# ARTICLES

# A Manifesto for Earth

Ted Mosquin

3944 McDonald's Corners Rd. Balderson, ON Canada K0G 1A0 Email: tedmosquin@gmail.com

Stan Rowe

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#### ABOUT THE AUTHORS

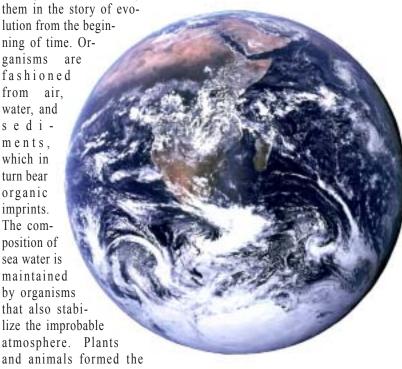
Ted Mosquin has a Ph.D. in Systematics & Evolution from UCLA. He spent 12 years as a research scientist with Agriculture Canada, Ottawa, and has taught at the University of Alberta, and the University of California, Berkeley. He served as editor of The Canadian Field - Naturalist, and of Biodiversity. He is the author or co-author of four books and of some 100 scientific and popular articles on ecology, natural history, endangered species, biodiversity, and environmental ethics. A recent article: The Roles of Biodiversity in Creating and Maintaining the Ecosphere http://www.ecospherics.net/pages/MosqEcoFun5.html summarizes part of the ecological foundation for this Manifesto. Ted has served as President and Director of several national and regional Canadian environmental organizations (More bio details at: www.ecospherics.net/ pages/aboutauthors.html).

Stan Rowe was educated in ecology at the Universities of Alberta, Nebraska and Manitoba. He has spent equal time as a research forester with Forestry Canada, as a teacher at the University of Saskatchewan, and since 1985 as an emeritus Professor. A geo-ecologist and environmental ethicist with a background in silviculture and terrain (landscape) ecology, Stan authored Forest Regions of Canada (1959), and Home Place: Essays on Ecology (NeWest Press, Edmonton, 1990; reissued 2002), as well as numerous articles, book chapters and reviews. Some of his articles on ecology and ethics are posted at www.ecospherics.net. He has served on provincial and federal environmental advisory councils. (More bio details at: http://www.ecospherics.net/pages/aboutauthors.html).

### **PREAMBLE**

Many artistic and philosophical movements have produced Manifestos, proclaiming truths that to their authors were as manifest as their five-fingered hands. This Manifesto also states self-evident truths, as obvious to us as the marvellous five-part environment – land, air, water, fire/sunlight, and organisms – wherein we live, move, and have our being. The Manifesto is Earth-centered. It shifts the value-focus from humanity to the enveloping Ecosphere – that web of organic/inorganic/symbiotic structures and processes that constitute Planet Earth.

The Ecosphere is the Life-giving matrix that envelops all organisms, intimately intertwined w i t h



limestone in mountains whose sediments make our bones. The false divisions we have made between living and non-living, biotic and abiotic, organic and inorganic, have put the stablity and evolutionary potential of the Ecosphere at risk.

Humanity's 10,000-year-old experiment in mode-of-living at the expense of Nature, culminating in economic globalization, is failing. A primary reason is that we have placed the importance of our species above all else. We have wrongly considered Earth, its ecosystems, and their myriad organic/inorganic parts as mere provisioners, valued only when they serve our needs and wants. A courageous change in attitudes and activities is urgent. Diagnoses and prescriptions for healing the human-Earth relationship are legion, and here we emphasize the visionary one that seems essential to the success of all others. A new worldview anchored in the planetary Ecosphere points the way.

### STATEMENT OF CONVICTION

Everyone searches for meaning in life, for supportive convictions that take various forms. Many look to faiths that ignore or discount the importance of this world, not realizing in any profound sense that we are born from Earth and sustained by it throughout our lives. In today's dominating industrial culture, Earthas-home is not a self-evident percept. Few pause daily

EARTH, the dynamo of LIFE, with its swirling clouds, its running rivers and ocean currents, its slow-moving crustal plates and, in the midst of it all, the Organic Dance! to consider with a sense of wonder the enveloping matrix from which we came and to which, at the end, we all return. Because we are issue of the Earth, the harmonies of its lands, seas, skies and its countless beautiful organisms carry rich meanings barely understood.

