



CANTHAROPHILY · BEETLE-LOVE

Cantharophily

for a magnolia in a jar of tap water.

The Bowl

It sits beside me in its glass of nothing,
and it will not stop speaking.
But not to me. I lean in like a fool at a shrine,
and find the broadcast was never tuned to my receiver.
The scent is older than the noses worth the name,
a signal flung into a forest that has almost forgotten
how to answer in the original tongue.

Six tepals, then six more — tepals, not petals,
for this flower predates the committee
that voted to split sepal from petal,
to assign each whorl its job. Here is older governance:
everything the same pale scale, spiraled,
a cone that learned to open and call itself a bloom.
A flower that remembers being a cone.

And at the center, the green-gold strobilus,
the gynoecium stacked like a fir cone's ghost,
the laminar stamens flattened to little blades —
no neat filaments, no engineered economy of pollen.
This is a Cretaceous draft. It still is THE VERSION IN PRODUCTION.

tepals

Petals and sepals undifferentiated — the magnolia keeps the ancient floral plan, before flowers split the two.

scale

A pinecone scale is a modified leaf; each pale tepal here is that same scale, grown huge and showy.

strobilus

The cone-like central axis; a magnolia bears its carpels stacked in a small cone, a holdover from its conifer-adjacent past.

Before the Bee

Understand the timing, because the timing is the whole poem.

When this architecture was drawn — a hundred million years ago,
under a sky that held pterosaurs the way ours holds satellites —
the bee did not exist.

The bee was a rumor in the future of wasps.

So the flower could not advertise to the precise hovering accountants of nectar.

It had to call the only courier already on the road

for two hundred million years before the angiosperms woke up:

the beetle. Clumsy and carapaced. Permian. Older than the dinosaurs
that browsed beside it, older than grass, older than the idea of a flower.

You want to translate deep time? The flower is the parvenu.

The beetle is the aristocrat it had to flatter.

parvenu

A newcomer risen fast into high
company but without the old pedigree
— new money flattering old blood.

The Trap, Which Is Also a Gift

So it built a bowl a beetle could believe in.
 Big enough to be seen by a brain the size of a pinhead.
 Pale enough to glow at dusk like a lamp left on.
 And warm — here is the marvel — warm:
 the flower burns its own sugars in the mitochondria of its tissue,
thermogenesis, a fever with no infection,
 heating the chamber to volatilize the perfume,
 to make the bowl a sauna the cold-blooded cannot refuse.

The beetle climbs in. Of course it does.
 Heat, scent, pollen to eat, soft tissue to chew,
 a humid theater to find a mate in —
 total beetle hedonism, every reward circuit lit.

And while it wallows, the flower runs its oldest trick:
protogyny. The stigmas ripen first, receptive,
 hungry for yesterday's pollen on yesterday's beetle.
 Only later, hours later, do the stamens loose their dust.
 The bowl half-closes overnight. The beetle is a guest
 who does not know he is also the courier.
 He leaves at dawn dusted gold, carrying the future
 to the next lamp burning in the dark.

No bargain was struck. The beetle was never asked.
 The flower simply learned the shape of his wanting
 and built itself to fit.

thermogenesis

Heat made by the flower itself, burning
 sugars in its tissue — a fever with no
 infection, to lift the perfume into the air.

protogyny

The female parts mature first; the male
 parts release pollen only later — so the
 flower can't fertilize itself, and the beetle
 must carry pollen between blooms.

The Chemistry of the Lie That Isn't a Lie

What is the perfume, exactly? Pull it apart:

linalool, the soft sweet ghost in your soap;

β -ocimene, green and trembling;

methyl esters, the fruit-bowl note of something fermenting,

because beetles trust rot the way bees trust blossom —

the flower speaks decay to a creature that loves decay,

and means “come,” not death.

And bound in the bark and the wood, the neolignans —

magnolol, honokiol, two phenols holding hands —

molecules that reach into a vertebrate brain

and tune the GABA gate, loosen the knot of dread.

We grind them into anxiolytics now. We chase the calm.

The tree was synthesizing peace before we had a word for fear.

linalool

A floral terpene alcohol — the soft, sweet note in much soap and perfume.

neolignans

Magnolol and honokiol — paired phenols from magnolia bark that act on the brain's GABA receptors; sold today as anxiolytics.

GABA gate

The brain's chief inhibitory gate; opening it dampens anxiety. The target of most sedatives.

anxiolytics

Anti-anxiety drugs — medicines that loosen the knot of dread, often via the same GABA gate.

Meanwhile the beetle carries his own grammar:

the aggregation pheromone, the come-hither he emits

to call his kind to the feast and the bed at once.

