. Having eggs fertilize on the ground can be risky, so some plants develop sperm cells which can float (pollen) all the way to egg cells resting on the plants themselves, a safer place for the precious seeds to mature. Here the gymnosperms<sup>15</sup> appear, like the conifers with their small male and larger female cones.



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15. Naked seed plant.

Now a traffic was developing in the air, with insects feeding on pollen and inadvertently fertilizing eggs with residue on their bodies. It is in this long moment that the flower must have developed, what Caroline Dormon once called “the moment that history held its breath.” The development of the first flower in this moment is still a mystery,<sup>16</sup> but we can sketch some of the most common working theses.

The first and simplest of these theses is commonsense, since it requires no more than observation of insects and plants: the first flower developed to market its sex cells to insects.

*Commonsense Thesis: flowers developed to attract pollinators.*

We have an even cruder formulation in the following:

*Botanical Thesis: flowers are a favorable adaptation in the process of natural selection.*

These theses can be refined. Advertising pollen isn’t like putting up a billboard next to a highway. A deep relationship between some insect and the first flowering plant must have developed, with the insect co-evolving. This means the first flower was expressive of a long relationship with its animal pollinator. We see in many flowers specialized markings, fragrances, symbols like landing strips,<sup>17</sup> and even complex architectures that open only to specific insects.<sup>18</sup> Thus we arrive at

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16. The sudden appearance of flowers in the fossil record famously resulted in Darwin defending his theory against paleobotanist William Carruthers, who suggested that flowers appeared by divine intervention, not evolution. We now understand this discrepancy in the fossils to exist because flowering plants did not proliferate until a period roughly 100 Ma (million years ago). Fossils of the first flower have yet to be discovered.

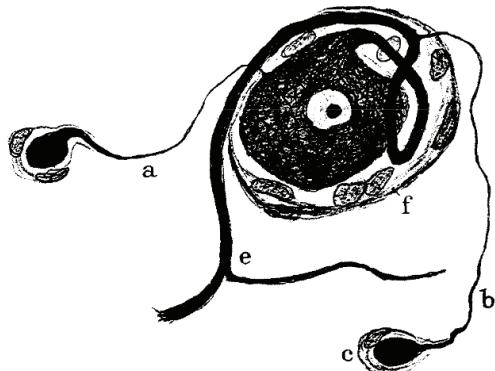
17. Many of these symbols ultraviolet, which can be seen by insects.

18. There is a flower which stamps bees with pollen, and then collects the pollen a few days later in the same manner. There is an orchid with which male wasps copulate, during which the flower sticks pollen packets to its body for transport. In the yucca plant, the female of a specific species of moth lays her eggs in the ovaries and then takes pollen from a ball she has collected and spreads it, using her hands, like a cream onto the stigma, ensuring seeds for her young to snack on when they hatch. One plant lures flies into its warm and sweet-smelling bell, which

the:

*Ecological Thesis: flowers are manifestations of deep relationships between a specific pair of plant and animal, the animal co-evolving with the flower, whose shape, color, smell, architecture, etc. expresses the relationship with the animal.*

This thesis, thought it appears tame to the contemporary eye, was not without its controversy. Indeed, in the era of gentleman-botanists flowers were simply called “attracting machines,” the legacy of a now forgotten controversy about the early days of land plants (sometimes referred to as the Ordovician Moss Debacle). There was discovered in the algae cell an organelle, dubbed the “attraction



*An algae diagram, the organelle is labeled C*

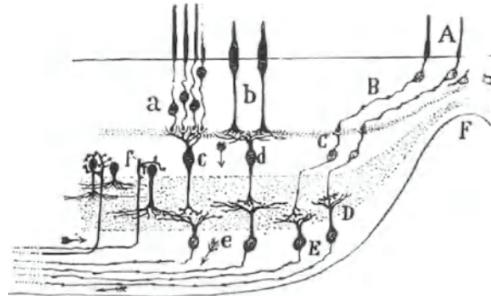
machine,” which would insure a certain level of salinity around the sex-producing cells, thus increasing reproductive success. Crucially, the early mosses which carried these organelles became dominant on land, and the organelle developed into its own specialized appendage of the moss.<sup>19</sup>

With the work of O. W. Herman, the celebrated evolutionary biologist who showed that the appendage evolved into the first flower, the flower’s case was sealed. Henceforth, the flower was an adaptive entity which emerged, inexorably

