Hey, Who are You Calling a Weed?

Conversations with the Most Poisonous Plant in the World

by Donna Marlatt

Change the way you look at things,
and the things you look at change.
~Wayne Dyer

Recently, I took part in starting a small agroforest on a section of cleared property. I prepared the newly excavated landscape, pulling any unwanted existing plants, then applied what I thought was a good layer of mulch. Next came the planting of young fruit trees, along with supportive shrubs and edible ground covers. Wiping dust and soil from my forehead and hands, I walked away crossing my fingers for a good combination of rain and sunshine. I revisited this area day after day, monitoring and watering as needed. Very quickly it was easy to see little green castor beans (also known as castor oil plant) sprouting all over, their dormant seeds having been awakened by the disturbed soil. In contrast to what I had planted, the castor bean seemed the fastest growing and the fastest spreading, and, of course, one plant that I did not want! ... or so I automatically thought. The term “weed”, an unwanted, nuisance plant, entered my mind. As I mechanically reached for the first, guilty-as-charged castor bean, some questions immediately arose ... *For what solid reason do I know this plant is not useful here? What do I know about this plant I am labeling a weed? If this plant could speak, what would it be saying to me? What is its role in this bigger picture we call an ecosystem? On a grander scale, do plants and I lead separate lives or do we actually have roles together?*

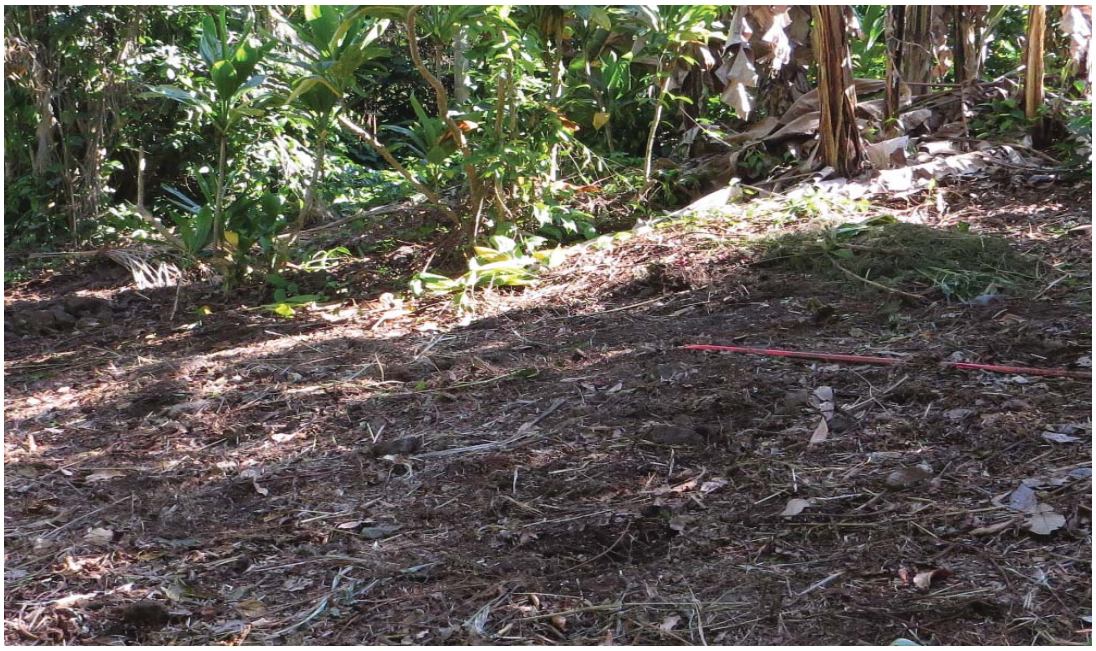
Much (to do) About Nothing?

Recorded knowledge of living things today can have a separated, individualistic and object-oriented feel to it...a liver does this, a foot does that, the amount of vitamin C in an orange is some healthy amount. If I truly look at the world around me, isn't it much more of an all-encompassing organic process, serving much more than me? It's as if this planet is one huge amoeba living and breathing in one big glob, yet all its pieces are functioning, cooperating and thriving as one large organism (the concept known as Gaia). How else could it be? If all this organic activity wasn't successful, it seems that life would have burned itself out eons ago. As much as disease and death can lead to suffering, those conditions are also a necessary part of life... letting go, allowing space for new growth to take place. Interestingly, just like the fate of a plant being pulled from its life support, we don't have a choice in how we leave this physical world. Life is a giving and receiving

system. This castor bean is possibly serving a purpose much more than I can see. I'm not sure I can justify pulling out this so-called weed. Maybe what I need to do is nothing at all, however, there also could be some consequences:

> The reason that man's improved techniques seem to be necessary is that the natural balance has been so badly upset beforehand by those same techniques that the land has become dependent on them.
> (Fukuoka, 1978)

Masanobu Fukuoka, author of *The One-Straw Revolution*, has a very good point here. When I prepared this site based on what I wanted, I severely damaged this area's natural support system ... unwelcome plants pulled up, dug up ... exposing soil to the elements where vital nutrients can dissipate quickly and, depending on weather conditions, releasing any moisture the ground was holding.



