

## **Darwin Initiative report of my recent activities in UK**

Karina Aguilar Vizcaino

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This report is to cover activities on the Round 19 Fellowship Funding Ref No: EIDPS036 for the period July 2013-May 2014.

After taking a course in English language in my home town for 9 months, I sat my TOEFL IBT exam, 10 days before traveling to England. I achieved a score of 78/120, considered "basic" but I hope to improve my understanding and communication with daily practice and to take further language courses at the University of Leeds.

During that same time period – July 2013 to March 2014, a team was formed with other colleagues in Guadalajara and we obtained additional data gathered in the field and through our contacts with different Institutions in Mexico. This has given me a good resource of information for the design and analysis of biological corridors in *Bosque La Primavera*.

This includes: basic infrastructure, terrain, land use zoning, political divisions, wildlife, forestry, governmental, social, environmental, climatological, hydrographic, hypsometric, specialized imagery, etc.

In the days since my arrival at the University of Leeds, I was assigned a desk equipped with a computer and completed the induction process (health and safety, etc.).

My activities so far have been to continue learning both the language through courses at the Language Centre at the University of Leeds on technical writing skills and basic GIS programme through online courses and one-to-one tuition. In addition, I have attended meetings and seminars and visited places nearby that have certain similarities with the location and management of protected natural area in *Bosque La Primavera*, Mexico. The idea here is to be able to make comparisons and to better understand certain practical issues such as defining conservation areas that cannot be always "managed" by human activities because the natural connection is lost.

Wherein for the last 6 years I have proposed work specific to each of the identified corridors, but now would fail to define a more particular scale relevant to the best places to work, to restore the natural connectivity and also convince local residents that the benefit to care for their land. This will be long term and consist not only of economic activities, but also include environmental benefits, help to organize working groups, generate sources of employment in areas where people usually migrate to the cities in search of better opportunities.

This could be accomplished by connecting "environmentally or socially responsible" companies or NGOs that are interested in investing in the subject and "adopt" one of these as their own brokers. Thus, the continuity of work is ensured and a process in which everyone wins can be achieved. We plan to submit a proposal to the Darwin Initiative to continue the work on establishing corridors, based on the work being undertaken in both La Primavera and the University of Leeds using GIS tools that integrate social data to be used in corridor planning and implementation.

To date, I have visited Sutton Bank and the White Horse in the North York Moors National Park, a splendid walk for almost 3 miles in my first national park in England, where I came to know more about the history of this place, and enjoy beautiful views just like I remembered from the books from James Herriot.

Also I visited Osmotherley, a beautiful quiet town with a lot of options for the local walkers and we walked a wonderful path, finding some new and very interesting things for me. The route was over Scarth Wood Moor above Osmotherley, for 7 or 8 miles.

Above all, I am impressed by co-existence between the farms and the wildlife, the respect to the paths, everything was very carefully maintained at least in appearance and compared how things are done in my country.

In April I visited Dalby Forest, a forest maintained by the UK Forestry Commission, with a large group of students from Sweden. The thing that most caught my attention was from the fact that the forestry commission offers students and interested public informative talks and guided walks through the park. Dalby Forest is used for recreation as well as timber production. There are several car parks, hiking trails and mountain bike trails, and a 'forest drive' throughout the forest. A toll is charged to enter the forest by car, although parking is free. The place offers activities for cycle visitors, and many other activities for environment education and recreation, but continues with the timber activities at the same time. I think is a good example of how some parks can be managed in Mexico. Here, too there are many things to learn.

With the River Basin Processes & Management research cluster I visited Spen Farm, a short but very interesting visit, because is like a lab in the field for the people from the university. We learned more about the river basins project of Tom Doherty.

I visited Wild Ennerdale with Dr Carver and other students to learn about biodiversity and landscape management in UK Forestry Commission/National Trust lands. This is a beautiful place, with an interesting management to control some fungus plague affecting the Larch trees (pytophera), change the introduced pines and let the native plants thrive again, with some cattle for conservation grazing but not for productive activities, etc. We also visited Scar Close in the Yorkshire Dales National Park which is another rewilding project wherein domestic grazing pressure has been completely removed for the last 40 years. The place is fantastic and looks like it has gradually been recovering naturally, not having the pressure of livestock, plants seek their niche protection and the place is like a big open air laboratory where nature emerges if only lets it be.