We are convinced that until the Ecosphere is recognized as the indispensable common ground of all human activities, people will continue to set their immediate interests first. Without an ecocentric perspective that anchors values and purposes in a greater reality than our own species, the resolution of political, economic, and religious conflicts will be impossible. Until the narrow focus on human communities is broadened to include Earth's ecosystems – the local

and regional places wherein we dwell – programs for healthy sustainable ways of living will fail.

A trusting attachment to the Ecosphere, an aesthetic empathy with surrounding Nature, a feeling of awe for the miracle of the Living Earth and its mysterious harmonies, is humanity's largely unrecognized heritage. Affectionately realized again, our connections with the natural world will begin to fill the gap in lives lived in the industrialized world. Important ecological purposes that civilization and urbanization have obscured will re-emerge. The goal is restoration of Earth's diversity and beauty, with our prodigal species once again a cooperative, responsible, ethical member.

#### **CORE PRINCIPLES**

Principle 1 The Ecosphere is the Center of Value for Humanity

Principle 2 The Creativity and Productivity of Earth's Ecosystems Depend on their Integrity

Principle 3 The Earth-centered Worldview is supported by Natural History

Principle 4 Ecocentric Ethics are Grounded in Awareness of our Place in Nature

Principle 5 An Ecocentric Worldview Values Diversity of Ecosystems and Cultures

Principle 6 Ecocentric Ethics Support Social Justice

### **ACTION PRINCIPLES**

Principle 7 Defend and Preserve Earth's Creative Potential

Principle 8 Reduce Human Population Size

Principle 9 Reduce Human Consumption of Earth Parts

Principle 10 Promote Ecocentric Governance

Principle 11 Spread the Message

Herds of Wildebeest and Zebras on the Serengeti Plains of Africa testify to the innate generative capacity of Earth's natural ecosystems. (Photo by Tim Clark, London, U.K. Web site: http:// www.wildlifetravel.net).

### CORE PRINCIPLES

# Principle 1. The Ecosphere is the Center of Value for Humanity

The Ecosphere, the Earth globe, is the generative source of evolutionary creativity. From the planet's inorganic/organic ecosystems organisms emerged: first bacterial cells and eventually those complex confederations of cells that are human beings. Hence, dynamic ecosystems,



intricately expressed in all parts of the Ecosphere, exceed in value and importance the species they contain.

The reality and value of each person's ecological or outer being has attracted scant attention compared to the philosophic thought lavished on humanity's inner being, the latter an individualistic focus that draws attention away from ecological needs and neglects the vital importance of the Ecosphere. Extended to society as concern only for the welfare of people, this homocentrism (anthropocentrism) is a doctrine of species-selfishness destructive of the natural world. Biocentrism that extends sympathy and understanding beyond the human race to other organisms marks an ethical advance, but its scope is limited. It fails to appreciate the importance of the total ecological "surround." Without attention to the priority of Earth-as-context, biocentrism easily reverts to a chauvinistic homocentrism, for who among all animals is commonly assumed to be the wisest and best? Ecocentrism, emphasizing the Ecosphere as the primary Life-Giving system rather than merely life's support, provides the standard to which humanity must appeal for future guidance.

We humans are conscious expressions of the Ecosphere's generative forces, our individual "aliveness" experienced as inseparable from sun-warmed

air, water, land, and the food that other organisms provide. Like all other vital beings born from Earth, we have been "tuned" through long evolution to its resonances, its rhythmic cycles, its seasons. Language, thought, intuitions – all are drawn directly or metaphorically from the fact of our physical being on Earth. Beyond conscious experience, every person embodies an intelligence, an innate wisdom of the body that, without conscious thought, suits it to participate as a symbiotic part of terrestrial ecosystems. Comprehension of the ecological reality that people are Earthlings, shifts the center of values away from the homocentric to the ecocentric, from *Homo sapiens* to Planet Earth.

