

BOOK 1: HYMNS

\* **MOTHERSONGS** \*



(10) *The Smallest of the Earth*

\*  
\*   \*  
\*

*They are no different from us, the Microbe-Being:*

*They thrive upon, flourish with gainful employment :  
flourish with some deep gut-satisfaction at good work well done.*

\*  
\*   \*

CATS HAVE THEIR PLACE. There will always be cats around: these small furry pet cushions, these miniature tigers, haughty opportunists we choose to call friends. They made a decision long ago to get close to the fire; not by flopping like boon-companions down at our feet, but by insinuating themselves discreetly into the best place and laying there very quiet like a burnt log.

They have been here to stay, for a long time.

BUT EACH LAND KNOWS exactly how many Cats it can tolerate. Every landscape decrees how much of anything it can accommodate : of new predators, and pastoral subdivisions, and feral weeds, and topical applications of synthesised chemicals, and pollution and exhaustion of rivers.

We can easily find out how much the Land can wear: by looking, and asking. Like examining a patient : You have a fever; you look red, your skin is sweaty and scabbed. How do you feel ? ~ is it

nausea, or sharp pain, or dull ache ? Is the discomfort deep or superficial, or both ? Do you have constant thirst ? How did you get these excoriations ?



*The answers of our ancient Land of Terra Australis are quite distinct. They are heard in the fading songs of birds, and the stuttering of retreating rock-wallabies in their beleaguered clefts, and the ceaseless tinnitus-growl of chainsaws, and the warning hiss of a feral cat with a native birdkill, and the profound silence of the extinguished tasmanian wolf. And the physical symptoms of her illness are quite observable: in the flaking psoriasis-eczema of rising salt-pans, the gumtrees twisting with die-back over literally millions of square*



*miles, the lurid seasonal water-scum of blue-green algae with its belly-up graveyard of rotting fish, riverside flotsam of poisoned animals. Her temperature is rising, the exposed skin is cracked and peeling : as thirty million tonnes of drought-stricken pastoral desert slough off and blow away into the pacific ocean in a single dust-storm.* (net)



**Most of the inland feral cats of many generations** are breeding consistent tawny-brown, like a lynx; and some weigh in at ten kilograms - twenty-two pounds. Each one eats ~ estimated - twelve little lives a day, four thousand wee things in a year. About 12 million

wild Cats, *50 billion tiny victims a year:* in a Land where the proper balance of predation was maintained for millennia by hawks and eagles and rodents and snakes and lizards, and a small spotted marsupial who reared one small litter per year, and hard-working dingos, and human hunters dedicated to taking exactly and only as much as they needed for a day or few. (net)



We shoot them, wild pussycats. We shoot them all over the country, from off the back verandah and from off the back of farm utes. Little striped tigers. Three litters of six a year. They get baited too, strychnine and old o-p luci-jet from the farm shed, and ten-eighty ~ cats die fast with strychnine , slower with 1080 - terrible twisting agony (twenty hours for dogs, forty hours for reptiles). Organophosphates a creeping or fast autonomic paralysis: nerve poison (like the military stuff). Rabbits and foxes too: intermittent drops of 1080 carrots and meat-baits. Endemic, cultured myxomatosis and calicevirus for rabbits too: death by blindness, gut ulceration and overwhelming systemic infection.

Everybody hates doing it. Hates the relentless duty of killing, culling. Hates the plagues, too: of millions, billions of introduced rabbits and mice and cactus and foxes and lantana and cane toads and people's pretty furry pets, escaped, gone bush, run amok. Like scabies on the Land: this fragile, ancient, paper-skinned continent, a lacey great-great-grandmother with these mean kids' infectious diseases, her burns and scratched sores and spreading patches of dead scurf.





*Our inheritance : our ancestors' awesome ecological ignorance and folly. Our own present-day fully-informed, continuing and defiant ecological vandalism : our persistent laceration of her flakey skin with sprawling irrigation systems, rising soil salinity and humus depletion, deep-cutting mines, sprawling hooved herds and million-*



*square-mile monocultures, bull-dozed forests, pests and plagues and our furious retaliations against these blameless guilty pest-creatures.*



*2018: In australia, the culls go on: annual millions poisoned of the 10 billion rabbits, annual millions shot of the 50 million kangaroos, in competition with stock for exhausted grazing. And the incessant agro-chemical culls within the very life-giving soils that provide for us: her bacterial-fungal-protozoan-nematode-insect-worm-*

*kingdoms of Soil, once bountiful: now mass-sterilised and depleted of the organic humus of Life, desiccating to blowing dusts on a skinny chemical diet of nitrogen, phosphorus, sulphur and pesticidal- fungicidal-herbicides. (net abc)*



