CONSEQUENCES, CONSEQUENCES

It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change.

Charles Darwin

Same old same old.
Modern humanan is a species of frantic fanatics who cannot remember what we learned yesterday, and so, fall in the same pits over and over again.

Ever since the Dutch got tulips from Iran, and the British brought plants from all over their empire to Britain, we have mixed up the flora and fauna of all imaginable climes and circumstances, Airplanes see to it that insects and smaller organisms are spread all over the world. Quickly. Flowers from far away we think exotic. Animals from far away exotic, or a pest. People from far away speak a different language, more than likely have a different religion, different customs, diet, dress… But once added to the mix the mix has changed

Every location has its own ecology, its own mix of plants and trees that are adjusted to local conditions of soil, climate, latitude, altitude, and all the unique factors that make a local ecology. When a new plant or animal species is introduced into a new environment I imagine it looking around, feeling dazed and uncertain, but as any living organism, it must survive. Sometimes it finds itself a "niche" as ecologist call it, a place in the whole that gives it what it needs to survive. More often a niche that fits is already occupied, The new immigrant can find itself a similar niche, or push the resident species off the board.

I am deliberately humanizing the story. Probably plants or coqui frogs don't think, but I see the introduction of a new plant species not all that different from a stranger coming into an established community. Ecologies are dynamic wholes, they change, and every change makes a new balance. Natural disasters demand great adjustments, and so do man-made disasters. However, I cannot imagine, however, that rapid changes, whether natural or man-made, would not stress the ability of an ecology to find a new balance. The mixing that we, humans, made in recent times visibly stresses ecologies' ability to adjust. Before a new balance can be reached, new elements -- species, circumstances -- come in to make new changes. That is true for plants and animals, and also for human ecologies.

Once upon a time what was a nice potted plant in Brazil, with extraordinarily beautiful flowers in royal purple and bright red, was brought to the little village of Volcano, on this island. Maybe the plant was put outside, or someone broke off a piece and threw it outside. However it happened, the plant got outside and flourished. More than flourished, it covers trees and is now so widespread that thinking of eradication is useless. It does not seem to harm the trees it climbs in, and the flowers are indeed extraordinarily beautiful.

More recently a tiny little frog was brought to this island, from the Caribbean, I've heard, that found an ideal home here. No natural enemies: it multiplied rapidly. The coqui frog does not harm anything but has a very loud voice. In areas were there are thousands of coqui the noise, apparently, is unbearable to some humans. Now we want to eradicate it.
Lately a tiny mite was found to kill bees, which not only means we might have to do without honey, but plants that rely on bees for pollination may not survive.
All these were accidental mixes. In addition, we have also deliberately introduced species for a variety of reasons.
Whether we humans planned the mix or not, the ecology must adjust.

We in the United States continue the strange idea the first settlers had, that they had come to an empty land. This continent was far from empty, of course. It had its share of unique plants, animals, and people, who lived in live ecologies. The newcomers almost eradicated buffalo, and tried their best to eradicate "Indians." The Indians were not eradicated, there are still (some) Buffalo, but the new dominant kind of humans continued to pretend that the land, its rivers and mountains, was empty, nothing but resource for humans to do with as they pleased. We did our best to make nature, as they found it here, to conform to our ideas of what nature should be. We changed the course of rivers, we cut the top of mountains, we covered large patches of earth with concrete but forgot, or ignored, that everything we do to an ecology has consequences. Until the consequences hit us where it hurts.

We have lost the ability to think ecologically. We have lost the ability to think of the natural world as a complex whole, where if we force one change, the whole is effected. The nearest model that comes to mind is a spider web. If we touch one strand, the whole web moves. But ecologies are much more complex, imagine a three dimensional web. Our so-called civilization has forgotten complex wholes, it tells us we have to spell out all the elements, name the most minute variations, so that to us, now, wholes become the sum of separate things. Seeing only the pieces it is easy to ignore consequences. There are *always* consequences.

Native Americans thought ecologically. All Our Relations, they said. And all our relations are a circle, all part of the same whole. All the people, but also the animals, plants and trees that I relate to, one way or another, are connected and part of a whole. We relate to the family that raised us and then with the family we form, we relate to the plants and animals that feed us, that are around us, that we admire or that we consider a weed or a pest. We relate to the weather, the sun, rain, wind. The trees that give shade or provide wood for burning or building are our relations. And all our relations are connected, one part with every other part of the whole.

