

Cuba notes,

Sarah Thompson

Monday 6 April 2015

FANJ, Havana

Upon arriving at the Antonio Núñez Jiménez Foundation for Nature and Humanity (Fundación Antonio Núñez Jiménez de la Naturaleza y el Hombre -FANJ), we were greeted by Roberto Perez, who took us into the extensive library housed on-site and gave an introduction to the foundation, its establishment and work. The foundation is a non-government organisation (NGO), established on the 16th of May 1994 by Cuban academic and revolutionary Antonio Núñez Jiménez,¹ which was established as

A civil, non-government, autonomous, cultural and scientific not-for-profit organisation, with the capacity to have its own heritage, rights and obligations under the current legal framework.

The foundation's mission statement is as follows:

To continue the legacy of our founder and President Antonio Núñez Jiménez, working towards a culture of nature to harmonise the society with its surroundings.

As such, the foundation is central to the permaculture movement, which was established in Cuba in 1996, having arrived three years earlier in 1993 during the Special Period and as a result of the accompanying food crisis. Since the beginning, it has worked with Australian and New Zealand groups under the auspices of the Southern Cross Brigades, organised by the Cuban Institute of Friendship with the People and the Australia Cuba Friendship Society.² Currently, it maintains international partnerships with many countries including Canada, Mexico, Ecuador, Australia, Switzerland, Germany, Spain, France, Italy, Holland, and other European Union countries.

Today, as when it was initially established, the foundation employs an approach that sees a joint focus on environment, science and culture and commences projects following requests from the Cuban government, from individuals, and from communities. According to Roberto Perez, nine of Cuba's 15 provinces have permaculture groups. The foundation has offices in Sancti Spiritus and Matanzas in addition to the head office in Havana. The structure of the organisation is as follows:

Honour Committee

Advisory Board

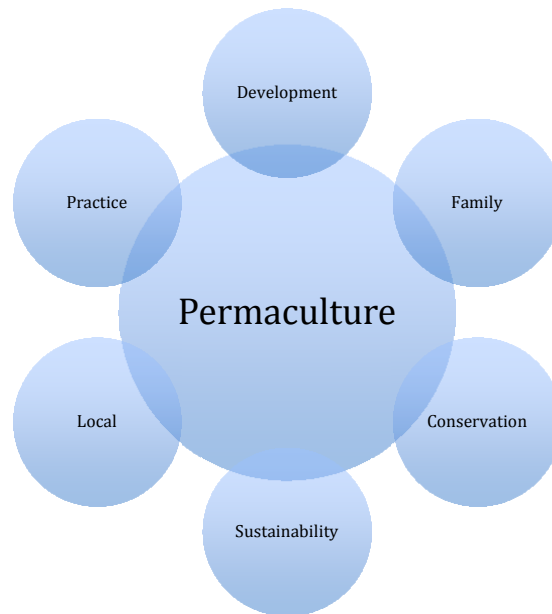
Administration Board

¹ Antonio Núñez Jiménez was a former president of the Academy of Sciences and former politician after the Cuban Revolution. He was central to the Cuban Agrarian Reform, taking over the position of Minister for Agrarian Reform in the revolutionary government in the early 1960s. He died in 1998.

²<http://www.cityfarmer.org/NunezUA.html>

- Directors Board
- Delegations
- Staff (multi-disciplinary)
- Collaborators (over 400)

FANJ has developed the local sustainable development (LSD) program, which builds on the principle of people to people communication that in turn builds community.



Cuba’s agrarian system heavily relies on animals for food, nutrient cycling and work. The Cuban diet however, is largely culturally based, and Roberto calls it the ‘slave diet’. A large proportion of the Cuban population descends from slaves brought in from Africa by the colonial Spanish rulers in the country’s early centuries, who were afforded very little in the way of diverse foodstuffs, but rather prioritised food items that sated the appetite and provided sufficient energy for hard labour over a long period of time. With subsequent rationing of food products in the intervening years due to the revolution and the subsequent Special Period, characterised by wide-reaching government restrictions and food rations, the diet has changed little since the colonial period. Roberto went on to state that Cubans spend 70% of their income on food, as people don’t need to pay for their homes because as they are government subsidised. The lack of food variety available here is a result of cultural factors, but Roberto predicts demand from tourists (one of Cuba’s largest industries) will result in increased variety.

