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*Restore Peace with Nature*  
**Yungas, La Paz- Bolivia**

### **Proposal Application**

Montane forest of the Yungas region in Bolivia is one of the most unique ecosystems in the world with high levels of diversity and endemism on plants, animals, and other unique species<sup>1</sup>. In recent years, however, this ecosystem has been highly fragmented for human activities like crops and uncontrolled human-induced fires<sup>2</sup>. The consequences of deforestation have affected the daily living of rural communities, crops do not grow in the same way and that affects the rural economy. Nowadays, people from these communities realize the importance of the forest, and all the services that nature gives to them, and they want to restore the natural habitat. Moreover, they want a sustainable alternative for economic income without destroying the nature around them.

This project hopes to contribute to habitat restoration in order to boost local peoples' economies and enable them to earn a fair living from nature-based activities like honey production. For this, I request a Davis Projects for Peace grant to rewild pollinators (bees and butterflies), to monitor the restoration process and promote the local economies.

### **Proposal Narrative**

Pollinators like butterflies and bees are key in habitat restoration: they can carry pollen over great distances, and they are food for other species such as amphibians, reptiles, and mammals<sup>3</sup>. In the Montane Forest of the Yungas region in Bolivia, there is one initiative led by Senda Verde, called 'butterfly-sky', this project aims to contribute to the conservation of native butterflies, native bees, bats, and hummingbirds. Building special domes for the breeding of butterflies, which will be able to fulfil the pollinating function in places adjacent to the Senda Verde properties. This project will work closely to the Senda Verde initiative to have pollinators (bees and butterflies) and to release them in the community 'Santa Rosa del Vagante', to help restore the natural habitat. Moreover, people of Santa Rosa del Vagante will be trained in beekeeping in order to produce honey to boost the local economy. Finally, camera traps will be set near the community to monitor the wild animals that live in the community and the images generated will be used to promote eco-tourism in this area.

### **Proposed activities**

#### **Breed butterflies**

From 2020 Senda Verde started to breed 20 species of native butterflies in the laboratory. We will breed at least 300 butterflies from 20 species to be released by people from Santa Rosa del Vagante. This activity will take one month in duration.

#### **Honeybees**

People from Santa Rosa del Vagante will have a workshop on beekeeping, the workshop will take three days to deliver. Attendees will learn how to build a honeycomb foundation and observe live colonies housed in see-through hives. Moreover, people will learn about the process of honey production, pollen storage, and wax building. Therefore, they will know more about native bees and their role in nature. As a second step, Santa Rosa del Vagante will have their own beekeeping backyards with 50 boxes of bees. This activity will help them to boost their economy by selling the honey and the propolis.

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<sup>1</sup> WWF (2022, January). <https://www.worldwildlife.org/ecoregions/nt0105>

<sup>2</sup> Gallegos, C. Silvia, Hensen, I., & Schleuning M. (2014). Secondary dispersal by ants promotes forest regeneration after deforestation. *Journal of Ecology*, 102, 659-666.

<sup>3</sup> Ghazanfar, M., Malik, M. F., Hussain, M., Iqbal, R., & Younas, M. (2016). Butterflies and their contribution in ecosystem: A review. *Journal of Entomology and Zoology Studies*, 4(2), 115-118.

### **Plant flowers**

For bees and butterflies is important to plant flowers. Two hundred and fifty flowers will be planted in Santa Rosa del Vagante to support the bees and the butterflies. This will be achieved by people of the community and volunteers; this activity will take one weekend to complete.

### **Monitoring**

Animals that live near Santa Rosa del Vagante will be monitored using with 5 camera trap stations. This will show people from the community that their habitat is being restored, and that the animals are coming back. Moreover, they will promote the site as a touristic place showing the diversity there.

### **Timetable**

<i>Phase</i>	<i>Activities</i>	<i>Week 1</i>	<i>Week 2</i>	<i>Week 3</i>	<i>Week 4</i>	<i>Week 5</i>	<i>Week 6</i>	<i>Week 7</i>
<i>Logistics and preparation*</i>	<i>Meeting with locals of Santa Rosa del Vagante</i>	X						
	<i>Procuring materials</i>		X	X				
	<i>Meetings with Senda Verde</i>	X	X	X	X	X	X	
	<i>Recruit team of volunteers</i>		X	X				
<i>Project implementation</i>	<i>Butterfly breeding</i>				X	X	X	
	<i>Butterfly release</i>							X
	<i>Honeybee workshop</i>						X	
	<i>Establish the honeybee boxes in the community</i>							X
	<i>Plant flowers</i>							X
	<i>Establish the monitoring stations</i>							X

*\*The logistics and preparation activities will be running online*

### **Goals**

In the short term, this project will contribute to peace by bringing community members together to restore their forest, releasing butterflies, and raising honeybees. In the long term, the community will increase its productivity through the sale of honey and the promotion of ecotourism. Ultimately the community will be a model in the region of sustainable and peaceful growth with nature.

### **Indicators of success and impact**

- the release of 300 butterflies of 20 different species.
- one workshop with the people of Santa Rosa del Vagante community
- after the workshop the installation of 50 honeybees' hive boxes in the community.
- 250 native flowers will be planted
- 5 camera trap stations placed in the community environs.