

From the Regions

Founder of Brazil's First Permaculture Institute Begins Anew

Marsha Hanzi

WHEN I WAS SEVEN, IN FLORIDA, someone told me of street kids in Brazil living in cardboard boxes. This so revolted my young heart that I demanded that my parents adopt one of these kids, finally forgiving them when I too, became a mother and realized how hard it is to raise children.

Fate would have it that 25 years later I would find myself living in Sao Paulo, Brazil's gigantic metropolis of 15 million people, one third of whom live in slums. Kids-in-boxes became a daily, unforgettable experience.

It soon became clear that the problem was not the kids, but their parents' circumstances: rural refugees, uprooted, penniless, unable to support their children under the harshness of the new urban life. The

only way to help these kids was to prevent rural exodus by improving rural conditions.

Thus, changing Brazil's agricultural model became the center of my professional life for the next thirty years, first through organic agriculture, as I had learned in Europe, then through agroforests and permaculture. Our Bahian Permaculture Institute was the first in Brazil, founded in 1992.

Today I can sincerely say we are well underway towards that goal: the Institute's "Dryland Polyculture Project" which I created and implemented with my talented young colleagues, is working with 700 farm families and is scheduled to go to 1,000 before the end of 2006. More than 600 people, mostly young idealistic agronomy students, have gone through our permaculture design courses and have gone on to do splendid work. And we are not alone: there are many other professionals and institutes working along similar lines.

Freed somehow of that childhood commitment, my daughters grown and gone, my 30-year marriage winding down, I decided, at the age of 56, to start over again, this time in pursuit of another lifelong dream: to transform a really degraded piece of land into a

Garden of Eden. I had already done that on an urban lot, but now I wanted more. The rainforest region was too "easy" for my Aries soul, so I chose the drylands, whose open spaces, luminosity, and strong, rich culture have always attracted me. I confess a touch of arrogance as well: I love to do things people say "can't be done." Of course I often fail, but sometimes there is success. I believe that, after three years of intense work, this is going to be one.



An elegantly designed cistern sits atop a welcoming gateway, emblematic of Marsha Hanzi's transformation of Brazilian drylands.

It took me a year of searching to fall in love with and buy 23 acres of pure white beach sand in a lovely valley. Only later would I perceive that, in spite of its terrible soils, the land holds a powerful energy vortex, which is usually felt by visitors, and must have been the cause of my attraction.

That land was once the bed of a prehistoric river, proven by layers of sand, clay, and river stones we found while digging the well. A terrible situation for annual crops but wonderful for trees, once they get their roots three meters down into the first clay layer.

The land had been plowed for watermelons. It was completely bare, no weeds, nothing except two gigantic cashew (*Anacardium occidentale*) trees (which we call "Grandfather" and "Grandmother"), ten local palms with wonderful edible nuts, and a bit of scrub along a dry creek bed.

That was the beginning of "Mariz-Epicenter for Culture and

Agroecology." The original intention was marked by four points:

1. To produce food for five to six people in a semi-wild agroforest system;
2. To learn to live interdimensionally, with no separation between the sacred and the profane, moving in organic, not linear time, developing intuition and the capacity to channel information directly from the system;
3. To create a healing space—for the planet, this land, its inhabitants, and all those who would pass through it;
4. To be good neighbors, contributing in whatever way would be useful.

Where do you begin when you have nothing? My long years of permaculture practice and the Perelandra techniques, which I

Where do you begin when you have nothing?

have used for years (see www.perelandra-ltd.com) gave an excellent starting point, and the land taught me the rest. Little by little we got into an ongoing dialogue with our drylands, which deepens with the years.

Brazilian dryland agroforests

Characteristics of the Brazilian dryland agroforest, based on Ernst Goetsch's successional agroforestry system are basic elements for structuring the field, creating soil, and furnishing dry season ground cover. Bromeliads (aloe vera, which is native), agaves (sisal, a fiber plant), and cactuses (opuntia, edible and a good animal fodder) are planted every meter. Castor bean (*Ricinus communis*) and pigeon pea (*Cajanas cajan*), as well as four types of local shrubs, all mulch plants and soil improvers, occupy the middle story. Cashews are planted every three meters, to be thinned later to twelve-meter intervals. As the cashew supports enormous biodiversity (see article "Slow Cashews" at www.marsha.com.br) this dense planting gives Marsha the opportunity to select the best producers.

Trees in this region bring their canopy down to the ground, creating their own cool microclimate. Therefore, it is not possible to work in various stories, as one would in the rainforest. A few trees—coffee, some types of bananas, custard apple (*Annona squamosa*)—grow in this dense shade, but the other trees are planted around the perimeter of the cashews, which can grow to be immense. ("Grandfather's" crown diameter measured 25m/82'!)

The local palm, "licori," has a wonderful edible nut which furnishes milk (similar to coconut milk) and oil, and is highly appreciated boiled green. It will be planted in the entire area.

There are some twenty fruits native or adapted to this region, as well as a number of noble wood trees. All are being

interplanted among the cashews, depending on availability of planting material. Several legume trees, leucaena and gliricidia among them are planted for nitrogen fixation; others such as moringa and quipe for their products.

Strips of polycultures are also planted to increase biomass production and biodiversity. These include some twenty elements, from radishes to long-term trees. Especially successful elements have been jack beans (*Canavalia ensiformis*), cowpeas (*Vigna sinensis*), sorghum (with fabulous resprouting capacity even in drought) and sesame, with tree cotton (*Gossypium arboreum*), moringa, and custard apples. Sunflowers are highly appreciated, but often eaten down by caterpillars.