Since 1959, Cuba has doubled its forest areas. FANJ is undertaking an historical mapping project whereby the information from historical maps is digitised and overlaid with current maps in order to determine land use, forest and environmental changes over time.

Roberto states that in the past monocrops dominated the agricultural landscape, the main crops being sugarcane and tobacco, but in recent times, and since the crash of the sugar industry monocrops have declined.

Roberto then discussed some of the natural remedies used for some ailments. For instance, he states that scorpion venom was used in the treatment of cancer, and sour sop and honey have some healing properties. Similarly, Cuba has imported many medical traditions from around the world, including acupuncture and Chinese herbal medicine, concluding that, “if it works, why do you have to understand everything?”

In terms of permaculture in Cuba, it does not focus on native and/or endemic species for two main reasons: 1) there are few edible ones; and 2) many species have become ‘naturalised’ over the 500-odd year colonial period, coming from Mexico, South America, and the Caribbean, to name a few. That said, he concedes that Cuba tries to import few new species. While the crisis period in a sense fertilised people’s minds for change, the necessity for local food and lead to an enhancement in the relationships between people and food in terms of availability, seasonality and locality. In Cuba, everything must be made from scratch and packaged ingredients must be imported. As a consequence, more and more cooperatives are being established in order to pool their resources and add value. Roberto adds that, “this is a very complex place. I have been living here for 45 years and I still don’t understand it all”.

Answering a question about fuel requirements, Roberto states that the Raul Castro government is slowly seeing the benefits of biomass. In terms of fuel, Fidel Castro has decreed that Cuba would not devote land to the production of fuel – only to food. Interestingly, Roberto says that Cuba could go straight to second-generation biofuel production, circumventing the destructive and energy intensive first generation stage of production.

According to Roberto, the amount of government expenditure per person per annum, at \$3000, is one of the lowest in the world, but the benefits to the community are some of the highest in the world.³

Roberto then talked us through the collection contained within the organisation’s library, comprised of thousands of books, the subjects including geography, environment, permaculture, sustainable agriculture, the Christopher Columbus collection (the largest outside Spain, Roberto tells us) and the extensive collection of Antonio Núñez Jiménez’s works. Finally, Roberto then took us on a tour of the premises, including the museum which houses a diverse collection of artefacts gathered during Antonio Núñez Jiménez’s canoe expedition from Ecuador, through South America and the Caribbean Islands to Cuba in 1988-1989. The expedition followed the path of the first South American Indians to reach Cuba.

Tuesday 7 April 2015

Group Pow-Wow

³I cannot ascertain whether this was total expenditure or, for instance, health expenditure per person. By comparison, Australian government health expenditure per person in 2011-2012 was \$5881.

First, Ian gave us a briefing relating to the activities over the coming days. We then discussed our impressions of what we had seen of Cuba thus far.

- Ian: Expected to see more food growing and more evidence of permaculture.
- Angela: 'The Power of Community: How Cuba Survived Peak Oil' seemed to be from the American perspective and maybe didn't reflect the Cuban experience. Cuba doesn't seem overtly like a dictatorship. There seems to be by comparison to Australia, an enhanced sense of community, possibly due to the lack of technological advances and availability here. Wondered how the younger generations will cope with the impending US influence? Similarly, there is no obvious poverty here – maybe the structure works quite well?
- Bron: Also expected more greenery. Has lots of questions, but struck by lots of happiness around.
- Heidi: Restrictions on freedom of choice here, but people seem to choose to be happy.
- Jo: We bring with us preconceived ideas and we have only been here a couple of days. The US embargo has affected the country massively.
- Andrea: Roberto's assessment seemed to have the most honest perspective. Interesting to see the different buildings and lack of renovations here in Havana. Impressed by indoor/outdoor culture but wonders how things would be in large apartment blocks, especially in terms of a sense of community. Some folks present romanticised versions of Cuba and other places.
- Merrilyn: Shocked by the poverty and living standards in both Mexico and Cuba, even after fairly extensive overseas travel. Interested in the system here and the politics as well as the lack of equality.
- Glenys: Wonders how safe the safety net is here, in the case of crime and corruption for instance, and the very obvious security personnel. The role of tourism and the easy way to make money to the detriment of local services and homes.
- Sarah: Also expected the evidence of more permaculture, even in the urban environment of Havana and beyond in the rural areas. Wonders if the Cuban experience, response and resilience to environmental, political and economic shocks has been romanticised to the point where it no longer reflects the reality on the ground.

