

The Art and Science of Landscape Architecture

Designing a Sustainable Future, by: S. Edgar David

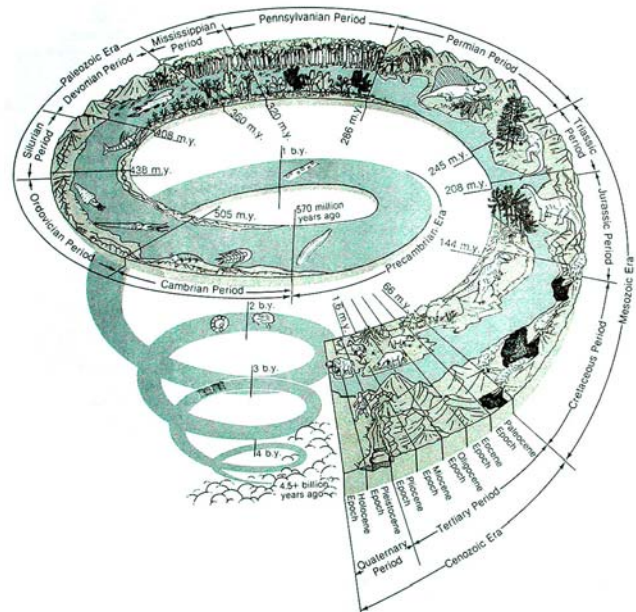
Background

Our home, earth, is a beautiful planet filled with life, plants and water necessary for sustaining life. Our planet earth is uniquely positioned, in relation to the sun, to support life. We usually don't appreciate the uniqueness of the development of life on earth. We usually don't contemplate the 4.5 billion-year history of the earth and the complex evolution of the biosphere that has led to human life in the last fraction of time. It is hard to imagine the building blocks that evolved to create the foundation for other life to follow. We take it for granted. As modern humans we see life through a narrow window of time.

Over the course of time life processes have become more complex and the atmosphere more refined. When algae and bacteria first began to photosynthesize three billion years ago the atmosphere became more oxygenated. Later, forest systems began to cover vast portions of the landmass forming a massive carbon sink and cleansing the atmosphere of carbon dioxide. The stage was set for developing more complex forms of life and eventually human life.

There is no assurance that these systems are here to stay. If we destroy the systems of the earth, systems like our forests and oceans, we undermine the basic building blocks that have evolved to hold up the more complex forms of life. The more we compromise these systems through inappropriate human activities the more we compromise our basic life support system.

Never in the history of the earth have the biological systems been so severely impacted; destroyed, exploited and stressed as they are today. This leaves us with an uncertain future. Generations of people are living with the mis-belief that the earth's natural resources are here for the exploitation of humankind. This attitude toward nature has left us with a deteriorating earth system. The severity of the condition is expressed in the rate of species extinction, which is greater now than ever before in the history of the earth. The biological fabric, which holds together the biosphere and sustains life is coming unraveled.