It took three years to begin to see the results. The first year, even cactus and sisal died! Even now, the vegetation in the areas where we have not yet intervened is barely over one foot high. In contrast, the areas which have been mulched, planted into polycultures, and treated with micro-organisms, show vibrant health and are beginning to take off. We took three years to get to where we would have gotten in just one year in the rainforest region.

Romanticism can be expensive. Repairing severely degraded land in the drylands is wonderful, but it takes time, labor, imported materials when you have none locally, transport, and infrastructure, all of which demand a constant flow of money. Fortunately, my former husband financed these first years for me, and has supported me completely in this new endeavor.

Today we are basically "there." We have a small house for me, a large visitor house, a common kitchen, a living room, and bathroom area. Our cistern capacity is 40,000 liters; we should double that yet this year. The well, which I located by dowsing, has never failed us, even in the driest months, although the water is of poor quality, heavy in carbonates. Even so, it is the best water in the area, compared to the neighbor's salty wells. The land has been completely planted in cashews and other agroforest elements, and the neighbors are beginning to notice! Local invitations for courses, field days, and lectures are coming in.

Walls are of cheap local brick, with a minimum of cement. The visitor house was built with a clay-lime mortar. The bricks are left bare, to reduce maintenance. Local formats were used, but improved with trellises and the use of the Golden Mean.

Comfort is achieved through careful placement by aspect, the use of high ceilings, and judicious plantings. The temperature difference from sun to shade is 8°C/14°F—huge! Within three years the entire area should be shaded by trees.

Water is from cisterns for the plants and for drinking, and from the well for washing. We store drinking water in a pot-shaped cistern (inspired by Viktor Schauberg) with a capacity of 7,000 liters. A similar cistern will be built at the new visitor house. The well water is distributed by gravity to the whole area from a beautiful pot on a pedestal, capacity 3,000 liters. All used water is recycled to plants. Sinks and showers go directly to trees or banana circles, and toilets go to underground brick boxes filled with coconut husks, accessed by trees planted around the perimeter. Marsha's house uses a sawdust toilet, with urine recycled directly to her garden.

There are two frond-roofed hen houses, ample and

comfortable. Their bedding material is removed from time to time to fertilize the system. A new rabbit house has been built, and is still under experimentation. The "house cow" has a small rotational system planted in cane grass and polycultures (sorghum, cowpeas, mustard, etc.), and a pasture area on the second plot of land. There are two small guard dogs who keep Marsha company at night, and several cats who have spontaneously taken up residence.

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In the meantime I bought 28 more acres nearby with much better soils and a small pond, where we can do serious annual cropping, but we have barely found time to scratch the surface, and I will probably rent it out to neighbors next year.

What has been the hardest part of this experience? Well, actually it has nothing to do with the project itself. I get tired much quicker than I used to, which is frustrating when there is so much to be done, and I am sometimes lonely, especially at night. The work itself, though demanding, has been profoundly rewarding, in spite of the severely hot climate, and it doesn't seem "hard." On the contrary, one feels great after a day of physical labor!

At this point I must raise my hat to the neighbors, especially my wonderful team who work alongside me every day, who received this unexpected "parachute drop" with open arms, supporting me, curious, doubting but hopeful—after all, my solutions may be their solutions, too.

Plans for the future? To make this place beautiful—it is still "raw"—with color, ceramics, flowers. And to go on to the next project—a Sudbury school (see www.sudval.org). After all, a big new project is the best preventive to getting old! △

Marsha Hanzi is the founder of the Instituto de Permacultura da Bahia, which she coordinated until 2001. She holds a Diploma in Permaculture teaching (1994), and has done courses with Max Lindegger and Lea Harrison, Bill Mollison and Scott Pittman, Ianto Evans and Alenjandro Caballero, and, more recently, Penny Livingston-Stark and Starhawk. She has worked with energy techniques for the last thirty years. For information about Marsha's work and teaching, see details on www.marsha.com.br, and for the Bahian Permaculture Institute, see www.permacultura-bahia.org.br.

This article is one in a series about Brazilian permaculturists, projects, and sites that will appear in the *Permaculture Activist* in advance of the 8th International Permaculture Convergence (IPC8) to be held in Brazil in May 2007. Details in the column to the right.

International Permaculture Convergence in May 2007

Recognizing that the equatorial and subtropical rainforests of Brazil hold many lessons and opportunities for permaculturists worldwide, the Eighth International Permaculture Conference (IPC8) has been slated for May 2007 in Sao Paulo, Brazil. The biennial event is held on a different continent each convening, and past locations have included Australia, the United States, New Zealand, Nepal, Scandinavia, and most recently, Croatia in 2005. For information about the 2007 IPC-8, visit www.ipc8.org.

Hosting the event for 2007 will be Permacultura America Latina (PAL). The Brazilian Permaculture Network, comprising four organizations, will handle the Brazilian and on-site coordination of the event.

The theme of the 2007 event will be "Greening Our Economy with the Principles of Permaculture." Workshops, lectures, field trips, and case studies will highlight the public policies needed to encourage sustainable economies at the local, state and national levels through local currencies, cooperatives, micro-financing, global environmental marketing, ecological restoration, economic democracy, certification, green accounting, and related themes.

The IPC program has traditionally consisted of four components: Conference, Convergence, Visit, and Permaculture Certification Course. The Conference will be a three-and-a-half day event in Sao Paolo. The Convergence is a private four-day gathering of permaculture design certificate holders for the purpose of setting continental and global agendas, making connections and sharing experiences. Convergence working committees will be organized into major climate groupings and special attention paid to green technology, genetic resources, trade, and urban self-reliance. The Visit will provide opportunities for international participants to visit Brazilian permaculture programs around the country including central and southern Brazil and the Amazon. Details of the permaculture design course will be announced. △

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