One corner of the newly prepared site. I provided a mulch layer over the top (not shown), pretending to be that natural process which would, over time, scatter decaying organic material that would protect and feed the ground underneath. The use of an ō'ō bar (mid right) was required for removing the more stubborn, deeply rooted elephant grass. What are the effects of my drastic actions to this area?

It's as if the wisdom of an ancient organic being knows its body needs mending and willfully responds. Hidden in living matter, lying dormant deep in the soil, the castor bean's seeds established fairly quickly, covering up the bareness like a

bandage on an open wound. Interestingly, castor bean had not been that predominant previous to the site's clearing. It acted as if it had a call-to-duty, waiting for the perfect opportunity for its vigorous life to have purpose.

“Undesirables” that had been removed from the site - elephant grass, desmodium and other vines - continue growing on the outskirts. The mass of green vegetation in the foreground is castor bean (Ricinus communis) *which sprouted in as little as a week's time. If this area had been sheet mulched more thoroughly, the castor bean may not have been so vigorous. I'm now wondering if sheet mulching for all cases is such a great idea? A gardener might think, “a weed! I must eradicate it!” However, my current state of mind is to not be so reactive. It seems the castor bean is doing a good job (for now) at keeping the other undesirables out of the site. The synchronized germination of the castor bean seems to be serving as a bandage, preventing erosion, holding water and nutrients, and shading bare ground where moisture could quickly evaporate. Let's not forget the all important microorganisms living in the already existing organic matter, which also play a huge role in plant and soil health and benefit from the castor bean's seemingly protective nature.*

Castor bean, along with some of its quickly growing neighbors - grasses, bitter melon and other unidentifiables - seem to have a mission together. Instead of coming from the fearful “weeds are going to take over the land and rob me of my food!”, I am now seeing the castor bean working in liaison with the environment playing the role of a pioneer species, a plant that quickly comes into disrupted ground. The castor bean seems to be cooperating and collaborating with other

species, holding soil in place preventing erosion, growing rapidly creating abundant carbon material, and bringing water and nutrients closer to the surface with their root systems where other plants in their fragile new growth can also benefit. This indicates the castor bean is actually helping other plants become established and not behaving like a weed at this point.

Two varieties of Okinawan spinach (upper right and lower left) growing well with castor bean (upper left). Notice the castor bean's growth makes a dense understory which, on hot days, protects the soil underneath and nearby, reserving any existing moisture while also fostering a humid environment. If I remove the castor bean now, during the coming dry season the newly installed spinach cuttings may wilt and require frequent hand watering. However, allowing the castor bean to grow too tall may eventually shade out the spinach entirely. I am hoping that the spinach will serve at least two functions, (1) a ground cover that (2) I can eat. I definitely will not be eating the castor bean! It's seeds are highly toxic (CDC, 2013). Wherever I have been involved in rearranging habitats, I have a degree of responsibility in maintaining it. A good place to start is practicing non-biased observation (i.e. do these plants seem healthy living next to each other?) and developing a healthy balance of cooperating with the natural processes. This may result in the need to take action on the castor bean if I see indications of it playing a detrimental role to the other plants (i.e. shading out its neighbors or them showing signs of chlorosis or stunted growth).

Plants, the Silent Communicators

Signal transmitted
Message received
Reaction making impact
Invisibly

Elemental telepathy
Exchange of energy
Reaction making contact
Mysteriously
"Chemistry" (Rush, 1982)

A dog wags its tail, telling a visitor it's ok to approach. A baby cries when it needs to be fed. Two people meet, conveying messages, spoken and unspoken, via a handshake. Yet communication happens among organisms whether or not it can be physically seen, heard, or felt. If it weren't for the activity of communication, no species would exist. From a biological standpoint, cells are frequently communicating (known as cell signaling). Individual cells signal each other, obviously doing this in cooperation and participation, creating an environment which eventually leads to life (or end of life) of an entire organism.

Signals can be received as intentional, misconstrued, or even ignored, depending on the relationship, receptivity and capabilities of the parties involved. No matter how small or large the organism, some kind of communication is happening with all living things on a 24/7 basis whether or not we are aware.