Scientists think that local ecologies changed slowly in the past. But with what we call progress has come a faster and ever greater change in the ways we live. Mixing species is behind many of the changes. Imports inevitably have an impact on the “whole” of an ecology.

Hawai'i, isolated in the middle of the Pacific ocean, has never had large animals, and perhaps because there were no grazers, there also were no plants with thorns. Now there are domesticated large animals and a variety of plants with thorns. The great majority of species that now form the ecologies of these islands were immigrants: brought in, or sneaked in.

Imagine: slowly over thousands, millions, of years a volcano under the ocean grows bigger and taller until its top pushes above sea level. Birth of an island. Land, but at first nothing but raw rock. So far from any land that few seeds will reach here. But over many thousands of years, the wind and currents in the ocean bring seeds; a few seeds grow. Slowly, very slowly at first, dead plants make soil. And now and then a storm brings a bird, or the ocean brings a floating tangle of wood that carries some small life forms. A meager cover of Life is spread over the islands. Coconuts float, are cast ashore, grow coconut trees. It all takes time, more thousands of years to become a simple ecology.

Until people came. Perhaps two thousand years ago intrepid seafarers from islands four thousand kilometers, 2500 miles, south of us came to these islands. They must have found fairly bare islands, not much diversity of plants and animals. They probably brought coconut, taro, maybe sweet potato, some other plants and dogs and pigs. The seafarers survived, multiplied, eventually spread to other islands of this group. Eleven hundred years later another group of people came, from Tahiti. They almost certainly brought more plants and animals. But the islands remained very isolated the ecologies of the islands remained fairly simple, and because of a relative paucity of different species, not strong. But, the Hawaiians lived, as all indigenous societies, in a sustainable ecology. Of course—they survived.

Then, in 1778, Captain Cook “discovered” these islands. A few years later other adventurous men found the islands, and before long,there was a small but growing population of westerners who made Honolulu home. These first settlers brought diseases: the common cold, measles, syphilis, tuberculosis, many others. Because the local population had never known and so had no resistance to these to us common diseases, 95% of Hawaiians was eradicated in 80 years. Newcomers came, who of course wanted plantations, so they imported workers. First from China, Japan, then the Philippines, Korea, from almost anywhere and

everywhere. These imports brought other imports, plants and animals that had never been here. The ecology of these islands suddenly, and very dramatically, changed. Almost all the flowers our Tourist Bureau proudly displays as “typically Hawaiian” are imports. The beautiful girls on posters and postcards are rarely Hawaiian, but mixtures. The twentieth century must have been the century of mixing. Mixing, plants, animals, and people.

Sustainable replaced with “progress,” not sustainable.

We, master movers, are indignant that the casual importation of a nice little bird (cardinal) is said to have caused the demise of many species of native birds. Some of us, in some of the Hawaiian islands, are distraught because a thumbnail sized frog with a loud voice has had a population explosion. It is said that in some areas the combined voices of “millions” of these *coqui* is deafening. We have a few coqui here, but we live with them. They are not many and they move around. The chickens eat them, or their eggs, when they find them. We also have some very undesirable trees, that we pull out as they sprout up or cut when they have grown big enough to cut. But we have found it to be not only easier but much more pleasant to live in nature as it is, Every now and then my western self sees a plant that for whatever reason I think ugly, useless, an eye sore. My hands go to a tool to root it out. Now, usually, I remember that if I remove that plant, another will grow in its place. I tell myself: *live with it, appreciate the mix, the marvel of nature’s chaos.*

For a long time now our only response to sudden population explosions of plants or animals has been: kill. Spray poison. Introduce an animal that will kill the plant, or introduce a clever disease that kills only the one kind of tree that we don’t like. We have never been very successful in any of these projects. The disease either does not work as expected—it kills the wrong tree—or there is "collateral damage" that the scientists had not foreseen. We discovered very quickly, for instance, that a chemical powder dusted on the leaves of plants kills coqui frogs, but even a little rain washes the powder off the leaves, and this is a rainy climate. The Legislature votes millions of dollars each year to dust more areas with the poison. It kills a few coqui. They are smart enough to move; they thrive elsewhere. Then there is a tree that has magically appeared here that is known to have displaced forests in Tahiti. Millions have been spent to eradicate the bad tree, so far without result.

