

South America

Travels and Adventures through the Amazing World of Medicinal Plants

Chile

Geoff D'Arcy Lic. Ac. DOM.



I set off with my family on an herbal adventure to Chile. We left in our Spring, as the weather was beginning to warm our New England bones, and found ourselves twelve hours later in Santiago, Chile, at the beginning of their Autumn. We would travel 800 miles South from the capital, Santiago, through desert-like terrain, into the mountains of the Andes, south to the lush green areas surrounding Puerto Montt and on to the remote Isle of Chiloe. We encountered a wide variety of climates in a short period of time, all of them stunningly beautiful.

As I was packing and preparing for our trip to Chile, I was thinking how wonderful it was that I was able to take my family along. Accompanying me on this “herbal adventure” were my wife and our two daughters. We would travel by van and pick-up truck a total of about 800 miles, south from Santiago with its dry, desert-like climate to Puerto Montt and the magical Isle of Chiloe.

Chile is located along the Pacific coast of South America. It is a narrow country that is bordered by Peru to the North, and by Bolivia and Argentina to the East. It is a country protected by natural boundaries: in the North lies a huge desert (with no recorded rainfall); in the East, the massive Andes Mountain range provides only a handful of mountain passes allowing access to neighboring Argentina; the Pacific Ocean to the West, and in the South, the Antarctic. It is never more than 110 miles wide and has an enormous

2,700 mile Pacific coastline. The Andes start at the north of South America in Venezuela and extend southward to the tip of Chile. Made up of some of the highest peaks in the world, the Andes with more than 50 mountain peaks reaching above 20,000 feet descend down to the Pacific coast through every kind of climatic zone imaginable—deserts, fertile valleys, rainforest, and glaciers. The plant life in this country is just about as diverse as it gets. In this unusually shaped country, there are 14.7 million people as well, of which 6 million are crammed in the capital city of Santiago; eighty percent of the population is urban, meaning that the wilderness is truly unpopulated. Chile is a “mestizo” country of mixed European and indigenous extraction. Enjoying poetry as a national pastime, the Chilean people have a strong inclination towards the arts, with many poets, actors and writers. Chile's literacy rate is one of Latin America's highest, nearly 90%. Interestingly, the indigenous herbal traditions are still very active in several parts of the country.

Our journey.

After a few days exploring Santiago, with its California-like climate, we traveled south through the farmland and vineyards of Puerto Varas then steeply upwards into the Andes, to a thermal springs / ski resort awaiting the snows of winter. “Chillan de Thermales” offered herbal treatments, internally but also externally, through the wonderful minerals of the volcanic spring water and mud. People all over the world use the healing mineral waters of thermal springs, to purify their skin and soak the goodness of the water through their pores for healing. We hiked high up into the mountains along stony paths bounded by sheer drops. A plume of steam far up the mountain guided our ascent; it rose from where the thermal water bubbled to the surface, heated far below by volcanic heat. When we reached the hot springs, we stood and bathed ourselves in the sulphurous steam. Hiking up further, we reached a primitive mud bath. Content after a long hike to just hang-out in the bubbling, smooth warmth with the soft mud. To finish, we washed off in the shocking cold numbness of a nearby glacial stream. Yikes! It was absolutely freezing, and remarkably invigorating, all at the same time.

One of my fondest memories was taking a thermal bath outside our apartment at about 6:00 am with my daughter Alyssa and seeing swarms of parrots fly into the valley and hang out in trees a few yards from the baths, with hundreds of parrots screeching and bickering in the trees. As long as we were silent, hidden by the steam, the parrots continued diving, flying a few inches over the water looking for insects, swerving at the last minute just in time to miss us in the bath. The look of wonder on Alyssa's face was priceless.



We met many different kinds of healers and herbalists in Chile. One of them was Senor Eliana, who lives and works in the remote mountains of Chillian de Thermales. He collects wild herbs, often picking them in the steam from thermal springs. He and his family camp by the roadside, collect, mix and then sell the herbs, until the snow and cold weather of the Andean Winter in April drives them back down into their home in the valley below. Senor and Senora Eliana would camp out of their van and wait, nearly until the snows come, wild crafting the herbs and then moving to the plains. They said they were trained by Senora Eliana's great Aunt who was a well respected herbalist in this area for many years.

