

INSECT SCHOOLS

We will work with communities to implement a social-ecological and educational strategy permitting them to know, conserve or use local insects for improved long-term sustainability. Experiential, participatory, and learner-focused education that allows communities to build on their direct experiences and knowledge, and to make links between these experiences and the complex issues at hand: food security, development, environmental and social justice issues facing today.

EXPLAIN YOUR PROJECT

Colombian communities are facing social, health and environmental consequences of a climate change, continued expansion of the agriculture frontier, marked transformation of ecosystems and displacement caused by violence. Malnutrition and difficulties for food production, loss of biodiversity, and contamination are documented.

We believe human well-being must be supported on biodiversity conservation not only by its intrinsic values but also by its instrumental values, meaning services it provides. The idea-project is focused on create: Insect schools in Colombia, working with the communities to know and use their own natural resources and knowledge. We will work to increase food security and conserving biodiversity based on social ecological systems.

Native heritage value of biodiversity combined with our experience on species and the roles they accomplish in nature will be a key factor to impact fragmentation and competition for scarce resources and improve sustainability. We will join the community to rediscover insect local species, learn about them, list their local pollinators, define needs and activities for conserving, managing them or growing them for decontamination, producing at the same time protein-food for local consumption.

We consider building and/or strengthening networks and fostering partnerships and using dialogue-oriented methodologies through contact with other learners and experts, so that participants can develop content knowledge, leadership and competences.

We propose to start with communities as IKARWA in Sierra Nevada Santa Marta as they in an explicit way ask to work with us. This may be the starting point to validate the usefulness of intelligent, itinerant insect schools for impacting people, bridging planet natural resources and conservation with social inclusive ways for guarantee prosperity.

As an enormous opportunity not frequently seen scientists and professors from 7 private and public universities and technical formation centers around the country, government institutions, teachers for private and public schools, environmentalists plus artists and photographers, which have been previously contacted, are committed with this initiative to work on the right for people to have physical and economic access to sufficient, safe, and nutritious food and education.

WHO ARE THE BENEFICIARIES

We hope to impact families and leaderships of IKARWA community. In first steps we will work on the food –biodiversity nexus with leaderships of the community and governance actors to obtain a cognitive mapping workshop and to identify the principal aspects that locally contribute to food security or biodiversity conservation. System properties, human, cultural and social capital will be evaluated. Priorities and actors on time lines will be established.

Then we will start working with selected actors and leader youths to create the school guidelines and activities in the time frame.

Fieldwork, biological studies and data collection will be planned to include most youth members. Specific work sessions for gender and age will be planned to define group activities and roles.

We expect woman and girls to be actively involved and empowered. Photography, art, narrative and other activities will be also defined and organized Kids between 5 and 10 will be involved in practical sessions of insects knowing and identification.

Socialization of partial findings and priorities as well as constructions and advances will be defined with key actors and planned for involve all the community.

HOW IS YOUR IDEA UNIQUE

We are convinced insects are a key factor for developing this project.

This idea is putting together all available aspects related to insects that may be used to construct needed bridges among communities and experts or even environmentalists and amateurs in behalf of food-conservation and education. We consider this is powerful combination and a tremendous opportunity to do apparently simply thing to attend urgent needs.

We have the community's call, the problems affecting them and the opportunities and trajectory as university to lead this process after being researching, teaching and working in insects for more than 15 years. People from different lines and expertise in a very uncommon way and in short time frame sent compromise letters and are committed with the initiative. Colombians working together form different institutions, regions and disciplines is a unique opportunity.

Insects are a common factor for education in natural sciences, environmental and ecological systems. They are both plagues natural services giving and they represent opportunities for innovation and added value in food and agro industry.

We all are convinced that from science, art and education, we can make a change.

We see this as a long-term initiative expandable to other communities with similar problems and opportunities. We do not know proposals like this in Colombia and we are convinced we can do it. We can give, change and learn for the future.

TELL US ABOUT YOUR ORGANIZATION

Universidad Nacional de Colombia is one of the biggest universities in the country. It has capacity and infrastructure as well experience in research, extension and teaching programs. Agronomy and Sciences faculties have accompanied the society and communities in food production. Entomology programs are leaders in process and research and posgraduate programs include study of most species around the country. Our research group has almost 20 years of experience working with systematics and biology of insects has graduated already 20 engineers and master students and 7 PhD are graduated or in the process. We are recognized for the national system of sciences COLCIENCIAS in the first category named A1 (<http://scienti.colciencias.gov.co:8085/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000001568>).