*2019: Over 150 billion animals on Earth were killed for human food consumption in one year. 150 million tonnes of fish, farmed and harvested. The average human eats three times as much meat as we did 50 years ago : when moreover there were only half as many of us.*

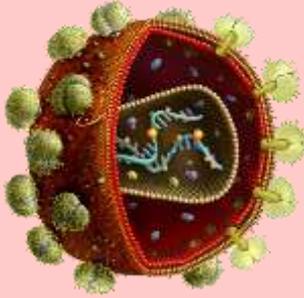
*2020: Coronavirus covid-19: our own human-created modern microbial plague, forced out from horrified, tormented little wild creatures, trapped caged bloodied killed publicly in crowded markets. For some side-lined humans, because of sheer hunger. For bloated others - for gourmet wild-meat indulgence, and vanity display.*

***As we sow, so do we reap.***



*(net)*

\*



THERE IS SOME EXCELLENT WORK BEING DONE on new methods of humane bio-control. An about-face in our attitude to microbes: not simply making clever antibiotics and clever composting, but inviting the cooperation of tailored bacteria and viruses in various beneficial tasks - for example, they are used as vectors to carry genes, carry vaccines into cells: and even potentially, vaccines against fertility; which could be delivered already by attractive bait drops. So that feral animals population numbers be limited not by murderous suffering, but by a relatively quiet distribution of an antigen which arouses an antibody response against sperm or the newly-fertilised ovum. (Not my field, not the latest info; but may this kind of work, in its contemporary forms, be looked to for compassionate future control of feral animals.)

Various such technologies are young and under-resourced, with some precarious implications, problems to be solved, studies to be done. But proper funding for such urgent and critical work in australia appears to be well down on the list below 72 hot-testosterone F-35 strike fighters at \$100 million-plus each (\$44,000 per hour to operate), some new-design submarines now requiring extra billions to make them go, and an enormous second-hand american warship like an exhumed mastodon (I forget how many hundred millions) now found rather unfortunately riddled with rust.



*How many other ecological disasters could be salvaged if we poured our citizens' tax contributions into projects where they rightly belong ?*

*(My daughter's popular t-shirt, given to her by my son:  
'It will be a great day when our schools have all the money they need,  
and the air force has to hold a cake stall to buy a bomber.')*

~ This front line, like so many others, of rational, compassionate application of good science, in a modern crisis zone of biological confrontation:

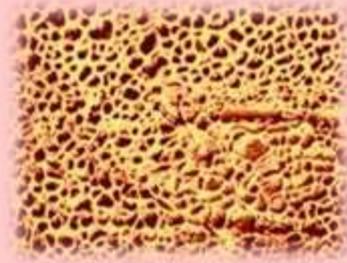
***~ Inviting the cooperation of microbes.***



\*

OUR VIRAL AND BACTERIAL AND PROTOZOAN POPULATIONS are in a state of siege and reactive disorder.

*They are thoroughly disturbed:* our invisible little companions of the eons, the elegant twined populations of families whose elaborate democracy maintains a proper balance-of-power amongst trillions while they surge about their complex tasks.



The apparent static and stolid earth around us is in fact a hallucinogenic-trip-world of rippling living matter: an ants-nest colony of microbial workers seething over every single surface and seeping into every crevice, between every grain of dirt and deep into the earth and its waters.

They interact in circular, weaving cycles with millions of other germs and burrowing micro-creatures sifting, enriching, darkening, carboning, organising soil; cleaning water, circulating in atmosphere, digesting and excreting, recycling the molecules of Life: the ornate, inherent Self-Organisation of Earth Systems.

Their collective motion is like an amoeba under low-power magnification: a pushing spread of fluid pseudo-limbs to explore into the environment beyond, testing and responding and retreating and pursuing. Their soft, multi-species-body is like an amoeboid order of little organelles in matrix, of enzyme packages and mitochondria and elastic bonds and light-sensors and contractile strands and ejector mechanisms; and a kind of sense of body-politic comparable to the power-centre of a nucleus. Self-organising into balance with millions of others.



They are like a single collective organism, in their evolved cooperative symbiosis with each other. Hundreds of varieties work together to accomplish the breaking-up of a salad sandwich fit for enzyme action in the digestive tract. They guard fresh injuries and minimise attack by infective micro-predators. They work and live and die in the soil and water and inside all multi-cellular living things, decomposing and composing and transmuting things like alchemists: which is what they are. They can start with straw and spin it into gold, and then their other-coloured mates can spin it

back to straw again. They will give each other rides, like little trojan horses, to secrete furtive pieces of viral DNA into desirable host cells. Lots absolutely cannot live without each other, and spin a cycle of special waste-products which are a perfect substrate for others to thrive on. Whole multi-racial tent-cities of microbes are built upon any dead carcass, with a dedicated charter of rules and objectives to finish the job; which is accomplished by successive waves of specialists, like dismantling a condemned historic building.