I got to sample Senor Eliana's best-selling herbal mixture, taken as an infusion and sucked through a large metal straw. It did much to restore my vigor after a challenging hike. Surprisingly, one of his staple herbs is St. John's Wort (San Juan in Spanish); I had no idea it would grow so high up or so late into the fall. This is now one of the best-selling herbs in the West for depression and has outperformed the drug Prozac for mild to moderate depression.



When we left Chillan de Thermales, and stopped at the invitation of a courageous local woman, Senora Maria Teresa Ossa, who had founded and supported a local alternative HIV clinic in the face of social distain and against the wishes of some of her family. ‘The *Futa Ayeyun Clinic*’ (which means universal love in the local Mapuche Indian language) was able to provide patients with physical, spiritual, and emotional support through Reiki treatments, aromatherapy, and meditation instruction.

Traveling further South, we stopped off at a deserted glacier lake near Rinihue, high in the Andes. From our camp we were presented with a stupendous view of the majestic snow-capped volcano at the end of the lake. As the lake had only recently begun to be settled, at the encouragement of the government, it was nature at her most pristine. Soon I was networking through the locals to find some herbalists to meet. Eventually, I was able to interview a local herbalist. I was told that everyone sought out this old lady, both rich and poor. The nearest medical care was a long drive away, and it seemed nearly all the local people preferred to visit with the 'Old Herbalist'. She lived by herself, supported pretty much by her work in the community, in an old wooden shack with chickens and dogs wandering in and out. I would guess she was about 75 to 80 years old, with one lone tooth protruding out the front of her mouth, and a cracked, craggy old face. I asked a few times to capture her wonderful old wizened face with a photo, but she declined – the local Indian beliefs had rubbed off on her, and she did not want me to steal her spirit. She was from European descent and had helped people with herbs for as long as she could remember. She would pick fresh herbs year round for her customers, advising them to make herbal decoctions. The local people clearly had a lot of respect for her, and she was called as a midwife to nearly every birth for miles around.



Boldo (*Peumus boldus* or *Boldoa fragans*)

Boldo is an evergreen, shrubby tree, growing 6 to 8 meters in height and found in the Andean regions of Chile and Peru. Legend has it that *boldo's* medicinal properties were discovered

when sheep grazing in a field of *boldo* no longer had constipation and liver trouble. Its aromatic minty leaves contain an essential oil that is useful for digestive upsets, liver and bile problems, as well as kidney and urinary tract illnesses. Recent excavation of Monte Verde, an area in southern Chile, has unearthed some of the earliest recorded usage of *boldo*. Excavations unearthed evidence of the medicinal use of 22 varieties of plants by people thought to have lived there more than 12,500 years ago. Among these plants is *boldo*. Archeologists found it wrapped in seaweed. It is believed that when chewed by individuals who had been severely injured or who required some kind of surgery, this combination of plants may have provided both painkilling and mind-altering properties. Today, *boldo* leaves are used to treat gallstones, liver or gallbladder discomfort, and for heartburn or other mild stomach cramps. Its choleric actions release bile, and its diuretic actions increase fluid excretion, possibly cleansing sediment or bacteria from the biliary tract itself. The constituent boldine stimulates choleric action (Tyler, 1994), which may provide relief to patients with gallstones for whom surgery is not an option or drugs have not been effective. In Chilean herbal medicine, it is customary to use *boldo* to kill intestinal worms. Chronic digestive problems such as gas and poor digestion also respond well to this bile-stimulating herb, which settles and reduces excess gastric acidity. It is also used to treat cystitis and rheumatism, and to lower fever. *Boldo* is one of the most popular herbs in South America, and is considered to be an excellent general tonic. It is used extensively in Europe and has noted therapeutic applications, including the treatment of gout and disorders of the liver, bladder, and prostate. Two new clinical studies conducted in 1998 have again validated its uses in gastrointestinal disorders in animals and humans.

