



Nectandra Institute

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Nectandra Cloud Forest Garden is Ready for Visitors

"We need three years to get the Garden ready", said chief horticulturist Arturo Jarquin in the Fall of 1999. Wiser to schedule slippages, I guessed less optimistically at five years till opening, although I was secretly hoping for four years. Right or wrong, we are all thrilled to have the last of the necessary permits firmly in hand this past October, just a few months short of our 5th anniversary. Nectandra Garden is born.

With the exception of the contact with a few local businesses, governmental agencies, and the handful of visitors, Nectandra has had a very quiet, busy and gestational existence with minimum publicity. Yet, our low profile did not go unnoticed. Over time, we could sense the growing curiosity of neighbors and passers-by. Officially on all the documents, Nectandra is in the educational ecotourism business. The word ecotourism on our permit applications conjured up a large hotel, restaurant and parking lot. Instead, all the visitors could see after five years is a parking spot for a few cars but with beautiful foot paths leading into the forest. The neighboring businesses were surprised to hear that visitation will be limited and wondered the wisdom of this policy. The local environmental agency pondered over our decision not to use available exotic plants for landscaping. "It is perfectly legal", they helpfully clarified for us. The Nectandra Garden, as a project, has remained an enigma for most. Slowly over time, however, the news seeped out that the Garden is a beautiful and unique place. We noticed the increasing frequency that the architects, engineers, vendors, inspectors, deliverymen, etc. arrive for their appointments accompanied by others (colleagues, friends, family etc). More recently, conservation-minded organizations from neighboring communities wished to visit and to learn about our project. The local grapevine is growing and reaching out everyday.

We still have no concise way to describe it 60 months after conception. Nectandra Garden fits no common description. For lack of definition, we call it a botanical garden when asked, but

most botanical gardens feature plants from far away and exotic places. The plants (and their ancient ancestors) in our Garden have never set roots in foreign soil. Sometimes, we refer to it as a horticultural garden, thereby putting the emphasis on cultivated garden plants, but that too is highly inaccurate. Most of the plants are wild and have never encountered human hands except for those of our gardeners. Our botanic design accents are striking in form, foliage and flowers, and yet, only Mother Nature has had a hand in their genetic selections. With a few exceptions, they are the progenies of millions of years of selection, the handiwork of natural pollinators and the survivors of harsh natural selection. In short, Nectandra is a display of live flora (slightly rearranged for display purpose) and *faunain situ*, a celebration of plants and animals in their native cloud forest.

The most frequently asked questions concern our logo and name. What (or who) is Nectandra? How do you spell it? Why the name? Our standard short answer is "Nectandra is a tree in a family related to wild avacadoes. It is a food source for many birds and insects in the cloud forest; it is therefore a symbolic reminder of the importance of the cloud forest in sustaining many kinds of life." The standard long answer is "Nectandra is the second largest genus (114 species) of trees in the *Lauraceae* family. *Nectandra*, together with the related genus *Ocotea*, makes up more than 600 species of tropical trees. *Nectandra* and *Ocotea* fruits, both relatives of our domesticated avacado (*Persea americana*), are nutritious and rich in oil. (I can personally attest to the oiliness and avacado-like texture of the *Ocotea* and *Nectandra* fruits. With a little effort, I can see them as appetizers used in the manner of olives.)

Who will be our visitors? Hopefully, anyone interested in plants, animals, nature, ecology, environmental issues, and the general well being of planet Earth. Costa Rica hosts millions of foreign visitors, mostly North Americans. Three quarters of them will drive by our front gate on their way to Arenal Volcano, a seismically active tourist destination.

Visits to the garden will be by reservations only. The number of daily visitors will not exceed 50, in small groups of fewer than 10 each. The visitors will enjoy 3-6 hours of walking through secondary and primary forest on well designed trails with our naturalist guides. Interspersed in the walk will be a refreshment break and short presentation(s) on various subjects related to ecology, biology and conservation of cloud forests. At the end of the walk, the visitors will have the chance to visit current scientific displays of live fauna and flora of the forests, enjoy the forest-inspired artwork at the Galeria or a meal using local ingredients at our café. These facilities and the garden are for the exclusive use of our Garden visitors. The pace, distance of the walk and topics

of the presentation can be tailored by prior arrangements to the visitors' interests. The Garden will also host workshops and small conferences on request. Profit (we are hopeful) generated from the garden operation will be used in large part to support future education programs and ongoing scientific field work.

Those fortunate few with interest and time to explore Nectandra will have the opportunity to be touched by the exuberance of life in the cloud forest, to experience the overwhelming sense of peace under the canopy and the humbling recognition that *Homo sapiens* but one denizen in an immensely varied world. A walk through the forest is not a passive experience, for the forest can "speak" with a voice that leaves an indelible effect on one's spirit. Dr. Ann Gallie, Biology faculty at Laurentian University who visited Nectandra with twenty students and faculty on Valentine's day 2003, described it most eloquently:

"I never used to think much about beauty. It was something unpredictable, easy to recognize and appreciate when you encountered it, but I never thought of it as a motivating force. Yet after my first experience of the Corcovado forests, I've come to think that beauty is something far more potent than I had understood...that it has the power to incorporate you into itself, and that afterwards you are not the same, that somehow after a brush with real beauty it demands that you respond in some way that is alike. "

On this fifth anniversary of our organization, it may be appropriate to reaffirm the founders' hope for the project:

The four of us care deeply about the future of our planet.