Friday 10 April 2015

Jardines Bellamar, Matanzas

Upon arrival, we were met by Cosa, who took us on a tour of the 11-hectare property.

There is an extensive cave system beneath the gardens, the preservation of these caves being a main purpose of this project, which was established under the auspices of FANJ. Cosa explained that the property used to be a poultry farm for birds and chickens, but that during the Special Period, there was not enough food for the animals, so the farm was abandoned for some years and covered in weeds.

In 1992, Esteban discovered the cave system, which is a gallery of limestone caves extending the 23 kilometres. Apparently there was initially a plan to build 20 000 new houses in the area. Esteban organised community support and spoke to town planners and succeeded in halting construction here. This project was started seven years ago. For over two-and-a-half years now the project has been affected by insufficient water to irrigate the gardens, as the pump and windmill are broken. Now, the water that fills the caves is used to irrigate the gardens.

The project in its development employed five people, with the assistance of the community, who cleaned the site of the rubbish that had found its way there. When work began, the site was a rubbish dump, and that which could not be used was sent elsewhere. Little by little it was cleaned up. The first area to be cleaned up was the vegetable garden. Over the last five years, the site has been planted up, timed to coordinate with the seasonal rains.⁴ Workers built the buildings. There are three dry composting toilets as well as a solar cooker.

In terms of food production, Cosa tells us that the food produced on-site feeds the people on the farm and also provides produce to the restaurant at the caves (which is now a tourist attraction). Some seeds such as lettuce are also saved. The crops grown on-site include: tomato, lettuce, silverbeet, cabbage, beetroot, mulberry, and sunflower (fodder for rabbits). Rabbits and guinea pigs are farmed for meat, their droppings composted for the worms (when there is enough water). Cosa explains that the main problem here is a lack of water, as there are not many pests or diseases.

People here are interested in permaculture, or at least are beginning to be. The practice of some zoning is evident, and other permaculture principles have been utilised.

We then watched a series of 3D films on Bellamar caves and on Cuba's national parks before a delicious lunch consisting of a variety of locally produced foods was served.

Following lunch, we watched some more 3D films on caves systems both in Cuba and around the world.

Sunday 12 April 2015

Sancti Spiritus

I didn't actually catch the name of this first organiponico we visited in Sancti Spiritus. In any case, it had the following features:

- Dry composting toilet
- Guinea pigs housed in the shade of the outhouse
- Worm farm
- Twin compost system

The organiponico uses no chemicals or any toxic substances on the plants. The plants grown include:

- Arrowroot
- Tomato

⁴ Now, some rainwater is stored in the fishponds that border the main house, but if it was to be taken from these ponds, the fish would die. There are both ornamental and edible fish in these ponds.

- Lettuce
- Beetroot
- Oregano
- Basil
- Chives
- Ginger
- Turmeric
- Banana
- Verbena
- Cassava
- Malanga
- Guava

Organico Ranchon

The second organiponico we visited, the site of Organico Ranchon, which was established 21 years ago, is 1200 m² and yields 20 tonnes of produce, with harvesting and sowing occurring on the same day. They overstock their ecosystems here, allowing growth over the sides of beds – growth is not constrained.