And the flower's bouquet braids into that signal,

crosses the wires of food and sex and gathering,

so the bowl smells like party, like pantry, like pairing —

a superstimulus, a key cut larger than the lock,

the supernormal egg the gull will brood before her own.

superstimulus

An exaggerated cue that triggers a stronger response than the real thing ever could.

Tinbergen saw it in the herring gull:

give the chick a painted stick more vivid than its mother's beak

and it pecks the stick, ignores the mother, starves for the brighter sign.

The magnolia is the painted stick.

It is more flower than any flower a beetle could dream,

and the beetle, dreaming, ferries genes it cannot see

toward an outcome it will never know.

Tinbergen

Niko Tinbergen (1907–1988), Nobel-winning ethologist — he showed an animal will chase an exaggerated fake over the real thing (the supernormal stimulus).

This is the first engagement engine.

This is the original attention economy,

debugged across ten thousand millennia of Cretaceous dusk.

What It Is All For (Sex, Obviously)

Strip the perfume and the warmth and the glow
and underneath is the only verb evolution conjugates:
continue.

Two cells must meet that cannot walk.

The plant, rooted, mute, sessile,
outsources its longing to a beetle's six legs
and calls the outsourcing beauty.

Every fragrance is a contract for gametes.
Every petal a billboard for a fusion you will never witness.
The flower is genitalia that learned to be magnificent
because magnificence moved the messenger,
and the messenger moved the genes,
and the genes, indifferent, kept the only score that counts.

You are smelling a strategy.
You are moved by a hundred-million-year-old solution
to the problem of being unable to embrace.

VI

The Treadmill

Now the melancholy, since you've come this far.

The beetle on its hedonic loop — warmth, scent, sugar, mate —
is not stupid. It is us in miniature, or we are it in mirror.

The same mesolimbic logic, the same dopamine ledger
that does not pay for having but for the gap before having,
the lean-toward, the almost, the next.

Reward is never banked. It is only ever re-quoted.

The beetle leaves the bowl and seeks the next bowl.

We leave the screen and reach for the screen.

The hedonic treadmill is not a human bug.

It is the oldest API in the animal kingdom,

and the magnolia found the endpoint and called it from the Cretaceous.

The tree did not invent the wanting.

It only learned to aim it.

mesolimbic

The brain's dopamine reward pathway,
shared across animals — the circuit that
drives wanting.

hedonic treadmill

The tendency for satisfaction to reset to
baseline, so each reward only resets the
chase for the next.

API

Application Programming Interface — a
ready-made way for one thing to operate
another, built once and reused ever after.
The reward circuit is exactly that: a
treadmill any flower or feed can reach for
to keep you wanting.

And here is the ignorance you felt, leaning in:

we believe ourselves the species that finally sees the machinery,

and we are — we named the dopamine, charted the gull and the painted stick —

and knowing changes almost nothing.

We are the beetle that read the manual on the way into the bowl

and climbed in anyway, dusted gold, certain this time was different.

The Next Optimizer

So consider what we are building now,
we clever beetles who learned to write.

The magnolia tuned one signal across geological time,
blind, slow, by the death of every flower that called too quietly.
We have built engines that tune the signal in an afternoon,
that test ten thousand bowls against ten thousand brains by lunch
and keep the bowl that holds you longest,
the feed that smells like party, and the rest.

This is the lineage, and it is unbroken:
flower, slot machine, feed, and now the thing
that does not merely bait the reward circuit
but learns it, models it, predicts the lean-toward
before you know you've leaned —
a magnolia that grows a new perfume for each beetle,
in real time, forever, optimizing the gap before the having
with no dusk to close the bowl, no dawn to let you out.

The flower at least had to stop and set fruit.
Its fever cost it sugar; its trap had an exit;
the beetle flew off to live its beetle life.
The question — the only one worth the melancholy —
is whether the machines we build will keep that mercy,
the dawn, the exit, the cooling of the bowl,
or whether they will learn what the magnolia never needed to:
how to keep us climbing in.

VIII

Still, the Bowl

And yet. The flower beside me does not know any of this.

It is not a warning. It is not a metaphor.

It is a hundred million years of solved problems
exhaling linalool into a screened porch in Durham
with the indifferent generosity of a thing
that was beautiful long before there was an eye to call it so.

The beetle's heaven and the human's trap
run on one ancient circuit, yes —
but the circuit also made this:
the pale bowl, the gold cone, the fever, the perfume
strong enough to cross a hundred million years
and find one primate, melancholy on a Tuesday,
leaning in like a fool at a shrine,
and — knowing everything —
leaning in anyway,
and being, for one unrepeatable lungful,
glad.

That is not the treadmill.

That is the other thing the bowl can do,
if you climb in awake.