Reflecting on our own personal experiences, we realize that our private reverence toward Earth was transmitted through a quiet but lasting contagious process. In our past, we were each infected, perhaps by parents and friends who were nature lovers, or by memorable experiences in the wild. We are also deeply concerned about how little we know about our planet while it is being destroyed.

What will inspire people to bring about sweeping attitude changes necessary to reverse the planetary damages? What motivates prepared minds? It struck us that there are no better ways than to expose potential Friends to other enthusiastic, hard-core naturalists or to let them experience the very thing we ourselves love.

from the editor

Below is another installment of biographical anecdote from our president's Alvaro Ugalde earlier years. Alvaro's courage in the struggle to create the Corcovado National Park is now a legend among Costa Rican conservationists. For additional reading on the creation of the national park system, the readers are encouraged to read *The Quetzal and the Macaw* by David R Wallace. Alvaro is currently serving as Director of the Osa Conservation Area under the Ministry of Environment and Energy (MINAE).

MY FIRST ENCOUNTER WITH OSA

Alvaro Ugalde, Director
Osa Conservation Area

It was the year 1965. I was returning to Costa Rica from the United States on a flight of the former famous Pan American Airline, which stopped in every capital city of Central America. Because of severe thunderstorms, we circled back and forth in the area until we finally arrived in San José, as I recall, almost completely drunk. The crew had offered us unlimited complimentary drinks in order to calm our fears and most of us had taken advantage of it.

Sitting next to me was an American couple in their fifties, who was moving from the West Coast to Costa Rica in search, they said, of paradise and lots of gold. He was a gold-miner and she a retired teacher. They met in a bar and had fallen in love. As I learned later, both were definitely alcoholics. He had talked her into marrying him and selling her home and possessions, in order to settle in Costa Rica and look for the source of gold in the Osa Peninsula.

Nineteen years old and naive, I set out to help them as much as I could. The first crisis came that very same day. For reasons that I don't remember, their dog could not be taken out of the airport upon arrival. The animal tried to escape during the night, hurting himself so badly that it died in their hotel bed a couple of days later. It was a real tragedy for them, much to my disbelief.

The amount of gear to be purchased in San José in preparation for our jungle trip to the Río Madrigal in the Osa Peninsula was unbelievable — food, gold-mining pans, metal detectors, tents, other camping and mining utensils, etc. and a revolver, which I bought under my name. Finally, we chartered a small airplane which took us to our final destination. The wife stayed in San José.

We landed uneventfully on a small grass strip in the middle of nowhere, and were met by excited local residents. The name of the place was Río Oro (gold river) and was owned by man named don Felix Avellan.

Years later in 1976, as I was trying to establish Corcovado National Park, I had to deal intensively with don Felix, since he owned another large property inside the newly created national park, which contained another landing field, a grocery store and hundreds of cattle and pigs.

As I recall, from the air Osa was then almost as impressive as it is today. The area which is now part of Corcovado National Park was absolutely pristine, but there were a lot more pasture lands

outside of the park, toward the point of the Peninsula. Cattle ranching to export beef to the US swept the country in the 60's and 70's. Over the years, specially in the last 10 to 15, a lot of foreigners have purchased and retired many of these cattle ranches. In addition, we began many years ago a new era, based on conservation, restoration and ecotourism. Nature has been coming back.

The day after our arrival, we set out to rent horses from don Felix and rode for a couple of hours to the mouth of the Madrigal River, where we found boarding at a house owned by Toño and Rosa, and met several gold-miners.

I wish somebody had taken photographs of us with all our gold-mining gear. We must have looked like Don Quijote and his assistant Sancho Panza. The miners looked at us with a kind of a hidden smile which forewarned me a great deal about our foolishness and predicament. Toño's and Rosa's house was full of the same kind of gear and utensils we were carrying ourselves, only ours were shining new, while the old mining utensils were rusted and half buried in the sand. It was obvious that hundreds or thousands of fools like ourselves had gone through there over the decades.

But a series of tragedies were to begin in our gold-mining expedition.

After dismounting on our arrival, my American friend was in agony. The two-hour horseride had produced blisters in the very lower end of his back and, as he got off the horse, he could hardly walk. All his gold mining spirits had kind of transformed into painful gestures, although the pain would briefly disappear when he tried to find gold. We panned for gold by washing sand in the river mouth. As is the case every time we tried it, tiny specs of gold were visible in the bottom of the pan. On these occasions, his face was transformed into a kind of a glorious moment, with his eyes bulging out. For the first time, I thought he was really crazy. Only much later in 1985, as I was immersed in solving the gold-mining problems of the park, did I realize that he was possessed by "gold fever".