Here, they utilise more than 50 types of insect repelling plants, including:

- Lemongrass
- Oregano
- Basil
- Citronella
- Tobacco

Other, food plants, grown include:

- Beetroot
- Chives
- Lettuce
- Tomato
- Aubergine
- Fruit salad plant
- Sarsaparilla
- Banana
- Cassava/yucca
- Mulberry
- Malanga
- Carrots
- Chilli
- Cucumber

Rice husks are used here to form the foundation of pathways in order to keep them clear of vegetation and to break down (as compost) to then be used on the garden beds.

“We were created to think, but our culture is not to think,” says our host.

The organiponico uses many educational methods at the site, enhancing person-to-person contact, including TV, other press, universities and polytechnic colleges, schools, and signage located outside the site on the street.

Plant waste and whatever is not sold at the attached shop is composted.

Water collection occurs in gullies, the rocks found within which serve to filter the water.

“Where there is a problem, there is an opportunity”

Our facilitator Roger reported that his family is fed by this farm; that from Monday to Friday produce is sent to local childcare centres (and sold at ½ price); some is sold at the attached shop; and some food is also given to people who have no family, until they reach the age of 17. People can come here to play, work, and take food home.

Seeds are saved and swapped here, “we get more [seeds] here than what we use”. People new to permaculture get more seeds from this initiative.

Looking forward, the plan is to redesign the site in order to get rid of the straight lines, with a view to making time and energy savings in the maintenance and cultivation of the site.

Palmera System of Urban Agriculture

This farm clearly ascribes to permaculture principles and is a member of FANJ, judging by the symbols painted on this house. Here, a garden rooftop has been established when once everyone threw rubbish. Now, it is looked after and people dispose of their rubbish more respectfully.

The garden is watered by rainwater, and the focus of the system is the use of local resources. Vertical space will also be utilised. The system utilises solar energy, with the design of the house being altered, based on permaculture principles. The house itself now has three bedrooms downstairs and two upstairs.

In the limited space of the small ground-floor courtyard garden, vertical space is utilised, housing medicinal, culinary and ornamental plants. Here, the water from the air conditioning unit is redirected to water the plants, instead of going to waste.

In the rooftop garden, there is an intensive use of space, a diversity of cultivated plants, seed saving practices, rainwater harvesting and bees. We were then shown a PowerPoint presentation of the original dwelling and the redesign and renovation process, incorporating permaculture principles. According to the owners, permaculture leads to an increase in quality of life, home energy savings and satisfaction. To return the favour, Ian showed our hosts two PowerPoint presentations: one about Australia’s conditions and main iconic features, and the other about the establishment and function of Ceres.

Upon seeing this, Roger advises that there are many larger sites that are located more rurally and that if we could visit, if we had more time. He acknowledged the benefits of establishing a long-term friendship in order to continue the exchange over time.

We discussed some beneficial suggestions for the next Ceres Cuba trip:

- PowerPoint presentations in Spanish, along with hand-outs and/or hard copies also in Spanish;

- Letters to hosts and general information sheets in Spanish; and
- Ceres shirts to give to each host or speaker, as a token of the participants' gratitude.

Monday 13 April 2015

Real Maravillosa

This site is only three years old, and was formerly the community rubbish tip. It serves as a family-based permaculture system, developed in partnership with a Canadian organisation, and whose yields supply four households with produce. Fruit trees are growing, still establishing themselves, but everything else is thriving. Some of the plants identified include:

- Avocado
- Plantain
- Beans
- Bok choy
- Mint
- Lettuce
- Macaranga
- Guava
- Citronella
- Coriander
- Basil
- Verbena
- Tomato
- Beetroot
- Chives
- Raspberry
- Chilli
- Cashew
- Strawberry
- Watercress
- Yucca
- Orange
- Carrots

Whatever excess produce the families don't eat, is offered to the community to purchase. Conversely, whatever is not grown here has to be bought, but the system still provides economic independence and nutrition to the families.