Keeping the big picture in mind, my attention right now is on a plant I've labeled a weed. What do we know today about the castor bean's ability to communicate, and could it be trying to communicate with me? I found that recent studies show that plants can see through their growing tips, have the ability to smell, hear, feel (physically) ... and even remember (Chamovitz, 2012). Plants have these similar capabilities not through sensing organs, but via chemical receptors. They can distinguish colors, the order of which they see those colors, whether it's day or night and are capable of measuring the length of the night. Both short-term and long-term memory capabilities have been shown to exist in plants. For example, a venus fly trap's knowledge of when to close on its victim depends on the precise timing (within twenty seconds) of when hairs on its leaves have been touched.

Is the castor bean aware of my presence? Does it have emotions or consciousness? The jury is still out on this highly debatable topic. The theory right now is that

plants cannot have emotions or be aware because of lack of a nervous system or a brain (Chamovitz, 2012). I find this a very presumptuous and limiting point of view. Why not treat plants as if they do have awareness instead of the other way around? Studies are already revealing certain abilities do not require organs such as eyes, ears, nose, etc. All that is possibly required for these functions to occur is a chemical reaction producing an electrical impulse being transported by organic matter. If I'm not imposing a belief on anyone, what harm can come if I approach plants with a conscientious, compassionate attitude? The key for me may be to stay aware of my own healthy state of mind, taking care in not creating an irrational environment of dysfunction.

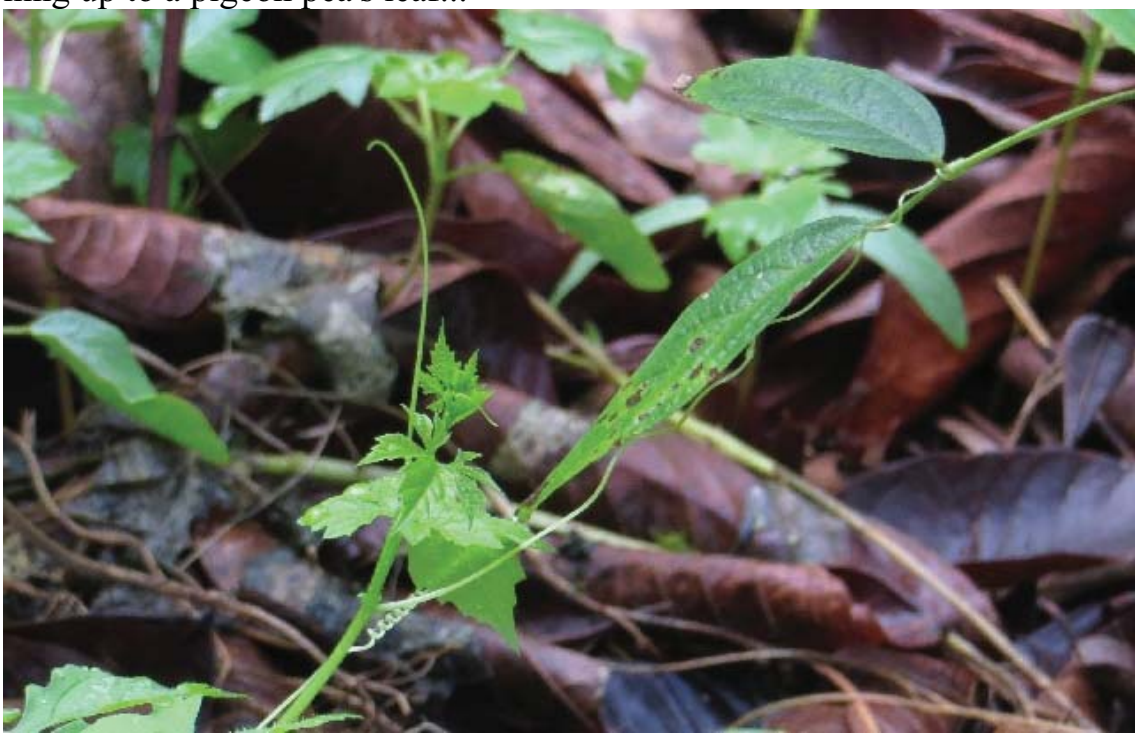
Re-awakening of an Ancestral Memory

Obviously, there is more to the castor bean and its surroundings than just the specifics I can see, read or hear about, and interpret with my own mind. There is much written about my Native American ancestors having a very close relationship with their natural world. They did not need books, internet, universities or scientific studies informing them about their environment in order to live successfully with the land. From what I understand, my ancestors were very good at communicating with their natural habitat ... and I don't mean just with their physical senses ... they somehow intuitively knew when and how certain events were going to happen in their natural world. Call it a very highly developed intuitive knowing. This enabled them to thrive in their day-to-day living, having time even for social gatherings. Indigenous societies seem to hold the Earth and all its natural inhabitants in very high regard. These societies had a relationship of respect and an attitude of compassion with their natural world, yet they did not claim their way was perfect. They knew that it was their natural world that ultimately gave them life.