Their balance of power is perhaps like the cellular wave-motion seen in a drop of sperm on a microscope slide: a graceful undulating surge which flows, and pushes, and then gives way before a returning eddy; a ceaseless fluid tug-of-war and testing of strength between tiny motes, each trying for a momentary pre-eminence before exhaustion and retreat, and recouping of energy.



**Microbe groups at peace** are an eddying world of such wave-motion simplicity, of testing each other's fluid strength. This is how they colonise and breed and accomplish digestion, in every single one of us; and cover us against infection-insurgencies and rogue bids-for-power from other bugs. And pursue their losing battle to clean our industrial effluents and break down our throw-away card and plastic containers.

*This is the billion-year evolved balance of working ecosystems.*

And this great, coherent mass-microbe organism will react just like any other composite organism to threat, injury, or assault.

*It will retaliate.*

\*



**We have carved deep fissures in the matrix of unicellular harmony.** We have attacked them constantly with new chemical toxins, with industrial wastes and pollutants, with excesses of salts and nitrates and phosphates and sulphates and heavy metals and hydrocarbons, with the clear-felling and destruction of their ancestral hosts and habitat-complexes, with pesticides and herbicides which destroy their homes and food-supplies, and make space for ancient enemies who can charge in and massively prevail. We have made direct assaults upon their individual identities, with antiseptics and bleaches and heat and irradiation and agro-chemicals.

**Antibiotics** are a special event, like smart-bomb targeting: designer molecules precisely configured to confound or penetrate or disable a specific bacterial cell's protective molecular barricade, by trickery or verisimilitude or pinioning. A specialised non-renewable therapy: dispensed by despairing doctors whose fretful patients demand pills for every sniffle; and wasted with gay abandon in factory mass-production of animals speed-fattened for lavish foods (70% of american antibiotic consumption), provoking the world-wide bacterial resistances so apparent today.



Cholera, whooping cough, diphtheria, tuberculosis, bubonic plague, bacterial sexually-transmitted diseases, herpes simplex, malaria ~ just a few, resurging. Some brand-new escapees: some of them hardened mutants, like methicillin-resistant staph aureus MRSA, triumphantly resistant to nearly all known antibiotics: the peril of modern hospitals. Ebola viruses from the 1970's, AIDS in the 1980's, a resistant gonorrhoea in the 1990's; re-expression of a hideous necrotising streptococcus in 1994. In animals: numerous resisting and resistant strains, cross-species newcomers like parvovirus in dogs,

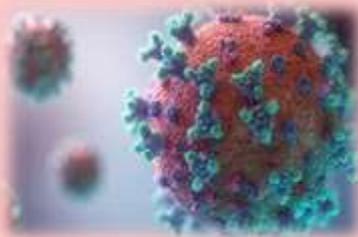
now loose and killing wild seals, sealions and the african hunting dog; and an apparent newly-zoonotic lyssavirus which exploded even as I wrote this, late 1994, and took out fourteen australian racehorses and their trainer in a few short days. Mad-cow disease, pushed into the human food chain by infected beef-cattle, forced to cannibalise their own kind with lot-fed cow-brain-meal; their own brains dissolving vacuolated and crazed. A kind of terrible retribution of Nature upon her deviant human children.



Then as I write again in 2001 ~ the farmers' grim silhouettes before the burning pyres of their exploding cattle, pigs and sheep: foot-and-mouth disease, this infamous grim reaper of millions of fit fine animals to premature slaughter.

And as I write again in 2019 - perhaps 200 million pigs died and slaughtered against african swine fever, new outbreaks spreading in china and phillippines and other south-east asian countries.

Our contemporary human over-population, poverty and war zones have created an enormous demand for vaccines and antimicrobials: jammed city ghettos of chronic respiratory and gut infections, raw open war-wounds packed into crowded emergency tents and huts : appealing for masses of prophylactic and therapeutic doses. And refugee camps literally decades old: three million in the 1970's, 2001 thirty million: crammed stress, sickness, poor nutrition and despair. 2019: now over 70 million people exiled from their homes.



And today, 2020: climactically, most of the whole human world in lock-down to starve out the C-19 coronavirus, a mutant bug broken out from wild-creature hosts and their scythed-down habitats. An awful microbial retaliation for our callous appetites.