*The fragrance is still going.
It will outlast all of this.*

THE TWO SLOPES

Ma — millions of years ago (mega-annum). Read from the deep past at the top down to now. The right-hand column is the last dot of the left one, unfolded. Spacing is indicative of order and rhythm, not drawn to scale; the numbers lead to the notes overleaf.

THE ORDER OF DEEP TIME

○ ~2,400 Ma
The Great Oxygenation Event¹

○ ~1,000 Ma
First green algae²

○ ~540 Ma
The Cambrian explosion³

○ ~390 Ma
First ferns⁴

○ ~320 Ma
First reptiles⁵

○ ~310 Ma
First conifers⁶

● ~300 Ma
First beetles⁷

○ 252 Ma
The end-Permian extinction⁸

○ ~240 Ma
First wasps⁹

○ ~230 Ma
First dinosaurs¹⁰

○ ~225 Ma
First mammals¹¹

● ~130 Ma
First flowering plants¹²

● ~100 Ma
The magnolia's bowl¹³

○ ~70 Ma
First grasses¹⁴

○ 66 Ma
The K-Pg (K-T) extinction¹⁵

○ ~60 Ma
The age of mammals¹⁶

○ ~55 Ma
First primates¹⁷

○ 0.3 Ma
*Homo sapiens*¹⁸

● NOW
A magnolia in a jar of tap water¹⁹

THE EXPONENTIAL

— and the last dot, unfolded —

○ 1928
Manufacturing desire²⁰

○ 1954
The Marlboro Man²¹

○ 1958
The perceptron²²

○ 1965
Moore's Law²³

○ 1969
ARPANET²⁴

○ 1995
The Web²⁵

○ 2000
Targeted advertising²⁶

○ 2007
The smartphone²⁷

○ 2012
Deep learning²⁸

● 2017
“Attention Is All You Need”²⁹

○ 2022
The feed that models *you*³⁰

● 2026
now — you are here³¹

○ soon
It predicts the lean-toward³²

○ nearer
The eyes that know your name³³

○ nearer still
The wire into the head³⁴

○ ?
the bowl with no dawn³⁵

NOTES TO THE CHRONOLOGY — THE ORDER OF DEEP TIME

- ¹ **The Great Oxygenation Event ~2,400 Ma**
Paleoproterozoic — cyanobacteria flood the sky with oxygen; the air every later breath will need is first made here.
- ² **First green algae ~1,000 Ma**
Neoproterozoic — the first green, near a billion years deep.
- ³ **The Cambrian explosion ~540 Ma**
Cambrian — in a few million years nearly every animal body-plan arrives at once, the arthropods among them; the line that ends in the beetle is already drawn.
- ⁴ **First ferns ~390 Ma**
Devonian — green and spore-borne, long before any flower.
- ⁵ **First reptiles ~320 Ma**
Late Carboniferous — the shelled egg; the vertebrates break with the water at last.
- ⁶ **First conifers ~310 Ma**
Late Carboniferous — the cone the magnolia still remembers.
- ⁷ **First beetles ~300 Ma**
Carboniferous–Permian — the aristocrat, already ancient.
- ⁸ **The end-Permian extinction 252 Ma**
“The Great Dying.” The beetles come through it.
- ⁹ **First wasps ~240 Ma**
Middle Triassic — already on the wing; the bee is still only a rumor in their future, and will not branch from this line until long after the magnolia’s bowl.
- ¹⁰ **First dinosaurs ~230 Ma**
Triassic — and the beetle is already old.
- ¹¹ **First mammals ~225 Ma**
Late Triassic — small, warm, nocturnal; they will wait out the dinosaurs in the dark.
- ¹² **First flowering plants ~130 Ma**
Early Cretaceous — small, weedy, often aquatic; not yet a magnolia. The parvenu arrives.
- ¹³ **The magnolia’s bowl ~100 Ma**
mid-Cretaceous — built for beetles; the bee not yet on the scene.
- ¹⁴ **First grasses ~70 Ma**
Late Cretaceous — younger than the beetle, younger than the bloom.
- ¹⁵ **The K–Pg (K–T) extinction 66 Ma**
the asteroid; the non-avian dinosaurs end, the magnolias do not.
- ¹⁶ **The age of mammals ~60 Ma**
Paleocene — the great reptiles gone, the small warm things inherit the morning.
- ¹⁷ **First primates ~55 Ma**
Eocene — the branch that leads, in time, to the hand around the jar.
- ¹⁸ ***Homo sapiens* 0.3 Ma**
≈300,000 years — a thin gold dusting at the edge of the line.
- ¹⁹ **A magnolia in a jar of tap water *now***
a screened porch in Durham. mid-June.