Other universities and institutions participating with members committed in the team are SENA National service of learning AGROSENA –REGIONAL MAGDALENA (<http://centrogaira.blogspot.com/2016/10/1ra-oferta-programas-de-formacion-2017.html>),

UNIVERSIDAD DEL MAGDALENA (<https://www.unimagdalena.edu.co/>),

UNIVERSIDAD JAVERIANA (<http://www.javeriana.edu.co/home#.WxWwoe4vzIU>),

UNIVERSIDAD DE ANTIOQUIA (<http://www.udea.edu.co>)

UNIVERSIDAD DE PAMPLONA (<http://www.unipamplona.edu.co/>),

UNIVERSIDAD FRANCISCO DE PAULA SANTANDER (<https://ww2.ufps.edu.co/>),

UNIVERSIDAD DE CALDAS (<http://www.ucaldas.edu.co/>),

INSTITUTO ALEXANDER VON HUMBOLDT (<http://www.humboldt.org.co/es/>),

PROAVES (<http://www.proaves.org/>),

COLEGIO LA ENSEÑANZA –COMPAÑIA DE MARIA (<http://www.laensenanza.com/web/>)

ASOCIACION DE AUTORIDADES ARHUACAS DE LA SIERRA (<https://origenarhuaco.com/associt/>).

INSPIRATION OF OUR STORY

We have seen how insects impact our planet. We know how education change lives; we saw here, how the insects are a wonderful instruments changing life. We saw receptivity and attitude of some communities when they visit our insectary or we go to the field to work with them. We saw examples of schools changing lives as example intelligent schools in Uruguay. We believe we can do a lot with what we have but we need to put bridges among universities, society and government. We have no common opportunities to finance proposals as this, which are beyond the simple academic debate of sustainability. We believe in learning-acting initiatives. We saw inspiring initiatives most of them far away.

PLEASE EXPLAIN HOW YOUR SELECTED TOPICA AREAS ARE INFLUENCED IN THE LOCAL CONTEXT

Sierra Nevada and its surroundings close to the Caribbean coast have been recognized as an irreplaceable area of global significance for biodiversity conservation. Beyond the mountain itself 1.2 million people are dependent upon the fresh water supply that drains down from river basins.

Prosperity in this zone constitutes a great challenge in relation to the continued expansion or agricultural frontier, unorganized tourism and displacement caused by the violence. A territory with a known and valued biodiversity is necessary for the successful maintenance of populations. There are some protected areas but there is still need for knowing and valuing the biodiversity. Main activities in Sierra have been affecting water quality and food availability and cases of poor nutrition have been frequently reported.

There is a lack of establishing relationships between environmental education and the valuation of biodiversity and in this context, insects have been less studied even they may provide relevant services and are on risk.

As an example some species of stingless bees and orchid bees are on risk as the honey hunters persecute them. Communities have poor idea about the existence or behavior of those bees and can do nothing to conserve them or to use them for honey production in a proper way.

We consider insects as a real alternative to implement proposals for development and prosperity conserving the planet and in line with the needs of today's society. Much of the knowledge derived from the study of insects is likely to be used for the benefit of the rural, peasant and indigenous communities and for society in general. As an example FAO indicated recently insects may be the most important source of protein in the future solving the problems actually we have to produce meat.

TOP STRENGTHS

Communities are waiting to work with us and their leaders invited us to start working as they have interest. We are convinced that this kind of projects are really needed in the country. We have a surplus as young people, students that are ready to work. We also have experts that have had experiences in international experiences and recognized in the community. We have expert people, museums, insectariums and infrastructure supporting the work. We have the inspiration and a multidisciplinary team representing institutions and experiences.

GEOGRAPHIC FOCUS

Valledupar Cesar, departament, Colombia.

IKARWA community and ASOCIT (Association of Arhuacans communities of Sierra Nevada de Santa Marta).

INSPIRED BY

A work mate that have worked with ants and communities. A work mate that worked with rural communities and organic production. Both of them are committed and participating with me here.

Also some other schools created from academic, or conservationist groups. Some of them in Mexico for integrating plagues control to scholar programs, other for sustainability in USA, and a personal experience in Indonesia.

Most of them are community integrated, sustainable. They promote critical understanding and action.

Studies as System Properties Determine Food Security and Biodiversity Outcomes at Landscape Scale: A Case Study from West Flores, Indonesia. Published in 2018 also inspired me.

<http://www.fee.global/eco-schools-1/>

<http://www.consumer.es/seguridad-alimentaria/normativa-legal/2005/07/11/19042.php>

<http://jaurecologico.blogspot.com/2015/05/escuela-inteligente-en-jaureguiberry.html>

<https://www.rentokil.mx/control-de-plagas-en-escuelas/>