Some of the other features include the following:

- Dry composting toilet
- Rainwater collection and filtration
- Water reuse in three locations across the site, including a handmade well
- Excess water flows down the site, as it has been constructed on a slight incline
- It is a functioning system, with all plants having a relationship to each other

- Biodiversity is high, with over 130 plant species grown here, which in turn attracts birds, butterflies and other animals
- Fish populate the two water tanks
- There is a worm farm
- Tyres are used as garden beds in order to prevent erosion

Our host points out a plant named *Biosa orezana* (or Onotto), whose seeds are used to colour food and was used by the original Indians to make paint.

Zoning principles have been used, with the most intensively maintained plants towards the front of the site near the main gate, and the least intensively maintained plants towards the back. Zone 2 serves as the food forest forming a microclimate and protecting the soil. Zone 3 is the most productive of the system. Zone 4 is largely untouched. Zone 5 is the canal, running along the back portion of the site.

Currently only two hours each day are devoted to work on-site, and everyday it seems to reduce further. Similarly the soil is growing everyday, but formerly at this site, soil would have been lost everyday.

La Permacultura aka Tyre Heaven

This site is 342m² and utilises tyres in its design. We are told that it is important to find alternate uses for used tyres, given the sheer volume of them that would otherwise go to landfill or be burned. In large part, the tyres are used whole, to border raised and un-raised garden beds.

The site was established in 2010, and although it has only a small area, it incorporates many classical permaculture designs; and was initially built by a group of young Canadians. Like so many of the sites we have visited thus far, this one was also formerly a garbage tip. Apparently the owner gave the site over under the condition that it be kept clean. Originally the site was very steep and as a result the rain constantly washed the earth away. As such, the soil has had to be built up over time. In order to assist this process, there are four compost bays that compost all plant waste from the site. Other features of the site include a 10m deep well, a pond, a mandala garden design, a passionfruit tepee, and rice husks to form pathways.

Given the site has problems with water, draught-resistant plants feature heavily, many of which are ornamentals. That is, there is less of a focus on food crops here. That said, the following plants are currently growing at the site:

- Lettuce
- Tomatoes
- Chives
- Coffee
- Carrots
- Oregano
- Beetroot
- Chilli
- Watercress

- Basil
- Bananas
- Verbena
- Beans
- Passionfruit
- Mame (a fruit tree that takes 17 years to fruit)
- Ornamentals including ferns, cycads, agaves and bromeliads

Our host suggests that this idea – community-based permaculture gardens – don't catch on because they are too hard to replicate. Many people have one or two jobs and so do not have time to create a garden. This is probably bolstered, he thinks, by the fact that oftentimes people can't see the obvious benefits either.

Organiponico El Estadio

This site consists of two systems – organiponico and permaculture - that were created separately in partnership with a Canadian group.

The types of plants growing in the organiponico system include:

- Strawberries
- Carrots
- Broccoli
- Oregano
- Lettuce
- Chives
- Celery
- Beetroot
- Beans
- Marigold
- Basil
- Corn

The site features worm farms, a dry composting toilet, living fences, and a street-front sale point. Here, crops are grown in rows for ease of harvesting, but our host Alberto concedes that a mandala design would be better for access and to save energy (over 36% of the space here is dedicated to walkways). Workers here collect seeds from many of the plants here, although some they do not. In terms of other energy inputs, animal manure is purchased from horse-and-cart taxi drivers, which are abundant in the city centre of Sancti Spiritus, and is put through the worm farm first before entering the system.

On the other – permaculture – side of the site, the layout is much less organised and more like a food forest than a highly productive organic agriculture system. Some of the plants on this part of the site include:

- Pineapples
- Tamarind
- Bananas
- Cashews

- Limes
- Mangos
- Pears (seeds brought in from the mountains)
- Grapes
- Coffee
- Aloe Vera
- Tomatoes
- Tarragon

Here, as at 'Tyre Heaven', tyres are utilised to border garden beds.

Finally, we are told that Aloe Vera is used medicinally for vaginal problems and haemorrhoids, as well as for the 'flu.