Also, I was invited by Dr Steve Carver to sit in on GEOG5060 and to develop a practical using CorridorDesign with the La Primavera datasets. It was a good experience because i was able to talk to the students about my work.

I attended the TALISMAN course “Introduction to Geographical Information systems Using ArcGIS (Raster Applications) taught by Dr Carver.

Also I attended the conference Digital Conservation in Aberdeen, with Dr Carver and Fernando Sanchez-Trigueros who presented the utilities of Map-Me program, that i am using in my project.

In the conference academics and practitioners presented papers about a field that increasingly shapes human interactions with the natural environment. This was very interesting, knowing different ways to do conservation, some very sophisticated, and other, simple but mostly ingenious using digital technologies. Of course, some of the talks didn't agree with the digital era, but this discussion was very interesting too.

I have been developing ideas for key outputs including journal articles (e.g. AppEcol and PLOS ONE, Biological Conservation ). A suggestion for the title is: “Proposal of the real implementation of the biological Corridors in the area of influence of the Protected Area Wildlife “La Primavera”, Jalisco, Mexico”.

I think all these new things are a good experience for me; they help me to understand better how can I implement my proposal in Mexico about the project for biological corridors between protected areas in Jalisco, and the interaction with the suburban or rural communities, offering alternative coexistence, successful restoration, improving the actions of wildlife conservation, mitigate climate change and many other aspects.

In the coming months I will continue working with ArcGIS-Corridor Designer and incorporating the return results of the survey we MapMe , that will be applied soon in the region to know the perception of the people and do maps with the real information about the situation with the inhabitants of Mexico, with all its good things and all its problems, presents for me a great challenge to achieve real action.

The projects can be implemented and with good long-term results for both the environment and the people who inhabit it, as in the case of Ahuisculco and Selva Negra, which started almost as my dream, and some years after we can see as there are results that are not only presumed, but also measured, as you can read in the attached article by John Pint.

At Leeds I have been travelling together with two doctoral students, Bishnu and Kisandra, and have gained different perspectives on places near Leeds according to the interests of each. For example, we visited York, Kirkstall Abbey, Darton and Barnsley.

Thanks to Darwin Initiative, Jon Lovett, Steve Carver and all those who make an effort to help me strengthen my tools working for try to make a better future in my country.

DATE	PROFESSOR	ACTIVITY	COST
29 March	Jon Lovett	Sutton Bank and Osmotherley	No
14 April	Jon Lovett	Dalby Forest	No
16 April	River Basin Processes & Management Research Group	Spennings Farm	No
28-30 April	Steve Carver	Wild Ennerdale and Scar Close in the Yorkshire Dales National Park	No
6 May	Steve Carver	I attended on GEOG 5060 and development of final practical using Corridor Design with La Primavera datasets.	No
19-20 May	Steve Carver	TALISMAN course "Introduction to Geographical Information systems Using ArcGIS (Raster Applications)	<b>£45</b>
21-23 May	Steve Carver	Digital Conservation Interdisciplinary Conference, in University of Aberdeen	£175.00 + £ 225.00 <b>£ 400.00</b>
12 May- 16 June	Katherine Taylor	Academic English Course	No

## **Rock band opens plant nursery in Ahuisculco An eco-dream is coming true in Jalisco**

**<http://www.theguadalajarareporter.com/index.php/columns/columns/john-pint/44018-eco-dream-comes-true-as-famed-rock-band-opens-plant-nursery-in-ahuisculco-jalisco>**

By John Pint

On Thursday, May 8, vocalist Fernando “Fher” Olvera of Maná, the biggest Latin Rock Band in the world, joined supporters of Project Selva Negra in inaugurating a sprawling “Endemic Plant Nursery” near Ahuisculco, a small town located 30 kilometers southwest of Guadalajara, near Tala.