The Mapuche

The South of Chile is a magical land filled with uninhabited fiords and lakes, massive snowcapped volcanoes, and the high mountains of the Andes. While staying in the South, I had hoped to meet a true 'Mapuche' healer, to talk about the medicinal plants and the wonderful 'Mapuche' herbal tradition. This Southern tribe fought off the Spanish in 1600

and kept them out of their lands until the late 1800's, they have a very strong connection with the land and the healing herbs. Among the Mapuche of Chile and Argentina, most men and women have a knowledge of more than 250 herbs. I was delighted to meet with a very accomplished healer, by the kind introduction of my good friend Ivan.



I met with Dr. Taborga, who is a fourth generation Mapuche Indian healer. He originally trained as a Medical Doctor, then returned to his Mapuche roots, healing with traditional Mapuche herbs, in his busy practice in the capital Santiago. He has also become proficient in acupuncture. He is pictured with me in his lab, where he distills some of his medicines for his patients. He also has a staff which prepares herbs and remedies for his practice and his herb shop. He believes in storing the herbs for many years before using them. His favorite herb is the 'Canelo', the sacred herb of the Mapuche Indians of Southern Chile.

Canelo, Pepper Bark, Winter's Bark, a.k.a in Brazil as Casca de Anta, (*Drymis winteri*.)



This tree is a sacred tree to the Mapuche. It grows 8-10 meters high and produces an abundance of small, white, pretty flowers with yellow centers, and a small round green seedpod with black seeds inside. The leaves have a peppery taste, hence one of its less common names, 'pepper bark'. The tree was also named after a Dr. Winter, surgeon for Sir Francis Drake's expedition from England. He was the first one to use it to prevent scurvy attacks, in 1577; hence it became known as 'Winter's bark'. However, it would take a very long time for Navies around the world to adopt 'supplementation' to avoid scurvy. Nowadays, the

cortex and the leaves are used as an important source of Vitamin C (in levels beyond those of lemons and oranges). Among its chemical components, it is possible to find tannins, vitamin C, essential oils, terpenoids, flavonoids, antibacterial substances, and substances to prevent leukemia. Although in high doses the sap of the Canelo can be toxic for the circulatory system, the bark of the Canelo is used to treat typical dermatological problems such as itching, pimples, and dermatitis

In Brazilian herbal medicine, Casca-de-Anta (Canelo) is highly recommended for all types of stomach and gastric disorders including dyspepsia, dysentery, nausea and vomiting, intestinal pain, and colic, as well as fever, anemia and debility and it is sometimes used as a substitute for Quinine in treating malaria and other febrile conditions. The bark is brewed into a tea (infusion) for this common natural medicine.

For the Mapuche, the veneration of the "Canelo" tree dates back countless generations due to its excellent curative properties. The Araucanian region of Chile is rich with medicinal plants that have allowed the Mapuche to experiment and learn the healing powers of these plants over time. Canelo is used in infusions and baths, as a stomach aid and a rheumatism aid. The Mapuches also consider it a symbol of peace. It is used in this capacity to construct native pottery and sculpture unique to the Mapuche culture. It is also used by their medicine women, "Machis," in rituals for healing. Machis put the leaves and sap of the Canelo in their mouths to help visualize the sickness of the patient and to expel the evil spirits.

The equivalent of a shaman or medicine woman, the *machi* considered both doctor and spiritual healer for the Mapuche. Machis are active in the daily and social lives of their community, and they are chosen within the community and are nearly always female. For their work they receive mainly barter as payments, from vegetables and other foods to services and occasionally money.

In an article, Rohan Radhakrishna explains the Machi and their rituals: they are seen as an go-between for the people and their God *NgenechenI*, and for this they are highly respected and cared for. The Machi is a balancing force between all the opposites at odds

with each other (yin vs. yang, good vs. evil, health vs. illness,) Machis can intervene between these dynamic forces and restore balance through their ties between the land, the community, ancestral spirits, natural forces and the individual inflicted with the illness. Because the Mapuche believe in the intervention of the supernatural world, the Machi begins the healing process with rituals to form a bridge between the spirits, nature and the human being. Machis also interpret dreams, thoughts, auras, and bodily fluids (urine and saliva). The ceremonies that the Machis practice are considered sacred and are rarely viewed by outsiders. Rituals and healing sessions can take the form of performances; it is through singing and music, dances and trances, that the Machi is able to enter the sick body, diagnose the evil spirit, and search for the remedy.