I begin to realize that the well-being of this environment which provides me with food, water, and shelter, depends largely on my communication with it. What messages can I receive before I, in a self-serving manner, tell this habitat what I need or want? Combined with the scientific knowledge that plants may sense me in their vicinity (and possibly my intentions), can also the memory of my ancestral abilities be re-awakened? I wanted to test this out...

One morning, I visited the new agroforest site with the intention of just being present and open to whatever forms of communication I received. Rain had fallen throughout the night and into the morning. All the vegetation was glistening with reflective raindrops. The fruit trees, spinaches, pigeon peas, and yes, the castor beans, all looked healthy together. Immediately my mind fell into the habitual

pattern focusing on individual plants, isolating them from the bigger picture, studying and analyzing them in their every detail. I reminded myself of why I was here this time ... not to just see with my eyes and analytical mind, that which quickly places objects into orderly labels and categories ... but to be open and receptive to processing information via other means. So I just relaxed, letting this relentless left brain thinking fall into the background. Soon I felt the energy shift throughout my entire body. Hard to describe, but in a few brief moments, vibrational waves of expansiveness pushed and pulsed against the inside of my skin until what felt like a breaking through ... to include, join up or mesh with the rest of the environment. At that point, I did not know where my body ended and my surroundings began. My eyes saw painted waves of different shades of greens, browns, yellows, all melting together on a living, moving canvas. I took a deep breath as a sort of checking in of the physical form, feeling my lungs fill up with a heavy dampness, and just as quickly, a cool breeze relieved me of the air's humid oppressiveness. Have you ever had that feeling of someone staring at you from a distance? That feeling made me look over my left shoulder and down close to the ground, my eyes immediately focusing on the tiny tendrils of a bitter melon reaching up to a pigeon pea's leaf...



A bitter melon's (Momordica charantia) *tendril reaches up and attaches to a branch of a pigeon pea* (Cajanus cajan). *Interestingly, the pigeon pea is a crop I planted, but the melon came up of its own accord. If the bitter melon has capabilities like a dodder* (Cuscuta) *then it selectively sought out the pigeon pea based on being able to smell it (Chamovitz, 2012). It seems it is at least able to see the pea or else it couldn't make contact. Is there a relationship we do not understand yet*

between the pigeon pea and melon, where the pigeon pea perhaps bent down and invited the melon's attachment? Studies are still inconclusive as to the nature of plant senses and level of communication between plants and its surroundings. For example, studies still have not been able to prove or disprove if a plant is aware ... having consciousness ... which will be a huge conundrum for the human race if this is ever proven true.

Balancing Doing Nothing with Doing Something

I do not yet know the significance of witnessing this "bitter melon meets pigeon pea" instance. I do know my attention was called to that particular scene. Perhaps at the moment I am unskilled at knowing what these plants are saying and what their true needs are, if any. What I learned here is to stay open-minded enough letting information come to me in any form that it may. For now, the castor bean, all its neighbors and I have a working relationship together, along with my growing understanding of them. My position now on the new agroforest site is to not just quickly label what I see happening, but to take note from all of my senses, especially what my intuition tells me, what feels right for the greatest good. For now, I do not think the castor bean is causing any major harm until it reaches a growth state where the other plants may show signs of suffering. It's wise to remember that the castor bean's seeds can be fatal if eaten (CDC, 2013). Therefore, I would not want this plant reaching maturity so it can disperse any new seeds, since there are animals on the property that may eat them accidentally.

If the title of this article sounds defensive, then maybe it's indicating that plants need to be approached with more compassion, considering it just can't get up and run away when we automatically call it a weed wanting to eradicate it. As I stay open-minded knowing that information changes all the time, whether it be proven by science, by my own intuitive nature, or even by some new wave of insight not yet proven by any mode, this knowledge cannot be ignored but must be carried forward with responsibility. The castor bean reminded me of an important lesson, not just regarding plants, but about life in general. It is that knowledge from external resources is useful as long as I am not running on automatic pilot, disengaging me from life. Trusting my own intuition is even more valuable. To learn by my own observation, trial and error, means I have relationship with that which is around me, creating and participating in a more fulfilling life.

I am not separate from nature, I am nature. To understand this means I function as part of the whole, not isolated from it. I know not to bite the hand that feeds me. This is why I feel compelled in taking care of the natural world with respect and gratitude, knowing that it has been, and always will be, taking care of me.

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Finally, mahalo nui loa to Hawaiʻi, for allowing my presence and the experience of land and people ... and to Earth, "Gaia," for this gift of an experience called life.

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