It seems, we cannot change our thinking. We are raised to think that we are in charge of this planet. It is we who decide what is good or bad, and bad needs to be removed, eradicated, killed.
I cannot help but notice that Nature tells us again and again that we are not really in charge at all. Our obsession with “control” makes us blind to notice that force

does not work. Force, always and inevitably, begets counterforce. Plants, animals and people fiercely resist eradication, “ethnic cleansing” is the new word. It almost never works.

Eradicating coqui frogs is probably impossible, and any attempt to kill them almost certainly will cause more collateral damage than we had foreseen. The few coqui we have here call each other every evening, joining crickets and bull frogs at the pond. Last year I taught first one, then another coqui to sing co-qui-qui. Now, many coqui generations later every now and then I hear a coqui-qui. I enjoy the evening concerts. After 9 PM they are silent; occasionally one calls and is not answered.

What we could learn from plants and animals also applies to people. The United States is a country of immigrants. The first immigrants, strangely, saw the continent as empty and therefore theirs for the taking. For centuries the immigrants eradicated native animals and people. However, people who were here before refused to be eradicated. Then, as all other colonials did, the immigrants imported people to do their dirty work. Again, surprise, these imports refused to be kept down. Now new immigrants who are willing to do today’s dirty work, are considered unwanted by some of the descendants of earlier immigrants. We never learn it seems..

Force inevitably and immediately brings counter force.

But of course we, humans, know better. We are the boss, the owner, the power on this planet. We even imagine that we can overcome laws of nature with overwhelming power, “shock and awe.” And every time, over and over again, it is the collateral damage that bites us. Worldwide, Man has waged wars against forests, ending up making deserts. Man cut the tops off mountains to get at coal. We changed the course of rivers. And everywhere our wars on nature have caused collateral damage that hurt us, humans. Eradicating as many species as we do today threatens the planetary ecology, and so ourselves. Changing the face of the planet, is changing the climate, which at a minimum *challenges* our way of living. But we continue to think we know better.

Our efforts to eradicate what we don’t like is called asymmetrical warfare. Twenty million dollars a year to eradicate a frog the size of my thumb nail. Pitting a modern army against “insurgents.” A modern army with uncounted airplanes, manned and un-manned, to fight not another army, but people who make home-made bombs. The collateral damage is always greatly more asymmetrical than the cost of the war machines. But Man is stubborn. If at first you don’t succeed, do it again, apply more power, and always, inevitably, making more counter power. What did not work yesterday, we do again, but more so. If this chemical

does not work, we use a more poisonous poison tomorrow. More airplanes dropping more lethal bombs. We destroy not only the land where the enemy lives, but our own country. We seem unable to learn. We convince each other that if power does not work, we must use more power.

It does not take a prophet to predict that the end, this time, will be the nuclear eradication of who we call terrorists. And we will be the collateral damage.

Where is our common sense?

Common sense comes from being aware and awake. Common sense is knowing that you nurture what you want to grow, rather than kill what you don't like. Common sense, in the end, is knowing that Man, in fighting nature, can win all battles except the last, as Thor Heyerdahl said many years ago. Common sense is straight thinking. Common sense is considering consequences.

But we assume—we don't even think about it—that of course the way we think is the only way to think. It is not easy to think differently. Modern man thinks that with force I can force another to do my will. And if he doesn't he is enemy and must be killed. We think that is normal; we cannot think any other way. We‘ve known and preached for at least 2500 years "Thou shalt not kill." But for the same more than 2500 years we have killed in the name of the God who told us those four simple words.

When I bring a new species of anything, plant, animal, human, to my garden, it will have an effect. If I cut everything to make a lawn, I create an empty space for other things to grow in. I must expect that. If I use pesticides and herbicides to "control" the piece of ground where I want to grow a lawn, the chemicals will cause collateral effects. Always; inevitably. If my country makes war, the "enemy" will fight back. Overwhelming force will just make the enemy more inventive, and all his neighbors will join in fighting us. Asymmetrical wars cannot be won; haven't we learned that by now? Perhaps no war can be won. All attempts at eradicating an unwanted plant or animal species have consequences that are worse than living with the unwanted species.

All this has nothing to do with morals or morality, it is a law of nature. If I force ever more air in a tire, it will blow up in my face. If I force a fluid through a small hole it will spread as a cloud of vapor. If I kick a stone, the stone will kick my toe. Force >< counter force. Violence begets violence. Modern Man thinks he knows best.
We weren't always so shortsighted.