# Principle 2. The Creativity and Productivity of Earth's Ecosystems Depends on their Integrity

"Integrity" refers to wholeness, to completeness, to the ability to function fully. The standard is Nature's sunenergized ecosystems in their undamaged state; for example, a productive tract of the continental sea-shelf or a temperate rain forest in pre-settlement days when humans were primarily foragers. Although such times are beyond recall, their ecosystems (as much as we can know them) still provide the only known blueprints for sustainability in agriculture, forestry, and fisheries. Current failings in all three of these industrialized enterprises show the effects of deteriorating integrity; namely, loss of productivity and aesthetic appeal in parallel with the continuing disruption of vital ecosystem functions.

The evolutionary creativity and continued productivity of Earth and its regional ecosystems require the continuance of their key structures and ecological processes. This internal integrity depends on the preservation of communities with their countless forms of evolved cooperation and interdependence. Integrity depends on intricate food chains and energy flows, on uneroded soils and the cycling of essential materials such as nitrogen, potassium, phosphorus. Further, the natural compositions of air, sediments, and water have been integral to Nature's healthy processes and functions. Pollution of these three, along with exploitive extraction of inorganic and organic constituents, weakens ecosystem integrity and the norms of the Ecosphere, the fount of evolving Life.

### Principle 3. The Earth-centered Worldview is Supported by Natural History

Natural History is the story of Earth unfolding. Cosmologists and geologists tell of Earth's beginnings more than four billion years ago, the appearance of small sea creatures in early sediments, the emergence of terrestrial animals from the sea, the Age of Dinosaurs, the evolution with mutual influences of insects, flowering plants, and mammals from which, in recent geological time, came the Primates and humankind. We





share genetic material and a common ancestry with all the other creatures that participate in Earth's ecosystems. Such compelling narratives place humanity in context. Stories of Earth's unfolding over the eons trace our coevolution with myriad companion organisms through compliance, and not solely through competitiveness. The facts of organic coexistence reveal the important roles of mutualism, cooperation, and symbiosis within Earth's grand symphony.

Cultural myths and stories that shape our attitudes and values tell where we came from, who we are, and where in the future we are going. These stories have been unrealistically homocentric and/or other-worldly. In contrast, the evidence-based, outward-looking narrative of humanity's natural history — made from stardust, gifted with vitality and sustained by the Ecosphere's natural processes — is not only believable but also more marvelous than traditional human-centered myths. By showing humanity-in-context, as one organic component of the planetary globe, ecocentric narratives also reveal a functional purpose and an ethical goal; namely, the human part serving the greater Earth whole.

Desert ecosystems cover huge regions of Earth. Here pictured are two scenes of the Moiave desert California. Deserts are often characterized by highly specialized deep rooted shrubs, a great many annual, ephemeral plant genera as well as the most unusual animals with unique adaptations for survival (Photos by Ted Mosquin).



From the tropics to polar lands, the presence of mountains has provided unique circumstances for the evolution of novel organic forms, and the emergence of a rich diversity of local human cultures (Principle 5). This is a view of the Valhalla Mountains in B.C. as seen from Idaho peak to the east with the small delta town of Silverton at the base. (Photo by John A.Rowe).

### Principle 4. Ecocentric Ethics are Grounded in Awareness of our Place in Nature

Ethics concerns those unselfish attitudes and actions that flow from deep values; that is, from the sense of what is fundamentally important. A profound appreciation of Earth prompts ethical behavior toward it. Veneration of Earth comes easily with out-of-doors childhood experiences and in adulthood is fostered by living-in-place so that landforms and waterforms, plants and animals, become familiar as neighborly acquaintances. The ecological worldview and ethic that finds prime values in the Ecosphere draws its strength from exposure to the natural and semi-natural world, the rural rather than the urban milieu. Consciousness of one's status in this world prompts wonder, awe, and a resolve to restore, conserve, and protect the Ecosphere's ancient beauties and natural ways that for eons have stood the test of time.

Planet Earth and its varied ecosystems with their matrix elements – air, land, water, and organic things – surrounds and nourishes each person and each community, cyclically giving life and taking back the gift. An awareness of self as an ecological being, fed by water and other organisms, and as a deep-air animal

living at the productive, sun-warmed interface where atmosphere meets land, brings a sense of connectedness and reverence for the abundance and vitality of sustaining Nature.