Machis have helpers that are always male. These translators decode the chants and actions of the Machi during rituals. Each Machi has an altar that they construct from the trunks of the Mimosa tree and from the leaves of the Canelo and Helecho trees, decorated with copihues (the national flower) and cereals. It is usually constructed based on revelations that come to the Machi in dream form and symbolically strengthens the bond between the community and the land.

With the advent of colonization, Protestant evangelical pastors and missionaries invaded the domain of the Machi and other leaders in the Mapuche community. Some Machis were demonized as witches and some were even burned at the stake. During the last decades, the role of the Machi has transformed and in many areas, they are less credible. The famous medical anthropologist Arthur Kleinman wrote that “Healers seek to provide a meaningful explanation for illness and to respond to the personal, family, and community issues surrounding illness. On the other hand, biomedicine is primarily interested in the recognition and treatment of disease (curing)” The Mapuche system of health is based on a holistic view of the Universe with a series of magical forces and supernatural spirits at work. Imagine entering a new system culturally, structurally, and spiritually. This system is the Western hospital that many Mapuche must deal with. Everything from the administration and structural process down to the doctor-patient

relationship is altered. The Machi exist to preserve and help the patient restore this equilibrium.

The Mapuche (literally translated to “people of the land”) are currently trying to adapt to new environmental changes. Invasive eucalyptus (*Eucalipto globulus*) and pine tree (*Pino radiata*) plantations used for exportation threaten local native forests. These insidious exotic species that are feeding the Chilean economy yet threaten to starve the people, as they suck the land dry of water, out-compete endemic species. The 9th region of Chile is known as La Araucania, named after the beautiful Araucania tree with candelabra branches, but today pines and eucalyptus have overtaken the landscape. There is a sense of displacement among the Mapuche, of being away from their traditions, from their heritage, from their *Mapu* -- their land. As modernization replaces tradition and the land continues to die, so does their indigenous language Mapudungun (literally “language of the land”).

For me the one great piece of news was the Intercultural ‘intergrative medicine’ at the Makewe Hospital. The Hospital Makewe began in 1895 as a health dispensary. When the government threatened to cut all funding recently, a group of 35 communities in the Makewe sector banded together to form the Indigenous Association of Makewe-Pelale, and they took over administration of the Hospital in March of 1999. Today Hospital Makewe serves 20,000 people of which 80% are Mapuche. The goal is a most noble one for an indigenous people: “to improve the quality of attention in health and to improve the quality of life for the population in the sector [Makewe region] through the fortification of Mapuche cultural identity.” Hospital Makewe is the “heart of the community combining both systems of healing, there is a “focus on integration where we take into account the health knowledge of the community and their specialists, and complement it with occidental knowledge” While the actual care in the hospital can be described as “complementary health” (all systems combined and contributing to the other), the overall goal of the hospital is “intercultural health” because it realizes that the environment, the community, and the culture all contribute to the well-being of the Mapuche people and their patients.

The Gaia Hypothesis

Nearly every time I look at traditional beliefs of native peoples, wherever they may be, there are common denominators within their belief systems; indigenous peoples often share a similar view in relation to illness and medicinal plants. The Gaia Hypothesis very elegantly restates this view in a modern vernacular and context. This hypothesis seems to posit a connection between what I will call the spiritual / Earth-based and the scientific belief systems. The Gaia Hypothesis, simply expressed, is this: that the Earth is a living,



self-regulating being. She is alive. It says that our planet functions as a single organism that maintains conditions, much like homeostasis in humans, that are necessary for Gaia's survival. These theories were formulated by Dr. James Lovelock, a British atmospheric scientist, in collaboration with Dr. Lynn Margulis, an American microbiologist. These ideas,

first put forward in the late 1960's and early 1970's, have produced much controversy and many interesting ideas, including new areas of research. The hypothesis provides much to ponder regarding the interconnections of how the Earth has transfigured and transformed itself for life, by a self-evolving and self-regulating web-of-life. All the myriad self-regulating, physical, chemical, geological, and biological processes behind it, are expansively mind-blowing.