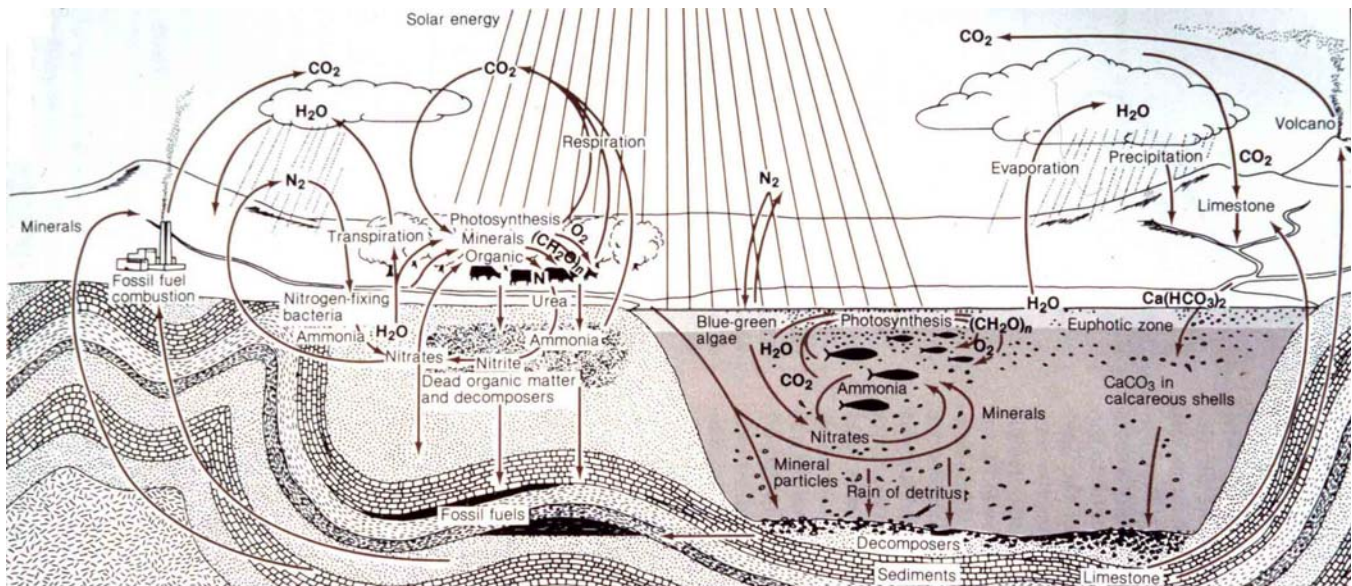


Evolution of the Earth
Earth, Press and Seiver

A New Paradigm

Today a new paradigm for the design of gardens is beginning to emerge from a need to find harmony within the processes that sustain life on earth. Among a growing group of dedicated people there is an awareness of the integral relationship between the quality of life on earth and the way we care for and live on the land. Through the work of James Lovelock and *GAIA* we know that biological systems regulate the biosphere creating the condition to support life, all life on earth. Humankind is an integral part of this great process.

Throughout time, gardens have been a place of refuge from an often brutal environment beyond the garden wall. At other times the garden has been a place to produce food to sustain life through nourishment. Gardens have often been an oasis to escape the intense energy of the sun and find shelter in the shade. Always, these qualities have been achieved in the context of making outdoor spaces and garden rooms that have the intrinsic quality of being enjoyable. Through design the garden has always been a place of salvation depending on the needs of the time and place.



Life Cycle of the Biosphere, Earth, Press and Seiver

Today we understand that our actions have impact far beyond the garden wall. What we do in our own spaces affects the local watershed, which in turn impacts the greater watershed which in turn affects the whole earthshed. In keeping with the past the garden will continue to play a vital role to sustain our well being on planet earth. The future garden will not only be a place to find personal solitude but will also be designed to mitigate the

detrimental impacts the built environment has on the earth's biological and hydrological processes. The gardens of the earth will be spaces that integrate the built environment with these natural processes; designed to give back to the earth that which has previously been taken and to initiate a restorative process.

Gardens and landscapes will begin to restore the forests of the earth, or the otherwise indigenous climatic landscape, thus rebuilding the carbon sinks of the past and restoring the most productive means of photosynthesis and evapotranspiration. The gardens of the future will cleanse the earth's waters that fall on them through the use of bio-filtration in vegetated swales and wetlands. The gardens of the future will promote infiltration of rainwater to replenish the earth's diminishing groundwater. The gardens of the future will be sanctuaries for native plants that will be used to re-colonize disturbed areas once they have been allowed to heal.

In this way brownfields will be turned into greenfields, one step at a time, on a long but essential journey of healing the land and water that sustains life. We are merely at the beginning of this journey. The ideas and initiatives that will transform our future are just beginning to be recognized. The practice of landscape architecture and design on the land is beginning a new revolution. As in the past when a new need has been defined, a design revolution rises to transform the face of the land. This revolution will define the quality of our life and that of future generations on this great planet we call home.



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