The nursery is already caring for over 100,000 seedlings and will soon be supplying trees for planting to organizations like CONAFOR (The National Forest Commission) and Carlos Slim’s Carso, the company which is constructing the *macrolibramiento* which promises to divert heavy traffic around instead of through greater Guadalajara.

I dropped in on Selva Negra project leader Francisco “Paco” Quintero the day after the inauguration to ask a few questions about the nursery, but not really expecting much of a story. To my surprise, I left with an insight into what seems to be an ecologist’s dream come true: a project that benefits nature as well as local communities with funding from organizations seriously interested in reducing their carbon footprints.

“The nursery,” Quintero told me, “employs local people and its sales will directly benefit Ahuisculco; however, it represents only a small part of a much bigger picture.”

To help me understand this bigger picture, Quintero took me back to 2010 when Arturo Balderas Torres of ITESO published a paper on reforestation and climate-change mitigation, arising from a project funded by the UK Darwin Initiative. “In his paper Balderas suggested that individuals and organizations should evaluate the damage they are doing to the environment and make up for it in practical ways,” explained Quintero.

Karina Aguilar, a member of the Primavera Forest Authority and currently a Darwin Research Fellow at the University of Leeds, had been thinking along exactly the same lines and was searching for a way to create biological corridors which would link the Primavera to other forests and assure the survival of wide-ranging animals like pumas.

Aguilar decided to approach Maná's founder Fher, who happened to be a former friend of hers: would the band consider "buying" credits for the damage it was doing to Planet Earth?

Well, Maná said yes. They looked at a world tour they were planning and calculated they would put 10,000 tons of carbon dioxide into the air transporting themselves and their entourage around the globe by planes, boats, trains, etc. To make a long story short, it was calculated that they could "pay back" this carbon debt by reforesting and preserving 80 hectares of land.

Now Aguilar and Maná approached Forest expert Quintero: Where can we find a stretch of land that big which would really benefit Jalisco's environment?

Quintero pointed to a beautiful forest near Ahuiculco which was adjacent to the Bosque la Primavera, but in danger of disappearing. The two woods could, hypothetically, be connected by animal bridges over the two highways separating them, saving the Primavera fauna from "strangulation by motorways."

The Ahuiculco *ejido* was enthusiastic about the idea of saving their forest and a deal was struck. Farming, ranching and housing projects would stop while reforestation and other projects would begin, under the sponsorship of groups like Maná, Coca-cola and Pronatura.

"The *ejido* also asked for specific socio-economic benefits like this nursery, a University of Guadalajara Prep school and a computer center," said Quintero, "all with the end of encouraging local people to live in Ahuiculco instead of migrating to the big city. As you can see, the nursery has now been built and the other projects are on their way."

The reality of the plant nursery was right there for me to see. Two young employees took me on a tour. "We are both from Ahuiculco," said Sofi Murillo and Sandi Soto, pointing out that normally "There are no jobs whatsoever for women in Ahuiculco." Along with four other members of their team, these young ladies collect, plant and care for the seedlings

*ofhuaje, tepame, tepehuaje, guácima* and *guamúchil* trees. These are cared for using sophisticated modern techniques and a special mist watering system developed in Israel. The nursery has a capacity for 178,800 plants and sales to organizations obliged to plant native species are guaranteed.

A few years ago, Jon Lovett, Chair of Global Challenges at the University of Leeds in England, who led the original Darwin research project with Arturo Balderas, visited Guadalajara and spoke about the need for the City and the Forest to recognize each other's contributions, pointing out that the City should be willing to pay for the benefits the Forest brings to it.

It sounded like a dream to me. Nevertheless, with ideas from people like Lovett and Balderas, action on the part of people like Aguilar and Quintero, and a new sense of responsibility from organizations like Maná and Coca-cola, creative solutions to environmental and social problems are quietly coming into reality in out-of-the-way places like Ahuisculco. "The local people are delighted," commented Paco Quintero. "Last year alone they earned over one million pesos working on conservation and reforestation projects...and now they have their own self-sustaining micro-business: this plant nursery." Somebody seems to be doing something right out there in the Selva Negra.