# Principle 5. An Ecocentric Worldview Values Diversity of Ecosystems and Cultures

A major revelation of the Earth-centered perspective is the amazing variety and richness of ecosystems and their organic/inorganic parts. The Earth's surface presents an aesthetically appealing diversity of arctic, temperate and tropical ecosystems. Within this global mosaic the many different varieties of plants, animals, and humans are dependent on their accompanying medley of landforms, soils, waters and local climates. Thus biodiversity, the diversity of organisms, depends on maintenance of ecodiversity, the diversity of ecosystems. Cultural diversity – a form of biodiversity – is the historical result of humans fitting their activities, thoughts and language to specific geographic ecosystems. Therefore, whatever degrades and destroys ecosystems is both a biological and a cultural danger and disgrace. An ecocentric worldview values Earth's diversity in all its forms, the non-human as well as the human.

Each human culture of the past developed a unique language rooted aesthetically and ethically in the sights, sounds, scents, tastes, and feelings of the particular part of Earth that was home to it. Such ecosystem-based cultural diversity was vital, fostering ways of sustainable living in different parts of Earth. Today the ecological languages of aboriginal people, and the cultural diversity they represent, are as endangered as tropical forest species and for the same reasons: the world is being homogenized, ecosystems are being simplified, diversity is declining, variety is being lost. Ecocentric ethics challenges today's economic globalization that ignores the ecological wisdom embedded in diverse cultures, and destroys them for short-term profit.

## Principle 6. Ecocentric Ethics Support Social Justice

Many of the injustices within human society hinge on inequality. As such they comprise a subset of the larger injustices and inequities visited by humans on Earth's ecosystems and their species. With its extended forms of community, ecocentrism emphasizes the importance of all interactive components of Earth, including many whose functions are largely unknown. Thus the intrinsic value of all ecosystem parts, organic and inorganic, is established without prohibiting their careful use. "Diversity with Equality" is the standard: an ecological law based on Nature's functioning that provides an ethical guideline for human society.

Social ecologists justly criticize the hierarchical organization within cultures that discriminates against the powerless, especially against disadvantaged women and chil-

dren. The argument that progress toward sustainable living will be impeded until cultural advancement eases the tensions arising from social injustice and gender inequality, is correct as far as it goes. What it fails to consider is the current rapid degradation of Earth's ecosystems that increases inter-human tensions while foreclosing possibilities for sustainable living and for the elimination of poverty. Social justice issues, however important, cannot be resolved unless the hemorrhaging of ecosystems is stopped by putting an end to homocentric philosophies and activities.

# ACTION PRINCIPLES

# Principle 7. Defend and Preserve Earth's Creative Potential

The originating powers of the Ecosphere are expressed through its resilient geographic ecosystems. Therefore, as first priority, the ecocentric philosophy urges preservation and restoration of natural ecosystems and their component species. Barring planet-destroying collisions with comets and asteroids, Earth's evolving inventiveness will continue for millions of years, hampered only where humans have destroyed whole ecosystems by exterminating species or by toxifying sediments, water and air. The permanent darkness of extinction removes strands in the organic web, reducing the beauty of the Earth and the potential for the future emergence of unique ecosystems with companion organisms, some possibly of greater-than-human sensitivity and intelligence.

"The first rule of intelligent tinkering is to save all the parts" (Aldo Leopold - Sand County Almanac). Actions that unmake the stability and health of the Ecosphere and its ecosystems need to be identified and publicly condemned. Among the most destructive of human activities are militarism and its gross expenditures, the mining of toxic materials, the manufacture of biological poisons in all forms, industrial farming, industrial fishing, and industrial forestry. Unless curbed, lethal technologies such as these, justified as necessary for protecting specific human populations, enriching special corporate interests, and satisfying human wants rather than needs, will lead to evergreater ecological and social disasters.

