

Earth's story is longer, grander than our human story

by Ralph C. Martin

"In a geological instant, the vitality of earth has plummeted. Dinosaurs were hit by an asteroid 65 million years ago and today we contend with our asteroid"

Sr. Miriam Therese MacGillis, Director, Genesis Farm, NJ

At the end of January, the soft voice of Miriam MacGillis held the attention of youth and elders and men and women at the 31st Organic Conference at the University of Guelph. She's an artist and poet who also embraces farming and provides leadership in her religious community.

MacGillis is firmly rooted in the tradition of Pierre Teilhard de Chardin, Thomas Berry and Brian Swimme. Her story has the ultimate story arch, from Big Bang to Big Impact of humans. Some geologists now call our period in Earth's history, the Anthropocene epoch because we have had so much impact on Earth in the brief few hundred years since the Industrial Revolution.

The great flaring forth of the universe was about 13.5 billion years ago. Two thirds of our story later, Earth was formed about 4.5 billion years ago. Let's call that January 1. By 3.9 billion yrs ago or Feb 18 single cell life developed. It wasn't until 2.5 billion yrs ago or June 11 that oxygen and ozone appeared and then finally, 600 million yrs ago or Nov 12, animals graced Earth. Plants and fungi followed a bit later at 440 million yrs ago or Nov 25 and then the great beasts of pre-school imaginations, dinosaurs, arrived 145 million yrs ago or Dec 19. Creatures resembling humans were late comers at 5 million yrs ago or Dec 31 at 9:44 in the morning.

Agriculture, so crucial to our lives, is really only a blink of Earth's story with its flirtatious entry 10,000 years ago or 1 second before the end of the year. Modern agriculture has only existed for about 100 years, that is 1% of a blink in Earth's history. Earth's self-regulating biological systems were selected over millennia for resilience, delightful diversity and zero waste. It is in this context we can choose how to raise food and live.

Brian Swimme says the one line story of Earth is a journey from molten rock to singing opera. Miriam, the poet, generously described science as a deep contemplative

focus on the outer world. With our gifts as humans to reach out, measure, hypothesize and organize our discoveries into conceptual theories we, the stuff of stardust, have the privilege to know what has become before, how we are now and where we might be going. At this point of Earth's journey, we are Earth, reflecting on herself.

Earth's story is well understood by aboriginals: we are all from stardust and connected to all of Earth. We owe respect to all our relations.

Miriam elucidated three principles of the journey of the universe. 1) The universe is differentiating and diversifying. 2) There is interiority or subjectivity and a self organizing aspect of every scale of being (consider James Lovelock and the Gaia hypothesis). 3) Earth consists of a community of beings. On the basis of this third principle, Thomas Berry called for a system of biocracy (making decisions as if all creatures and entities have a voice) to move beyond democracy.

The implication for our agriculture and food system, when seeing our place in the evolution of Earth, is to respect the precautionary approach to production and processing. In other words, do current and potential methods have negative effects on Earth's self-regulating biological systems? If so, how can we bring our practices back into line with ecological principles?

Ecology is really just long term economics. Sometimes ecological practices benefit short term economics too. For example, cover crops with immediate costs, can be integrated into cash crop systems to improve soil fertility and reduce fertilizer costs in the short term, while improving soil organic matter in the long term.

We've only experienced modern agriculture for about a century. In this time, we've had unusually benign climatic conditions for growing crops, machinery replaced most farm labour and nitrogen fertilizer, with its high energy requirements, became a significant factor in agricultural production. Now about 50% of people depend on nitrogen fertilizer for their food.

Remembering the long term helps us to see the ephemeral nature of our recent accomplishments. As enlightening and innovative as they may be, we do well to live today and in the future with humility and awareness that Earth's story is longer and grander than our human story. We know ourselves and our potential, more fully, within the context of Earth's story.

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