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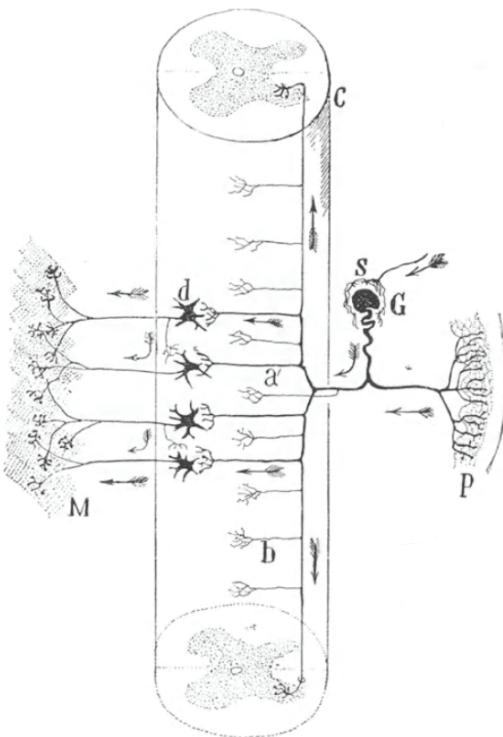
the flies are unable to leave, blocked by oily hairs pointing downwards, hairs which shrivel the next morning to reveal a drop of syrup, getting which, on the way out, dusts the flies with pollen.

19. The so-called “magic wand” of early mosses.



*Various moss wands*

and mechanically, from the organelle first found in algae. Debate on flowers was closed well into the 20th century.



*The wand becomes the flower*

It has now been decades since the existence of this organelle has been disproven, and the work of Herman discredited. Why has the scientific establishment's attitudes on flowers not yet changed? It is time to open the windows and let the stale air of scientific conservatism blow away; living things cannot be reduced to evolutionary adaptation. Each living thing is a link in the great chain of being, where species slowly evolve through deep relationships formed with all other beings. Further, each living thing exists as a sort of subject who must express itself to the living things around them, doing so within the limits of their bodies which

they developed in this long process of mutual evolution. Formulating these ideas for flowers:

*The Bipartite Thesis: 1) flowers are bodies embedded in a long process of mutual adaptation through the mechanisms of innumerable relationships across the ages; 2) flowers are subjects expressing within the limits of their bodies developed under 1).*<sup>20</sup>

Working under this thesis, the crucial questions shift away from phylogeny: “what did flowers physically develop into, and how does this affect their subjectivity?” Of course, each flower has developed under unique conditions, and I’ve personally only talked to a handful of flowers. But we can sketch some preliminary answers.

The first flower was a manifestation of a developing relationship between an ancient gymnosperm<sup>21</sup> and the insects feeding on its pollen. And the flower’s fruit, swelled ovaries which are seed enclosures,<sup>22</sup> too were manifestations of developing relationships with seed eating animals. So the birth of the flower is the necessity of relationships: pollen and fruit became the food of animals, and animals became the sex of plants. From here, the flowering plants diversified and now make up the vast majority of all living plants, showing the strength of the bond between animal and flower.

Consider that tens of millions of years before this, relationships developed between certain conifers and insects.<sup>23</sup> Yet most gymnosperms remain reliant on wind for pollination, while most flowering plants rely on animals. That is, gym-

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20. And we may add: 3) *the subjectivity in 2) has yet-to-be-understood effects on 1).*

21. Or gymnosperm ancestor. Either way, this plant is now lost to us. It is thought that the common ancestor of all seed plants existed 310-350 Ma, while the common ancestor of all flowering plants existed some 140-250 Ma.

22. Angiosperm, meaning enclosed seed, is a common name for the flowering plants which refers not to the flower but to the fruit.

23. A fact thought to be independent of the same phenomenon with flowers.

nospersms are not primarily expressing to animals; they express to wind. It's no surprise that on important occasions we hand each other bunches of flowers, not pine cones.

So the flower is, physically, an outward-facing, animal-facing body. It is a being-with-other. Its mode is of constant expression and communication. Yes, it expresses "Come to me! Take my pollen! Land here! Fertilize me!" but the flower needn't even be aware of this. A flower is not a reproductive function, in the same way that a human is not a bipedal reproductive system. Yes, the spirit of the flower is molded by this function—sexuality forms the brute facts of the flower—but this "function" is only incidental to the flower as a being in itself. Humans have their poetry, and flowers have their colors and symmetries, all of them exploding onto the face of the sky. We all make the best of our substrates, we are all in some sense false machines. This is the dual nature of the flower: it is a subject expressing within a body which is a being-with-other, an expresser of complex ideas: a voice. The flower is a world-historical development manifested as a voice spoken against the naked sun to the entirety of creation.

## 5

We are left with a single question to consider. What does the flower express? But the flower sometimes expresses with immediacy and urgency, and sometimes



with reticence and circularity. There are no generalities about what flowers ex-



press, we can only listen. The next time a flower calls to you, approach it and give it your full attention. It may speak something you've never heard.