#### Principle 8. Reduce Human Population Size

A primary cause of ecosystem destruction and species extinctions is the burgeoning human population that already far exceeds ecologically sustainable levels. Total world population, now at 6.5 billion, is inexorably climbing by 75 million a year. Every additional human is an environmental "user" on a planet whose capacity to provide for all its creatures is size-limited. In all lands the pressure of numbers continues to undermine the integrity and generative functioning of terrestrial, fresh water, and marine ecosystems. Our human monoculture is overwhelming and destroying Nature's polycultures. Country by country, world population size must be reduced by reducing conceptions.

Ecocentric ethics that value Earth and its evolved systems over species, condemns the social acceptance of unlimited human fecundity. Present need to reduce numbers is greatest in wealthy countries where per capita use of energy and Earth materials is highest. A reasonable objective is the reduction to population levels as they were before the widespread use of fossil fuels; that is, to one billion or less. This will be accomplished either by intelligent policies or inevitably by plague, famine, and warfare.

# Principle 9. Reduce Human Consumption of Earth Parts

The chief threat to the Ecosphere's diversity, beauty and stability is the ever-increasing appropriation of the planet's goods for exclusive human uses. Such appropriation and over-use, often justified by population overgrowth, steals the livelihood of other organisms. The selfish homocentric view that humans have the right to all ecosystem components – air, land, water, organisms – is morally reprehensible. Unlike plants, we humans are "heterotrophs" (other-feeders) and must kill to feed, clothe and shelter ourselves, but this is no license to plunder and exterminate. The accelerating consumption of Earth's vital parts is a recipe for destruction of ecodiversity and biodiversity. Wealthy nations armed with

### WHY THIS MANIFESTO?

This Manifesto is Earth-centered. It is precisely ecocentric, meaning home-centered, rather than biocentric, meaning organism-centered. Its aim is to extend and deepen people's understanding of the primary life-giving and life-sustaining values of Planet Earth, the Ecosphere. The Manifesto consists of six Core Principles that flow from ecological reality, plus five derivative Action Principles outlining humanity's duties to Earth and to the geographic ecosystems Earth comprises. It is offered as a guide to 21st Century ethical thinking, conduct and social policy.

Over the last century advances have been made in scientific, philosophical and religious attitudes to non-human Nature. We commend the efforts of those whose sensitivity to a deteriorating Earth has turned their vision outward, to recognition of the values of the lands, the oceans, animals, plants and other creatures. And yet, for lack of a common ecocentric philosophy, much of this goodwill has been scattered in a hundred different directions. It has been neutralized and rendered ineffective by the one, deep, taken-for-granted cultural belief that assigns first value to Homo sapiens sapiens and then, sequentially, to other organisms according to their relatedness to the primary one.

The recent insight that Earth, the Ecosphere, is an object of supreme value has emerged from cosmologic studies, the Gaia hypothesis, pictures of Earth from space, and especially ecological understanding. The central ecological reality for organisms – 25 million or so species – is that all are Earthlings. None would exist without planet Earth. The mystery and miracle called life is inseparable from Earth's evolutionary history, its composition and processes. Therefore, ethical priority moves beyond humanity to its inclusive Earth home. The Manifesto maps what we believe is an essential step toward a sustainable Earth-human relationship.

Wetland ecosystems (top) are more productive of plant and animal biomass than any other on the planet. Their secure presence on the planet made possible the stupendous array of marsh wildlife waterfowl, plants, and invertebrates, living together in complex food chains. No marsh organism could have evolved without these ecosystems that are so dependent on the security of water supply. Bruce Peninsula National Park, Ontario. Photo by Ted Mosquin.

Coral reef fishes (bottom) such as these attest to the high productivity of undamaged reef ecosystems where creative symbiotic processes have prevailed for hundreds of millions of years and involving countless different groups of organisms.

powerful technology are the chief offenders, best able to reduce consumption and share with those whose living standards are lowest, but no nation is blameless.

The eternal growth ideology of the market must be renounced, as well as the perverse industrial and economic policies based on it. The Limits to Growth thesis is wise. One rational step toward curbing exploitive economic expansion is the ending of public subsidies to those industries that pollute air, land or water and/or destroy organisms and soils. A philosophy of symbiosis, of living compliantly as a member of Earth's communities, will ensure the restoration of productive ecosystems. For sustainable economies, the guiding beacons are qualitative, not quantitative. "Guard the health, beauty and permanence of land, water, and air, and productivity will look after itself" (E.F. Schumacher - Small is Beautiful).