The same first night, Toño's and Rosa's pigs and chicken were trying to eat our tent, our food and all our belongings and that infuriated my friend. The mosquitoes didn't help either.

The next day we finally set out to conquer our goal. We hired 3 or 4 gold-miners as guides. They were very happy to get a paid day, but were obviously laughing at us. They new knew better.

We walked for about two hours, climbing the Río Madrigal in the

direction of its origin, where, according to my friend, was the big source of all the gold in the Osa. He had purchased a map of the area, and had drawn a line from the mouth of the river to our destination. Since there were no trails, we walked up following the river bed. It was full of rocks, pebbles, sand, mud and water. I do not remember what kind of shoes we were wearing, but soon after, my friend began to complain about his feet hurting too much. Little did I know that the gold-mining side of our expedition was soon to take an abrupt change.

Suddenly, my friend announced an unexpected decision to me and the others. In spite of all the expectations, money spent in utensils, flights, etc. all of a sudden he uttered the following words: "I can't go on, forget gold-mining, let's go fishing." This, of course, was the best moment for me. We hiked back to the house, threw all utensils on top of the pile build up over the years by people like us. He pulled out his fishing rod and fishing he went.

After that moment, we were the happiest men on earth. The fishing was absolutely great, so he was fully enjoying it, and I went about watching the scarlet macaws and the magnificent wildlife of Osa. I was witnessing it for the first time. I was, of course, very unaware that years later as director of the Park System, I was to lead the battle to create Corcovado National Park and save nature I was witnessing for the first time. When the park was established in 1975, the Madrigal River was not part of it, but my colleagues and I made sure it was included in a park extension presidential decree in 1982.

In the meantime, back in San Jose, the wife had gone crazy. For three or four days she had not heard from us and considered us lost in the jungle. She went about calling the authorities and the US Embassy and started begging for help. I do not remember exactly how many days went by, not many, but the entire fuss ended when we showed up in San Jose in one piece, but much poorer than when we started.

They lived in Costa Rica for another several months. And as the time went by, my family and I realized how serious were their alcoholism and their mental problems. Costa Rica was no longer the paradise they called it at the beginning. One day, they left for their next heaven, Canada, and were never heard from again.

So this was my first encounter with Osa, as a gold-miner for a few hours – an encounter that was to be imprinted in my mind. Osa is as one of the most magnificent places on the planet – a place that later, through my actions, would become Corcovado National Park, a place for which I am still fighting for almost 40 years later.

Highlights for Year 2003

• **Jan. 2003.** Five graduate students and two representatives from the University of Delaware Horticultural Program spent five days at Nectandra working with our garden staff on transplanting, trail building and reforestation work. In exchange, we organized two workshops, the first on medicinal use of plants by indigenous Costa Ricans and the second, a wet workshop to learn about plant dyes and dying (see fotos below).



Longwood Garden graduate program visitors preparing dye plant material



Preparation of Achiote seeds for dyeing of cotton skein (brilliant orange third from left). Also drying are results of dyes from other plant species.

• **Feb.** Fifteen students and five professors from the Laurentian University in Sudbury, Ontario came for a one day visit. Our plans were to have the students examine the wealth of fauna in aqueous suspensions inside individual bromeliads. Two microscopes, both shipped from California within the last 3 months, were unpacked

for the occasion. Both promptly blew their fuses. End of workshop. Their post-mortem showed that the high humidity during the 3-month storage was sufficient to corrode several contacts and caused the shorts. One of us (ETL) is still learning to clean and cope with the microscopes under their new environment.



Laurentian University students attending lecture by Alvaro Ugalde on Conservation in Costa Rica and in the National Park System

• **March - June.** Parataxonomist Gerardo Rivera continued with his collection of unusual vascular plants for the herbarium. The current number of specimens in our herbarium collection nears 1000, including some 150 fern species. Data entry into our computer database is continuing on the identified specimens. Digital photos of each specimen, the corresponding fruit and flower, plus all the associated data are included with each entry.

• **March 2003-March 2004.** The number of parcels (each about 0.5 hectare) reforested increased from two to seven during the year. Each parcel is reforested and maintained differently to learn about the growth variables. The growth of the tagged and identified plants is being monitored for future statistic evaluation. Two of the seven plots are “control” plots for the variables under study.

• **August.** We joined a nascent regional community/government effort to discourage illegal hunting. Diligent, daily patrolling and notetaking from our own ranger Manuel Solis (a former professional hunter converted) revealed the regular presence of hunters and their dogs in our preserve. By pooling efforts with the other local communities and property owners, we hope to collect information on the intensity and location of the hunting activities.

We also hope to learn something about the hunters, enough to explore formal open discussions with them. On this front, we were encouraged that several known hunters responded to the organization’s invitation to participate in a dialogue with the organizers.

• **November.** Municipal business and health department permits finally in hand.

• Construction of the Visitor Center was completed.

• Main trails and landscaping was completed