\*

**Our microbial companions are on the defensive and fighting back:** the retaliation of an organism under constant attack. Its total body scale is not at risk: not on a planet where in our worst-case imminent scenario, Insects and Microbes will (with relief) inherit the Earth. Our peril, instead, is its massive metabolic imbalance and internal sickness: like a stressed over-crowded animal with colibacillosis, an explosive overpopulation of intestinal e. coli which triggers a metabolic cascade of systems-damages.



\*

OUR SUCCESS IN MEETING WITH MICROBIAL RETALIATION will depend on our recognition of their own microbial mass-injury, and the reasonableness of their recent, reactive attacks. As a collective organism, they do not purposely intend to hurt. When circumstances push some to strike out, it is in their opportunist nature to multiply to the maximum. If we instead create clever and balanced environs for their useful good works, their normal urge for multi-symbiotic action will prevail.



*We will be amazed at their willing powers of delivery to our ailments, when they are wisely approached and invited.*

*But an absolute prerequisite to their assistance is that we turn our full powers of public intellect to comprehending their huge and subtle multi-species pattern on the planet, their powers of cooperative self-organisation, and their stern condition that they be treated with Restraint and Respect.*

\*  
\*   \*

***We have several avenues which Together will relieve the stress upon this beleaguered microbe-mass:***

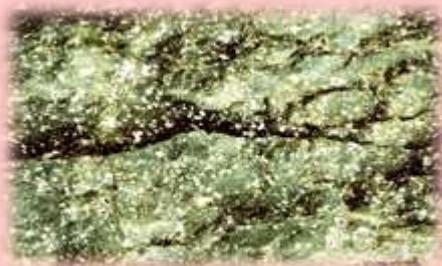
*\* One is to restore to them and to their complex life-cousins the natural, wild habitats of diversity in which to do their benevolent works.*

*\* One is to undertake disciplined, limited and selective use of both direct and indirect antimicrobial agents: to use world-wide responsibility and restraint, to assert our extensive warning knowledge, and refuse the pressure of ignorant or greedy markets to over-use and abuse those pesticidal substances and practices which tear down their microbial worlds.*

***For example:*** *If we cannot produce animals for food cheaply, without squandering our precious antibiotics and our soil weed-and-insect-and-worm-killers, then we must simply be prepared to eat less of them, and pay more for them, as we should. And to look long and hard at the encompassing Shame of tormenting factory-farmed Animals for this indefensible purpose : cheap, self-indulgent, intoxicated piles of meat on our plates two or three times a day.*



*\* One is to evolve our crop and stock-farming practices away from agro-chemicals and monocultures towards the creative commonsense and demonstrable successes of regenerative mixed agriculture.*



*\* One is to discover some self-control and dignity as a species, and undertake immediately to limit our ludicrous, unrestrained, pandemic human numbers : which churn and pillage the whole surface of the Earth.*

***\* Another: is to open up the widest possible Benign Avenues of Microbial Action. To proffer immense arenas of Constructive Metabolism for a mass-creature which loves to work, which loves and understands cooperation and symbiosis and shared construction, and which has knowledge and powers of synthesis and deconstruction and reconstruction and self-organisation of systems which to most of us approach the absolutely magical.***



***Already our micro-organisms serve us in hundreds of industries: their transformative powers harnessed in creation of medicines, nutrients, dairy food production, bio-fertilisers, bio-fuels, solvents; their fermentations in food and alcohol beverage production, in recycling; in food preservation; in extraction and retrieval of metals from soils and sewage; in bio-degrading and decomposing organic waste; in moderating underground water flow; in metabolising and cleaning up our catastrophic oil spills in the ocean, and in innumerable other valuable services. These realms of alchemy which invisibly surround and sustain us.***

*They are no different from us, the Microbe-Being:  
They thrive upon, flourish with gainful employment:  
flourish with some deep gut-satisfaction at good work well done.*

*We have chosen to be blind to the lively, sensitive sentiment of Life and all its passionate Exponents : the unmalicious hyperconscious focus of the hunting dingo, the obvious emotional love and fierce protection of parent animals, the altruistic support of the sick seen in whales, many mammals, and even in some fish ; the scurrying fear and mass-self-protection of termite mounds under threat from storms ; the sense of wholesome health shared amongst a collective Being of micro-animals who have together accomplished the total objective of their tiny lives, lived out their part of the life-web.*

***These little creatures are the great Matrix of our lives' future. And in recognising in their society the same concentrated abreaction that we experience ourselves under assault, we are empowered to stay our hands, and to learn instead to understand and to work with them.***

*They will be a source and willing assistants in our transformation of world processes, agricultural production, and Environmental Care.*

***Ask those who work with them, and love them :  
those who Know them.***



\*

\* \*

WE CAN APPEAL TO GREAT SCIENTIFIC AND METAPHYSICAL ORDERS throughout the privileged world: to focus your magnified vision upon these dawning Modern Plagues, to pour your informed and insightful resources into compassionate projects to rescue people and Life from severe self-injury, and particularly the most discarded of our brothers and sisters on Earth.