"The recognition of the non-linear nature of all systems dynamics is the very essence of ecological awareness, the essence of 'systemic wisdom,' as Bateson called it. This kind of wisdom is characteristic of traditional non-literate cultures but has been sadly neglected in our over-rational and mechanized society. Systemic wisdom is based on a profound respect for the wisdom of nature, which is totally consistent with the insights of modern ecology."

--Fritjof Capra, in his work entitled "The Turning Point"

On the spiritual side is the concept of 'Mother Earth' that we have all heard from so many indigenous cultures throughout the world. The concept was central to the religion of

Native Americans (North, Central and South), as well as being symbolized a continent away in the Hindu goddess Kali. Within the ancient Greek metaphor, they named their Earth goddess Gaia, an embodiment of the notion of a Mothering Earth, the source of the living and non-living entities that populate our planet. Both Kali and Gaia were gentle, feminine and nurturing archetypes, but also ruthlessly cruel to any who crossed them. Gaia was the Greek goddess who drew the living world forth from Chaos. The prefix "ge" in the words geology and geography is taken from the Greek root for Earth. Dr Lovelock aptly named his concept, appealing to both the scientifically-minded as well as the spiritually-minded reader within the same hypothesis.

"The entire range of living matter on Earth from whales to viruses and from oaks to algae could be regarded as constituting a single living entity capable of maintaining the Earth's atmosphere to suit its overall needs and endowed with faculties and powers far beyond those of its constituent parts...[Gaia can be defined] as a complex entity involving the Earth's biosphere, atmosphere, oceans, and soil; the totality constituting a feedback of cybernetic systems which seeks an optimal physical and chemical environment for life on this planet." --

James Lovelock, Gaia: A New Look at Life on Earth.

While the science continues to debate the Gaia Hypothesis, the global and holistic perspective of the concept has really struck a nerve and continues to capture the imagination of people from all walks of life. To the indigenous cultures such as the Mapuche, who see the Earth as a sacred spirit, to others who sought the "oneness" in super-organism of nature, to those concerned for the environment, and to those seeking religious frameworks, to an increasing multicultural and multidisciplinary audience, the concept of the Gaia Hypothesis has nourished and supported as a paradigm for the third millennium.

Journey's end Chiloe Island



To end our hectic journey through the magical diversity of life, that Chile supports, we ended it within the peace



and quiet of the Island of Chiloe in the south of Chile. We had traveled from Puerto Montt taking a ferry over to the magical Island of Chiloe. This Island has its own unique

identity and history almost separate from mainland Chile. The pace of life on this mystical island is slow, even at times seems to have stopped. Using traditional methods, from simpler times past, the Chiloe people base their livelihood on fishing, farming, and clamming. Their rhythm of life is not controlled by the pages of an appointment book or palm pilot, nor by the clock, yet by the changes and seasons of the forces of nature. In our modern world of rush, work, computers, email, deadlines, and double-clicks, Chiloe offered us a space for calm, peace, quieting before our return. Local herbalism was also a major part of this connection to life's simplicity, using the medicinal plants provided by nature also had a place on the Islands culture. Before we left, visited with a local herbalist, who had learned to heal with herbs from her Mother, in an unbroken lineage for 5 generations. She wild crafts and puts her combinations together, to be made as teas and sells them in her shop from the high street.

After traveling 800 miles in 14 days with 5 adults and 5 kids, through so many micro-climates, Chile left us tired, yet inspired by the glow of her awesome and spectacular natural beauty. It seemed there was so much of the indigenous botanical traditions still untranslated. The lineages and wisdom of medicinal plants hidden up in the mountains and in the forests of this country, are still largely unrecorded in the world herbal databases. It left me hungry to learn and facilitate the usage of Chilean plants and I felt sure there were many treasured medicinal plants just waiting to be discovered.