### Principle 10. Promote Ecocentric Governance

Homocentric concepts of governance that encourage over-exploitation and destruction of Earth's ecosystems must be replaced by those beneficial to the survival and integrity of the Ecosphere and its components. Advocates for the vital structures and functions of the Ecosphere are needed as influential members of governing bodies. Such "ecopoliticians," knowledgeable about the



processes of Earth and about human ecology, will give voice to the voiceless. In present centers of power, "Who speaks for wolf?" and "Who speaks for temperate rain forest?" Such questions have more than metaphorical significance; they reveal the necessity of legally safeguarding the many essential non-human components of the Ecosphere.

A body of environmental law that confers legal standing on the Ecosphere's vital structures and functions is required. Country by country, ecologically responsible people must be elected or appointed to governing bodies. Appropriate attorney-guardians will act as defendants when ecosystems and their fundamental processes are threatened. Issues will be settled on the basis of preserving ecosystem integrity, not on preserving economic gain. Over time, new bodies of law, policy, and administration will emerge as embodiments of the ecocentric philosophy, ushering in ecocentric methods of governance. Implementation will necessarily be step by slow step over the long term, as people test practical ways to represent and secure the welfare of essential, other-than-human parts of Earth and its ecosystems.

### Principle 11. Spread the Message

Those who agree with the preceding principles have a duty to spread the word by education and leadership. The initial urgent task is to awaken all people to their functional dependence on Earth's ecosystems, as well as to their bonds with other species. An outward shift in focus from homocentrism to ecocentrism follows, providing an external ethical

#### Some Historical Background

This Manifesto provides a unifying framework for earlier environmental/ethical thinking which, though mostly biocentric, shows ecocentric tendencies. Three examples:

- a) The Deep Ecology Platform http://www.deepecology.org/deepplatform.html, developed in 1984 (slightly revised in 2000) by Arne Naess and George Sessions. Although its first four Principles indicate a biocentric rather than ecocentric stance, the Deep Ecology Movement has championed the creativity of all Nature, viewing organisms and natural ecosystems as far more important than simply providers of resources for humanity.
- b) The United Nations World Charter for Nature http://www.oceanlaw.net/texts/wcharter.htm written in 1982. Although it begins well, pointing out that life depends on the uninterrupted functioning of natural systems, it proceeds to emphasize utility for humanity as the chief reason for Earth care.
- c) The Earth Charter http://www.earthcharter.org, released in March 2000, is a praiseworthy environmental statement. Its first two Principles "Respect and Care for the Community of Life" and "Ecological Integrity" are commendably placed ahead of explicit humanistic goals. It links maintenance of biodiversity and the recovery of endangered species to protection of Earth and its ecosystems. In this Manifesto we emphasize above all else the primary values of the Earth.



Barrier islands such as these, created by ocean wave action over eons, make possible the emergence of specialized brackish ecosystems, including nursery beds. Their positive physical role of the barrier islands and similar dune areas is to create protected shoreline wetlands which are among the most productive on Earth.

regulator for the human enterprise. Such a shift signals what must be done to perpetuate the evolutionary potential of a beautiful Ecosphere. It reveals the necessity of participating in Earth-wise community activities, each playing a personal part in sustaining the marvelous surrounding reality.

This Ecocentric Manifesto is not anti-human, though it rejects chauvinistic homocentrism. By promoting a quest for abiding values – a culture of compliance and symbiosis with this lone Living Planet – it fosters a unifying outlook. The opposite perspective, looking inward without comprehension of the outward, is ever a danger as warring humanistic ideologies, religions, and sects clearly show. Spreading the ecological message, emphasizing humanity's shared outer reality, opens a new and promising path toward international understanding, cooperation, stability, and peace.

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Text only file at: http://www.ecospherics.net/pages/ EarthManifesto.html. Text plus illustrations file at: http://www.ecospherics.net/pages/EarthManifesto.pdf The integrity (Principle 2) of savanna ecosystems around the world is profoundly degraded through conversion to human utilitarian purposes. This photo provides an example of a savanna ecosystem that still retains a semblance of normalcy.