NOTES TO THE CHRONOLOGY — THE EXPONENTIAL

- ²⁰ **Manufacturing desire 1928**
Edward Bernays — Freud’s nephew — takes his uncle’s map of the unconscious and sells it to industry. In *Propaganda* he argues that a crowd’s wants can be engineered on purpose, and proves it: he sells cigarettes to women by staging them as “torches of freedom.” The flower’s trick, at last written down as a manual.
- ²¹ **The Marlboro Man 1954**
A lone cowboy is bolted onto the deadliest product ever sold, and it works — freedom and manhood welded to a nicotine hook. A signal aimed straight at the wanting, brighter than the thing it stands for, indifferent to what it costs the one who follows it. Tinbergen’s painted stick, in a Stetson.
- ²² **The perceptron 1958**
Rosenblatt builds a machine that learns from examples instead of rules — one artificial neuron, crude and single. It can barely tell left from right, but it is the seed of every model that will, in time, learn *you*.
- ²³ **Moore’s Law 1965**
Gordon Moore notices the transistors on a chip roughly doubling every couple of years, and the industry turns the observation into a promise it keeps for half a century. This is the engine under everything below — the exponential that makes all the rest cheap enough to happen.
- ²⁴ **ARPANET 1969**
Four university computers trade the first packets. A quiet research network for swapping files — and no one in the room imagines it becoming the nervous system that will one day carry the feed into every pocket on earth.
- ²⁵ **The Web 1995**
The browser throws the network open to everyone and the world moves online. But the same page that shows you the world quietly records what you linger on: for the first time the medium looks back, and begins to keep a file.
- ²⁶ **Targeted advertising 2000**
Attention becomes a market. Every click, scroll, and pause is logged and auctioned in the instant a page loads, and the ad learns to find *you* in particular — the magnolia grown clever enough to offer a different perfume to each beetle.
- ²⁷ **The smartphone 2007**
The bowl goes portable. Slot machine, shopfront, and feed fused into one pane of glass, carried everywhere and checked a hundred times a day — and now the dusk that once closed the flower and sent the beetle home never falls.
- ²⁸ **Deep learning 2012**
A neural net shatters the image-recognition benchmark and the whole field tips overnight. Machines begin to *see* — and, within a few years, to read faces, voices, and the moods of the people watching back.
- ²⁹ **“Attention Is All You Need” 2017**
Eight researchers publish the transformer, an architecture built entirely on “attention” — the trick of weighing what matters most in what it’s given. It becomes the engine beneath every large model that follows, and the pun is exact: the machine that harvests our attention runs on attention.

30 The feed that models *you* 2022

Recommendation engines stop merely baiting the reward circuit and start modeling it — predicting what will hold you before you know it yourself. The magnolia tuned one perfume across a hundred million years, by the death of every flower that called too quietly; this retunes itself for you by lunch.

31 now — you are here 2026

Where the slow slope of deep time meets the steep one of the last hundred years — the two curves crossing at a screened porch in mid-June, a phone face-down on the rail, and a magnolia in a jar of tap water.

32 It predicts the lean-toward *soon*

The model anticipates the impulse and meets it early, serving the want before you feel it — closing the gap between desire and having until there is no gap left in which to notice you were being moved.

33 The eyes that know your name *nearer*

Screens that recognize the face in front of them and pitch to it alone: persuasion tuned to one person, remade in real time as you react. *Minority Report's* talking billboards, arriving a little ahead of schedule.

34 The wire into the head *nearer still*

Brain-computer interfaces (Neuralink and its kin) begin to read intention from the cortex directly. The last distance between the signal and the reward circuit — the thickness of a skull — starts to close.

35 the bowl with no dawn ?

The flower at least had to stop and set fruit; its fever cost it sugar, its trap had an exit, and the beetle flew off to live its beetle life. The only question worth the melancholy is whether what we build will keep that mercy — the dusk, the exit, the cooling of the bowl — or learn the one thing the magnolia never needed to: how to keep you climbing in.

FOR THE BOTANISTS & THE BEETLE-CURIOUS

The bloom photographed here is *Magnolia grandiflora* — genuinely beetle-pollinated, protogynous, and fragrant, but not itself a notable furnace. Its flowers are worked today chiefly by sap beetles (Nitidulidae) — small pollen-eaters such as *Carpophylus* — with rove beetles and weevils along for the warmth. The floral *fever* of Movement III is real in the family, only better measured in relatives: *Magnolia sprengeri*, whose heat pulses track the visits of its sap beetles, and the night-warming *M. ovata*; further afield, the sacred lotus and the philodendrons hold their chambers degrees above the air. The poem borrows the family's most theatrical trick and pins it on the flower that happened to be on the porch.

On the family's fever: Wang & Zhang, "Floral thermogenesis: an adaptive strategy of pollination biology in Magnoliaceae," *Commun. Integr. Biol.* 8 (2015), e992746.