And aid our advance into good culture, avert the Earth's metabolic cascade into pathology and collapse of waters, soils, skies, provision.

*Call upon* your sponsors, your governments and corporations, to redirect and deliver the Funds for a World-Wide Emergency Effort.

***Take the initiative, Men and Women of Privilege, Commitment and Magnitude of Mind:*** *You have Collective Powers far beyond your own small self. You need not be enslaved to petty cycles of repeat experiments with rats' brains. You need not waste your clever lives with obedient projects developing private-cryo-freeze for small people too terrified to die or even to live; or big comfort-modules for rich ungainly space-tourists; or designing machines to cultivate the perfect golf-swing.*

*Your minds are too valuable for any democratic government to dispense with. Your collective demands, as a World-Wide Association of Thinkers dedicated to Compassion and Reparation, could redirect the entire streaming of Scientific and Philosophical Endeavour.*



*Insight and intellect are precious attributes - massively co-opted against the Earth today.*

*They should bestow the Highest Responsibility and Self-Judgement :*

***~ because clever Intelligences have a potency and effect far disproportionate to their owners' unremarkable personal scales;***

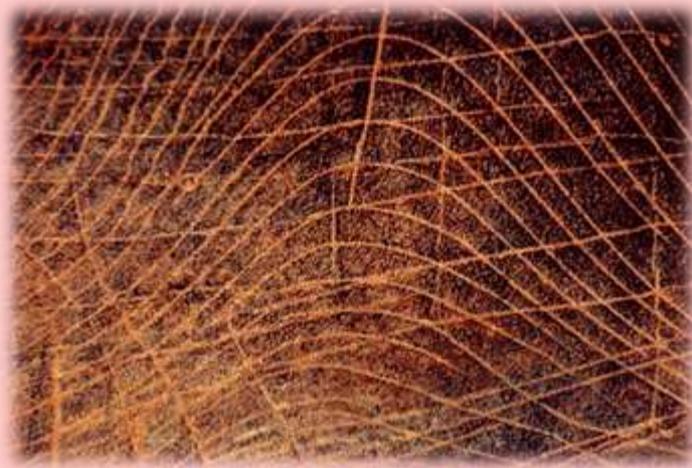
***~ because the Gift of high powers of Understanding, can enable wide and lucid search, and the knowledge that You Can Do something to heal the Earth's sickness;***

***~ because Intellectual Altitude can easily be sold out to Personal Aggrandisement : as we can see in corrupted demagogues and Dr. No's all around us;***

***~ and Brilliance can also duck beneath weak and Impotent Ethics: the cover-story of the Mad Scientist who without blinking pours the full force of his surrendered intellect into engineering a new war-plane or missile-guidance system. Because he feels too gratified, too expended in his bunker, to take that one last step of causal logic: and dare to look at its end-point of agony.***

\*

\*



*sine waves*

***FIND AND HELP EACH OTHER, BRIGHT AND CONCERNED PEOPLE WHO CARE :***

***THERE ARE MILLIONS OF YOU.***

***You are everywhere :*** *Not just in lecture theatres and the antiseptic halls of laboratory institutes, but in education and in volunteer environment resource centres and wednesday night group meetings and alternative healers and solo visionaries at home understanding the music of the universe.*

***DECLARE YOURSELVES*** *in the Journals of your Discipline; tune your digital ears and voices in world-wide cooperation for **the salvation of our life-Foundation, our Earth.** Form associations, write high charters for attainment -*

***~ lay down to the World your Moral Edict  
as to how you will allow, and will not allow,  
Your Brain to be Used in service.***

*You will not be disposed of by your sponsors. A collective wave of directed scientific and philosophical self-declaration can draw with you a groundswell of dedicated parental and public support; and the governments and organisations and institutions of your nation's people must follow their lead.*

***It is time to give thanks for your Gifts of energy, intelligence, learning, and the privilege of living amongst the Earth's open-speaking communities:***

*~ and Speak Together from our highest and finest human Thinking.*



\*  
\* \*  
\*