DAVIS EXPEDITION FUND

REPORT ON EXPEDITION / PROJECT

Expedition/Project Title:	Sierra Expedition 2017- Serrania de la Macarena and Sierra Nevada de Santa Marta- Unique montane formations in Colombia
Travel Dates:	17 April to 31 December 2017
Location:	Sierra Nevada de Santa Marta (Magdalena, Cesar, La Guajira) and Serrania de La Macarena (Meta)- Colombia
Group Members:	KARINA BANDA RODRIGUEZ
Aims:	•To explore remote and isolated montane regions in Colombia - Sierra Nevada de Santa Marta. •To compile a floristic species list of the seasonally dry areas of the Serrania de La Macarena •To improve the understanding of the seasonal dry formations in Colombia

Outcome (not less than 300 words):

The aim of the project was to explore remote and isolated montane regions in Colombia -Sierra Nevada de Santa Marta- and to compile a floristic species list of the seasonally dry areas of the Serrania de La Macarena. La Macarena and Sierra Nevada are montane formations with remarkable isolation which might represent complex biogeographic patterns.

Specifically, field work was carried out in La Macarena National Park (Figure 2) and Sierra Nevada de Santa Marta (Figure 3). Collected material from La Macarena were mainly from the locality: *Municipio: Vista Hermosa.PNN. La Macarena. Camino entre la vereda Buenavista y Guapaya. Caño La Cristalina y caño La Legia,* in an altitudinal gradient from 600 to 1200 m.a.l.s. In total 116 vouchers were collected from 46 botanical families, including trees, herbs and some ferns and epiphytes. 90% of the collection is fertile material. Vouchers were dried and gathered in the Herbario Amazónico Colombiano - COAH in Bogota. Unidentified specimens will be send it to specialists at the Royal Botanical Garden Edinburgh (RBGE). These botanical collections are the first effort to collect in areas that have been unexplored due to security issues in the last four decades. The species list obtained during the expedition will contribute to the biogeographical analyses of the seasonally dry formations in the Neotropics, led by researchers from DRYFLOR (Latin American Seasonally Dry Tropical Forest Floristic Network).

Sierra Nevada de Santa Marta was visited in three localities: Nabusimake in Cesar, Palomino in La Guajira and Minca in Magdalena (Figure 1). High altitudes in Sierra Nevada have several restrictions for visitors due to are considered as sacred areas for indigenous communities. Even though, the team could go to explore areas between 1800 and 2100 m.a.l.s., the distribution range of *Vallea stipularis* (Elaeocarpaceae) is above 1800 m. Unfortunately, we could not find individuals of this species in any of the locations visited, which was once of the goals of the expedition. Probably, this species is restricted to very small forest patches, due to the high level of degradation of the forest in the area.

The demand of wood for fuel is high and constant for the local communities in Sierra Nevada, so the degradation of the montane forest in the region is imminent (Figure 3. Top left). There is an urgent need to suggest alternatives for energy supplied in the region to ensure the conservation of the biodiversity that Sierra Nevada holds. So, after the expedition, I am working with a local leader to develop an initiative that support the use of solar energy and decompose organic matter as alternative to fuel for cooking in Nabusimake, and also to design an educational material for local schools in Palomino.

Expedition participants and Associates

Currently I am a research fellow at the School of geography in the University of Leeds, UK and this expedition was the first step as an early career researcher with the aim to continue working in collaboration with the UK and Colombian institutions.

Fundación Ecosistemas Secos de Colombia (ESC): Non-governmental organization (NGO).
Carlos Vargas Botanist, Ph.D student Univesidad del Rosario-Bogota.
Jorge Luis Contreras Botanist MSC. COAH Instituto SINCHI, Bogota.
Joana Casas: Social Scientist based on Palomino (La Guajira)

The itinerary was followed mainly as described in the initial proposal, with an additional trip to Sierra Nevada de Santa Marta to visit Minca, trying to find *V. stipularis*. Each trip included briefing meetings for local guides, logistic arrangement and material purchases.

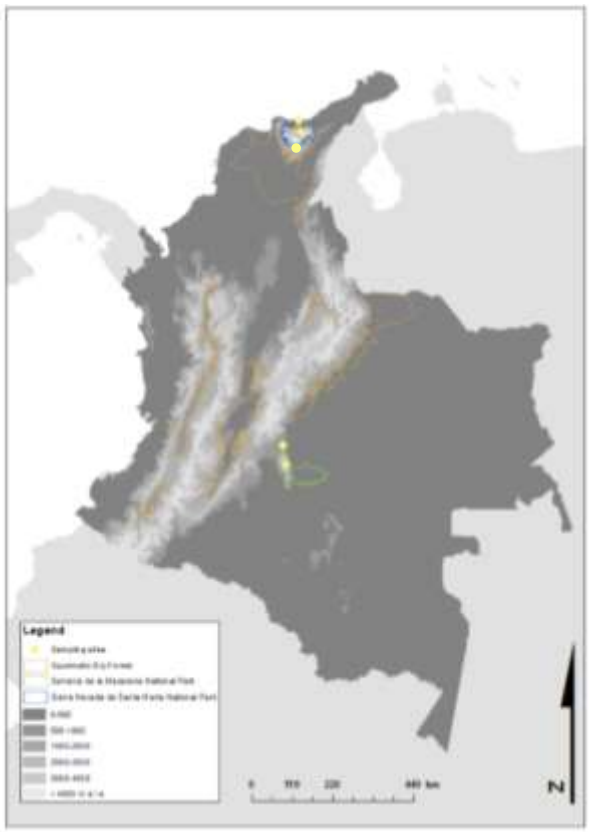

Figure 1. Sierra Expedition 2017, field work sites.

Figure 2. Field work at Serrania de La Macarena, Meta

BUDGET

A total of £4075 was provided by the Davis Expedition fund. This was used to cover the cost of the expedition, the remaining costs were covered by ESC and the applicant (Table 1).

Table 1. Sierra Expedition 2017 Expenses

Item	Expenses in COP	Expenses in GBP	COP to GBP	Total (GBP)
Transportation	12,567,000.0		3,307.1	3,307.1
Food	2,675,000.0		751.4	751.4
Accommodation	1,495,000.0		419.9	419.9
Local guides' salaries	1,572,860.0		441.8	441.8
Materials	2,255,000.0	230.0	633.4	863.4
Herbarium	2,340,000.0		657.3	657.3
Subtotal	22,904,860.0			
Expenses				6,441.00

** April 2017 exchange rate: 1 GBP = 3560 COP*

Figure 3. Sierra Nevada de Santa Marta

ACKNOWLEDGEMENTS

I will like to thank the Davis expedition fund committee for supporting this initiative and allowing the exploration of ecosystems of high conservation priority. I would like to express my gratitude to the local collaborators mainly Carlos Vargas and also the Royal Botanic Garden Edinburgh. Finally, I will like to thank local communities in Colombia for your support and guidelines.